

**Mullins, Robert A** <robert.a.mullins@wv.gov>

Re: Pre-Draft R30-07100001-2025

1 message

Scott Kisner <skisner@greerindustries.com>
To: "Mullins, Robert A" <robert.a.mullins@wv.gov>

Mon, Jul 28, 2025 at 6:42 AM

I've reviewed the permit and fact sheet and have no comments. The renewal appears accurate and complete.

Thank you

Scott Kisner
Greer Industries, Inc.
Environmental Compliance Manager
304-276-5263

From: Mullins, Robert A <robert.a.mullins@wv.gov>
Sent: Thursday, July 17, 2025 12:08 PM
To: Scott Kisner <skisner@greerindustries.com>
Subject: Pre-Draft R30-07100001-2025

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Attached is the Predraft Title V Permit Renewal for Greer Industries, Inc.'s Riverton Facility. Please review the Title V permit and factsheet and respond with any questions or comments by July 31, 2025 so that I may respond to any questions/comment before sending the renewal out to Notice.

Thanks,
--

Robert Mullins

WV Department of Environmental Protection

Division of Air Quality

[601 57th Street, SE](#)

[Charleston, WV 25304](#)

Phone: (304)926-0499 ext. 41286

**Mullins, Robert A** <robert.a.mullins@wv.gov>

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2 attachments**Pre-DPPermit R30-07100001-2025 w- Apendixes.pdf**
1975K**Pre-DPFactSheet_R30-07100001-2025.pdf**
326K

West Virginia Department of Environmental Protection

*Harold D. Ward
Cabinet Secretary*

Permit to Operate



*Pursuant to
Title V
of the Clean Air Act*

Issued to:
Greer Industries, Inc. d.b.a. Greer Lime Company
Riverton, Pendleton County, WV
R30-07100001-2025

Laura M. Crowder
Director, Division of Air Quality

*Issued: [Date of issuance] • Effective: [Equals issue date plus two weeks]
Expiration: [5 years after issuance date] • Renewal Application Due: [6 months
prior to expiration]*

Permit Number: **R30-07100001-2025**
Permittee: **Greer Industries, Inc. d.b.a. Greer Lime Company**
Facility Name: **Riverton Facility**
Permittee Mailing Address: **1088 Germany Valley Limestone Road, Riverton, WV 26814**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 - Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Riverton, Pendleton County, West Virginia
Facility Mailing Address:	1088 Germany Valley Limestone Road, Riverton, WV 26814
Telephone Number:	(304)567-2141
Type of Business Entity:	Corporation
Facility Description:	Limestone Quarry and Lime Manufacturing Operation
SIC Codes:	Primary 3274; Secondary 1422
UTM Coordinates:	640.00 km Easting • 4293.00 km Northing • Zone 17

Permit Writer: Robert Mullins

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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Appendix A - 45CSR10 Monitoring Plan for Greer Industries, Inc. d.b.a. Greer Lime

Appendix B - 40 C.F.R. Part 63 Subpart AAAAAA Operating, Maintenance and Monitoring (OM&M) Plan

1.0. Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
PRIMARY AND SECONDARY CRUSHING (Group 002)					
1-DH-1	1-DH-1	Dump Hopper with Impact Hammer	1994	50 Tons/1.5 MMTPY	WS, PE
1-IH-1	1-IH-1	Impact Hammer	Pre 1975	250 TPH/1.5 MMTPY	WS, PE
1-VGF-1	1-VGF-1	Vibrating Grizzly Feeder; (54"x24") Diester Model: VFG-5424	1994	800 TPH/1.5 MMTPY	WS, PE
1-CR-1	1-CR-1	Primary Jaw Crusher; Nordberg Model No. C-140B; (41"x55") Single Toggle	1994	800 TPH/0.6 MMTPY	WS, PE
1-BC-1	1-BC-1	Stone Belt	1994	800 TPH/1.5 MMTPY	FE
1-VS-1	1-VS-1, 1-DC-1	Vibrating Screen Triple Deck (8x20); Diester Model No. XHM-200T	1994	800 TPH/1.5 MMTPY	FE, WS, BH (TP8)
1-DC-1	1-DC-1	Dust Collector	1996	NA	NA
1-BC-2	1-BC-2	Stone Belt	1994	500 TPH/1.04 MMTPY	FE
1-SB-1	1-SB-1	Secondary Crusher Surge Bin	1994	75 Tons/1.04 MMTPY	PE
1-VF-1	1-VF-1	Electromechanical Vibrating Feeder; Syntron Model: MF400-D	1994	500 TPH/1.04 MMTPY	PE
1-CR-2	1-CR-2	Secondary Cone Crusher (5½'); Nordberg Model: Standard Heavy Duty Symons	1994	500 TPH/1.04 MMTPY	WS, PE
1-BC-3	1-BC-3	Stone Belt	1994	800 TPH/1.5 MMTPY	FE
1-BC-4	1-BC-4	Stone Belt	1994	800 TPH/1.5 MMTPY	FE
1-BC-5	1-BC-5	Stone Belt	2021	800 TPH/1.5 MMTPY	FE
1-SI-1	1-SI-1	Stone Silo 1	2021	2,000 Tons, 1.5 MMTPY	FE
2-VF-3	2-VF-3	Vibrating Feeder	Pre 1976	800 TPH/1.5 MMTPY	FE
2-VF-4	2-VF-4	Vibrating Feeder	Pre 1976	800 TPH/1.5 MMTPY	FE
1-SI-2	1-SI-2	Stone Silo 2	2021	2,000 Tons, 1.5 MMTPY	FE
2-VF-1	2-VF-1	Vibrating Feeder	1999	800 TPH/1.5 MMTPY	FE
2-VF-2	2-VF-2	Vibrating Feeder	1999	800 TPH/1.5 MMTPY	FE
2-BC-1	2-BC-1	Tunnel Belt	1999	800 TPH/1.5 MMTPY	FE
2-BC-2	2-BC-2	Scale Belt	1996	800 TPH/1.5 MMTPY	FE

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
2-VS-1	2-VS-1	Vibrating Screen Triple Deck (8'x24')	1994	800 TPH/1.5 MMTPY	FE, WS
2-BC-3	2-BC-3	Stone Belt	1996	400 TPH/0.6 MMTPY	FE
2-SI-1	2-SI-1	Storage Silo	1960	400 TPH/0.6 MMTPY	FE
2-BC-9	2-BC-9	Belt Conveyor	1997	400 TPH/0.6 MMTPY	FE
2-OS-2	2-OS-2	Open Stockpile	1996	400 TPH/0.6 MMTPY	WS
2-BC-4	2-BC-4	Stockpile Belt	1996	400 TPH/0.6 MMTPY	FE
2-OS-1	2-OS-1	Open Stockpile	2009	14,500 Tons/0.6MMTPY	WS
2-BC-5	2-BC-5	Kiln Stone Belt	Pre 1990	400 TPH/0.9 MMTPY	FE
2-BC-6	2-BC-6	Kiln Stone Conveyor Belt	Pre 1990	400 TPH/0.9 MMTPY	FE
2-BC-7	2-BC-7	Kiln Stone Conveyor Belt	Pre 1990	400 TPH/0.9 MMTPY	FE
2-BC-8	2-BC-8	Kiln Stone Conveyor Belt	Pre 1990	400 TPH/0.9 MMTPY	FE
400 TPD LIME KILN (Group 004)					
4-SI-3	E-4-DC-4	Hydrate Storage Bin	2024	2,000 CF	BH
4-BL-5	1E	Blower	2024	20 HP	BH
4-OS-1	4-OS-1	Kiln Stone Stockpile No. 1	Pre 1990	6,000 Tons/0.9 MMTPY	WS
4-BC-1	4-BC-1	Belt Conveyor	1995	150 TPH/0.9 MMTPY	FE
4-BC-2	4-BC-2	Belt Conveyor	1995	150 TPH/0.9 MMTPY	FE
4-BC-3	4-BC-3	Belt Conveyor	Pre 1990	400 TPH/0.5819 MMTPY	FE
4-BC-4	4-BC-4	Belt Conveyor	Pre 1990	400 TPH/0.276 MMTPY	FE
4-STB-1	4-STB-1	Stone Bin	Pre 1990	250 TPH/0.276 MMTPY	FE
4-PH-1	1E	6 Bay LPD Pre-Heater	Pre 1990	31.5 TPH/0.276 MMTPY	4-DC-1
4-TC-1	1E	Transfer Chute	Pre 1990	31.5 TPH/0.276 MMTPY	4-DC-1
4-RK-1 400-105	1E	400 TPD Rotary Kiln (11'6"x150'); KVS Heat Rating; 5.0 MMBtu/ton Lime; Fuel: Coal	1995	16.7 TPH/0.146 MMTPY	4-DC-1
4-NC-1	E-6-DC-1	NIEMS Lime Cooler	Pre 1990	16.7 TPH/0.146 MMTPY	6-DC-1
4-VF-1	1E	Vibrating Feeder	Pre 1990	16.7 TPH/0.146 MMTPY	4-DC-1
4-VF-2	1E	Vibrating Feeder	Pre 1990	16.7 TPH/0.146 MMTPY	4-DC-1
4-VF-3	1E	Vibrating Feeder	Pre 1990	16.7 TPH/0.146 MMTPY	4-DC-1
4-VF-4	1E	Vibrating Feeder	Pre 1990	16.7 TPH/0.146 MMTPY	4-DC-1
5-SI-2	5-SI-2	Coal Bin	Pre 1990	30 Tons/0.0263 MMTPY	FE
5-WF-1	5-WF-1	Coal Weigh Feeder	Pre 1990	3 TPH/0.0263 MMTPY	FE

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
5-BM-1	1E	Ball Mill	Pre 1990	3 TPH/0.0263 MMTPY	4-DC-1
5-AS-1	1E	Classifier	Pre 1990	3 TPH/0.0263 MMTPY	4-DC-1
4-PC-1	1E	Primary Collector	Pre 1990	3 TPH/0.015 MMTPY	4-DC-1
4-SI-1	4-SI-1	Dust Bin	Pre 1990	30 TPH/0.015 MMTPY	FE
4-LS-2	4-LS-2	Loading Spout	Pre 1990	30 TPH/0.015 MMTPY	FE
4-DC-1	4-DC-1	Dust Collector	Pre 1990	NA	NA
4-SC-1	4-SC-1	Baghouse Screw Conveyor	Pre 1990	3 TPH/0.015 MMTPY	FE
4-SC-2	4-SC-2	Baghouse Screw Conveyor	Pre 1990	3 TPH/0.015 MMTPY	FE
4-SC-3	4-SC-3	Baghouse Collection Screw	Pre 1990	3 TPH/0.015 MMTPY	FE
4-SC-4	4-SC-4	Dust Screw Conveyor	Pre 1990	3 TPH/0.015 MMTPY	FE
4-BEL-1	4-BEL-1	Dust Elevator	Pre 1990	3 TPH/0.015 MMTPY	FE
5-CS-1	5-CS-1	3-Sided Covered Coal Storage Pile	2002	5,000 Tons/0.054 MMTPY	PE
5-CS-1A	5-CS-1A	Coal Storage Pile	2014	15,000 TPY	NA
5-CS-2	5-CS-2	Coal Storage Pile	2014	15,000 TPY	NA
5-DH-1	5-DH-1	Dump Hopper - Coal	2006	50 TPH/0.054 MMTPY	PE
5-VF-1	5-VF-1	Vibrating Feeder - Coal	2006	50 TPH/0.054 MMTPY	PE
5-BC-0	5-BC-0	Belt Conveyor - Coal	2006	50 TPH/0.054 MMTPY	FE
5-CR-1	5-CR-1	Coal Grinder	2006	50 TPH/0.054 MMTPY	FE
5-SI-1	5-SI-1	Coal Silo	2006	2,500 Tons/0.054 MMTPY	FE
5-VF-2	5-VF-2	Vibrating Feeder - Coal	2006	60 TPH/0.054 MMTPY	FE
5-BC-1	5-BC-1	Belt Conveyor - Coal	2006	60 TPH/0.054 MMTPY	FE
5-BC-2	5-BC-2	Belt Conveyor - Coal	2006	60 TPH/0.054 MMTPY	FE
5-BC-3	5-BC-3	Belt Conveyor	1960s	60 TPH/0.054 MMTPY	FE
500 TPD LIME KILN (Group 005)					
4-SI-4	E-4-DC-5	Hydrate Storage Bin	2024	2,000 CF	BH
4-BL-6	500-115	Blower	2024	20 HP	BH
4-BC-5	4-BC-5	Belt Conveyor	1995	400 TPH/0.306 MMTPY	FE
4-STB-2	4-STB-2	Stone Bin	1995	300 Tons/0.306 MMTPY	FE
4-PH-2	500-115	8-Bay LPD Preheater	1995	38.62 TPH/0.306 MMTPY	4-DC-2
4-TC-2	500-115	Transfer Chute	1995	38.62 TPH/0.306 MMTPY	4-DC-2

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
4-RK-2	500-115	500 Ton per day KVS Rotary Lime Kiln - Lime Calcining System; Kennedy Van Saun, Allis Mineral Systems Burner 89 MMBtu/hr; Fuel: Coal	1995	38.62 TPH/0.306 MMTPY	4-DC-2
4-NC-2	500-P1	NIEMS - Lime Cooler	1995	20.8 TPH/0.165 MMTPY	6-DC-4
4-VF-5	500-115	Vibrating Feeder	1995	20.8 TPH/0.165 MMTPY	4-DC-2
4-VF-6	500-115	Vibrating Feeder	1995	20.8 TPH/0.165 MMTPY	4-DC-2
4-VF-7	500-115	Vibrating Feeder	1995	20.8 TPH/0.165 MMTPY	4-DC-2
4-VF-8	500-115	Vibrating Feeder	1995	20.8 TPH/0.165 MMTPY	4-DC-2
5-BC-4	5-BC-4	Conveyor Belt	1995	60 TPH/0.028 MMTPY	FE
5-SI-3	5-SI-3	Coal Bin	1995	50 Tons/0.028 MMTPY	FE
5-WF-2	5-WF-2	Coal Weigh Feeder	1995	3.5 TPH/0.028 MMTPY	FE
5-BM-2	500-115	Ball Mill	1995	3.5 TPH/0.028 MMTPY	4-DC-2
5-AS-2	500-115	Classifier	1995	3.5 TPH/0.028 MMTPY	4-DC-2
4-PC-2	500-115	Primary Separator	1995	3 TPH/0.015 MMTPY	4-DC-2
4-SC-9	500-119b	Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SC-10	500-119b	Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-BEL-2	500-119b	Bucket Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SI-2	500-119b	Dust Bin for Bag House Dust	1995	50 Tons/0.015 MMTPY	4-DC-3
4-LS-1	500-119b	Loading Spout	1995	30 TPH/0.015 MMTPY	4-DC-3
500-BOB	500-119b	Blow Off Bin for Truck Cleaning	1997	20 TPH/0.003 MMTPY	4-DC-3
4-DC-2	500-115	Dust Collector	1995	NA	NA
4-SC-5	500-119b	Module C-D Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SC-6	500-119b	Module A-B Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SC-7	500-119b	Baghouse Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SC-8	500-119b	Dust Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-DC-3	500-119b	Dust Collector	1995	NA	NA
LIME HANDLING SYSTEM (Group 006)					
6-BC-1	6-BC-1	Belt Conveyor	Pre 1990	16.7 TPH/0.146 MMTPY	FE
6-BC-2	E-6-DC-1	Belt Conveyor	Pre 1990	50 TPH/0.311 MMTPY	6-DC-1
6-BEL-2	E-6-DC-3	Bucket Elevator	Pre 1990	50 TPH/0.1 MMTPY	6-DC-3
6-BC-3	E-6-DC-1	Belt Conveyor	Pre 1990	50 TPH/0.311 MMTPY	6-DC-1

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
6-CR-3	E-6-DC-1	Roll Crusher; McLanahan Roll Crusher Model No. Black Diamond 18" x 18" Type: Double Roll	1998	50 TPH/0.311 MMTPY	6-DC-1
6-DC-1	E-6-DC-1	Dust Collector	1991	NA	NA
6-BEL-1	6-BEL-1	Bucket Elevator	1998	50 TPH/0.311 MMTPY	FE
6-VS-4	E-6-DC-3	5 Deck Vibrating Screen (5' x 10')	1998	50 TPH/0.311 MMTPY	6-DC-3
6-DC-3	E-6-DC-3	Dust Collector	1991	NA	NA
6-SC-1	6-SC-1	Screw Conveyor	Pre 1990	50 TPH/0.311 MMTPY	FE
6-SC-2	6-SC-2	Screw Conveyor	1998	50 TPH/0.311 MMTPY	FE
6-SC-3	6-SC-3	Screw Conveyor	1998	50 TPH/0.311 MMTPY	FE
6-SC-4A	6-SC-4A	Screw Conveyor	1998	50 TPH/0.1 MMTPY	FE
6-SC-4B	6-SC-4B	Screw Conveyor	1998	50 TPH/0.1 MMTPY	FE
6-SC-5	6-SC-5	Screw Conveyor	Pre 1990	50 TPH/0.311 MMTPY	FE
6-SI-1	6-SI-1	Lime Storage Silo No. 1	1960s	125 Tons/0.311 MMTPY	FE
6-SI-2	6-SI-2	Lime Storage Silo No. 2	1960s	125 Tons/0.311 MMTPY	FE
6-SI-3	6-SI-3	Lime Storage Silo No. 3	1960s	125 Tons/0.311 MMTPY	FE
6-SI-4	6-SI-4	Lime Storage Silo No. 4	1960s	125 Tons/0.311 MMTPY	FE
6-SI-5	6-SI-5	Lime Storage Silo No. 5	1960s	125 Tons/0.311 MMTPY	FE
6-SI-6	6-SI-6	Lime Storage Silo No. 6	1960s	125 Tons/0.311 MMTPY	FE
6-SI-7	6-SI-7	Hydrate Feed Storage Silo No. 7	1960s	735 Tons/0.1 MMTPY	FE
6-SI-8	6-SI-8	Hydrate Feed Storage Silo No. 8	1960s	735 Tons/0.1 MMTPY	FE
6-SI-9A	6-SI-9A	Hydrate Feed Storage Silo No. 9A	1960s	735 Tons/0.1 MMTPY	FE
6-BB-1	6-BB-1	Granular Lime Bagging Bin	Pre 1990	25 TPH/0.311 MMTPY	FE+FE
6-VF-1	6-VF-1	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-2	6-VF-2	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-3	6-VF-3	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-4	6-VF-4	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-5	6-VF-5	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-6	6-VF-6	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-BC-8	6-BC-8	Belt Conveyor	1998	150 TPH/0.1 MMTPY	FE
6-BC-9	6-BC-9	Belt Conveyor	1998	150 TPH/0.1 MMTPY	FE
6-BC-10	6-BC-10	Belt Conveyor	1998	150 TPH/0.1 MMTPY	FE
6-GB-1	6-GB-1	Granular Bagger	1998	25 TPH/0.311MMTPY	FE+FE

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
6-SC-8	6-SC-8	Screw Conveyor	1998	150 TPH/0.311 MMTPY	FE
6-SC-9	6-SC-9	Screw Conveyor	1998	150 TPH/0.311 MMTPY	FE
6-SC-11	6-SC-11	Screw Conveyor	2016	50 TPH/0.311MMTPY	FE
6-LS-1	E-6-DC-3	Retractable Loading Spout	1998	150 TPH/0.311 MMTPY	6-DC-3
6-BC-11	6-BC-11	Belt Conveyor	1998	150 TPH/0.1 MMTPY	FE
6-BEL-5	6-BEL-5	Bucket Elevator	1984	150 TPH/0.1 MMTPY	FE
6-SC-6	E3	Screw Conveyor	2018	50 TPH/0.125 MMTPY	7-DC-3
6-BC-13	6-BC-13	Belt Conveyor	1998	150 TPH/0.311 MMTPY	FE
6-BC-14	6-BC-14	Belt Conveyor	1998	150 TPH/0.311 MMTPY	FE
6-DC-4	500-P1	Dust Collector	1995	NA	NA
6-BC-15	500-P1	Belt Conveyor	1995	20.8 TPH/0.165 MMTPY	6-DC-4
6-BC-16	500-P1	Belt Conveyor	1995	20.8 TPH/0.165 MMTPY	6-DC-4
6-BC-4	500-P1	Product Belt Conveyor	1995	50 TPH/0.311 MMTPY	6-DC-4
6-DC-2	E-6-DC-2	Dust Collector	1998	NA	NA
6-BC-5	E-6-DC-2	Product Belt Conveyor	Pre 1990	50 TPH/0.311 MMTPY	FE
6-VS-3	E-6-DC-2	Double Deck Vibrating Screen (4'x8')	Pre 1990	50 TPH/0.311 MMTPY	6-DC-2
6-BEL-3	6-BEL-3	Bucket Elevator	Pre 1990	50 TPH/0.311 MMTPY	FE
6-CR-2	E-6-DC-2	Roll Crusher	1998	50 TPH/0.311 MMTPY	6-DC-2
6-SI-10	E-6-DC-2	Storage Silo	1991	1,200 Tons/0.311 MMTPY	6-DC-2
6-BC-6	6-BC-6	Conveyor Belt	1991	150 TPH/0.311 MMTPY	FE (Dust Sock)
6-BC-7	6-BC-7	Conveyor Belt	1991	150 TPH/0.311 MMTPY	
6-BEL-4	6-BEL-4	Bucket Elevator	1991	50 TPH/0.311 MMTPY	FE
6-SI-9B	E-6-DC-2	Storage Silo	1991	1,200 Tons/0.311 MMTPY	6-DC-2
6-VS-5	6-VS-5	Single Deck Vibrating Screen	2006	50 TPH/0.06 MMTPY	FE
6-SC-10	6-SC-10	Screw Conveyor	2006	50 TPH/0.06 MMTPY	FE
6-BL-1	6-BL-1	DensPhase Pump System	2006	50 TPH/0.06 MMTPY	FE
6-FG-6	6-FG-6	This flop gate diverts lime leaving bucket elevator 6-BEL-3 to crusher 6-CR-2.	1998	50 TPH/0.311MMTPY	FE
HYDRATE PLANT (Group 007)					
7-SB-1	E3	Hydrate Feed Bin	1984	50 TPH	7-DC-3
7-DC-3	E3	Dust Collector	1984	NA	NA

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
7-BC-1	7-BC-1	Belt Conveyor	1984	15 TPH	FE+FE
7-SC-0	7-SC-0	Screw Conveyor	1984	15 TPH	FE+FE
7-BEL-1	7-BEL-1	Bucket Elevator	1984	15 TPH	FE+FE
7-SC-1	E4	Screw Conveyor	2013	15 TPH	7-SCR-1
7-SCR-1	E4	Wet Scrubber	1999	NA	NA
7-MT-1	7-MT-1	Mixing Tub	1999	15 TPH	FE+FE
7-HY-1	E4	Atmospheric Hydrator	1999	15 TPH	7-SCR-1
7-SC-2	E20	Screw Conveyor	1984	15 TPH	7-DC-20
7-BEL-2	E20	Bucket Elevator	2013	25 TPH	7-DC-20
7-AS-20	E20	Air Separator	2013	25 TPH	7-DC-20
7-SM-1	E20	Pin Mill	2018	20 TPH	7-DC-20
7-SC-8	E20	Screw Conveyor	1984	20 TPH	7-DC-20
7-SC-9	E20	Screw Conveyor	1984	20 TPH	7-DC-20
7-BEL-3	E1	Bucket Elevator	1984	20 TPH	7-DC-1
7-SC-10	E1	Screw Conveyor	1984	20 TPH	7-DC-1
7-SC-11	E1	Screw Conveyor	1984	20 TPH	7-DC-1
7-BL-1	E2, E5, E21	Blower	2018	25 TPH	7-DC-2 7-DC-5 7-DC-21
7-DC-1	E1	Dust Collector	1984	NA	NA
7-SI-1	E1	Hydrate Bin	1984	150 Tons	7-DC-1
7-SI-2	E1	Hydrate Bin	1984	150 Tons	7-DC-1
7-SC-12	E1	Screw Conveyor	1984	25 TPH	7-DC-1
7-SC-13	E1	Screw Conveyor	1984	25 TPH	7-DC-1
7-SI-4	E5	Hydrate Silo	1997	200 Tons	7-DC-5
7-LS-2	7-LS-2	Truck Loading Spout	1997	100 TPH	PE
7-BEL-4	E1	Bucket Elevator	1984	25 TPH	7-DC-1
7-SC-14	E1	Screw Conveyor	1984	25 TPH	7-DC-1
7-LS-1	7-LS-1	Truck Loading Spout	1991	25 TPH	PE
7-SI-5	E21	Hydrate Bagging Bin	2018	25 Tons	7-DC-21
7-DC-21	E21	Dust Collector	2018	NA	NA
7-SC-23	E20	Screw Conveyor	2013	25 TPH	7-DC-20

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
7-SC-24	E20	Screw Conveyor	2013	20 TPH	7-DC-20
7-SC-25	E1	Screw Conveyor	2013	20 TPH	7-DC-1
7-SC-27	E6	Screw Conveyor	2018	5 TPH	7-DC-6
7-SC-28	E2	Screw Conveyor	2018	20 TPH	7-DC-2
7-DC-2	E2	Dust Collector	1991	NA	NA
7-BG-1	E6	Hydrate Bagging Machine	2018	25 TPH	7-DC-6
7-CDC-1	E6	Chain Drag Conveyor	2018	2.5 TPH	7-DC-6
7-BGR-1	E2	Hydrate Bulk Bin	2018	15 Tons	7-DC-2
7-SC-29	E20	Screw Conveyor	2019	20 TPH	7-DC-20
7-SC-30	E20	Screw Conveyor	2019	20 TPH	7-DC-20
7-BM-1	E20	Ball Mill	2019	20 TPH	7-DC-20
7-SC-31	E20	Screw Conveyor	2019	20 TPH	7-DC-20
7-SC-32	E20	Screw Conveyor	2019	20 TPH	7-DC-20
7-DC-20	E20	Duct Collector	2013	NA	NA
7-DC-5	E5	Dust Collector	2018	NA	NA
7-DC-6	E6	Dust Collector	2018	NA	NA

PORTABLE PLANT (Group 008)

GF1	GF1	Grizzly Feeder	2002	300 TPH/0.6 MMTPY	WS
PC1	PC1	Jaw Crusher	2002	300 TPH/0.6 MMTPY	WS
BC1	BC1	Under Crusher Belt Conveyor	2002	300 TPH/0.6 MMTPY	WS
BC2	BC2	Screen Feed Radial Stacker	2002	300 TPH/0.6 MMTPY	COM
PS1/BC5	PS1/BC5	Triple Deck Scalping Screen and Under Screen take-away belt	2002	300 TPH/0.6 MMTPY	PE, WS
BC3	BC3	Stockpile Feed Radial Stacker Belt	2002	110 TPH/0.6 MMTPY	COM
PSP1	PSP1	Limestone Open Stockpile 1 Area: 8,460 ft2 Height: 32 Feet	2002	8,000 Tons/0.6 MMTPY	COM
BC4	BC4	Stockpile Feed Radial Stacker	2002	190 TPH/0.6 MMTPY	WS
PSP2	PSP2	Gabion Open Stockpile 2 Area: 8,460 ft2 Height: 32 Feet	2002	8,000 Tons/0.05 MMTPY	COM
BC6	BC6	Surge Bin Feed Radial Stacker	2002	300 TPH/0.6 MMTPY	COM
B1	B1	Surge Bin	2002	50 Tons/0.6 MMTPY	COM
BC7	BC7	Under-Bin Main Feed Belt Conveyor	2002	300 TPH/1.2 MMTPY	COM

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
PS2/BC12	PS2/BC12	Triple Deck Screen and Conveyor	2002	300 TPH/1.2 MMTPY	FE, WS
PC2	PC2	Cone Crusher	2002	300 TPH/0.6 MMTPY	WS
BC8	BC8	Belt Conveyor	2002	300 TPH/0.6 MMTPY	COM
BC9	BC9	Stockpile Feed Radial Stacker	2002	150 Tons/0.6 MMTPY	COM
PSP3	PSP3	Limestone Open Stockpile Area: 8,460 ft2 Height: 32 Feet	2002	8,000 Tons/0.6 MMTPY	COM
BC10	BC10	Stock Feed Radial Stacker	2002	190 TPH/0.6 MMTPY	COM
PSP4	PSP4	Open Stockpile 4 Area: 8,460 ft2 Height: 32 Feet	2002	8,000 Tons/0.6 MMTPY	COM
BC11	BC11	Stock Feed Radial Stacker	2002	75 TPH/0.6 MMTPY	COM
PSP5	PSP5	Open Stockpile 5 Area: 8,460 ft2 Height: 32 Feet	2002	8,000 Tons/0.6 MMTPY	COM

VEHICULAR TRAFFIC (Group 009)

VT	VT	Vehicles Traveling Plant Haulroads	Pre 1972	NA	WT

LIMESTONE GRINDING SYSTEM (Group 011)

11-DH-1	11-DH-1	Feed Hopper	2009	100 TPH/0.1 MMTPY	PE
11-BC-4	11-BC-4	Belt Conveyor	2009	100 TPH/0.1 MMTPY	PE
11-BC-1	11-BC-1	Belt Conveyor	2007	200 TPH/0.5694 MMTPY	FE
11-BEL-1	11-BEL-1	Bucket Elevator	2007	200 TPH/0.5694 MMTPY	FE
11-SI-3	E-11-DC-1	Mill Feed Bin	2007	500 Tons/0.5694 MMTPY	11-DC-1
11-BC-2	11-BC-2	Belt Conveyor	2007	65 TPH/0.5694 MMTPY	FE
11-SB-2	11-SB-2	Surge Bin	2007	10 Ton/0.5694 MMTPY	FE
11-BM-1	E-11-DC-1	Bradley Mill	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-DS-1	E-11-DC-1	Dynamic Separator	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-HG-1	E-11-DC-1	Hot Air Generator	2007	7.5 MM Btu/Hr	11-DC-1
11-CY-1	E-11-DC-1	Cyclone Separator	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-BL-3	E-11-DC-1	Blower	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-FT-1	11-FT-1	Fuel Oil Storage Tank	Modified 2007	8,000 gal	None
11-CL-1	E-11-DC-1	Classifier Separator	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-BL-2	E-11-DC-1	Blower	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-SI-1	E-11-DC-1	Sand Storage Silo	2007	350 Tons/0.5694 MMTPY	11-DC-1
11-CY-2	E-11-DC-1	Cyclone Separator	2007	65 TPH/0.5694 MMTPY	11-DC-1

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
11-SI-2	E-11-DC-1	Ag Lime Storage Silo	2007	150 Tons/0.5694 MMTPY	11-DC-1
11-DC-1	E-11-DC-1	Dust Collector	2007	NA	NA
11-SC-1	11-SC-1	Screw Conveyor	2007	1 TPH/0.0028 MMTPY	FE
11-DC-4	E-11-DC-4	Dust Collector	2011	0.022 gr/dscf	NA
11-SI-5	E-11-DC-4	Rock Dust Silo	2007	400 Tons/0.5694 MMTPY	11-DC-4
11-SI-6	E-11-DC-2	Rock Dust Bulk Silo	2007	400 Tons/0.5694 MMTPY	11-DC-2
11-SC-3	E-11-DC-2	Screw Conveyor	2007	65 TPH/0.5694 MMTPY	11-DC-2
11-DC-2	E-11-DC-2	Dust Collector	2008/ 2011	NA	NA
11-DV-5	E-11-DC-3	Divertor	2008	NA	11-DC-3
11-DV-20	E-11-DC-2	Divertor	2011	65 TPH/0.5694 MMTPY	11-DC-2
11-DV-21	E-11-DC-2	Divertor	2011	65 TPH/0.5694 MMTPY	11-DC-2
11-SB-1	E-11-DC-3	Rock Dust Bin	2008	100 Tons/0.5694 MMTPY	11-DC-3
11-SSB-1	E-11-DC-3	Super Sack Bagger	2008	30 TPH/0.2628 MMTPY	11-DC-3
11-SI-7	E-11-DC-3	Ultra-Fine Rock Dust Bin	2008	125 Tons/0.5694 MMTPY	11-DC-3
11-SC-7	E-11-DC-3	Screw Conveyor	2008	65 TPH/0.5694 MMTPY	11-DC-3
11-LS-4	E-11-DC-3	Truck Loading Spout	2008	65 TPH/0.5694 MMTPY	11-DC-3
11-DC-3	E-11-DC-3	Dust Collector	2008/ 2011	NA	NA
11-SC-4	E-11-DC-3	Screw Conveyor	2008	2 TPH/0.002934 MMTPY	11-DC-3
11-SC-5	E-11-DC-3	Screw Conveyor	2008	2 TPH/0.002934 MMTPY	11-DC-3
11-SC-6	E-11-DC-3	Screw Conveyor	2008	2 TPH/0.002934 MMTPY	11-DC-3
11-SI-4	E-11-DC-3	Baghouse Dust Bin	2008	50 Tons/0.002934 MMTPY	11-DC-3
11-LS-3	E-11-DC-2	Truck Loading Spout	2008	65 TPH/0.5694 MMTPY	11-DC-2
11-LS-2	E-11-DC-1	Truck Loading Spout	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-LS-1	E-11-DC-1	Truck Loading Spout	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-SC-20	E-11-DC-20	Screw Conveyor	2011	30 TPH/262,800 TPY	11-DC-20
11-BEL-20	E-11-DC-20	Bucket Elevator	2011	38.5 TPH/332,880 TPY	11-DC-20
11-BG-20	E-11-DC-20	Bagger	2011	30 TPH/262,800 TPY	11-DC-20
11-SC-21	E-11-DC-20	Screw Conveyor	2011	7.5 TPH/65,700 TPY	11-DC-20
11-WC-20	NA	Wire Conveyor	2011	30 TPH/262,800 TPY	No Emissions

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity ⁽¹⁾	Control Device ⁽²⁾
11-BC-20	NA	Belt Conveyor (bagged product)	2011	30 TPH/262,800 TPY	No Permitted Emissions
11-BC-21	NA	Belt Conveyor (bagged product)	2011	30 TPH/262,800 TPY	No Permitted Emissions
11-BC-22	NA	Belt Conveyor (empty bags)	2011	30 TPH/262,800 TPY	No Permitted Emissions
11-SC-22	E-11-DC-20	Screw Conveyor	2011	7.5 TPH	11-DC-20
11-DC-20	E-11-DC-20	Dust Collector	2011	0.014 gr/dscf	NA

- (1) Compliance with the maximum design capacity limitations as given under Emission Units Table 1.1 shall be based on a clear and visible boilerplate rating or on product literature, manufacturer's data, or equivalent documentation that shows that the specific emission unit(s) or processing line in question is limited by design or an upstream/downstream bottleneck to a throughput or production rate that does not exceed the specified value under Table 1.1.
- (2) Control Device abbreviations: FE = Full Enclosure, FE+FE = Full Enclosure in Building, PE = Partial Enclosure, NE = No Enclosure, BH = Baghouse, WT = Water Truck, WS = Water Spray, COM = Carry Over Moisture from an Upstream Water Spray, NA = Not Applicable

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-1396E	September 10, 2019
R13-1381B	May 29, 2024
R13-1685C	June 27, 2025
R13-2113K	April 21, 2016
R13-2222-P2	March 19, 2002
R13-2670B	May 1, 2014

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSPS	New Source Performance Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM₁₀	Particulate Matter less than 10µm in diameter
C.F.R. or CFR	Code of Federal Regulations	pph	Pounds per Hour
CO	Carbon Monoxide	ppm	Parts per Million
C.S.R. or CSR	Codes of State Rules	PSD	Prevention of Significant Deterioration
DAQ	Division of Air Quality	psi	Pounds per Square Inch
DEP	Department of Environmental Protection	SIC	Standard Industrial Classification
FOIA	Freedom of Information Act	SIP	State Implementation Plan
HAP	Hazardous Air Pollutant	SO₂	Sulfur Dioxide
HON	Hazardous Organic NESHAP	TAP	Toxic Air Pollutant
HP	Horsepower	TPY	Tons per Year
lbs/hr or lb/hr	Pounds per Hour	TRS	Total Reduced Sulfur
LDAR	Leak Detection and Repair	TSP	Total Suspended Particulate
m	Thousand	USEPA	United States Environmental Protection Agency
MACT	Maximum Achievable Control Technology	UTM	Universal Transverse Mercator
mm	Million	VEE	Visual Emissions Evaluation
mmBtu/hr	Million British Thermal Units per Hour	VOC	Volatile Organic Compounds
mmft³/hr or mmcf/hr	Million Cubic Feet Burned per Hour		
NA or N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
 - a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

- d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.

[45CSR§30-6.4.]

2.7. Minor Permit Modifications

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.

[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.

[45CSR§30-6.5.b.]

2.9. Emissions Trading

- 2.9.1. 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 the permit and that are in accordance with all applicable requirements.

[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
- b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield.

- d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.
- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
- b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
- c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

- 2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
- b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

- 2.16.1. 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. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Reserved

2.18. Federally-Enforceable Requirements

- 2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

- 2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

- 2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall

directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

- 2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

2.21. Permit Shield

- 2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45 CSR§30-5.6.a.]

- 2.21.2. Nothing in this permit shall alter or affect the following:

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

- 2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B.]

2.23. Severability

- 2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

2.24. Property Rights

- 2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

- 2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.
- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.
 - b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
 - c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. [45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. [40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. [45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. [45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(15)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.
- [40 C.F.R. 82, Subpart F]

- 3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]
- 3.1.9. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 45CSR§§7- 3.2 (See Section 3.1.10.), 3.3, 3.4, 3.5, 3.6, and 3.7 (See Section 3.1.11.).
[45CSR§7-3.1.; 45CSR13, R13-1396, 4.1.10.; 45CSR13, R13-1685, 4.1.5.a]
- 3.1.10. The provisions of Section 3.1.9 [45CSR§7-3.1] shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.
[45CSR§7-3.2; 45CSR13, R13-1396, 4.1.10.; 45CSR13, R13-1685, 4.1.5.b]
- 3.1.11. No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to Section 3.1.14 [45CSR§7-5.1.] is required to have a full enclosure and be equipped with a particulate matter control device.
[45CSR§7-3.7.]
- 3.1.12. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in 45CSR7 Table 45-7A.
[45CSR§7-4.1.; 45CSR13, R13-1396, 4.1.10.; 45CSR13, R13-1685, 4.1.5.c]
- 3.1.13. Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR§7-4.12.]
- 3.1.14. No person shall cause, suffer, allow, or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design, or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1.; 45CSR13, R13-1685, 4.1.5.d]
- 3.1.15. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to prevent particulate matter generation and atmospheric entrainment.
[45CSR§7-5.2.; 45CSR13, R13-1685, 4.1.5.e]

- 3.1.16. Affected facilities as defined in 40 C.F.R. §§60.670 and 60.671 must meet the stack emission limits and compliance requirements in Table 2 of 40 C.F.R. Part 60 Subpart OOO within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 C.F.R. §60.8. The requirements in Table 2 of 40 C.F.R. Part 60 Subpart OOO apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.
- a. Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008 must meet the following stack emission limits:
 - 1. A particulate matter (PM) limit of 0.05 g/dscm (0.022 gr/dscf), except for equipment identified in 40 C.F.R. §§60.672(d) through (f); and
 - 2. An opacity limit of 7 percent for dry control devices.
 - b. Affected facilities that commenced construction, modification, or reconstruction on or after April 22, 2008 must meet the following stack emission limits:
 - 1. A particulate matter (PM) limit of 0.032 g/dscm (0.014 gr/dscf), except for equipment identified in 40 C.F.R. §§60.672(d) through (f); and
 - 2. An opacity limit of 7 percent for dry control devices on individual enclosed storage bins.

[45CSR16, 40 C.F.R. §60.672(a) and Table 2; 45CSR13, R13-1685, 4.1.6.a] (Groups 002, 004, 005, 008, 011)

- 3.1.17. Affected facilities as defined in 40 C.F.R. §§60.670 and 60.671 must meet the fugitive emission limits and compliance requirements in Table 3 of 40 C.F.R. Part 60 Subpart OOO within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 C.F.R. §60.11. The requirements in Table 3 of 40 C.F.R. Part 60 Subpart OOO apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008 must meet the following fugitive emission limits:

- a. Ten (10) percent opacity for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility.
- b. Fifteen (15) percent opacity for crushers without a capture system.

Affected facilities that commenced construction, modification, or reconstruction on or after April 22, 2008 must meet the following fugitive emission limits:

- c. Seven (7) percent opacity for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility.

- d. Twelve (12) percent opacity for crushers without a capture system.

[45CSR16, 40 C.F.R. §60.672(b) and Table 3; 45CSR13, R13-1685, 4.1.6.b] (Groups 002, 004, 005, 008, 011)

- 3.1.18. Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of 40 C.F.R. §60.672.

[45CSR16, 40 C.F.R. §60.672(d); 45CSR13, R13-1685, 4.1.6.c] (Groups 002 and 008)

- 3.1.19. If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in 40 C.F.R. §60.672(a) and (b) [Sections 3.1.16 and 3.1.17.], or the building enclosing the affected facility or facilities must comply with the following emission limits:

- a. Fugitive emissions from the building openings (except for vents as defined in 40 C.F.R. §60.671) must not exceed 7 percent opacity; and
- b. Vents (as defined in 40 C.F.R. §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of 40 C.F.R. Part 60 Subpart OOO (see Section 3.1.16.).

[45CSR16, 40 C.F.R. §60.672(e); 45CSR13, R13-1685, 4.1.6.d] (Groups 002, 004, 005, 008, 011)

- 3.1.20. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2113, R13-2113A, R13-2113B, R13-2113C, R13-2113D, R13-2113E, R13-2113F, R13-2113G, R13-2113H, R13-0725, R13-1788 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.

[45CSR13, R13-2113, 2.5.1.]

- 3.1.21. The transfer points, as identified in the Process Flow Diagram included as Attachment F in Permit Application R13-1396E, shall use the following control devices:

- a. The following transfer points shall be required to use partial enclosures: TP287 and TP292;
- b. The following transfer points shall be required to use double full enclosures (FE/FE): TP254, TP256 -TP258 ; and
- c. Transfer point TP259 shall be controlled by the scrubber 7-SCR-1; and
- d. All other transfer points that have the potential to emit particulate matter, with the exception of TP260 and TP261, shall use Dust Collectors as specified under in the Process Flow Diagram included as Attachment F in Permit Application R13-1396D.

[45CSR13, R13-1396, 4.1.7.]

3.2. Monitoring Requirements

- 3.2.1. The permittee shall implement the following maintenance and monitoring work practices in order to demonstrate continuous compliance with opacity requirements of 45CSR7 and 40 C.F.R. Part 60 Subparts

OOO and HH. [Not required for open stockpiles (2-OS-1 and 4-OS-1), Coal and Limestone Feed Stockpile Common to 400 TPD & 500 TPD Lime Kilns, PSP1, PSP2, PSP3, PSP4, PSP5, and haulroads]

Visible emission observations shall be conducted at least once per calendar quarter by a certified Method 9 observer for all transfer points and fugitive dust sources during periods of operation for 5 minutes to determine if any of the emission units or transfer points have visible emissions. If emissions are evident and quantifiable, their opacity shall be determined by conducting a documented Method 9 observation. If any emission unit or transfer point has visible emissions exceeding the applicable regulatory limit, then it should be documented as such and the permittee shall initiate corrective actions to minimize emissions in a timely manner in accordance with the maintenance and monitoring work practice procedures established below (See Section 3.2.3. for exceptions).

- a. Monitoring in the form of inspections shall be conducted at least once per calendar quarter on all transfer points and emission units subject to the opacity requirements of 45CSR7 and 40 C.F.R. Part 60 Subpart OOO or HH. The inspections shall utilize a certified Method 9 observer to evaluate each source of emissions using Method 22. If during the inspection or anytime the permittee recognizes visual emissions approaching opacity limits, maintenance activities shall be initiated to minimize PM emissions and maintain opacity within compliance levels based on the applicable opacity standard. Maintenance activities shall be completed, and a satisfactory inspection documented before the end of the following quarterly inspection.
- b. A record of each visible emissions observation shall be maintained, including any data required by 40 C.F.R. Part 60 Appendix A, Method 22 or Method 9, whichever is appropriate. The record shall include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer. Records shall be maintained on site stating any maintenance or corrective actions taken as a result of the quarterly inspections, and the times the fugitive dust control system(s) are inoperable, and any corrective actions taken.

[45CSR§30-5.1.c.] (Groups 002, 004, 005, 006, 007, 008, 011)

- 3.2.2. The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall operate each baghouse within its pressure drop (ΔP) range listed in the table below. Records of the weekly pressure drops for each baghouse shall be maintained. The permittee shall also maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results including the pressure drop, and corrective action taken, if any. Records shall be maintained on site for five (5) years from its origination date.

Emission Unit ID	ΔP Compliant Range (inches of H ₂ O)
1-DC-1	0.5 – 9.0
4-DC-1, 4-DC-2	2.0 – 15.0
4-DC-3	0.5 – 6.0
6-DC-1, 6-DC-2, 6-DC-3, 6-DC-4, 7-DC-1, 11-DC-1, 11-DC-2, 11-DC-3, 11-DC-4, 11-DC-20	0.5 – 8.0

Emission Unit ID	AP Compliant Range (inches of H ₂ O)
7-DC-2, 7-DC-3, 7-DC-5, 7-DC-6, 7-DC-20, 7-DC-21	0.5 – 10.0

[45CSR§30-5.1.c.] (Section 1.0 (Dust Collectors))

- 3.2.3. Except as specified in 40 C.F.R. §60.674(e) [Section 3.2.4.], the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 C.F.R. Part 60, Appendix A–7). The Method 22 (40 C.F.R. Part 60, Appendix A–7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 C.F.R. Part 60, Appendix A–7) test, including the date and any corrective actions taken, in the logbook required under 40 C.F.R. §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to 40 C.F.R. §60.675(b) [Section 3.3.5.] simultaneously with a Method 22 (40 C.F.R. Part 60, Appendix A–7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of 40 C.F.R. Part 60 Subpart OOO. The revised visible emissions success level must be incorporated into the permit for the affected facility.

[45CSR16, 40 C.F.R. § 60.674 (c)] (11-SI-7, 11-SC-7, 11-LS-4, 11-DC-3)

- 3.2.4. As an alternative to the periodic Method 22 (40 C.F.R. Part 60, Appendix A–7) visible emissions inspections specified in 40 C.F.R. §60.674(c) [Section 3.2.3.], the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 C.F.R. Part 63 Subpart AAAAA) may follow the continuous compliance requirements in row 1 items (ii) through (iii) of Table 6 to 40 C.F.R. Part 63 Subpart AAAAA [Section 12.2.5].

[45CSR16, 40 C.F.R. §60.674(e)] (11-SI-7, 11-SC-7, 11-LS-4)

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:
- The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4 or 45CSR§30-6.5 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 - 1. The permit or rule evaluated, with the citation number and language.
 - 2. The result of the test for each permit or rule condition.
 - 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(15-16) and 45CSR13]

- 3.3.2. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to the Secretary. The Secretary may at his option witness or conduct such stack tests. Should the Secretary exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[45CSR§7-8.1.]
- 3.3.3. The Secretary may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions.
[45CSR§7-8.2.]
- 3.3.4. In conducting the performance tests required in 40 C.F.R. §60.8, the owner or operator shall use as reference methods and procedures the test methods in 40 C.F.R. Part 60 Appendices A-1 through A-7 or

other methods and procedures as specified in this section, except as provided in 40 C.F.R. § 60.8(b). Acceptable alternative methods and procedures are given in 40 C.F.R. §60.675(e) [Section 3.3.8.].
[45CSR16, 40 C.F.R. §60.675(a)] (Groups 002, 004, 005, 008, 011)

3.3.5. The owner or operator shall determine compliance with the particulate matter (PM) standards in 40 C.F.R. §60.672(a) [Section 3.1.16.] as follows:

- a. Method 5 of 40 C.F.R. Part 60 Appendix A–3 or Method 17 of 40 C.F.R. Part 60 Appendix A–6 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 C.F.R. Part 60, Appendix A–3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.
- b. Method 9 of 40 C.F.R. Part 60 Appendix A–4 and the procedures in 40 C.F.R. §60.11 shall be used to determine opacity.

[45CSR16, 40 C.F.R. §60.675(b)] (Groups 002, 004, 005, 008, 011)

3.3.6. The permittee shall utilize the test methods and procedures of 40 C.F.R. §60.675(c) as follows:

- a. In determining compliance with the particulate matter standards in 40 C.F.R. §60.672(b) [Section 3.1.17.] or 40 C.F.R. §60.672(e)(1) [Section 3.1.19.a.], the owner or operator shall use Method 9 of 40 C.F.R. Part 60 Appendix A–4 and the procedures in 40 C.F.R. § 60.11, with the following additions:
 1. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).
 2. The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of 40 C.F.R. Part 60 Appendix A–4, Section 2.1) must be followed.
 3. For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.
- b.
 1. In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under 40 C.F.R. § 60.672(f), using Method 9 (40 C.F.R. Part 60 Appendix A–4), the duration of the Method 9 (40 C.F.R. Part 60 Appendix A–4) observations shall be 1 hour (ten 6-minute averages).
 2. The duration of the Method 9 (40 C.F.R. Part 60 Appendix A–4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.
- c. When determining compliance with the fugitive emissions standard for any affected facility described under 40 C.F.R. § 60.672 (b) [Section 3.1.17.] or 40 C.F.R. § 60.672(e)(1) [Section 3.1.19.a.], the

duration of the Method 9 (40 C.F.R. Part 60 Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of 40 C.F.R. Part 60 Subpart OOO must be based on the average of the five 6-minute averages.

[45CSR16, 40 C.F.R. §60.675(c) and Table 3] (Groups 002, 004, 005, 008, 011)

- 3.3.7. To demonstrate compliance with the fugitive emission limits for buildings specified in 40 C.F.R. §60.672 (e)(1) [Section 3.1.19.a.], the owner or operator must complete the testing specified in 40 C.F.R. §60.675 (d)(1) and (2) [Section 3.3.7.a. and b.]. Performance tests must be conducted while all affected facilities inside the building are operating.
- a. If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 C.F.R. Part 60 Appendix A–4) performance test according to this section and 40 C.F.R. § 60.11.
 - b. If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 C.F.R. Part 60 Appendix A–7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in 40 C.F.R. § 60.672 (e) (1) [Section 3.1.19.a.]. If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 C.F.R. Part 60 Appendix A–4) performance test according to this section and 40 C.F.R. § 60.11 to show compliance with the opacity limit in 40 C.F.R. § 60.672 (e) (1) [Section 3.1.19.a.].

[45CSR16, 40 C.F.R. §60.675(d)] (Groups 002, 004, 005, 008, 011)

- 3.3.8. The owner or operator may use the following as alternatives to the reference methods and procedures specified in 40 C.F.R. § 60.675:
- a. For the method and procedure of 40 C.F.R. § 60.675 (c) [Section 3.3.6.], if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:
 1. Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.
 2. Separate the emissions so that the opacity of emissions from each affected facility can be read.
 - b. A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:
 1. No more than three emission points may be read concurrently.
 2. All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
 3. If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

- c. Method 5I of 40 C.F.R. Part 60, Appendix A–3 may be used to determine the PM concentration as an alternative to the methods specified in 40 C.F.R. §60.675(b)(1). Method 5I (40 C.F.R. Part 60, Appendix A–3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.
- d. In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of 40 C.F.R. Part 60 Appendix A–1 of this part [i.e., velocity head <1.3 mm H₂O (0.05 in. H₂O)] and referred to in EPA Method 5 of 40 C.F.R. Part 60 Appendix A–3. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (e.g., from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$V_e = \frac{Q_f}{A_e} \quad (\text{Eq. 1})$$

Where:

- V_e = average building vent velocity (feet per minute);
- Q_f = average fan flow rate (cubic feet per minute); and
- A_e = area of building vent and measurement location (square feet).

[45CSR16, 40 C.F.R. §60.675(e)] (Groups 002, 004, 005, 008, 011)

- 3.3.9. For performance tests involving only Method 9 (40 C.F.R. Part 60 Appendix A–4) testing, the owner or operator may reduce the 30-day advance notification of performance test in 40 C.F.R. §60.7(a)(6) and 40 C.F.R. §60.8(d) to a 7-day advance notification.

[45CSR16, 40 C.F.R. §60.675(g)] (Groups 002, 004, 005, 008, 011)

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.; 45CSR13, R13-1396, 4.4.1.; 45CSR13, R13-2670, 4.4.1.; 45CSR13, R13-1685, 4.4.1, R13-1381, 4.4.1.]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]
- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]
- 3.4.4. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures applied at the facility. The permittee shall also inspect all fugitive dust control systems weekly from May 1 through September 30 and monthly from October 1 through April 30 to ensure that they are operated and maintained in conformance with their designs. The permittee shall maintain records of all scheduled and non-scheduled maintenance and shall state any maintenance or corrective actions taken as a result of the weekly and/or monthly inspections, the times the fugitive dust control system(s) were inoperable, and any corrective actions taken.
[45CSR§30-5.1.c.]
- 3.4.5. Each owner or operator seeking to comply with 40 C.F.R. § 60.670 (d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.
- a. For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:
 - 1. The rated capacity in megagrams or tons per hour of the existing facility being replaced and
 - 2. The rated capacity in tons per hour of the replacement equipment.
 - b. For a screening operation:
 - 1. The total surface area of the top screen of the existing screening operation being replaced and
 - 2. The total surface area of the top screen of the replacement screening operation.
 - c. For a conveyor belt:
 - 1. The width of the existing belt being replaced and
 - 2. The width of the replacement conveyor belt.
 - d. For a storage bin:
 - 1. The rated capacity in megagrams or tons of the existing storage bin being replaced and
 - 2. The rated capacity in megagrams or tons of replacement storage bins.
- [45CSR16, 40 C.F.R. §60.676(a)] (Groups 002, 004, 005, 008, 011)**

- 3.4.6. Owners or operators of affected facilities for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under 40 C.F.R. §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.
[45CSR16, 40 C.F.R. §60.676(b)(1)] (11-SI-7, 11-SC-7, 11-LS-4)
- 3.4.7. The owner or operator of each affected facility demonstrating compliance according to 40 C.F.R. §60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 C.F.R. part 63, subpart AAAAA) must maintain records of visible emissions observations required by §63.7132(a)(3) and (b) of 40 C.F.R. part 63, subpart AAAAA.
[45CSR16, 40 C.F.R. §60.676(b)(3)] (11-SI-7, 11-SC-7, 11-LS-4)
- 3.4.8. The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 C.F.R. §60.672, including reports of opacity observations made using Method 9 (40 C.F.R. Part 60 Appendix A–4) to demonstrate compliance with 40 C.F.R. §§60.672(b) and (e) [Sections 3.1.17 and 3.1.19] and 40 C.F.R. §60.672(f).
[45CSR16, 40 C.F.R. §60.676(f)] (Groups 002, 004, 005, 008, 011)
- 3.4.9. The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in 40 C.F.R. §60.672(b) and the emission test requirements of 40 C.F.R. §60.11.
[45CSR16, 40 C.F.R. §60.676(g)] (Groups 002, 004, 005, 008, 011)
- 3.4.10. The 40 C.F.R. Part 60 Subpart A requirement under 40 C.F.R. §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under 40 C.F.R. Part 60 Subpart OOO.
[45CSR16, 40 C.F.R. §60.676(h), Group (002, 004, 005, 008, 011)]
- 3.4.11. A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.
- a. For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.
- b. For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

[45CSR16, 40 C.F.R. §60.676(i)] (Group 002, 004, 005, 008, 011)

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states

that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

[45CSR§§30-4.4. and 5.1.c.3.D.]

- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

[45CSR§30-5.1.c.3.E.]

- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

US EPA:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Section Chief
U. S. Environmental Protection Agency, Region III
Enforcement and Compliance Assurance Division
Air, RCRA and Toxics Branch (3ED21)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

- 3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 45CSR§30-8.

[45CSR§30-8.]

- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:

DEPAirQualityReports@wv.gov

US EPA:

R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:

DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

- 3.5.7. **Reserved.**

- 3.5.8. **Deviations.**

- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Reserved.
2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or email. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

- b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

- 3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

- 3.6.1. None.

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.
- a. **45CSR§10-5.1** - This process is not defined as a refinery process gas stream or any other process gas stream that contains hydrogen sulfides to be combusted.
 - b. **45CSR17** - Greer Lime Company is subject to 45CSR7 which exempts it from 45CSR17, To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter, as stated in 45CSR§7-10.2.
 - c. **40 C.F.R. §§ 60.380 - 60.386 Subpart LL** - Standards of Performance for Metallic Mineral Processing do not apply because lime or limestone is not a metallic mineral.
 - d. **40 C.F.R. §§ 60.674(a) and 60.676(c), (d), and (e) Subpart OOO** - These sections of 40 C.F.R. Part 60 Subpart OOO do not apply to Greer Lime Company since Greer Lime Company does not incorporate a wet scrubber in their non-metallic mineral processing plant subject to 40 C.F.R. 60 Subpart OOO. Wet scrubber 7-SCR-1 is not located in a process that is defined as a non-metallic mineral processing plant.
 - e. **40 C.F.R. §§ 60.730 - 60.737 Subpart UUU** - Standards of Performance for Calciners and Dryers in Mineral Industries do not apply because lime is not listed as a mineral processed or produced in a mineral processing plant.
 - f. **40 C.F.R. 64 Compliance Assurance Monitoring (CAM)** - The two rotary kilns have uncontrolled potential to be Title V major for PM, however they are subject to 40 C.F.R. 63 Subpart AAAAA standards, which were proposed after 11/15/1990 and therefore, exempts the pollutant specific emission unit “PSEU” from “CAM”.

The coal handling system (5-DH-1, 5-VF-1, 5-BC-0, 5-CR-1, 5-SI-1, 5-VF-2, 5-BC-1, 5-BC-2 and 5-BC-3) employs only passive control measures to meet the opacity requirements of 40 C.F.R. Part 60 Subpart Y and therefore, do not employ any add on control equipment that would require CAM monitoring.

The lime handling system (Group 006) does not encompass any individual PSEU having pre-controlled emissions exceeding major source thresholds for Title V.

The Hydrate Plant (Group 007) does not encompass any individual PSEU having pre-controlled emissions exceeding major source thresholds for Title V.

The fine grinding lines (Group 011) do not encompass any individual PSEU having pre-controlled emissions exceeding major source thresholds for Title V.

The open coal stockpiles (5-CS-1A and 5-CS-2) authorized by R13-2670B employ only passive control measures to meet the opacity requirements of 40 C.F.R. Part 60 Subpart Y and therefore, do not employ any add on control equipment that would require CAM monitoring.

4.0. Requirements for Primary and Secondary Crushing (Group 002) [Emission Unit IDs: 1-CR-1, 1-CR-2; 1-IH-1; 1-VS-1, 2-VS-1; 1-DH-1; 1-VGF-1; 1-VF-1, 2-VF-1, 2-VF-2, 2-VF-3, 2-VF-4; 1-SB-1; 1-SI-1, 1-SI-2, 2-SI-1; 1-BC-1, 1-BC-2, 1-BC-3, 1-BC-4, 1-BC-5, 2-BC-1, 2-BC-2, 2-BC-3, 2-BC-4, 2-BC-5, 2-BC-6, 2-BC-7, 2-BC-8, 2-BC-9; 2-OS-1, 2-OS-2]

4.1. Limitations and Standards

4.1.1. Only the emission units/sources identified in Table 1.0 of R13-1685C, with the exception of any de minimis sources as identified under Table 45-13B of 45CSR13, is authorized at the permitted facility by permit R13-1685C. In accordance with the information filed in Permit Applications R13-1685, R13-1685A, R13-1685B, and R13-1685C the emission units/sources identified under Table 1.0 of R13-1685C shall not exceed the listed maximum design capacity where listed, shall utilize the specified emission control device, and comply with any other information provided under Table 1.0 of R13-1685C.
[45CSR13, R13-1685, 4.1.1]

4.1.2. Input of stone to the primary crusher shall not exceed 800 tons per hour or 1,500,000 tons per year.
[45CSR13, R13-1685, 4.1.2] (1-CR-1, TS1, TS-DG1)

4.1.3. Fugitive dust control equipment as proposed in Permit Application R13-1685 and its supplements shall be installed, operated and maintained in such a manner as to minimize fugitive dust generation and atmospheric entrainment. Such measures shall include:

- a. Pressurized water sprays located at the primary and secondary crushers, primary and secondary screens, conveyor belt discharge for stockpile 2-OS-1, truck dump hopper, and truck dump hopper vibrating feeder.
- b. Primary and secondary screens (1-VS-1 and 2-VS-1) shall be fully enclosed except for entry and discharge points.
- c. Water sprays at stockpile, 2-OS-2, during material storage.
- d. Water truck utilizing pressurized spray nozzles for dust control of haulroads and stockpile areas.

[45CSR13, R13-1685, 4.1.3] (1-CR-1, 1-CR-2, 1-VS-1, 2-VS-1, 2-BC-4, 1-DH-1, 1-VGF-1, 2-OS-1, 2-OS-2)

4.1.4. Pressurized water spray system shall be winterized by equipping each spray manifold with a drain and heat taping all exposed piping in accordance with Permit Application R13-1685.
[45CSR13, R13-1685, 4.1.4]

4.1.5. Operation and Maintenance of Air Pollution Control Equipment

The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.10.; 45CSR13, R13-1685, 4.1.7]

4.1.6. **Applicable Rules**

The permittee shall meet all applicable requirements, including those not specified above, as given under 45CSR7 and 40 C.F.R. 60, Subpart OOOO. Any final revisions made to the above rules will, where applicable, supersede those specifically cited in this permit.

[45CSR13, R13-1685, 4.1.8]

- 4.1.7. See Sections 3.1.16 through 3.1.19 for all affected facilities. The vibrating feeders (2-VF-3 and 2-VF-4) are not subject to NSPS, Subpart OOO, since construction of this facility commenced prior to 1983. The open stockpile (2-OS-1) is not subject to the NSPS, Subpart OOO.

[45CSR16, 40 C.F.R. 60 Subpart OOO]

4.2. **Monitoring Requirements**

- 4.2.1. See Section 3.2 for opacity and dust collector monitoring requirements.

4.3. **Testing Requirements**

- 4.3.1. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established in this permit and/or applicable regulations.

[45CSR13, R13-1685, 4.3.1]

- 4.3.2. See Sections 3.3.4 through 3.3.9 for opacity and PM testing requirements from 40 C.F.R. Part 60 Subpart OOO.

4.4. **Recordkeeping Requirements**

- 4.4.1. The following information shall be recorded on a daily basis, and maintained at the permitted facility for a period of three years, and made available to the Director, or his designated representative upon request:

- a. Limestone charged through primary and secondary crushing and screening circuit in tons per day; and
- b. Water used for particulate control in gallons per day; and

A report of monthly totals shall be submitted to the Director on suitable forms. Such monthly reports shall be certified to be accurate by the Chief Executive Officer or owner of the permitted facility, or their designee and shall be submitted by the fifteenth day following the end of each calendar month.

[45CSR13, R13-1685, 4.2.1]

- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-1685, 4.4.2]

- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-1685, 4.4.3]

4.5. Reporting Requirements

- 4.5.1. None.

4.6. Compliance Plan

- 4.6.1. None.

5.0. Requirements for Limestone Grinding (Group 011) [Emission Unit IDs: 11-BC-1, 11-BC-2, 11-BC-4; 11-SC-1, 11-SC-20, 11-SC-3, 11-SC-4, 11-SC-5, 11-SC-6, 11-SC-7; 11-WC-20; 11-BEL-1, 11-BEL-20; 11-SI-1, 11-SI-2, 11-SI-3, 11-SI-4, 11-SI-5, 11-SI-6, 11-SI-7; 11-SB-1, 11-SB-2; 11-DS-1; 11-CL-1; 11-HG-1; 11-BM-1; 11-CY-1, 11-CY-2; 11-DC-1, 11-DC-2, 11-DC-3, 11-DC-4; 11-LS-1, 11-LS-2, 11-LS-3, 11-LS-4; 11-BG-20; 11-SSB-1; 11-BL-2, 11-BL-3; 11-DH-1, 11-BC-20, 11-BC-21, 11-BC-22, 11-SC-21, 11-DV-20, and 11-DV-21]

5.1. Limitations and Standards

5.1.1. The maximum processing rate of limestone to the Fine Grinding System from the Secondary Crushing System shall not exceed 400 tons per hour (TPH) and 600,000 tons per year (TPY).
[45CSR13, R13-2113, 4.1.1.] (11-SI-3)

5.1.2. The fine grinding circuit shall employ a hot air generator, grinding mill, dynamic separator, cyclone #1, cyclone #2, classifier separator and two centrifugal blowers identified as 11-HG-1, 11-BM-1, 11-DS-1, 11-CY-1, 11-CY-2, 11-CL-1, 11-BL-2, and 11-BL-3 respectively. The operation of this circuit shall not exceed the following maximum operating and emission limitations:

a. Emissions from the emission point E-11-DC-1 shall not exceed the maximum individual hourly and annual emission limits set forth below:

Emission Source ID	Pollutant	Maximum Emissions	
		Hourly (lb/hr)	Annual TPY
11-HG-1, 11-BM-1, 11-DS-1, 11-CY-1, 11-CY-2, 11-CL-1, 11-BL-2, 11-BL-3, 11-SI-1, 11-SI-2, 11-SI-3	PM	1.75	7.64
	PM ₁₀	0.83	3.64
	SO ₂	3.84	16.8
	NO _x	0.72	3.2
	CO	0.59	2.6

[40 C.F.R. §60.672(a)(1) for PM and 45CSR§10-4.1 for SO₂]

- b. The hot air generator shall not consume more than 54 gallons per hour or 473,040 gallons per year of No. 2 fuel oil;
- c. The No. 2 fuel oil consumed by the hot air generator shall not contain sulfur greater than 0.5 percent by weight. This limit and the fuel restriction limit in 5.1.2.b coincides with the SO₂ limits in Table 5.1.2.a.;
- d. The feed rate of material (limestone or lime) into the circuit shall not exceed 65 tons per hour or 569,400 tons per year;
- e. Visible PM from emission point E-11-DC-1 shall not be exhibited greater than 7 percent opacity.

[45CSR13, R13-2113, 4.1.5., 45CSR16, 40 C.F.R. §60.672(a)(2)] (11-HG-1, 11-BM-1, 11-DS-1, 11-CY-1, 11-CY-2, 11-CL-1, 11-BL-2, 11-BL-3, 11-SI-1, 11-SI-2, 11-SI-3)

5.1.3. Emissions discharged to the atmosphere from emission points E-11-DC-20, E-11-DC-4, E-11-DC-3 and E-11-DC-2 shall be limited to the following maximum emission limitations:

- a. PM concentration in the exhaust stream from the emission points E-11-DC-2, E-11-DC-4, and E-11-DC-3 shall not exceed 0.022 gr/dscf while emissions from emission point E-11-DC-20 shall not exceed 0.014 gr/dscf;
- b. Annual PM₁₀ and PM emissions from emission point E-11-DC-3 shall not exceed 1.18 TPY and 2.48 TPY respectively;
- c. Annual PM₁₀ and PM emissions from emission point E-11-DC-2/E-11-DC-4 (combined) shall not exceed 1.18 TPY and 2.48 TPY respectively;
- d. Annual PM₁₀ and PM emissions from E-11-DC-20 shall not exceed 1.00 TPY and 2.1 TPY respectively; and
- e. Visible PM from the emission point shall not exceed greater than 7 percent opacity.

[45CSR13, R13-2113, 4.1.6., 45CSR16, 40 C.F.R. §60.672(a)] (E-11-DC-3, E-11-DC-2, E-11-DC-4, E-11-DC-20)

5.1.4. The equipment listed below shall not exhibit visible PM emissions greater than 10 percent opacity, unless the transfer points of belt conveyors or the unit is located in an enclosed building. Then, the enclosed building shall not exhibit visible PM emissions greater than 7 percent opacity.

Emission Unit ID	Emission Point ID	Emission Unit Description
11-BC-1	11-BC-1	Belt Conveyor
11-BEL-1	11-BEL-1	Bucket Elevator
11-BC-2	11-BC-2	Belt Conveyor
11-BC-4*	11-BC-4	Belt Conveyor
11-SB-2	11-SB-2	Surge Bin
11-DH-1*	11-DH-1	Feed Hopper
11-SC-4	E-11-DC-3	Screw Conveyor

*Since 11-DH-1 and 11-BC-4 were installed after April 22, 2008, they are subject to 7 percent opacity requirement [see Section 3.1.20.c].

[45CSR13, R13-2113, 4.1.7., 45CSR16, 40 C.F.R. §§60.672(a)(2), (b), and (e)]

5.1.5. Compliance with all annual limits stated in Section 5.1 shall be demonstrated using a 12 month rolling total.

[45CSR13, R13-2113, 4.1.8.]

- 5.1.6. The equipment listed below shall not exhibit visible PM emissions greater than 7 percent opacity.

Emission Unit ID	Emission Point ID	Emission Unit Description
11-BC-20	NA	Belt Conveyor
11-BC-21	NA	Belt Conveyor
11-BC-22	NA	Belt Conveyor

[45CSR13, R13-2113, 4.1.9., 45CSR16, 40 C.F.R. §60.672(b)]

- 5.1.7. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in the Fine Grinding Circuit [dust collectors (11-DC-1, 11-DC-2, 11-DC-3, 11-DC-4, 11-DC-20)] and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-2113, 4.1.10, 45CSR§13-5.10] (11-DC-1, 11-DC-2, 11-DC-3, 11-DC-4, 11-DC-20)

5.2. Monitoring Requirements

- 5.2.1. For the purpose of determining compliance with the opacity limits in Sections 5.1.2.e, 5.1.3.e and 5.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR7A for the sources subject to 45CSR§§7-.3.1 and 3.2, and Method 9 for all other sources as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A 45CSR7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

[45CSR13, R13-2113, 4.2.1.] (E-11-DC-1, E-11-DC-3, E-11-DC-2, and Section 5.1.4 Transfer Points)

- 5.2.2. The owner or operator shall determine compliance with the opacity limits in Section 5.1.6. in accordance with the requirements of 40 C.F.R. Part 60, Subpart OOO, Section §60.675(b)(2) and Table 3 with an initial

Method 9 performance test and a repeat performance test within 5 years from the previous performance test.

[45CSR13, R13-2113, 4.2.1., 45CSR16, and 40 C.F.R. Part 60, Subpart OOO]

5.3. Testing Requirements

- 5.3.1. See Section 3.3.4 through 3.3.9 for 40 C.F.R. Part 60 Subpart OOO testing requirements.
[45CSR16, 40 C.F.R. Part 60 Subpart OOO] (Group 011)

5.4. Recordkeeping Requirements

- 5.4.1. For the purpose of determining compliance with the maximum processing limits set forth in Sections 5.1.1 and 5.1.2.d., the company shall maintain certified monthly and annual records of limestone processing rates of the Fine Grinding System. An example data form is given in Appendix A of R13-2113. Such records shall be maintained in accordance with Section 3.4.2.
[45CSR13, R13-2113, 4.4.4.] (2-OS-2, 11-BM-1)
- 5.4.2. For the purpose of determining compliance with the maximum fuel consumption limit set forth for in Section 5.1.2.b, the company shall maintain certified monthly and annual records of #2 fuel oil consumption. An example data form is given in Appendix B of R13-2113. Such records shall be maintained in accordance with Section 3.4.2.
[45CSR13, R13-2113, 4.4.5.] (11-HG-1)
- 5.4.3. The permittee shall maintain records from fuel oil supplier certifying the fuel sulfur content in order to demonstrate compliance with Section 5.1.2.c.
[45CSR§30-5.1.c.] (11-HG-1)
- 5.4.4. The permittee shall maintain records of all monitoring data required by Section 5.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80 °F, 6 - 10 mph NE wind) during the visual emission check(s). An example data form is given in Appendix C of R13-2113. Should a visible emission observation be required to be performed per the requirements specified in 45CSR7A, the data records of each observation shall be maintained per the requirements of 45CSR7A. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.
[45CSR13, R13-2113, 4.4.6.] (E-11-DC-1, E-11-DC-2, E-11-DC-3, and Section 5.1.4. Transfer Points)
- 5.4.5. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Emission Group (011) of Section 1.0 as dust collectors (11-DC-1, 11-DC-2, 11-DC-3, 11-DC-4, and 11-DC-20), the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13, R13-2113, 4.4.2.]
- 5.4.6. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed Emission Group (011) of Section 1.0 as dust collectors (11-DC-1, 11-DC-2, 11-DC-3, 11-DC-4, and 11-DC-20), the permittee shall maintain records of the occurrence and duration of any malfunction or

operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-2113, 4.4.3.]

5.5. Reporting Requirements

- 5.5.1. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 45CSR7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, R13-2113, 4.5.1.]

- 5.5.2. The permittee shall submit a written report of the results of testing required in 40 C.F.R. Part 60, Subpart OOO before the close of business on the 60th day following the completion of such testing to the Director and U.S. EPA Administrator. Such report(s) shall include all records of the opacity observations made during such testing.

[45CSR13, R13-2113, 4.5.2., 45CSR16, 40 C.F.R. §60.676(f)]

5.6. Compliance Plan

- 5.6.1. None.

6.0. Requirements for 400 TPD Rotary Lime Kiln (Group 004) [Emission Unit IDs: 4-BC-1, 4-BC-2, 4-BC-3, 4-BC-4, 5-BC-2, 5-BC-3; 4-SC-1, 4-SC-2, 4-SC-3, 4-SC-4; 4-BEL-1; 4-TC-1; 4-PH-1; 4-STB-1, 4-SI-1; 5-SI-2; 4-VF-1, 4-VF-2, 4-VF-3, 4-VF-4; 5-BM-1; 5-AS-1; 5-WF-1; 5-CS-1; 4-NC-1; 4-RK-1; 4-DC-1; 4-PC-1; 4-LS-2; 4-OS-1; E-4-DC-4]

6.1. Limitations and Standards

- 6.1.1. Total particulate emissions to the atmosphere from the one (1) stack (4-DS-2) which constitute emission point 1E (emissions from the 400 TPD lime kiln 105 [4-RK-1] after baghouse 112 [4-DC-1]) shall not exceed the more stringent limitation of either 0.6 pounds particulate matter per ton of limestone feed according to 40 C.F.R. Part 60 Subpart HH (following), "Standards of Performance for Lime Manufacturing Plants," or that particulate matter emission limitation in Section 6.1.2.

On and after the date on which the performance test required to be conducted by 40 C.F.R. §60.8 is completed, no owner or operator subject to the provisions of this 40 C.F.R. Part 60, Subpart HH, shall cause to be discharged into the atmosphere from any rotary lime kiln any gases which:

- a. Contain particulate matter in excess of 0.30 kilogram per megagram (0.60 lb/ton) of stone feed.
- b. Exhibit greater than 15 percent opacity when exiting from a dry emission control device.

Compliance with Section 6.1.1.a is streamlined by demonstrating compliance with 40 C.F.R. Part 63 Subpart AAAAA [0.12 lb/ton stone feed (tsf)] incorporated within Section 12.1.4.

[45CSR16, 40 C.F.R. § 60.342 (a), 45CSR13, R13-1381, 4.1.1. ,1E]

- 6.1.2. Emissions to the atmosphere from emission point 1E [4-DS-2] that is controlled by the 4 module baghouse (4-DC-1) shall not exceed the following maximum rates:

Pollutant	lb/hr	TPY
Particulate Matter	0.5	2.19
Sulfur Dioxide	16	70
Nitrogen Oxides	30	131.4
Carbon Monoxide	17	74.5
Non-Methane Hydrocarbons	4	17.5

[45CSR13, R13-1381, 4.1.2.]

- 6.1.3. The maximum throughputs associated with the 400 TPD lime kiln (4-RK-1) shall not exceed:

Substance	TPH	TPD	TPY
Limestone Feed	31.5	756.16	275,997
Bituminous Coal Burned	3	72	26,280

Substance	TPH	TPD	TPY
Lime Product	16.7	400	146,000

[45CSR13, R13-1381, 4.1.3.] (4-RK-1)

- 6.1.4. Bituminous coal as fired in the rotary lime kiln 4-RK-1 shall not exceed 1.1% sulfur by weight and 10% by weight in ash content.

[45CSR13, R13-1381, 4.1.4.] (4-RK-1)

- 6.1.5. No person shall cause, suffer, allow, or permit the emission into open air from any source operation an in-stack sulfur dioxide concentration exceeding 2000 parts per million by volume from existing source operations, except as provided in subdivisions of 45CSR§10-4.1.

[45CSR§10-4.1., 45CSR13, R13-1381, 4.1.5.] (4-RK-1)

- 6.1.6. Compliance with the allowable sulfur dioxide concentration limitations from manufacturing process source operation(s) set forth in this rule shall be based on a block three (3) hour averaging time.

[45CSR§10-4.2., 45CSR13, R13-1381, 4.1.6.]

- 6.1.7. See Sections 3.1.16 and 3.1.17 for belt conveyor, transfer points and affected facilities (4-BC-3 and 4-BC-4).

[45CSR16, 40 C.F.R. §§60.672(a) and (b)] (Limestone transfer operations into kiln)

- 6.1.8. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.

[45CSR§7-5.1., 45CSR13, R13-1381, 4.1.7.]

- 6.1.9. The permitted facility must be constructed and operated in accordance with information filed in Permit Application R13-1381, R13-1381A, R13-1381B and R13-1788 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.

[45CSR13, R13-1381, 2.5.1.]

- 6.1.10. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with 45CSR§§10-3, 4 and 5 by testing and /or monitoring in accordance with one or more of the following: 40 C.F.R. Part 60, Appendix A, Method 6, Method 15, and 45CSR16, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit. Compliance with this requirement may be satisfied through compliance with the requirements of the approved 45CSR10 Monitoring Plan (Appendix A) submitted on March 30, 2001 and any amendments thereto.

[45CSR§10-8.2.3] (4-RK-1 and 4-RK-2)

- 6.1.11. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to 45CSR§§10-3, 4 and 5 shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to 45CSR§10-8.2.3. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years. Compliance with this requirement may be satisfied through compliance with the

requirements of the approved 45CSR10 Monitoring Plan (Appendix A) submitted on March 30, 2001 and any amendments thereto.

[45CSR§10-8.3.1] (4-RK-1 and 4-RK-2)

- 6.1.12. The owner or operator shall submit a periodic exception report to the Secretary, in a manner specified by the Secretary. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause of the excursion and the corrective action taken. Compliance with this requirement may be satisfied through compliance with the requirements of the approved 45CSR10 Monitoring Plan (Appendix A) submitted on March 30, 2001 and any amendments thereto.

[45CSR§10-8.3.2] (4-RK-1 and 4-RK-2)

- 6.1.13. The owner or operator of a fuel burning unit(s) or a combustion source(s) shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each unit in a manner specified by the Secretary. Such records are to be maintained on-site and made available to the Secretary or his duly authorized representative upon request. Compliance with this requirement may be satisfied through compliance with the requirements of the approved 45CSR10 Monitoring Plan (Appendix A) submitted on March 30, 2001 and any amendments thereto.

[45CSR§10-8.3.3] (4-RK-1 and 4-RK-2)

- 6.1.14. PM/PM_{2.5} emissions from Hydrated Lime Silo (4-SI-3) shall not exceed 0.03 pounds per hour. PM/PM_{2.5} emissions from both Hydrated Lime Silos (4-SI-3 and 4-SI-4) combined shall not exceed 0.01 tons per year. (Compliance with this streamlined PM lb/hr limit assures compliance with 45CSR§7-4.1)

[45CSR13, R13-1381, 4.1.19., 45CSR§7-4.1] (E-4-DC-4)

- 6.1.15. Maximum loading of hydrated lime to the Hydrated Lime Silo (4-SI-3) shall not exceed 2,000 tons per year. Compliance with said limit shall be based on a 12 month rolling total.

[45CSR13, R13-1381, 4.1.20.] (E-4-DC-4)

- 6.1.16. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Group 004 of Section 1.1. and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-1381, 4.1.21.]

6.2. Monitoring Requirements

- 6.2.1. The owner or operator of a facility that is subject to the provisions of 40 C.F.R. Part 60 Subpart HH, shall install, calibrate, maintain, and operate a continuous monitoring system (4-OM-2), except as provided in 40 C.F.R. §§60.343(b) and (c), to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 40% opacity

[45CSR16, 40 C.F.R. § 60.343 (a), 45CSR13, R13-1381, 4.2.1.] (Emission Point 1E)

- 6.2.2. For the purpose of conducting a performance test under 40 C.F.R. §60.8, the owner or operator of any lime manufacturing plant subject to the provisions of 40 C.F.R. Part 60 Subpart HH, shall install, calibrate,

maintain, and operate a device for measuring the mass rate of stone feed to any affected rotary lime kiln. The measuring device used must be accurate to within ± 5 percent of the mass rate over its operating range. **[45CSR16, 40 C.F.R. §60.343(d), 45CSR13, R13-1381, 4.2.2.] (4-RK-2)**

- 6.2.3. At the request of the Secretary the owner and/or operator of a source shall install such stack gas monitoring devices as the Secretary deems necessary to determine compliance with the provisions of 45CSR§10. The data from such devices shall be readily available at the source location or such other reasonable location that the Secretary may specify. At the request of the Secretary such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of 45CSR10. **[45CSR§10-8.2.1., 45CSR13, R13-1381, 4.2.3.] (4-RK-1 and 4-RK-2)**

6.3. Testing Requirements

- 6.3.1. 45CSR10 testing requirements.

- a. At such reasonable times as the Secretary may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of 45CSR10 sections 3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 C.F.R. Part 60, Appendix A, Method 6, Method 15, and 45CSR16 or other equivalent EPA testing method approved by the Secretary. The Secretary may at his or her option witness or conduct such tests. Should the Secretary exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices.
- b. The Secretary may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions other than those noted in section 3 of 45CSR10.

[45CSR§§10-8.1.1. and 2., 45CSR13, R13-1381, 4.3.1.a. and b.] (4-RK-1 and 4-RK-2)

- c. Prior to the installation of calibrated stack gas monitoring devices, sulfur dioxide emission rates shall be calculated on an equivalent fuel sulfur content basis. **[45CSR§10-8.2.2., 45CSR13, R13-1381, 4.3.1.c.] (4-RK-1 and 4-RK-2)**

- 6.3.2. In conducting the performance tests required in 40 C.F.R. § 60.8, the owner or operator shall use as reference methods and procedures the test methods in 40 C.F.R. Part 60 Appendix A or other methods and procedures as specified in 40 C.F.R. § 60.344, except as provided in 40 C.F.R. § 60.8 (b). **[45CSR16, 40 C.F.R. §60.344(a), 45CSR13, R13-1381, 4.3.2.]**

- 6.3.3. The owner or operator shall determine compliance with the particulate matter standards in 40 C.F.R. §60.342(a) [Section 6.1.1.] as follows:
- a. The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = \frac{(C_s Q_{sd})}{PK}$$

where:

- E = emission rate of particulate matter, kg/Mg (1b/ton) of stone feed.
 C_s = concentration of particulate matter, g/dscm (gr/dscf).
 Q_{sd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).
P = stone feed rate, Mg/hr (ton/hr).
K = conversion factor, 1000 g/kg (7000 gr/lb).

- b. Method 5 (40 C.F.R. Part 60 Appendix A) shall be used at negative-pressure fabric filters and other types of control devices and Method 5D (40 C.F.R. Part 60 Appendix A) shall be used at positive-pressure fabric filters to determine the particulate matter concentration (C_s) and the volumetric flow rate (Q_{sd}) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).
- c. The monitoring device of 40 C.F.R. §60.343(d) [Section 6.2.2.] shall be used to determine the stone feed rate (P) for each run.
- d. Method 9 (40 C.F.R. Part 60 Appendix A) and the procedures in 40 C.F.R. § 60.11 shall be used to determine opacity.

[45CSR16, 40 C.F.R. §60.344(b)]

- 6.3.4. The permittee shall conduct tests to determine compliance with the nitrogen oxides (NO_x) and carbon monoxide (CO) emission limitations in Section 6.1.2 for the one (1) vent stack (4-DC-1). The Methods listed below from Appendix A of 40 C.F.R. Part 60 shall be utilized for purposes of conducting performance tests, unless the Director approves an alternate or equivalent method. Requirements shall be met with respect to submission of a test protocol and notification of testing.

Pollutant	Method
Carbon Monoxide	10
Nitrogen Oxides	7

Testing to determine compliance with the nitrogen oxides (NO_x) and carbon monoxide (CO) limitations of Section 6.1.2 shall be conducted in accordance with the schedule set forth in the following table.

Test	Test Results	Testing Frequency
Annual	If annual testing is required, after two successive tests indicate mass emission rates between 50% and 90% of nitrogen oxides (NO_x) or carbon monoxide (CO) limit	Once/3 years
Annual	If annual testing is required, after three successive tests indicate mass emission rates $\leq 50\%$ of nitrogen oxides (NO_x) or carbon monoxide (CO) limit	Once/5 years
Once/3 years	If testing is required once/3 years, after two successive tests indicate mass emission rates $\leq 50\%$ of nitrogen oxides (NO_x) or carbon monoxide (CO) limit	Once/5 years
Once/3 years	If testing is required once/3 years and any test indicates a mass emission rate $\geq 90\%$ of nitrogen oxides (NO_x) or carbon monoxide (CO) limit	Annual

Test	Test Results	Testing Frequency
Once/5 years	If testing is required once /5 years and any test indicates mass emission rates between 50% and 90% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/3 years
Once/5 years	If testing is required once/5 years and any test indicates a mass emission rate ≥90% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Annual

[45CSR§30-5.1.c.] (4-RK-1)

- 6.3.5. In the event that the Secretary requests emissions tests to be conducted to determine the particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, and total hydrocarbon emissions from emission point 1E, the methods listed below from Appendix A of 40 C.F.R. Part 60 shall be utilized for purposes of conducting performance tests, unless the Secretary approves an alternate or equivalent method. For any tests to be conducted by the permittee, a test protocol shall be submitted to the DAQ by the permittee at least thirty (30) days prior to the test and shall be approved by the Secretary. The Secretary shall be notified at least fifteen (15) days in advance of the actual dates and times during which the test will be conducted.

Pollutant	Method
Particulate Matter	5D
Sulfur Dioxide	6B
Nitrogen Oxides	7
Carbon Monoxide	10
Total Non-methane Hydrocarbons	25

[45CSR13, R13-1381, 4.3.3.] (4-DC-1)

- 6.3.6. See Sections 3.3.4 through 3.3.9 for NSPS testing requirements.

6.4. Recordkeeping Requirements

- 6.4.1. For the purpose of determining compliance with Sections 6.1.1 through 6.1.6, the company shall maintain certified monthly and annual records on the following for the 400 TPD Rotary Lime Kiln. Such records shall be retained by the permittee for at least five (5) years. Certified records shall be made available to the Director or the duly authorized representative upon request.
- daily usage of the amount of coal purchased to determine the monthly usage and the twelve (12) month rolling total
 - sulfur content on a weight basis of the coal purchased
 - ash content on a weight basis of the coal purchased
 - the approximate heating value of the coal purchased

- e. limestone feed rates to determine the monthly usage and the twelve (12) month rolling total
- f. lime production to determine the monthly usage and the twelve (12) month rolling total

[45CSR§30-5.1.c., 45CSR§30-5.1.c.2.B., 45CSR13, R13-1381, 4.4.4] (4-RK-1)

- 6.4.2. Compliance with the emission limits set forth in Section 6.1.2.and 7.1.3, for VOC, SO₂ and PM from bag houses (4-DC-1 and 4-DC-2) shall be demonstrated by complying with Sections 6.1.4. and 7.1.2.
[45CSR13, R13-1381, 4.4.5.] (4-RK-1)and (4-RK-2)
- 6.4.3. In accordance with Greer’s 45CSR10 Monitoring Plan that was submitted on March 30, 2001, Greer will maintain sulfur content statements from the fuel suppliers on-site for a period of at least five (5) years in accordance with 45CSR10A, Section 7. Greer will submit a “Monitoring Summary Report” and an “Excursion and Monitoring Plan Performance Report” on a quarterly basis to the Secretary by the 30th day of the month following the calendar quarter. Greer’s 45CSR10 Monitoring Plan for the 400 and 500 TPD Rotary Lime Kilns (4-RK-1 and 4-RK-2) is attached in Appendix A.
[45CSR§10-8.3., 45CSR13, R13-1381, 4.4.6] (4-RK-1 and 4-RK-2)
- 6.4.4. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Group 004 of Section 1.1., the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13, R13-1381, 4.4.2.]
- 6.4.5. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Group 004 of Section 1.1., the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
 - a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.For each such case associated with an equipment malfunction, the additional information shall also be recorded:
 - e. The cause of the malfunction.
 - f. Steps taken to correct the malfunction.
 - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-1381, 4.4.3.]

- 6.4.6. In order to determine compliance with 6.1.15., the permittee shall maintain records of the amount of hydrated lime loaded to each silo on a monthly basis.
[45CSR13, R13-1381, 4.4.7.]

6.5. Reporting Requirements

- 6.5.1. For the purpose of reports required under 40 C.F.R. §60.7(c), periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity of the visible emissions from any lime kiln Section 6.1.1. [40 C.F.R. §60.342(a)] is greater than 15 percent.
[45CSR16, 40 C.F.R. §60.343(e)]

6.6. Compliance Plan

- 6.6.1. None.

7.0. Requirements for 500 TPD Rotary Lime Kiln (Group 005) [Emission Unit IDs: 4-BC-5, 5-BC-4; 4-SC-5, 4-SC-6, 4-SC-7, 4-SC-8, 4-SC-9, 4-SC-10; 4-BEL-2; 4-VF-5, 4-VF-6, 4-VF-7, 4-VF-8; 4-SI-2, 5-SI-3, 4-STB-2; 5-AS-2; 5-WF-2; 5-BM-2; 4-PC-2; 4-LS-1; 4-TC-2; 4-NC-2; 4-PH-2; 4-RK-2; 4-DC-2; 4-DC-3; 500-BOB; E-4-DC-5]

7.1. Limitations and Standards

- 7.1.1. Total particulate emissions to the atmosphere from emission point 500-115, the 500 TPD lime kiln (4-RK-2) baghouse (4-DC-2), shall not exceed the more stringent limitation of either 0.6 pounds of particulate matter per ton of limestone feed according to 40 C.F.R. 60 Subpart HH, "Standards of Performance for Lime Manufacturing Plants," or that particulate matter emission limitation in Section 7.1.3.

On and after the date on which the performance test required to be conducted by 40 C.F.R. §60.8 is completed, no owner or operator subject to the provisions of 40 C.F.R. Part 60 Subpart HH, shall cause to be discharged into the atmosphere from any rotary lime kiln any gases which:

- a. Contain particulate matter in excess of 0.30 kilogram per megagram (0.60 lb/ton) of stone feed.
- b. Exhibit greater than 15 percent opacity when exiting from a dry emission control device

Compliance with Section 7.1.1.a is streamlined by demonstrating compliance with 40 C.F.R. Part 63 Subpart AAAAA [0.12 lb/ton stone feed (tsf)] incorporated within Section 12.1.4.

[45CSR16, 40 C.F.R. §60.342(a)(1), 45CSR13, R13-1381, 4.1.8, 40 C.F.R. §60.342(a)(2)] (500-115)

- 7.1.2. Bituminous coal as fired in the rotary lime kiln (4-RK-2), shall not exceed 1.1% sulfur by weight and 10% by weight in ash content.

[45CSR13, R13-1381, 4.1.4] (4-RK-2)

- 7.1.3. Emissions to the atmosphere from emission point 500-115, the 500 TPD lime kiln (4-RK-2) baghouse (4-DC-2), shall not exceed the following maximum rates.

Pollutant	lb/hr	TPY
Particulate Matter	4.1	16.2
Sulfur Dioxide	12.08	47.8
Nitrogen Oxides	42	166
Carbon Monoxide	21	83.2
Non-Methane Hydrocarbons	5	19.8

[45CSR13, R13-1381, 4.1.9]

- 7.1.4. The maximum throughputs associated with lime kiln (4-RK-2) shall not exceed.

Substance	TPH	TPD	TPY
Limestone Feed	38.62	926.88	305,870
Bituminous Coal Burned	3.5	84	27,720
Lime Product	20.8	500	165,000

[45CSR13, R13-1381, 4.1.10] (4-RK-2)

- 7.1.5. The bituminous coal fuel stockpile, common to both lime kilns (4-RK-1) and (4-RK-2), shall not exceed 5,000 tons at any given time.

[45CSR13, R13-1381, 4.1.10] (4-RK-1 and 4-RK-2)

- 7.1.6. The limestone feed stockpile (4-OS-1) common to both lime kilns (4-RK-2) and (4-RK-1), shall not exceed 6,000 tons at any given time.

[45CSR13, R13-1381, 4.1.11] (4-OS-1)

- 7.1.7. Dust Collector (4-DC-2) controls shall include equipment to monitor and maintain a negative pressure drop of 16 inches of water across the baghouse.

[45CSR13, R13-1381, 4.1.12] (4-DC-2)

- 7.1.8. The following equipment shall vent to baghouse (4-DC-3).

Emission Unit ID	Equipment Description
4-SI-2	Baghouse Dust Bin
4-SC-7	Dust Screw Conveyor #1
4-SC-8	Dust Screw Conveyor #2
4-BEL-2	Dust Bucket Elevator
4-LS-1	Dust Truck Loading Spout

[45CSR13, R13-1381, 4.1.13] (4-DC-3)

- 7.1.9. Maximum particulate emissions from baghouse (4-DC-3) emission point 500-119b shall not exceed 0.273 lb/hr.

[45CSR13, R13-1381, 4.1.14] (4-DC-3)

- 7.1.10. Side of baghouse (4-DC-3) emission point 500-119b shall be equipped in such a manner as to discharge emissions vertically into the atmosphere.

[45CSR13, R13-1381, 4.1.15] (4-DC-3)

- 7.1.11. The following equipment shall vent to baghouse (6-DC-4).

Emission Unit ID	Equipment Description
6-BC-15	Product Conveyor #1

Emission Unit ID	Equipment Description
6-BC-16	Product Conveyor #2
6-BC-4	Product Conveyor #3

[45CSR13, R13-1381, 4.1.16] (6-DC-4, 6-BC-15, 6-BC-16, 6-BC-4)

- 7.1.12. Maximum particulate emissions from baghouse (6-DC-4) emission point 500-P1 shall not exceed 1.89 lb/hr.

[45CSR13, R13-1381, 4.1.17] (6-DC-4)

- 7.1.13. Side of baghouse (6-DC-4) emission point 500-P1 shall be equipped in such a manner as to discharge emissions vertically into the atmosphere.

[45CSR13, R13-1381, 4.1.18] (6-DC-4)

- 7.1.14. The maximum processing rate of material to or from the Blow Off Bin (500-BOB) shall not exceed 20 TPH and 3,000 TPY.

[45CSR13, R13-2113, 4.1.4.] (500-BOB)

- 7.1.15. No person shall cause, suffer, allow, or permit the emission into open air from any source operation an in-stack sulfur dioxide concentration exceeding 2000 ppm by volume from existing source operations, except as provided in subdivisions of 45CSR§10-4.1.

[45CSR§10-4.1., 45CSR13, R13-1381, 4.1.5] (4-RK-2)

- 7.1.16. No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device. Compliance with this streamlined opacity limit assures compliance with 40 C.F.R. 60 Subpart OOO.

[45CSR§7-3.7.] (4-SI-2 and 500-BOB)

- 7.1.17. PM/PM_{2.5} emissions from Hydrated Lime Silo (4-SI-4) shall not exceed 0.03 pounds per hour. PM/PM_{2.5} emissions of from both Hydrated Lime Silos (4-SI-3 and 4-SI-4) combined shall not exceed 0.01 tons per year. (Compliance with this streamlined PM lb/hr limit assures compliance with 45CSR§7-4.1)

[45CSR13, R13-1381, 4.1.19., 45CSR§7-4.1] (E-4-DC-5)

- 7.1.18. Maximum loading of hydrated lime to the Hydrated Lime Silo (4-SI-4) shall not exceed 2,000 tons per year. Compliance with said limit shall be based on a 12 month rolling total.

[45CSR13, R13-1381, 4.1.20.] (E-4-DC-5)]

- 7.1.19. Refer to Sections 6.1.10 – 6.1.13 for 45CSR10 sulfur dioxide monitoring requirements, which also pertain to the 500 TPD kiln.

- 7.1.20. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Group 005 of Section 1.1. and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-1381, 4.1.21.]

7.2. Monitoring Requirements

- 7.2.1. The owner or operator of a facility that is subject to the provisions of this 40 C.F.R. Part 60 Subpart HH, shall install, calibrate, maintain, and operate a continuous monitoring system (4-OM-1), except as provided in 40 C.F.R. §§60.343(b) and (c), to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 40 percent opacity.
[45CSR16, 40 C.F.R. §60.343(a), 45CSR13, R13-1381, 4.2.1.]
- 7.2.2. See Section 6.2.2 for 40 C.F.R. Part 60 Subpart HH, operating requirements for devices measuring mass rate of stone feed.
- 7.2.3. See Section 6.2.3 for the 500 TPD Rotary Lime Kiln, (4-RK-2), 45CSR10 stack monitoring provisions.

7.3. Testing Requirements

- 7.3.1. See Section 3.3.4 through 3.3.9 for NSPS testing requirements.
- 7.3.2. See Sections 6.3.2 and 6.3.3 for 40 C.F.R. Part 60 Subpart HH testing requirements.
- 7.3.3. See Sections 6.3.1 for 45CSR10 SO₂ testing requirements.
- 7.3.4. The permittee shall conduct tests to determine compliance with the nitrogen oxides (NO_x) and carbon monoxide (CO) emission limitations in Section 7.1.3 for the one (1) vent stack (4-DC-2). The Methods listed below from 40 C.F.R. Part 60 Appendix A shall be utilized for purposes of conducting performance tests, unless the Director approves an alternate or equivalent method. Requirements shall be met with respect to submission of a test protocol and notification of testing.

Pollutant	Method
Carbon Monoxide	10
Nitrogen Oxides	7

Testing to determine compliance with the nitrogen oxides (NO_x) and carbon monoxide (CO) limitations of Section 7.1.3 shall be conducted in accordance with the schedule set forth in the following table.

Test	Test Results	Testing Frequency
Annual	If annual testing is required, after two successive tests indicate mass emission rates between 50% and 90% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/3 years
Annual	If annual testing is required, after three successive tests indicate mass emission rates ≤50% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/5 years
Once/3 years	If testing is required once/3 years, after two successive tests indicate mass emission rates ≤50% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/5 years
Once/3 years	If testing is required once/3 years and any test indicates a mass emission rate ≥90% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Annual

Test	Test Results	Testing Frequency
Once/5 years	If testing is required once /5 years and any test indicates mass emission rates between 50% and 90% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/3 years
Once/5 years	If testing is required once/5 years and any test indicates a mass emission rate ≥90% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Annual

45CSR§30-5.1.c.] (4-RK-2)

7.4. Recordkeeping Requirements

7.4.1. For the purpose of determining compliance with Sections 7.1.1 through 7.1.6, the company shall maintain certified monthly and annual records on the following for the 500 TPD Rotary Lime Kilns. Such records shall be retained by the permittee for at least five (5) years. Certified records shall be made available to the Director or the duly authorized representative upon request.

- a. daily usage of the amount of coal purchased to determine the monthly usage and the twelve- (12) monthly rolling total
- b. sulfur content on a weight basis of the coal purchased
- c. ash content on a weight basis of the coal purchased
- d. the approximate heating value of the coal purchased
- e. limestone feed rates to determine the monthly usage and the twelve- (12) monthly rolling total
- f. lime production to determine the monthly usage and the twelve- (12) monthly rolling total

[45CSR§30-5.1.c., 45CSR§30-5.1.c.2.B., 45CSR13, R13-1381, 4.4.4.] (4-RK-2)

7.4.2. For the purpose of determining compliance with the maximum processing limits set forth in Section 7.1.14, the company shall maintain certified monthly and annual records of blow off processing rates from the Blow Off Bin. An example data form is given in Appendix A of R13-2113. Such records shall be maintained in accordance with Section 3.4.2.

[45CSR13, R13-2113, 4.4.4.] (500-BOB)

7.4.3. See Section 6.4.3. for 45CSR10 SO₂ recordkeeping requirements.

7.4.4. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Group 005 of Section 1.1., the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-1381, 4.4.2.]

7.4.5. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Group 005 of Section 1.1., the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-1381, 4.4.3.]

- 7.4.6. In order to determine compliance with 7.1.18., the permittee shall maintain records of the amount of hydrated lime loaded to each silo on a monthly basis.

[45CSR13, R13-1381, 4.4.7.]

7.5. Reporting Requirements

- 7.5.1. For the purpose of reports required under 40 C.F.R. §60.7(c), periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity of the visible emissions from any lime kiln in Section 7.1.1 [40 C.F.R. §60.342(a)] is greater than 15 percent.

[45CSR16, 40 C.F.R. §60.343(e)]

7.6. Compliance Plan

- 7.6.1. None.

8.0. Requirements for Lime Handling System (Group 006) [Emission Unit IDs: 6-BC-1, 6-BC-2, 6-BC-3, 6-BC-4, 6-BC-5, 6-BC-6, 6-BC-7, 6-BC-8, 6-BC-9, 6-BC-10, 6-BC-11, 6-BC-13, 6-BC-14, 6-BC-15, 6-BC-16; 6-SC-1, 6-SC-2, 6-SC-3, 6-SC-4A, 6-SC-4B, 6-SC-5, 6-SC-6, 6-SC-8, 6-SC-9, 6-SC-11; 6-BEL-1, 6-BEL-3, 6-BEL-4, 6-BEL-5; 6-SI-1, 6-SI-2, 6-SI-3, 6-SI-4, 6-SI-5, 6-SI-6, 6-SI-7, 6-SI-8, 6-SI-9A, 6-SI-9B, 6-SI-10; 6-BB-1; 6-VF-1, 6-VF-2, 6-VF-3, 6-VF-4, 6-VF-5, 6-VF-6; 6-GB-1; 6-DC-1, 6-DC-2, 6-DC-3, 6-DC-4; 6-CR-2 and 6-CR-3; 6-VS-3, 6-VS-4, 6-VS-5; 6-LS-1; 6-BL-1; 6-BEL-2, 6-SC-10, 6-FG-6]

8.1. Limitations and Standards

- 8.1.1. In the Lime Handling Area, the maximum processing rate of lime through the replacement Roll Crusher (6-CR-3) and the new Roll Crusher (6-CR-2) shall not exceed 50 TPH and 311,000 TPY.
[45CSR13, R13-2113, 4.1.2.] (6-CR-2 and 6-CR-3)
- 8.1.2. Emission points identified as E-6-DC-1, E-6-DC-2, E-6-DC-3, and 6-VS-5 shall not emit visible particulate matter greater than 20% opacity except for visible particulate matter emission less than 40% for a period or periods aggregating no more than 5 minutes in any 60 minute period.
[45CSR13, R13-2113, 4.1.3., 45CSR§7-3.1. and 45CSR§7-3.2.] (6-CR-3, 6-CR-2, 6-VS-4, 6-VS-5)

8.2. Monitoring Requirements

- 8.2.1. See Sections 3.2.1 and 3.2.2 for 45CSR7 opacity monitoring requirements and dust collector monitoring.

8.3. Testing Requirements

- 8.3.1. See Sections 3.3.1 and 3.3.2.

8.4. Recordkeeping Requirements

- 8.4.1. For the purpose of determining compliance with the maximum processing limits set forth in 8.1.1., the company shall maintain certified monthly and annual records of lime processing rates in the Lime Storage and Truck Loading System. An example data form is given in Appendix A of R13-2113. Such records shall be maintained in accordance with condition 3.4.1.
[45CSR13, R13-2113, 4.4.4]

8.5. Reporting Requirements

- 8.5.1. Reserved.

8.6. Compliance Plan

- 8.6.1. None.

9.0. Requirements for Hydrate System (Group 007) [Emission Unit IDs: 7-BC-1, 7-SC-0, 7-SC-1, 7-SC-2, 7-SC-8, 7-SC-9, 7-SC-10, 7-SC-11, 7-SC-12, 7-SC-13, 7-SC-14, 7-SC-23, 7-SC-24, 7-SC-25, 7-SC-27, 7-SC-28; 7-SC-29, 7-SC-30, 7-SC-31, 7-SC-32, 7-BM-1, 7-SI-1, 7-SI-2, 7-SI-4, 7-AS-20; 7-LS-1, 7-LS-2; 7-MT-1; 7-HY-1; 7-SM-1, 7-BL-1, 7-SI-5, 7-BG-1, 7-CDC-1, 7-BGR-1; 7-DC-1, 7-DC-2, 7-DC-3, 7-DC-5, 7-DC-6, 7-DC-20, 7-DC-21; 7-SCR-1; 7-SB-1; 7-BEL-1, 7-BEL-2, 7-BEL-3, 7-BEL-4]

9.1. Limitations and Standards

9.1.1. Only those emission units/sources as identified in Table 1.0 of R13-1396, with the exception of any de minimis sources as identified under Table 45-13B of 45CSR13, are authorized at the Hydrate Plant (the Equipment identified as the Hydrate System (Group 007) in Section 1.1 Emission Units). In accordance with the information filed in Permit Application R13-1396E, the emission units/sources identified under Table 1.0 of R13-1396 shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, shall not exceed the listed maximum design capacities, and shall use the specified control devices.

[45CSR13, R13-1396, 4.1.1.]

9.1.2. Hydrated Lime production shall not exceed 125,000 tons per year.

[45CSR13, R13-1396, 4.1.2.]

9.1.3. Emissions of particulate matter for the listed emission points shall not exceed the limits given in the following table:

Table 9.1.3.: Hydrate Plant Point Source Emission Limits^{(1),(2)}

Emission Point	PM		PM ₁₀		PM _{2.5}	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
E1 (7-DC-1)	0.85	3.72	0.85	3.72	0.85	3.72
E2 (7-DC-2)	0.43	1.88	0.43	1.88	0.43	1.88
E3 (7-DC-3)	0.39	1.69	0.39	1.69	0.39	1.69
E4 (7-SCR-1)	2.25	9.38	1.74	7.27	0.35	1.45
E5 (7-DC-5)	0.43	1.88	0.43	1.88	0.43	1.88
E6 (7-DC-6)	0.94	4.13	0.94	4.13	0.94	4.13
E20 (7-DC-20)	0.47	2.06	0.47	2.06	0.47	2.06
E21 (7-DC-21)	0.43	1.88	0.43	1.88	0.43	1.88

⁽¹⁾ Condensables assumed to be zero from these sources.

⁽²⁾ PM₁₀ and PM_{2.5} emissions based on particle size distribution of hydrated lime provided by the permittee.

Compliance with these limits will ensure compliance with 45CSR§7-4.1

[45CSR13, R13-1396, 4.1.3.]

- 9.1.4. Dust collectors 7-DC-1 and 7-DC-3 shall be installed, operated, and maintained so as to not exceed a maximum particulate matter stack emission concentration of 0.03 grains/ACF.
[45CSR13, R13-1396, 4.1.4.]
- 9.1.5. Dust collectors 7-DC-2, 7-DC-5, 7-DC-6, and 7-DC-21 shall be installed, operated, and maintained so as to not exceed a maximum particulate matter stack emission concentration of 0.02 grains/ACF.
[45CSR13, R13-1396, 4.1.5.]
- 9.1.6. Dust collector 7-DC-20 shall be installed, operated, and maintained so as to not exceed a maximum particulate matter stack emission concentration of 0.01 grains/ACF.
[45CSR13, R13-1396, 4.1.6.]
- 9.1.7. The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply water as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haul roads and other work areas where mobile equipment is used. The spray bar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated.
- The pump delivering the water, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haul roads and work areas where mobile equipment is used.
[45CSR13, R13-1396, 4.1.8.]
- 9.1.8. The permittee shall properly install, operate and maintain winterization systems for all water trucks and/or water sprays in a manner that all such fugitive dust control systems remain effective and functional, to the maximum extent practicable, during winter months and cold weather. At all times, including periods of cold weather, the registrant shall comply with the water trucks and/or water sprays requirements of this permit.
[45CSR13, R13-1396, 4.1.9.]
- 9.1.9. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 of R13-1396 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR13, R13-1396, 4.1.11.]
- 9.1.10. No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device.
[45CSR§7-3.7.] (7-SB-1, 7-SI-1, 7-SI-2, 7-SI-4, and 7-SI-5)
- 9.1.11. See Sections 3.1.9 through 3.1.15 for 45CSR7 limitation and standard requirements for the Hydrate System.

9.2. Monitoring Requirements

- 9.2.1. For the purpose of demonstrating compliance with the maximum production limit set forth in 9.1.1, the permittee shall monitor and record the monthly and rolling twelve-month amount of hydrated lime produced.

[45CSR13, R13-1396, 4.2.1.]

9.2.2. **Visible Emissions Compliance Demonstrations**

For the purposes of demonstrating compliance with visible emissions limitations set forth in 3.1.9, the permittee shall:

- a. Conduct monthly Method 22 visible emission observations of the applicable units (or associated control devices) to ensure proper operation for a sufficient time interval, but no less than one (1) minute each month the units are in operation.
- b. In the event visible emissions are observed in excess of the limitations given under 3.1.9, take immediate corrective action.
- c. Maintain records of all visual emission observations pursuant to the monitoring required under 9.2.2. including any corrective action taken.
- d. In the event of any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40C.F.R. Part 60, Appendix A, Method 9 or 22, report in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, R13-1396, 4.2.2.]

9.3. **Testing Requirements**

- 9.3.1. At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established in the permit application and/or applicable regulations.

[45CSR13, R13-1396, 4.3.1.]

- 9.3.2. The permittee shall meet all applicable Performance Testing Requirements as given under 45CSR7.

[45CSR13, R13-1396, 4.3.2.]

9.4. **Recordkeeping Requirements**

- 9.4.1. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0 of R13-1396, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

[45CSR13, R13-1396, 4.4.2.]

- 9.4.2. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0 of R13-1396, the permittee shall maintain records of the occurrence and duration of

any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-1396, 4.4.3.]

9.5. Reporting Requirements

- 9.5.1. Reserved.

9.6. Compliance Plan

- 9.6.1. None.

10.0. Requirements for Portable Crushing and Screening Plant (Group 008) [Emission point IDs: GF1; PC1, PC2; BC1, BC2, BC3, BC4, BC5, BC6, BC7, BC8, BC9, BC10, BC11; BC12; PS1, PS2; PSP1, PSP2, PSP3, PSP4, PSP5; B1]

10.1. Limitations and Standards

10.1.1. In accordance with the information filed in Permit Application R13-2222-P2, the following process/transfer rates shall not be exceeded, and the following methods of control shall be installed, maintained, and operated so as to minimize particulate matter (PM) emissions:

Emission Point ID	Description	Control Method ⁽¹⁾	Maximum Processing Rate		Associated Transfer Points or Equipment		
			TPH	TPY	Location	ID No.	Control Method ⁽¹⁾
GF1	Grizzly Feeder - Receives limestone from front endloader, transfers it to Jaw Crusher (PC1)	N	300	600000	Before After	TP1 ---	WS ---
PC1	450 TPH Jaw Crusher - Receives limestone from the Grizzly Feeder, transfers it to Under Crusher Belt Conveyor (BC1)	WS	300	600000	Before After	--- TP2	--- WS
BC1	Under Crusher Belt Conveyor - Receives limestone from Jaw Crusher (PC1), transfers it to Screen Feed Radial Stacker (RS2)	WS	300	600000	Before After	TP2 TP3	WS COM
RS2	Screen Feed Radial Stacker - Receives limestone from Under Crusher Belt Conveyor (BC1), transfers it to Double-deck Scalping Screen (PS1)	COM	300	600000	Before After	TP3 TP4	COM COM
PS1	550 TPH Double-deck Scalping Screen - Receives limestone from Screen Feed Radial Stacker (RS2), transfers it to three (3) different locations	FE/WS	300	600000	Before After	TP4 TP5 TP8 TP11	COM WS WS WS

Emission Point ID	Description	Control Method ⁽¹⁾	Maximum Processing Rate		Associated Transfer Points or Equipment		
			TPH	TPY	Location	ID No.	Control Method ⁽¹⁾
RS3	Radial Stacker - Receives crusher run limestone from Scalping Screen (PS1), transfers it to Stockpile (PSP1)	WS	110	600000	Before After	TP5 TP6	WS COM
PSP1	Stockpile - Receives crusher run limestone from Radial Stacker (RS3), transfers it by front endloader into dump trucks	COM	110	600000	Before After	TP6 TP7	COM MD
RS4	Radial Stacker - Receives gabion (lime-stone) from Scalping Screen (PS1), transfers it to Stockpile (PSP2)	WS	190	600000	Before After	TP8 TP9	WS COM
PSP2	Stockpile - Receives gabion (limestone) from Radial Stacker (RS4), transfers it by front endloader into dump trucks	COM	190	50000	Before After	TP9 TP10	COM COM
BC5	Under Screen Belt Conveyor - Receives limestone from Scalping Screen (PS1), transfers it to Surge Bin Feed Radial Stacker (RS6)	WS	300	600000	Before After	TP11 TP12	WS COM
RS6	Surge Bin Feed Radial Stacker - Receives limestone from Belt Conveyor (BC5), transfers it to 50 Ton Bin	COM	300	600000	Before After	TP12 TP13	COM COM
B1	50 Ton Bin - Receives limestone from Radial Stacker (RS6), transfers it to Under-Bin Belt Conveyor (BC7)	COM	300	600000	Before After	TP13 TP14	COM MD

Emission Point ID	Description	Control Method ⁽¹⁾	Maximum Processing Rate		Associated Transfer Points or Equipment		
			TPH	TPY	Location	ID No.	Control Method ⁽¹⁾
BC7	Under-Bin Main Feed Belt Conveyor to screen - Receives limestone from 50 Ton Bin and Belt Conveyor (BC8), transfers it to Three Deck (TD) Screen (PS2)	COM	300	1200000	Before After	TP14 TP17 TP15	COM COM COM
PS2	600 TPH Three Deck (TD) Screen - Receives limestone from Belt Conveyors (BC7 and BC8), transfers it to four (4) different locations	FE/WS	300	1200000	Before After	TP15 TP16 TP18 TP19 TP20	COM WS WS WS WS
PC2	350 TPH Cone Crusher - Receives limestone from Chute exiting TD Screen (PS2), transfers it to Belt Conveyor (BC8)	WS	300	600000	Before After	--- TP16	--- WS
BC8	Belt Conveyor - Receives limestone from Cone Crusher (PC2), transfers it to back to Belt Conveyor (BC7) for reprocessing through TD Screen (PS2)	WS	300	600000	Before After	TP16 TP7	WS COM
RS9	Radial Stacker - Receives 57's (limestone) from TD Screen (PS2), transfers it to Stockpile (PSP3)	WS	150	600000	Before After	TP18 TP25	WS COM
PSP3	Stockpile - Receives 57's (limestone) from Radial Stacker (RS9), transfers it with a front endloader into dump trucks	COM	150	600000	Before After	TP25 TP26	COM MD
RS10	Radial Stacker - Receives crusher limestone from TD Screen (PS2), transfers it to Stockpile (PSP4)	WS	190	600000	Before After	TP19 TP21	WS COM

Emission Point ID	Description	Control Method ⁽¹⁾	Maximum Processing Rate		Associated Transfer Points or Equipment		
			TPH	TPY	Location	ID No.	Control Method ⁽¹⁾
PSP4	Stockpile - Receives crusher run limestone from Radial Stacker (RS10), transfers it with a front endloader into dump trucks	COM	190	600000	Before After	TP21 TP22	COM MD
RS11	Radial Stacker - Receives 8's (limestone) from TD Screen (PS2), transfers it to Stockpile (PSP5)	WS	75	600000	Before After	TP20 TP23	WS COM
PSP5	Stockpile - Receives 8's (limestone) from Radial Stacker (RS11), transfers it with a front endloader into dump trucks	COM	75	600000	Before After	TP23 TP24	COM MD

(1) Control Equipment Abbreviations: N - None, COM - Carry Over Moisture, FE - Full Enclosure, MD - Minimize Drop Height, WS - Water Spray

[45CSR13, R13-2222, A.1.]

10.1.2. In the event that this facility is modified for any reason(s), the facility and its associated emissions shall be reviewed in their entirety for 45CSR14 applicability.

[45CSR13, R13-2222, A.2.]

10.1.3. The permitted facility shall be constructed and operated in accordance with information filed in Permit Application R13-2222-P2 and any amendments thereto. The Director may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.

[45CSR13, R13-2222, C.3.]

10.1.4. See Sections 3.1.16 through 3.1.19 for 40 C.F.R. Part 60 Subpart OOO requirements.

10.2. Monitoring Requirements

10.2.1. See Sections 3.1.17 (b) and (d) for fugitive emissions from any crushers without a capture system.

[45CSR16, 40 C.F.R. §60.672(b) and Table 3, 45CSR13, R13-2222, B.4.c.] (PC1 and PC2)

10.3. Testing Requirements

10.3.1. Reserved.

10.4. Recordkeeping Requirements

- 10.4.1. The company shall maintain certified monthly and annual records of limestone processing rate by the Portable Limestone Crushing and Sizing facility. The annual limestone processing rate shall be calculated using a rolling total for any continuous span of twelve (12) months. The company may use the forms identified as Attachment A in Permit R13-2222-P2.

[45CSR13, R13-2222, B.3.]

10.5. Reporting Requirements

- 10.5.1. Reserved.

10.6. Compliance Plan

- 10.6.1. None.

11.0. Source-Specific Requirements for Coal Handling [Emission Point IDs: 5-DH-1; 5-VF-1, 5-VF-2; 5-CR-1; 5-BC-0, 5-BC-1; 5-SI-1; 5-CS-1; 5-CS-1A, 5-CS-2]

11.1. Limitations and Standards

11.1.1. The amount of coal processed or conveyed shall not exceed 54,000 tons per year. Compliance with the throughput limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of coal throughput at any given time for the previous twelve (12) consecutive calendar months.

[45CSR13, R13-2670, 4.1.1.]

11.1.2. The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply water, or a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haul roads and other work areas where mobile equipment is used.

The spray bar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated. The pump delivering the water, or solution, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of water, or solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haul roads and work areas where mobile equipment is used.

The permittee shall properly install, operate and maintain designed winterization systems for all water trucks and/or water sprays in a manner that all such fugitive dust control systems remain functional during winter months and cold weather.

[45CSR13, R13-2670, 4.1.2.]

11.1.3. **Opacity Limit.** No person shall cause, suffer, allow or permit emission of particulate matter into the open air from any fugitive dust control system which is twenty percent (20%) opacity or greater.

[45CSR13, R13-2670, 4.1.3., 45CSR§5-3.4]

11.1.4. Standards for Particulate Matter.

a. On and after the date on which the performance test is conducted or required to be completed under 40 C.F.R. § 60.8, whichever date comes first, an owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit $\geq 20\%$ opacity. [5-DH-1, 5-VF-1, 5-VF-2, 5-CR-1, 5-BC-0, 5-BC-1, 5-SI-1, 5-CS-1]

b. On and after the date on which the performance test is conducted or required to be completed under 40 C.F.R. § 60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs b.1. through 3. of this section, as applicable to the affected facility. [5-CS-1A, 5-CS-2]

1. Except as provided in paragraph b.3. of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit $\geq 10\%$ opacity.

2. The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).
3. Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph b.1. of this section.

[45CSR13, R13-2670, 4.1.4.1. and 4.1.4.2., 45CSR16, 40 C.F.R. §§60.254(a) and (b)]

- 11.1.5. The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions as specified in paragraphs a. through f. of this section.
 - a. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile.
 - b. For open coal storage piles, the fugitive coal dust emissions control plan must require that one or more of the following control measures be used to minimize to the greatest extent practicable fugitive coal dust: Locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source (when the provisions of paragraph f. of this section are met), use of a wind barrier, compaction, or use of a vegetative cover. The owner or operator must select, for inclusion in the fugitive coal dust emissions control plan, the control measure or measures listed in this paragraph that are most appropriate for site conditions. The plan must also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan must be revised as needed to reflect any changing conditions at the source.
 - c. Any owner or operator of an affected facility that is required to have a fugitive coal dust emissions control plan may petition the Administrator to approve, for inclusion in the plan for the affected facility, alternative control measures other than those specified in paragraph (b) of this section as specified in paragraphs c.i. through iv. of this section.
 - i. The petition must include a description of the alternative control measures, a copy of the fugitive coal dust emissions control plan for the affected facility that includes the alternative control measures, and information sufficient for EPA to evaluate the demonstrations required by paragraph c.ii. of this section.
 - ii. The owner or operator must either demonstrate that the fugitive coal dust emissions control plan that includes the alternate control measures will provide equivalent overall environmental protection or demonstrate that it is either economically or technically infeasible for the affected facility to use the control measures specifically identified in paragraph b.
 - iii. While the petition is pending, the owner or operator must comply with the fugitive coal dust emissions control plan including the alternative control measures submitted with the petition. Operation in accordance with the plan submitted with the petition shall be deemed to constitute compliance with the requirement to operate in accordance with a fugitive coal dust emissions

control plan that contains one of the control measures specifically identified in paragraph b. of this section while the petition is pending.

- iv. If the petition is approved by the Administrator, the alternative control measures will be approved for inclusion in the fugitive coal dust emissions control plan for the affected facility. In lieu of amending this subpart, a letter will be sent to the facility describing the specific control measures approved. The facility shall make any such letters and the applicable fugitive coal dust emissions control plan available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.
- d. The owner or operator must submit the fugitive coal dust emissions control plan to the Administrator or delegated authority as specified in paragraphs d.i. and d.ii. of this section.
 - i. The plan must be submitted to the Administrator or delegated authority prior to startup of the new, reconstructed, or modified affected facility, or 30 days after the effective date of this rule, whichever is later.
 - ii. The plan must be revised as needed to reflect any changing conditions at the source. Such revisions must be dated and submitted to the Administrator or delegated authority before a source can operate pursuant to these revisions. The Administrator or delegated authority may also object to such revisions as specified in paragraph e. of this section.
- e. The Administrator or delegated authority may object to the fugitive coal dust emissions control plan as specified in paragraphs e.i. and e.ii. of this section.
 - i. The Administrator or delegated authority may object to any fugitive coal dust emissions control plan that it has determined does not meet the requirements of paragraphs a. and b. of this section.
 - ii. If an objection is raised, the owner or operator, within 30 days from receipt of the objection, must submit a revised fugitive coal dust emissions control plan to the Administrator or delegated authority. The owner or operator must operate in accordance with the revised fugitive coal dust emissions control plan. The Administrator or delegated authority retain the right, under paragraph e. of this section, to object to the revised control plan if it determines the plan does not meet the requirements of paragraphs a. and b. of this section.
- f. Where appropriate chemical dust suppression agents are selected by the owner or operator as a control measure to minimize fugitive coal dust emissions, (1) only chemical dust suppressants with Occupational Safety and Health Administration (OSHA)-compliant material safety data sheets (MSDS) are to be allowed; (2) the MSDS must be included in the fugitive coal dust emissions control plan; and (3) the owner or operator must consider and document in the fugitive coal dust emissions control plan the site-specific impacts associated with the use of such chemical dust suppressants. [5-CS-1A, 5-CS-2]

[45CSR13, R13-2670, 4.1.4.3., 45CSR16, 40 C.F.R. §60.254(c)]

- 11.1.6. The amount of coal loaded into open stockpiles 5-CS-1A and 5-CS-2 shall not exceed 15,000 tons per year. **[45CSR13, R13-2670, 4.1.5.]**

- 11.1.7. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 of R13-2670B and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. **[45CSR13, R13-2670, 4.1.6, 45CSR§13-5.10] (5-DH-1, 5-VF-1, 5-BC-0, 5-CR-1, 5-SI-1, 5-VF-2, 5-BC-1)**

11.2. Monitoring Requirements

- 11.2.1. For the purpose of determining compliance with the maximum throughput limit set forth in Section 11.1.1, the permittee shall maintain certified monthly and annual records of the amount of coal transferred or processed. Such records shall be retained onsite by the permittee for at least five (5) years. Certified records shall be made available to the Director or his duly authorized representative upon request. **[45CSR13, R13-2670, 4.2.1.]**

- 11.2.2. For the purposes of determining compliance with water truck usage set forth in Section 11.1.2, the permittee shall monitor water truck activity and maintain certified daily records. Such records shall be retained onsite by the permittee for at least five (5) years. Certified records shall be made available to the Director or his duly authorized representative upon request. **[45CSR13, R13-2670, 4.2.2.]**

- 11.2.3. For the purpose of determining compliance with the opacity limits of Section 11.1.3 or 11.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stacks, conveyors, crushers, silos, bins, and screens) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. Method 9 checks shall be performed on the source for at least six (6) minutes. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

[45CSR13, R13-2670, 4.2.3.]

- 11.2.4. For the purpose of determining compliance with the maximum throughput limit set forth in Section 11.1.6., the permittee shall maintain certified monthly and annual records of the amount of coal transferred to open stockpiles 5-CS-1A and 5-CS-2. Such records shall be retained onsite by the permittee for at least five (5)

years. Certified records shall be made available to the Director or his duly authorized representative upon request. **[45CSR13, R13-2670, 4.2.4.]**

11.3. Testing Requirements

11.3.1. The permittee shall conduct tests to determine compliance with the visible emission limitation of Section 11.1.3; tests shall be conducted by certified visible emission observers in accordance with Method 9 of 40 C.F.R. Part 60 Appendix A and 45CSR16.
[45CSR13, R13-2670, 4.3.1., 45CSR§5-12.4.]

11.3.2. The owner or operator must determine compliance with Section 11.1.4. opacity standards as specified in paragraphs a. through c. of this section.

- a. Method 9 of 40C.F.R.60, appendix A-4 and the procedures in 40 C.F.R. §60.11 must be used to determine opacity, with the exceptions specified in paragraphs a.i. and ii. below:
 - i. The duration of the Method 9 performance test shall be 1 hour (ten 6-minute averages).
 - ii. If, during the initial 30 minutes of the observation of a Method 9 performance test, all of the 6-minute average opacity readings are less than or equal to half the applicable opacity limit, then the observation period may be reduced from 1 hour to 30 minutes.
- b. To determine opacity for fugitive coal dust emissions sources, the additional requirements specified in paragraphs b.i. through iii. must be used.
 - i. The minimum distance between the observer and the emission source shall be 5.0 meters (16 feet), and the sun shall be oriented in the 140-degree sector of the back.
 - ii. The observer shall select a position that minimizes interference from other fugitive coal dust emissions sources and make observations such that the line of vision is approximately perpendicular to the plume and wind direction.
 - iii. The observer shall make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Water vapor is not considered a visible emission.
- c. A visible emissions observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions specified in paragraphs c.i. through iii. of this section are met.
 - i. No more than three emissions points may be read concurrently.
 - ii. All three emissions points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
 - iii. If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), then the observer must stop taking readings for the other two points and continue reading just that single point.

[45CSR16, 40 C.F.R. §60.257(a)]

11.4. Recordkeeping Requirements

11.4.1. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0 of R13-2670B, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13, R13-2670, 4.4.2.] (5-DH-1, 5-VF-1, 5-BC-0, 5-CR-1, 5-SI-1, 5-VF-2, 5-BC-1)

11.4.2. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0 of R13-2670B, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-2670, 4.4.3.] (5-DH-1, 5-VF-1, 5-BC-0, 5-CR-1, 5-SI-1, 5-VF-2, 5-BC-1)

11.4.3. The permittee shall maintain records of all monitoring data required by 11.2.3 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix A of R13-2670B. Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note “out of service” (O/S) or equivalent.

[45CSR13, R13-2670, 4.4.4.]

11.4.4. The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:

- a. The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.
- b. The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.
- c. The amount and type of coal processed each calendar month.
- d. The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.
- e. Monthly certification that the dust suppressant systems were operational when any coal was processed, and that manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.
- f. Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g., objections, to the plan and any actions relative to the alternative control measures, e.g., approvals, shall be noted in the logbook as well.

After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the affected facility must submit the test data to EPA. For opacity performance tests, the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.

[45CSR16, 40 C.F.R. §§60.258(a) and (d)]

11.5. Reporting Requirements

- 11.5.1. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40 C.F.R. Part 60 Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, R13-2670, 4.5.1.]

11.6. Compliance Plan

- 11.6.1. None.

12.0. Source-Specific Requirements Pertaining to National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Facilities (40 C.F.R. Part 63 Subpart AAAAA) [Equipment IDs: 4-RK-1, 4-RK-2; 4-BC-1; 4-BC-2; 4-BC-4, 4-BC-5; 4-STB-1, 4-STB-2 and Control Equipment: Fabric Filters 4-DC-1, 4-DC-2; Emission Point ID 1E, 500-115]

12.1. Limitations and Standards

- 12.1.1. As an existing affected source you must comply with the applicable PM emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than January 5, 2007, except as noted in paragraphs 40 C.F.R. §§63.7083(g)(1) and (2).
[45CSR34, 40 C.F.R. §63.7083(b)]
- 12.1.2. As an existing affected source you must comply with all applicable emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than July 16, 2027, except as noted in paragraphs 40 C.F.R. §§63.7083(h)(1) and (2).
[45CSR34, 40 C.F.R. §63.7083(d)]
- 12.1.3. If your affected source commenced construction or reconstruction on or before January 5, 2023, then the compliance date for HCl, mercury, total organic HAP, and D/F emissions limitations is July 16, 2027.
[45CSR34, 40 C.F.R. §63.7083(h)(1)]
- 12.1.4. The permittee must meet each emission limit in Table 1 to 40 C.F.R. 63 Subpart AAAAA that applies:

Table 1 to Subpart AAAAA of Part 63—Emission Limits

For...	You must meet the following emission limit
1. All existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004. (1E and 500-115)	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).
10. All preheater rotary lime kilns and their associated coolers producing high-calcium quick lime (1E and 500-115)	HCl emissions must not exceed 0.096 lb/ton of lime produced.
14. All existing lime kilns and their associated coolers (1E and 500-115)	Mercury emissions must not exceed 34 lb/MMton of lime produced.
15. All lime kilns and their associated coolers (1E and 500-115)	Total Organic HAP emissions must not exceed 2.6 ppmvd @7% O ₂ .
16. All lime kilns and their associated coolers (1E and 500-115)	D/F emissions must not exceed 0.037 ng/dscm (TEQ) ¹ @7% O ₂ .
19. Fugitive emissions from all process stone handling (PSH) operations at a new or existing affected source, except as provided by item 8 of this table 1. (4-BC1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, 4-STB-2)	Emissions must not exceed 10 percent opacity.

¹ Determined using the toxic equivalency factors listed in Table 2 of Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2, 3, 7,

8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (incorporated by reference, see § 63.14). When calculating TEQ, zero may be used for congeners that are below the estimated detection level (EDL).

[45CSR34, 40 C.F.R. §63.7090(a), Table 1]

12.1.5. The permittee shall meet the following operating limits from Table 3 of 40 C.F.R. Part 63 Subpart AAAAA:

- a. Each lime kiln equipped with a fabric filter (FF) shall maintain a 6-minute average opacity for any 6-minute block period that does not exceed 15% percent; and comply with the requirements in 40 C.F.R. §§63.7113(f) and (g) and Table 6 of 40 C.F.R. Part 63 Subpart AAAAA. The referenced requirements are incorporated in Sections 12.2.1 and 12.2.2.

[45CSR34, 40 C.F.R. § 63.7090(b), Table 3 - #1] (1E and 500-115)

- b. The permittee shall prepare and implement for each lime manufacturing plant (LMP) a written operations, maintenance, and monitoring (OM&M) plan in accordance with 40 C.F.R. §63.7100(d) and the corrective actions to be taken when required in Table 6 to Subpart AAAAA of Part 63. This plan has been approved and is provided for reference as Appendix B. Any subsequent changes to the plan must be submitted to the applicable permitting authority, WVDEP Division of Air Quality, for review and approval. Pending approval of an initial or amended plan, the permittee must comply with the provisions of the submitted plan. Each plan must contain the information listed in 40 C.F.R. §§63.7100(d)(1) through (7).

[45CSR34, 40 C.F.R. § 63.7090(b), Table 3 - #5, 40 C.F.R. § 63.7100(d)]

- c. Each emission unit equipped with an add-on air pollution control device shall vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter (FF); and operate each capture/collection system in accordance with the procedures and requirements defined in the OM&M plan required by Section 12.1.5.(b).

[45CSR34, 40 C.F.R. § 63.7090(b), Table 3 - #6] (4-DC-1, 4-DC-2)

12.1.6. On or after the relevant compliance date for your source as specified in 40 C.F.R. § 63.7083(g), you must meet each startup and shutdown period emission limit in table 2 to this subpart that applies to you.

Table 2 to Subpart AAAAA of Part 63—Startup and Shutdown Emission Limits for Kilns and Coolers

For . . .	You must meet the following emission limit	You have demonstrated compliance, if after following the requirements in § 63.7112 . . .
1. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during each startup (1E and 500-115)	Emissions must not exceed 15 percent opacity (based on startup period block average)	i. Installed, maintained, calibrated and operated a COMS as required by 40 C.F.R. part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2);
		ii. Collected the COMS data at a frequency of at least once every 15 seconds, determining block averages for each startup period and demonstrating for each startup block period the average opacity does not exceed 15 percent.

For . . .	You must meet the following emission limit	You have demonstrated compliance, if after following the requirements in § 63.7112 . . .
3. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during shutdown (1E and 500-115)	Emissions must not exceed 15 percent opacity (based on 6-minute average opacity for any 6-minute block period does not exceed 15 percent)	i. Installed, maintained, calibrated and operated a COMS as required by 40 C.F.R. part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2);
		ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.

[45CSR34, 40 C.F.R. §63.7090(c), Table 2]

- 12.1.7. For those LMP using emissions averaging for either HCl emission limits or mercury emission limits in accordance with the procedures in § 63.7114(b) and (c), must not exceed the applicable emission limits in table 9 to this subpart.

Table 9 to Subpart AAAAA of Part 63—Emissions Averaging Emission Limits

For . . .	You must meet the following emission limit
4. Existing preheater rotary lime kilns and their associated coolers producing high-calcium quick lime (1E and 500-115)	HCl emissions must not exceed 0.087 lb/ton of lime produced.
7. Existing lime kilns and their associated coolers (1E and 500-115)	Mercury emissions must not exceed 31 lb/MMton of lime produced.

[45CSR34, 40 C.F.R. §63.7090(d), Table 9]

- 12.1.8. You must prepare and implement for each LMP, a written operations, maintenance, and monitoring (OM&M) plan. You must submit the plan to the applicable permitting authority for review and approval as part of the application for a 40 C.F.R. part 70 or 40 C.F.R. part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, you must comply with the provisions of the submitted plan. Each plan must contain the following information:
- Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable, for each emission unit.
 - A monitoring schedule for each emission unit.
 - Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in tables 1, 2, and 3 to this subpart, respectively. On and after the relevant compliance date for your source as specified in § 63.7083(g), your OM&M plan must address periods of startup and shutdown.
 - Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:

- i. Calibration and certification of accuracy of each monitoring device;
 - ii. Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;
 - iii. Prior to the relevant compliance date for your source as specified in § 63.7083(g), ongoing operation and maintenance procedures in accordance with the general requirements of §§ 63.8(c)(1)(i) and (ii), (3), and (4)(ii). On and after the relevant compliance date for your source as specified in § 63.7083(g), ongoing operation and maintenance procedures in accordance with the general requirements of paragraph (c) of this section and §§ 63.8(c)(1)(ii), (3), and (4)(ii); and
 - iv. Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d).
- e. Procedures for monitoring process and control device parameters.
- f. Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in Table 3 to this subpart, including:
- i. Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.
- g. A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

Note: 40 C.F.R. 63 Subpart AAAAA OMM Plan Revision No. 2 dated January 2021 was reviewed and approved during this Title V Renewal.

[45CSR34, 40 C.F.R. §63.7100(d)]

- 12.1.9. The permittee shall comply with the General Provisions of 40 C.F.R. §63.1 through §63.16 that apply in accordance with Table 9 of 40 C.F.R. Part 63 Subpart AAAAA. When there is overlap between 40 C.F.R. Part 63 Subpart A and 40 C.F.R. Part 63 Subpart AAAAA, as indicated in the Explanations" column in Table 8, 40 C.F.R. Part 63 Subpart AAAAA takes precedence.

[45CSR34, 40 C.F.R. §63.7140]

12.1.10. Initial Compliance with the Emission Limit Standards.

- a. You must demonstrate initial compliance with each emission limit in Table 1 to 40 C.F.R. 63 Subpart AAAAA that applies to you, according to Table 4 to 40 C.F.R. 63 Subpart AAAAA.
- b. For those LMP that comply with either the HCl emissions limit or the mercury emission limit using emissions averaging, the average HCl or mercury emissions determined according to the procedures in § 63.7112(n), must not exceed the applicable emission limit in table 9 to this subpart.

- c. For those LMP that comply with either the HCl emissions limit or the mercury emission limit using emissions averaging, you must comply with the requirements in paragraphs (c)(1) through (4) of this section.
 1. You must complete the stack testing required in paragraph § 63.7112(n) for all lime kilns you wish to include in the emission average before submitting the implementation plan required in paragraph (c)(2) of this section.
 2. You must develop and submit to the applicable regulatory authority for review and approval, an implementation plan for emission averaging no later than 180 days before the date you intend to demonstrate compliance using the emission averaging option. You must include the information contained in paragraphs (c)(2)(i) through (iii) of this section in your implementation plan.
 - i. Identification of all lime kilns in the averaging group, including the lime kiln subcategory, type of lime produced, typical stone production rate, control technology installed, and types of fuel(s) that will be burned.
 - ii. The HCl or mercury emission rate for each lime kiln for each of the fuels identified in paragraph (c)(2)(i) of this section.
 - iii. The date on which you are requesting emission averaging to commence.
 3. The regulatory authority shall review and approve or disapprove the plan according to the following criteria:
 - i. Whether the content of the plan includes all the information specified in paragraph (c)(2) of this section; and
 - ii. Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.
 4. The applicable regulatory authority shall not approve an emission averaging implementation plan containing any of the following provisions:
 - i. Averaging between emissions of differing pollutants;
 - ii. Averaging that includes lime kilns constructed or reconstructed on or after July 16, 2024; or
 - iii. Averaging between lime kilns located at different facilities.
 - iv. Averaging between lime kilns in different subcategories.
- d. You must establish each site-specific operating limit in Table 3 to 40 C.F.R. 60 Subpart AAAAAA that applies to you according to the requirements in § 63.7112(j) and Table 5 to 40 C.F.R.63 Subpart AAAAAA. Alternative parameters may be monitored if approval is obtained according to the procedures in § 63.8(f).

- e. You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7130(e).

[45CSR34, 40 C.F.R. §63.7114]

12.2. Monitoring Requirements

- 12.2.1. The permittee must install, operate, and maintain each continuous opacity monitoring system (COMS) in accordance with the following:

For each COMS used to monitor an add-on air pollution control device, you must install the COMS at the outlet of the control device and install, maintain, calibrate, and operate the COMS as required by 40 C.F.R. Part 63 Subpart A, General Provisions and according to 40 C.F.R. Part 60 Appendix B, Performance Specifications (PS)-1. Facilities that operate COMS installed before February 6, 2001, may continue to meet the requirements in effect at the time of COMS installation unless specifically required to recertify the COMS by their permitting authority.

Continuous compliance shall be established by collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.

[45CSR34, 40 C.F.R. §§ 63.7113(a) and (g), 40 C.F.R. § 63.7121(a), Table 6, Item 4] (1E and 500-115)

- 12.2.2. For each emission unit equipped with an add-on air pollution control device you must inspect each capture/collection and closed vent system at least once each calendar year to ensure each system is operating in accordance with the operating requirements of 40 C.F.R. Part 63 Subpart AAAAA, Table 3 Item 6, incorporated herein as Section 12.1.5(c), and record the results of each inspection.

[45CSR34, 40 C.F.R. § 63.7113(f)] (4-RK-1 and 4-RK-2)

- 12.2.3. Except for monitor malfunctions, associated repairs, required quality assurance or control activities (including, as applicable, calibration checks and required zero adjustments), and except for PSH operations subject to monthly VE testing, you must monitor continuously (or collect data at all required intervals) at all times that the emission unit is operating.

[45CSR34, 40 C.F.R. § 63.7120(b)]

- 12.2.4. Data recorded during the conditions described in 40 C.F.R. §§63.7120(c)(1) and (2) [Section 12.2.4.] may not be used either in data averages or calculations of emission or operating limits; or in fulfilling a minimum data availability requirement. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

- a. Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;
- b. Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and

[45CSR34, 40 C.F.R. § 63.7120(c)]

- 12.2.5. Ongoing compliance with the fugitive opacity requirements referenced in Section 12.1.4 Table 1 to Subpart AAAAA of Part 63—Emission Limits Item #19 shall be demonstrated by conducting monthly visual

emission checks for at least 1 minute per each emission unit while the affected source is in operation in accordance with 40 C.F.R. §63.7121(e), which is stated as follows:

- a. For each PSH operation subject to an opacity limit as specified in 40 C.F.R. Part 63 Subpart AAAAA, Table 1, and any vents from buildings subject to an opacity limit, you must conduct a VE check according to item 1 in 40 C.F.R. Part 63 Subpart AAAAA, Table 7, and as follows:
 1. Conduct visual inspections that consist of a visual survey of each stack or process emission point over the test period to identify if there are VE, other than condensed water vapor.
 2. Select a position at least 15 but not more 1,320 feet from the affected emission point with the sun or other light source generally at your back.
 3. The observer conducting the VE checks need not be certified to conduct 40 C.F.R. Part 60 Appendix A, Method 9, but must meet the training requirements as described in 40 C.F.R. Part 60 Appendix A, Method 22.
- b. Additionally, 40 C.F.R. Part 63 Subpart AAAAA, Table 7, items 1 (a) (ii), (iii), and (iv) allows a tiered monitoring frequency to be utilized in accordance with the following criteria:
 1. If no VE are observed in 6 consecutive monthly checks for any emission unit, you may decrease the frequency of VE checking from monthly to semi-annually for that emission unit; if VE are observed during any semiannual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks;
 2. If no VE are observed during the semiannual check for any emission unit you may decrease the frequency of VE checking from semi-annually to annually for that emission unit; if VE are observed during any annual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and
 3. If VE are observed during any VE check, you must conduct a 6-minute test of opacity in accordance with 40 C.F.R. Part 60 Appendix A, Method 9; you must begin the method 9 test within 1 hour of any observation of VE and the 6-minute opacity reading must not exceed the applicable opacity limit.

[45CSR34, 40 C.F.R. §§ 63.7121(a) and (e) and Table 7, Item 1 of 40 C.F.R. Part 63 Subpart AAAAA] (4-BC-1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, 4-STB-2)

- 12.2.6. If you elect to comply with either the HCl emission limit or the mercury emission limit in table 9 to 40 C.F.R. 63 Subpart AAAAA using emissions averaging in accordance with an implementation plan approved under the provisions in § 63.7114(c) you must comply with the requirements in paragraphs (1) through (8) of this section.
 - a. For lime kilns included in the emissions averaging group that are equipped with dry sorbent injection (DSI) or activated carbon injection (ACI) systems, you must comply with the requirements in § 63.7113(h).

- b. For kilns included in the emissions averaging group that use a control device or method other than DSI or ACI, you must comply with your site-specific monitoring plan of this section, in accordance with the requirements of § 63.7100(d).
- c. Calculate the monthly production-weighted average emission rate using the HCl or mercury emission rate determined during the last performance test and the actual production data for each kiln included in the emissions averaging option, as shown in equation 1 to 40 C.F.R. § 63.7121(g)(3).

Equation 1 to 40 C.F.R. § 63.7121(g)(3)

$$E_g = \frac{\sum_{k=1}^n (E_k \times P_k)}{\sum_{k=1}^n (P_k)}$$

Where:

E_g = Monthly production-weighted average emission rate for month “g” for the group of kilns;

E_k = Average emission rate for kilns “k”, as determined during the last compliance stack test;

P_k = Total monthly production of lime produced for kilns “k”; and

n = Number of kilns in the averaging group.

4. Until 12 monthly weighted average emission rates have been accumulated, the monthly weighted average emissions rate, calculated as shown in 40 C.F.R. § 63.7121(g)(3), must not exceed the emission limit in table 9 to this subpart in any calendar month.
5. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, you must use equation 2 to 40 C.F.R. § 63.7121 (g)(5) to calculate the 12-month rolling average of the monthly weighted average emission rates for the current month and the previous 11 months. The 12-month rolling weighted average emissions rate for the kilns included in the group must not exceed the emission limits in table 9 to this subpart.

Equation 2 to 40 C.F.R. § 63.7121 (g)(5)

$$E_{avg} = \frac{\sum_{i=1}^{12} E_i}{12}$$

Where:

E_{avg} = 12-month rolling average emission rate.

E_i = Monthly weighted average for month “i” calculated as shown in equation 1 to 40 C.F.R. § 63.7121(g)(3).

6. For those kilns that produce multiple types of lime in the HCl subcategory (e.g., high calcium quick lime and dolomitic quick lime) you must establish a kiln-specific emission limit using equation 3 to 40 C.F.R. § 63.7121(g)(6).

Equation 3 to 40 C.F.R. § 63.7121 (g)(6)

$$EL_k = (P_{QL} \times EL_{QL}) + (P_{DL} \times EL_{DL})$$

Where:

EL_K = kiln-specific allowable emission limit, lb/yr.

P_{QL} = Actual 12-month production of high calcium quick lime, ton lime produced/yr.

EL_{QL} = Emission limit for high calcium quick lime taken from table 9 to this subpart, lb HCl/ton lime produced.

P_{DL} = Actual 12-month production of dolomitic quick lime, ton lime produced/yr.

EL_{DL} = Emission limit for dolomitic quick lime taken from table 9 to this subpart, lb HCl/ton lime produced.

7. For those kilns that produce multiple types of lime in the HCl subcategory, after the close of each calendar month compliance with the kiln-specific emission limit developed in 40 C.F.R. § 63.7121(g) would be calculated using equation 4 to 40 C.F.R. § 63.7121(g)(7).

Equation 4 to 40 C.F.R. § 63.7121(g)(7)

$$E_k = (P_{QL} \times TER_{QL}) + (P_{DL} \times TER_{DL})$$

Where:

E_K = Average emission rate for kiln “k”, as determined during the last compliance stack test, lb HCl/ton production.

P_{QL} = Actual 12-month production of high calcium quick lime, ton lime produced/yr.

E_{QL} = Average emission rate for kiln “k” while producing high calcium quick lime, as determined during the last compliance stack test.

P_{DL} = Actual 12-month production of dolomitic quick lime, ton lime produced/yr.

E_{DL} = Average emission rate for kiln “k” while producing dolomitic quick lime, as determined during the last compliance stack test, lb HCl/ton production.

[45CSR34, 40 C.F.R. § 63.7121(g)]

12.3. Testing Requirements

- 12.3.1. The permittee must conduct a performance test within 5 years following the initial performance test and within 5 years following each subsequent performance test thereafter.

[45CSR34, 40 C.F.R. § 63.7111] (1E, 500-115) and Fugitive Unit IDs (4-BC-1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, 4-STB-2)

- 12.3.2. You must conduct each performance test in Table 5 to 40 C.F.R. 63 Subpart AAAAA that applies to you.

[45CSR34, 40 C.F.R. §63.7112(a)]

- 12.3.3. Except for opacity and VE observations, you must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour or as specified in table 5 to this subpart.

[45CSR34, 40 C.F.R. §63.7112(d)]

- 12.3.4. The emission rate of particulate matter (PM) from each lime kiln (and each lime cooler if there is a separate exhaust to the atmosphere from the lime cooler) must be computed for each run using Equation 1 of 40 C.F.R. § 63.7112:

$$E = (C_k Q_k + C_c Q_c) / PK \quad (\text{Eq. 1})$$

Where:

E = Emission rate of PM, pounds per ton (lb/ton) of stone feed.

C_k = Concentration of PM in the kiln effluent, grain/dry standard cubic feet (gr/dscf).

Q_k = Volumetric flow rate of kiln effluent gas, dry standard cubic feet per hour (dscf/hr).

C_c = Concentration of PM in the cooler effluent, grain/dscf. This value is zero if there is not a separate cooler exhaust to the atmosphere.

Q_c = Volumetric flow rate of cooler effluent gas, dscf/hr. This value is zero if there is not a separate cooler exhaust to the atmosphere.

P = Stone feed rate, tons per hour (ton/hr).

K = Conversion factor, 7000 grains per pound (grains/lb).

[45CSR34, 40 C.F.R. § 63.7112(e)]

12.3.5. Performance test results must be documented in complete test reports that contain the information required by 40 C.F.R. § 63.7112(h)(1) through (10), as well as all other relevant information. The plan to be followed during testing must be made available to the Administrator at least 60 days prior to testing.

- a. A brief description of the process and the air pollution control system;
- b. Sampling location description(s);
- c. A description of sampling and analytical procedures and any modifications to standard procedures;
- d. Test results, including opacity;
- e. Quality assurance procedures and results;
- f. Records of operating conditions during the test, preparation of standards, and calibration procedures;
- g. Raw data sheets for field sampling and field and laboratory analyses;
- h. Documentation of calculations;
- i. All data recorded and used to establish operating limits; and
- j. Any other information required by the test method.

[45CSR34, 40 C.F.R. § 63.7112(h)]

12.3.6. You must establish any applicable 3-hour block average operating limit indicated in Table 3 to this subpart according to the applicable requirements in Table 4 to 40 C.F.R. 63 Subpart AAAAA and 40 C.F.R. § 63.7112 (j)(1) through (4).

- a. Continuously record the parameter during the performance test and include the parameter record(s) in the performance test report.
- b. Determine the average parameter value for each 15-minute period of each test run.
- c. Calculate the test run average for the parameter by taking the average of all the 15-minute parameter values for the run.
- d. Calculate the 3-hour operating limit by taking the average of the three test run averages.

[45CSR34, 40 C.F.R. § 63.7112(j)]

- 12.3.7. On and after the relevant compliance date for your source as specified in § 63.7083(g), during startup, kilns must be tested hourly to determine when lime product meets the definition of on-specification lime product. **[45CSR34, 40 C.F.R. § 63.7112(m)]**
- 12.3.8. The emission rate of mercury and hydrogen chloride (HCl) from each lime kiln (and each lime cooler as applicable) must be computed for each run using equation 4 to 40 C.F.R. § 63.7112(n):

Equation 4 to 40 C.F.R. § 63.7112(n)

$$E = \frac{(C_k Q_k + C_c Q_c)}{KP}$$

Where:

E = Emission rate of mercury, pounds per thousand tons (lb/MMton) of lime produced or HCl pounds per ton (lb/ton) of lime produced.

C_k = Concentration in the kiln effluent of mercury, micrograms/dry standard cubic feet (µg/dscf) or HCl, parts per million by volume on a dry basis (ppmvd).

Q_k = Volumetric flow rate of kiln effluent gas, dry standard cubic feet per hour (dscf/hr).

C_c = Concentration in the cooler effluent of mercury, µg/dscf or HCl, ppmvd. This value is zero if there is not a separate cooler exhaust to the atmosphere.

Q_c = Volumetric flow rate of cooler effluent gas, dscf/hr. This value is zero if there is not a separate cooler exhaust to the atmosphere.

P = Lime production rate, tons per hour (ton/hr).

K = Conversion factor, for mercury, 4.4x10⁸ micrograms per pound (µg/lb) for HCL 1.09x10⁷ ppmvd HCl per lb/dscf HCl.

[45CSR34, 40 C.F.R. § 63.7112(n)]

- 12.3.9. The concentration of total organic HAP and dioxins/furans shall be corrected to 7 percent oxygen using equation 5 to 40 C.F.R. § 63.7112(o):

Equation 5 to 40 C.F.R. § 63.7112(o)

$$C_{7\%} = C_{unc} * \frac{13.9}{(20.9 - C_{O_2})}$$

Where:

C_{7%} = concentration of total organic HAP, ppmv on a dry basis or dioxins/furans in ng/dscm corrected to 7 percent oxygen.

C_{unc} = uncorrected total organic HAP, ppmv on a dry basis or dioxins/furans in ng/dscm.

C_{O₂} = concentration of oxygen (percent).

[45CSR34, 40 C.F.R. § 63.7112(o)]

12.4. Recordkeeping Requirements

- 12.4.1. You must keep the records specified in 40 C.F.R. §§ 63.7132(a)(1) through (3) [Section 12.4.1 (a)].

- a. A copy of each notification and report that you submitted to comply with 40 C.F.R. 63 Subpart AAAA, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in 40 C.F.R. § 63.10(b)(2)(xiv).
- b. On and after the relevant compliance date for your source as specified in 40 C.F.R. § 63.7083(g), the records in paragraphs 40 C.F.R. §§ 63.7132(a)(2)(i) and (ii).
 - i. You must keep records for each startup period of the date, the time startup began, the time began producing on-specification lime product, and the time discharge from the kiln began for any affected source that is subject to a standard during startup that differs from the standard applicable at other times.
 - ii. You must keep records of the date, time, cause and duration of each malfunction (as defined in 40 C.F.R. 63.2) that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time, cause, and duration of the monitoring malfunction; the record must list the affected source or equipment; if there was a failure to meet a particulate matter emissions limit, an estimate of the volume of each regulated pollutant emitted over the limit, and a description of the method used to estimate the emissions.
- c. Records of performance tests, performance evaluations, and opacity and VE observations as required in 40 C.F.R. §63.10(b)(2)(viii).

[45CSR34, 40 C.F.R. §63.7132(a)]

- 12.4.2. You must keep the records in 40 C.F.R. § 63.6(h)(6) for VE observations. Compliance with this condition shall be satisfied by documenting the VE monitoring required by Section 12.2.5.

[45CSR34, 40 C.F.R. §63.7132(b)]

- 12.4.3. You must keep the records required by 40 C.F.R. Part 63 Subpart AAAAA, Tables 6 and 7 incorporated as Sections 12.2.1 and 12.2.5, to show continuous compliance with each emission limitation that applies to you.

[45CSR34, 40 C.F.R. §63.7132(c)]

- 12.4.4. You must keep the records which document the basis for the initial applicability determination as required under § 63.7081.

[45CSR34, 40 C.F.R. §63.7132(d)]

- 12.4.5. Your records must be in a form suitable and readily available for expeditious review, according to 40 C.F.R. §63.10(b)(1).

[45CSR34, 40 C.F.R. §63.7133(a)]

- 12.4.6. As specified in 40 C.F.R. §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[45CSR34, 40 C.F.R. §63.7133(b)]

- 12.4.7. You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. §63.10(b)(1). You may keep the records offsite for the remaining 3 years.

[45CSR34, 40 C.F.R. §63.7133(c)]

- 12.4.8. Any records required to be maintained by this part that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[45CSR34, 40 C.F.R. §63.7133(d)]

12.5. Reporting Requirements

- 12.5.1. You must report each instance in which you did not meet each operating limit, opacity limit, and VE limit in Tables 2, 3 and 7 of 40 C.F.R. Part 63 Subpart AAAAAA that applies to you. These deviations must be reported according to the requirements in 40 C.F.R. §63.7131 incorporated herein as Section 12.5.3.

[45CSR34, 40 C.F.R. § 63.7121(b)]

- 12.5.2. When conducting performance test, such as those incorporated by Section 12.3, the permittee shall submit a notification of intent to conduct such testing at least 60 calendar days before the performance test is scheduled to begin, as required in 40 C.F.R. §63.7(b)(1).

[45CSR34, 40 C.F.R. §63.7130(d)]

- 12.5.3. The permittee shall submit each report listed in 40 C.F.R. Part 63 Subpart AAAAAA, Table 8 as applicable.

You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that applies to you, a statement that there were no deviations from the emission limitations during the reporting period;	Semiannual compliance reports shall be submitted in accordance with the Title V schedule defined by Section 3.5.6.
	b. If there were no periods during which the CMS, including any operating parameter monitoring system, was out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period;	
	c. If you have a deviation from any emission limitation (emission limit, operating limit, opacity limit, and VE limit) during the reporting period, the report must contain the information in §63.7131(d);	
	d. If there were periods during which the CMS, including any operating parameter monitoring system, was out-of-control, as specified in §63.8(c)(7), the report must contain the information in §63.7131(e); and	
	e. On and after the relevant compliance date	

You must submit a . . .	The report must contain . . .	You must submit the report . . .
	for your source as specified in § 63.7083(g), if you had a startup, shutdown or malfunction during the reporting period and you failed to meet an applicable standard, the compliance report must include the information in § 63.7131(c)(3).	
4. Performance Test Report	The information required in § 63.7(g) and § 63.7112(h)	According to the requirements of § 63.7131.

[45CSR34, 40 C.F.R. §§63.7131(a), and (b), 40 C.F.R. Part 63 Subpart AAAAA, Table 8]

12.5.4. Each semiannual compliance report must contain the information specified by 40 C.F.R. §§63.7131(c)(1) through (6).

- a. Company name and address.
- b. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
- c. Date of report and beginning and ending dates of the reporting period.
- d. If there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that apply to you, the compliance report must include a statement that there were no deviations from the emission limitations during the reporting period.
- e. If there were no periods during which the continuous monitoring systems (CMS) were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS were out-of-control during the reporting period.

[45CSR34, 40 C.F.R. §63.7131(c)]

12.5.5. For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information specified in 40 C.F.R. §§ 63.7131(c)(1) through (4) and 40 C.F.R. §§ 63.7131(d)(1) and (2). The deviations must be reported in accordance with the requirements in 40 C.F.R. § 63.10(d) prior to the relevant compliance date for your source as specified in § 63.7083(g) and the requirements in § 63.10(d)(1) through (4) beginning on the relevant compliance date for your source as specified in § 63.7083(g).

- a. The total operating time of each emission unit during the reporting period.
- b. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), and the corrective action taken.

- c. An estimate of the quantity of each regulated pollutant emitted over a non-opacity or VE emission limit, and a description of the method used to estimate the emissions.

[45CSR34, 40 C.F.R. §63.7131(d)]

12.5.6. For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) occurring at an affected source where you are using a CMS to comply with the emission limitation in 40 C.F.R. 63 Subpart AAAAA, you must include the information specified in 40 C.F.R. §§ 63.7131(c)(1) through (4) and 40 C.F.R. §§ 63.7131(e)(1) through (11), except that beginning on the relevant compliance date for your source as specified in § 63.7083(g), the semiannual compliance report must also include the information included in 40 C.F.R. § 63.7131(e)(12). This includes periods of startup, shutdown, and malfunction.

- a. The date and time that each malfunction started and stopped.
- b. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.
- c. The date, time and duration that each CMS was out-of-control, including the information in 40 C.F.R. § 63.8(c)(8).
- d. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.
- e. A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total affected source operating time during that reporting period.
- f. A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
- g. A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total emission unit operating time during that reporting period.
- h. A brief description of the process units.
- i. A brief description of the CMS.
- j. The date of the latest CMS certification or audit.
- k. A description of any changes in CMS, processes, or controls since the last reporting period.
- l. An estimate of the quantity of each regulated pollutant emitted over a non-opacity or VE emission limit, and a description of the method used to estimate the emissions

[45CSR34, 40 C.F.R. §63.7131(e)]

12.5.7. Each facility that has obtained a title V operating permit pursuant to 40 C.F.R. Part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report 40 C.F.R. §§ 70.6(a)(3)(iii)(A) or 71.6 (a)(3)(iii)(A). If you submit a compliance report specified in 40 C.F.R. Part 63 Subpart AAAAA, Table 8 along with, or as part of, the semiannual monitoring report required by 40 C.F.R. §§

70.6(a)(3)(iii)(A) or 71.6 (a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation you may have to report deviations from permit requirements to the permit authority.

[45CSR34, 40 C.F.R. §63.7131(f)]

12.5.8. If you are required to submit reports following the procedure specified in 40 C.F.R. 63.7131(g), you must submit reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as Confidential Business Information (CBI). Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report, you must submit a complete file, including information claimed to be CBI, to the EPA following the procedures in 40 C.F.R. 63.7131(g). Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 C.F.R. part 2. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in 40 C.F.R. §63.7131(g).

- a. The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the Office of Air Quality Planning and Standards (OAQPS) CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings and be flagged to the attention of the Lime Manufacturing Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link.
- b. If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, P.O. Box 12055, Research Triangle Park, North Carolina 27711, Attention Lime Manufacturing Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

[45CSR34, 40 C.F.R. §63.7131(g)]

12.5.9. Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in 40 C.F.R. §§63.7131(h)(1) through (3).

- a. **Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website**

(<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test. Submit the results of the performance test to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

b. **Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test.** The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

c. **Confidential business information (CBI).**

- i. The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information submitted under paragraph (a)(1) or (2) of 40 C.F.R. § 63.7131, you must submit a complete file, including information claimed to be CBI, to the EPA.
- ii. The file must be generated using the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website.
- iii. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 C.F.R. part 2.
- iv. The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings and be flagged to the attention of the Group Leader, Measurement Policy Group. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link.
- v. If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, P.O. Box 12055, Research Triangle Park, North Carolina 27711, Attention Group Leader, Measurement Policy Group. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.
- vi. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.
- vii. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described in 40 C.F.R. § 63.7131(h)(1) and (2).

[45CSR34, 40 C.F.R. §63.7131(h)]

12.5.10. If you are required to electronically submit a report or notification through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in 40 C.F.R. §63.7131(i)(1) through (7).

- a. You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.
- b. The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.
- c. The outage may be planned or unplanned.
- d. You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.
- e. You must provide to the Administrator a written description identifying:
 - i. The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;
 - ii. A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;
 - iii. Measures taken or to be taken to minimize the delay in reporting; and
 - iv. The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
- f. The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- g. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

[45CSR34, 40 C.F.R. §63.7131(i)]

12.5.11. If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in 40 C.F.R. §63.7131(j)(1) through (5).

- a. You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or

- equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage).
- b. You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.
 - c. You must provide to the Administrator:
 - i. A written description of the force majeure event;
 - ii. A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
 - iii. Measures taken or to be taken to minimize the delay in reporting; and
 - iv. The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
 - d. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
 - e. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

[45CSR34, 40 C.F.R. §63.7131(j)]

12.6. Compliance Plan

- 12.6.1. None.

Appendix A

45CSR10 Monitoring Plan for Greer Industries, Inc. d.b.a. Greer Lime

- No. 2 Fuel Oil Fired 65 TPH Rotary Dryer (AOS “A”)
- Coal Fired 400 TPD Lime Kiln
- Coal Fired 500 TPD Lime Kiln

March 30, 2001

Ms. Laura Crowder, Enforcement
West Virginia Office of Air Quality
7012 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304

RE: Greer Industries, Inc.
45CSR10 Monitoring Plan for Manufacturing Processes
Hand Delivered

Dear Ms. Crowder:

Potesta & Associates, Inc. (POTESTA), on behalf of Greer Industries, Inc. (Greer), is submitting a monitoring plan, in accordance with 45CSR10, for Greer's manufacturing process sources for the following operations and affected equipment for the West Virginia Office of Air Quality's approval: Greer Industries, Inc. d.b.a. Greer Lime
Riverton, Pendleton County, West Virginia
Plant ID No.: 071-00001

No. 2 fuel oil fired 65 tph rotary dryer
Coal fired 400 tpd lime kiln
Coal fired 500 tpd lime kiln

Regulation 10 Testing Requirements

Greer hereby petitions the Director for an alternative to stack testing and requests that fuel analysis for sulfur and the corresponding calculation of in-stack sulfur dioxide concentration be used as a substitute in demonstrating compliance with the 2,000 ppm standard from 45CSR10, Section 4. The attached calculations, based on existing permit limits, demonstrate that each affected unit operated by Greer has maintained and will continue to maintain compliance with the in-stack sulfur dioxide concentration. The results of the in-stack concentration calculations are shown in Table 1:

Table 1: In-stack SO₂ concentration calculation results

Plant	Unit	Result (ppm)
Greer Lime	65 tph rotary dryer	22.27
Greer Lime	400 tpd lime kiln	51.15
Greer Lime	500 tpd lime kiln	31.67

By maintaining compliance with existing permit conditions and limitations, it can be reasonably expected that the in-stack sulfur dioxide concentration will be well below the 2,000 ppm standard. Greer requests that the Director accept these results for the initial test as they are a reliable indication of Greer's ability to meet the standard.

Regulation 10 Monitoring Requirements

Greer proposes to monitor the sulfur content percentage of permitted fuels in the affected units by obtaining sulfur content statements from the fuel suppliers. Operating these permitted units as they were intended while utilizing fuels with sulfur contents at or below existing permitted levels will assure that Greer continues to maintain compliance with the 2,000 ppm standard from 45CSR10, Section 4. Maximum sulfur content percentages for each affected unit for the given, permitted fuels are shown below in Table 2:

Table 2: Maximum sulfur content percentages

Plant	Unit	Fuel Type	Max. Sulfur Content (%)
Greer Lime	65 tph rotary dryer	No. 2 fuel oil	0.5
Greer Lime	400 tpd lime kiln	coal	1.1
Greer Lime	500 tpd lime kiln	coal	1.1

By utilizing fuels that do not exceed the maximum sulfur content percentages listed in Table 2, which maintains compliance with existing permit conditions and limitations, it can be reasonably expected that the in-stack sulfur dioxide concentration will be well below the 2,000 ppm standard as indicated in Table 1. Greer requests that the Director accept fuel sulfur content as the trackable basis of a Regulation 10 monitoring plan for the affected units.

Regulation 10 Recordkeeping and Reporting Requirements

Greer will maintain sulfur content statements from the fuel suppliers on-site at each affected facility for a period of at least five (5) years in accordance with 45CSR10A, Section 7. Upon approval of this monitoring plan by the Director, Greer will submit a “Monitoring Summary Report” and an “Excursion and Monitoring Plan Performance Report”. In accordance with 45CSR10A, Section 7.2.b., Greer will submit these reports on a quarterly basis to the Director by the 30th day of the month following the calendar quarter. The purpose of these reports is to provide the Director with sulfur content statements for the fuels utilized during the quarter and to report any excursions in accordance with 45CSR10A, Section 7.2.b.3.

If you have any questions, or require additional information, please contact me at (304) 342-1400.

Sincerely,

Scott R. Kisner
Senior Engineer

Attachments: SO₂ in-stack concentration calculations

c: Mr. Joseph B. Dean
Greer Industries, Inc.

Appendix B

40 C.F.R. Part 63 Subpart AAAAA

Operating, Maintenance and Monitoring (OM&M) Plan



west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
(304) 926-0475

Harold D. Ward, Cabinet Secretary
dep.wv.gov

MEMORANDUM

To: File

From: Robert Mullins

Date: July 15, 2025

Subject: Greer Industries, Inc
Riverton Facility
Facility ID No. 071-00001

Greer Industries, Inc's Riverton Facility is subject to the requirements of 40 C.F.R. 63, Subpart AAAAA – "National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants." Under 40 C.F.R. §63.7100(d), the permittee must submit an operations, maintenance, and monitoring (OMM) plan to the Administrator for review and approval as part of the application for the Title V permit. Greer Industries, Inc last revised their OMM plan in January 2021. This plan was submitted to WV DAQ on July 10, 2025 as additional information for the Title V Renewal application.

40 C.F.R. §63.7100(d) outlines the elements that must be included in the OMM plan. These are as follows:

1. Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable, for each emission unit.
2. A monitoring schedule for each emission unit.
3. Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in tables 1, 2, and 3 to this subpart, respectively. On and after the relevant compliance date for your source as specified in § 63.7083(g), your OM&M plan must address periods of startup and shutdown.
4. Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device;
 - ii. Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;

Promoting a healthy environment.

- iii. Prior to the relevant compliance date for your source as specified in § 63.7083(g), ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(i) and (ii), (c)(3), and (c)(4)(ii). On and after the relevant compliance date for your source as specified in § 63.7083(g), ongoing operation and maintenance procedures in accordance with the general requirements of paragraph (c) of this section and §§ 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii); and
 - iv. Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d).
- 5. Procedures for monitoring process and control device parameters.
 - 6. Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in table 3 to this subpart, including:
 - i. Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.
 - 7. A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

A review of Greer Industries, Inc.'s OMM plan has been conducted, and it has been determined that the plan contains the elements outlined in 40 C.F.R. §63.7100(d) for the rotary lime kiln (4-RK-1 and 4-RK-2) and the process stone handling equipment (4-BC-1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, and 4-STB-2) subject to the requirements of 40 C.F.R. 63, Subpart AAAAA. As such, this plan has been approved in accordance with 40 C.F.R. §63.7100(d). The OMM plan approval has been incorporated by reference in condition 12.1.8 and the OMM plan has been included as an attachment in R30-07100001-2025 .

40 CFR Part 63, Subpart AAAAAA – Lime Manufacturing MACT

Operations, Maintenance, & Monitoring Plan

Startup, Shutdown, & Malfunction Plan



Greer Lime Company
Riverton, West Virginia

Revision No. 2
January 2021

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1.1 Background

Greer Lime Company (Greer) operates a lime manufacturing plant near Riverton, Pendleton County, West Virginia. Emissions testing of the rotary lime kilns, conducted during October 2004, indicate that hydrochloric acid (HCl) emissions are greater than 10 tons/year, classifying the facility as a major source of hazardous air pollutants (HAP). As a major source of HAP, Greer is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Lime Manufacturing Plants, detailed in Title 40, Part 63, Subpart AAAAA of the Code of Federal Regulations (40 CFR 63 Subpart AAAAA). Typically, NESHAP regulations are also referred to as Maximum Achievable Control Technology (MACT) standards.

Both rotary lime kiln systems (4-RK-1 and 4-RK-2) are considered “existing sources” under the regulations. The compliance date for the equipment associated with these systems is January 5, 2007. Affected equipment subject to the Lime MACT rule is required to have in place an Operations, Maintenance, and Monitoring Plan (OM&MP) and a Startup, Shutdown, and Malfunction Plan (SSMP).

This document contains the OM&MP and the SSMP for the rotary lime kilns and processed stone handling equipment. As defined within the rule, the processed stone handling equipment at Greer consists of tunnel belt 4-BC-1, reclaim belt 4-BC-2, stone bin feed belt 4-BC-4, stone bin feed belt 4-BC-5, stone bin 4-STB-1, and stone bin 4-STB-2.

This document was revised during January 2021 to reflect changes made to the Rule following a Risk and Technology Review (RTR) conducted under the Clean Air Act. On June 4, 2020, the US EPA finalized amendments to the 2004 NESHAP for Lime Manufacturing Plants. The changes become effective on January 20, 2021. Specifically, the US EPA changed the following:

- Revised requirements for startup, shutdown and malfunction (SSM) to be consistent with recent court decisions; and
- Require electronic reporting of performance test results and compliance reports.

1.2 Action Items & Responsible Personnel

The following table address the critical action items and responsible personnel associated with the OM&M Plan and the SSMP provisions.

Action Item	Responsible Personnel	Discussion
Maintain the written OM&M Plan.	Environmental Manager	Will maintain the written plan and will update as necessary.
Submit the OM&M Plan to WVDAQ for review and approval.	Environmental Manager	Will submit to WVDAQ upon finalization with the updated Title V application. Changes to OM&M Plan must also be submitted to WVDAQ for review and approval.
Maintain the written startup, shutdown, and malfunction procedures.	Environmental Manager	Will maintain the written startup, shutdown, and malfunction procedures and update as necessary.
Keep records on each startup, shutdown, and malfunction.	Kiln Control Operator	Will keep records on each startup, shutdown, and malfunction event.
Submit a Compliance Report	Environmental Manager	Semiannually according to the requirements in §63.7131(b)
Submit a Performance Test Report	Environmental Manager	As required according to the requirements of §63.7131.

2. Operations, Maintenance, and Monitoring Plan

The OM&M plan requirements of 40 CFR §63.7100(d) are discussed in detail below. The actual regulatory language appears in *italic font*. Greer's response to each requirement appears in plain text.

- (d) *You must prepare and implement for each LMP, a written operations, maintenance, and monitoring (OM&M) plan. You must submit the plan to the applicable permitting authority for review and approval as part of the application for a 40 CFR part 70 or 40 CFR part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, you must comply with the provisions of the submitted plan. Each plan must contain the following information:*
- (1) *Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable for each emission unit.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The opacity from the fabric filter dust collectors serving each lime kiln system is continuously monitored with a continuous opacity monitoring system (COMS). A computerized data acquisition system records all opacities in electronic form. The opacity limit is 15% per startup period block average per Item 1 in Table 2, Startup and Shutdown Emission Limits, and 15% per 6-minute block average all other times per Item 1 of Table 3, Operating Limits, but the actual opacity is typically less during startup, shutdown and operation.
Rotary Lime Kiln – 500 TPD 4-RK-2	
	Measured opacity for compliance purposes will be taken from the data acquisition system.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The opacity limit for processed stone handling (PSH) equipment is 10% per Item 7 in Table 1, Emission Limits, and Item 4 in Table 4, Initial Compliance, of the Lime MACT rule. Dust emissions from the affected equipment are minimized through full enclosures and water sprays.

(2) *A monitoring schedule for each emission unit.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The opacity from each fabric filter dust collector serving its respective lime kiln is continuously monitored with a COMS. Data is stored electronically.
Rotary Lime Kiln – 500 TPD 4-RK-2	
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The Title V permit (R30-07100001-2020) the Lime MACT Rule, specifically, Item 1 in Table 7, Periodic Monitoring for Compliance with Opacity and Visible Emissions Limits, requires monthly visible emission observations for these sources. Data is stored in a written or electronic log and maintained on-site.

(3) *Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1, 2 and 3 to this subpart, respectively. Your OM&M plan must address periods of startup and shutdown.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The dust collectors are operated in conjunction with the lime kilns due to the system's physical design and process control interlocks. The induced draft fan is the first item in sequence of process equipment to be started on kiln startup and the last item to shut down after lime kiln shutdown. This must occur to control preheat and cool down of the kilns to prevent damage to internal refractory. Computer system interlocks are used to assure proper startup and shutdown. The condition of the fabric filter bags is monitored continuously by the COMS. Each dust collector is equipped with a Bag Leak Detection System (BLDS) for operational purposes only. The BLDS is able to detect excess particulate matter exiting the dust collector in very small quantities, often prior to causing a significant increase in opacity on the COMS. The BLDS is able to determine the specific module (there are four in each dust collector) and row of bags causing the particulate matter detection. That
Rotary Lime Kiln – 500 TPD 4-RK-2	

Emission Unit	Discussion
	information, combined with regular tracking of stack opacity through the COMS, allows Greer to determine when bag(s) may need replaced. Kilns are shutdown for scheduled, preventative maintenance approximately every six months. During this time, kiln systems, including the induced draft fan and dust collector are inspected, with work conducted as needed. Preventative maintenance is performed by Greer's on-site maintenance crew or contractors as needed.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The PSH equipment has an opacity limit of 10%. Full enclosures and water sprays are used to minimize dust generation from the affected equipment. The Title V permit and Lime MACT Rule requires monthly visible emission observations and fugitive dust control system inspections for these sources. Any issues identified during VE observations will be corrected using Greer's on-site maintenance crew or contractors as needed.

- (4) *Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:*
- (i) *Calibration and certification of accuracy of each monitoring device;*
 - (ii) *Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;*
 - (iii) *Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (3), and (4)(ii); and*
 - (iv) *Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d).*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	The opacity of exhaust gas released via the stack through the dust collectors is continuously monitored with a COMS. Data is maintained in electronic format by the plant's data acquisition system. The COMS are installed, maintained, calibrated, and operated in accordance with PS-1 of 40 CFR Part 60, Appendix B (specification in effect at the time the monitor was installed).

Tunnel Belt: 4-BC-1	There are no monitoring devices on these fugitive emissions sources. The Title V permit and Lime MACT Rule requires monthly visible emission observations.
Reclaim Belt: 4-BC-2	
4-STB-1 Feed Belt: 4-BC-4	
4-STB-2 Feed Belt: 4-BC-5	
Stone Bin: 4-STB-1	
Stone Bin: 4-STB-2	

(5) *Procedures for monitoring process and control device parameters.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The kilns utilize an Optimizing Control System (OCS) to supplement traditional PLC controls. The OCS continuously determines and implements optimized set points to maintain a required product quality. The system assists the kiln operator in determining the necessary balance of fuel, air, and stone input that results in consistent operation. Over 70 parameters on each kiln are continuously monitored, recorded, and displayed on the kiln operator's computer screens with other remote access terminals available within the plant. Opacity from the dust collectors serving the lime kilns is continuously monitored with a COMS. The measurements are continuously recorded from the monitor and displayed to the kiln operator's computer screens and other remote access plant terminals as with the process parameters. The measurements are viewable as an instantaneous opacity and 6-minute average. Exceedances of the 6-minute block average are recorded and maintained for compliance determination. The kiln operator is in nearly continuous attendance to monitor system alarms and is trained to take any necessary corrective action. Fault conditions occurring with the COMS are also recorded in order to determine if data collected is valid. Total fault condition time will be used to determine if the 95% data availability standard is being met. Startup block averages will be calculated based upon time at coal start to time at production of on spec lime. The opacity average during that period will be compared to the kiln startup emission limit standard.
Rotary Lime Kiln – 500 TPD 4-RK-2	

Tunnel Belt: 4-BC-1	The Title V permit and Lime MACT Rule requires monthly visible emission observations. The results of these observations are recorded in a log that is maintained on site.
Reclaim Belt: 4-BC-2	
4-STB-1 Feed Belt: 4-BC-4	
4-STB-2 Feed Belt: 4-BC-5	
Stone Bin: 4-STB-1	
Stone Bin: 4-STB-2	

- (6) *Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in Table 3 to this subpart, including:*
- (i) *Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and*
 - (ii) *Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The opacity limit is 15% per startup period block average per Item 1 in Table 2, Startup and Shutdown Emission Limits, and 15% per 6-minute block average all other times per Item 1 of Table 3, Operating Limits. The COMS will be used to determine if a deviation of the operating limit has occurred. If a deviation occurs, the kiln system and dust collector will be inspected as soon as practicable to determine the cause and necessary corrective action. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. Information on each deviation will be collected and used to record the cause, duration and corrective action taken.
Rotary Lime Kiln – 500 TPD 4-RK-2	

Emission Unit	Discussion
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	These are fugitive emissions sources. The only requirement for these sources is to follow this OM&M plan per Item 5 in Table 3, Operating Limits, and Item 1 of Table 7, Periodic Monitoring for Compliance with Opacity and Visible Emissions Limits.

- (7) *A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	The opacity monitor provides an indication of the performance condition of the respective dust collector in conjunction with other constantly measured parameters such as temperature and pressure drop. The opacity monitor thereby may be used as a predictive tool. Maintenance functions, bag usage, inventory, and parts purchase orders are tracked and recorded. Maintenance history is used to determine semi-annual outage needs. Kilns are shutdown for scheduled, preventative maintenance approximately every six months. Preventative maintenance is performed by Greer's on-site maintenance crew with assistance from outside contractors as needed. Additionally, in accordance with 40 CFR §63.7113(f), an annual inspection of the ductwork leading to the fabric filter dust collector will be conducted. The results of this annual inspection will be recorded in a log that is maintained on site.

Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	Potential fugitive emissions are minimized by full enclosures. The Title V permit and Lime MACT Rule requires monthly fugitive dust control system inspections.

3. Startup, Shutdown, and Malfunction Plan

A startup, shutdown, and malfunction plan (SSMP) is required by 40 CFR §63.7100(e). The requirements of the SSMP are contained in 40 CFR §63.6(e)(3).

3.1 SSMP Requirements Checklist

The critical elements of the SSMP are shown in the following table.

Item	Summary	Discussion
§63.6(e)(3)(i)	Develop and implement written SSMP.	Ensure emissions are minimized at all times, correct malfunctions as soon as practicable and reduce the reporting burden associated with SSM.
§63.6(e)(3)(iii)	Keep records of SSM events where consistent with the SSMP.	Keep records of SSM events where actions are consistent with the SSMP, but the event may cause an exceedance to an applicable emissions standard. Report these in the semiannual Compliance Report.
§63.6(e)(3)(iv)	Keep records of SSM events where not consistent with the SSMP and immediate reporting obligations.	Keep records of SSM events where actions are NOT consistent with the SSMP, and the event causes an exceedance to an applicable emissions standard. Report actions inconsistent with the SSMP within working 2 days, followed by a letter within 7 working days after the end of the event.
§63.6(e)(3)(v)	Maintain current and previous versions of SSMP.	Current and previous versions of the SSMP are maintained at the affected source and will be made available upon request.
§63.6(e)(3)(vi)	May use other documents to satisfy SSMP requirements.	A formal SSMP has been developed (this document). Other documents and records maintained by the affected facility may be used for recordkeeping.
§63.6(e)(3)(vii)	Administrator may require changes in SSMP.	Revision may be required by the Administrator if the SSMP is inadequate.

§63.6(e)(3)(viii)	Owner may periodically revise SSMP as necessary.	Revision of the SSMP may be made by the owner as necessary to satisfy requirements. Revision must be reported in the semiannual compliance report required by §63.10(d)(5).
§63.6(e)(3)(ix)	Title V permit must address requirement for SSMP.	This requirement will be addressed in the Title V application update to be submitted to WVDAQ as required by the Lime MACT rule.

3.2 Startup and Shutdown Procedures

Emission Unit	Startup and Shutdown Procedures
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	<u>Startup:</u> Before starting a kiln, ensure that the respective fabric filter dust collector and continuous opacity monitoring system (COMS) is operating properly. This is accomplished by the fabric filter dust collector being control interlocked with the lime kiln. COMS operation will be verified visually through the kiln control program by the Kiln Control Operator. If the dust collector and COMS were operating properly prior to shutdown, it is satisfactorily assumed that this equipment will operate properly prior to startup. For purposes of startup, proper operation is defined as no 6-minute block average of 15% or greater for the previous 24-hour period of operation, unless the kiln system was shutdown to correct opacity compliance issues. <u>Shutdown:</u> Before intentionally taking the fabric filter dust collector and COMS out of operation, ensure that the kiln is out of operation which is defined as no longer firing on coal.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The full enclosures are in place to minimize fugitive dust regardless if equipment is operating or not.

3.3 Malfunction Events

Emission Unit	Malfunction Events
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	<u>Fabric filter dust collector malfunction:</u> If a fabric filter dust collector system is malfunctioning in a manner that consistently causes the opacity limit (>15% in a 6-minute block average) to be exceeded, then the dust collector will be inspected by Greer’s maintenance crew and repaired as soon as safely practicable. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. The cause of the malfunction, malfunction start and end times, and corrective action taken will be recorded. <u>COMS malfunction:</u> If the continuous opacity monitoring system (COMS) is malfunctioning, repairs will be made as soon as practicable. COMS malfunctions are identified by a fault alarm. Fault alarms are recorded by the data acquisition system. Fault alarms will be investigated in a timely manner to determine if the underlying fault condition is harming the validity of COMS data. Most faults can be cleared in-house by performing the manufacturer’s prescribed routine maintenance followed by an on-stack calibration. If this does not correct the fault condition, then the COMS manufacturer will be contacted to secure their technical services. There are some fault alarms that do not negatively impact the validity of the COMS data, but instead are used to notify the operator of an undesirable condition that needs addressed. If the fault alarm is not related to a condition causing invalid data, then those fault times will not be counted as a malfunction. A COMS malfunction is a condition causing invalid data. During a COMS outage caused by a malfunction lasting longer than 24-hours, visible emissions observations by a Method 9 certified observer will be conducted at least once per day during daylight hours. The results will be maintained in a written log and made available for review upon request.

Emission Unit	Malfunction Events
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	If dust emissions are evident and the 10% opacity limit is in jeopardy of being violated, the full enclosures and/or water sprays will be inspected for defects and corrected as necessary.

Section 4

40 CFR Part 63, Subpart AAAAA (Lime MACT Rule)

Section 5

Opacity Monitor Calibration & Maintenance

Opacity Monitor Calibration & Maintenance

Greer Lime Company maintains a continuing annual contract with Teledyne Instruments Monitor Labs (Teledyne) for preventative maintenance, corrective maintenance, monitor auditing, and clear stack calibration for both kiln opacity monitors. The contract specifies that the required maintenance and auditing will be conducted by a Teledyne technician on a semi-annual basis.

In addition to Teledyne's contract services, plant personnel have been trained to perform routine maintenance including purge air system filter replacement, lens cleaning, unit alignment, and on-stack calibration should it be needed between Teledyne's semi-annual visits.

Section 6

Template SSMP Forms, Reports, and Notifications and Completed SSMP Forms, Reports, and Notifications

- Startup/Shutdown Report**
- Malfunction Report**
- “Immediate” SSMP Reporting Requirements**
- “Periodic” SSMP Reporting Requirements**

Rotary Lime Kiln Startup/Shutdown Report - Lime MACT

Greer Lime Company – Riverton, West Virginia

Note: This report is to be completed only for startups and shutdowns of either rotary lime kiln system.

A. Person Completing Report: _____

B. Which Kiln? _____

C. Date & Time of Shutdown: _____

D. Date & Time of Startup: _____

E. Reason for Shutdown?

F. Were the Startup/Shutdown Procedures Followed? (*see below*)

_____ Yes

_____ No (*If no, then notify management immediately and document the procedures that were used to either startup or shutdown the kiln.*)

Startup and Shutdown Procedures

Startup: Before starting a kiln, ensure that the respective fabric filter dust collector and continuous opacity monitoring system (COMS) is operating properly. This is accomplished by the fabric filter dust collector being control interlocked with the lime kiln. COMS operation will be verified visually through the kiln control program by the Kiln Control Operator. If the dust collector and COMS were operating properly prior to shutdown, it is satisfactorily assumed that this equipment will operate properly prior to startup. For purposes of startup, proper operation is defined as no 6-minute block average of 15% or greater for the previous 24-hour period of operation, unless the kiln system was shutdown to correct opacity compliance issues.

Shutdown: Before intentionally taking the fabric filter dust collector and COMS out of operation, ensure that the kiln is out of operation which is defined as no longer firing on coal.

Rotary Lime Kiln Malfunction Report - Lime MACT

Greer Lime Company – Riverton, West Virginia

Note: This report is to be completed only for those malfunctions which resulted in excess particulate (dust) emissions from either rotary lime kiln system or involving the failure of the opacity monitoring system.

A. Person Completing Report: _____

B. Which Kiln? _____

C. Date: _____

D. Starting and Ending Times of the Malfunction and Corrective Actions:

Malfunction Starting Time/Date: _____

Corrective Action Starting Time/Date: _____

Corrective Action Ending Time/Date: _____

Malfunction Ending Time/Date: _____

E. Description of Malfunction and Corrective Actions:

F. Is this Specific Malfunction Listed in the Malfunction Plan? (see below)

_____ Yes _____ No (If no, then notify management immediately.)

G. Were the Corrective Actions Listed in the Malfunction Plan Followed?

_____ Yes _____ No (If no, then notify management immediately.)

Malfunction Events

Fabric filter dust collector malfunction: If a fabric filter dust collector system is malfunctioning in a manner that consistently causes the opacity limit (>15% in a 6-minute block average) to be exceeded, then the dust collector will be inspected by Greer's maintenance crew and repaired as soon as safely practicable. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. The cause of the malfunction, malfunction start and end times, and corrective action taken will be recorded.

COMS malfunction: If the continuous opacity monitoring system (COMS) is malfunctioning, repairs will be made as soon as practicable. COMS malfunctions are identified by a fault alarm. Fault alarms are recorded by the data acquisition system. Fault alarms will be investigated in a timely manner to determine if the underlying fault condition is harming the validity of the COMS data. Most faults can be cleared in-house by performing the manufacturer's prescribed routine maintenance followed by an on-stack calibration. If this does not correct the fault condition, then the COMS manufacturer will be contacted to secure their technical services. There are some fault alarms that do not negatively impact the validity of the COMS data, but instead are used to notify the operator of an undesirable condition that needs addressed. If the fault alarm is not related to a condition causing invalid data, then those fault times will not be counted as a malfunction. A COMS malfunction is a condition causing invalid data. During a COMS outage caused by a malfunction lasting longer than 24-hours, visible emissions observations by a Method 9 certified observer will be conducted at least once per day during daylight hours. The results will be maintained in a written log and made available for review upon request.

“Immediate” SSMP Reporting Requirements

In accordance with the requirements of 40 CFR §63.10(d)(5)(ii), if actions taken by Greer during a startup, shutdown, or malfunction event are not consistent with this plan and an applicable emission limit (15% opacity for lime kilns and 10% for) has been exceeded, then immediate notification must be made to the regulatory authority. This notification consists of:

1. Communication by phone or fax within two working days; and
2. Confirmation in writing within seven working days.

Fax number:

(304) 926-0479

Mailing address:

WV Division of Air Quality

601 57th Street

Charleston, WV 25304

The written notification must contain the following elements:

1. Name, title, and certifying signature of the responsible official;
2. Explanation of the circumstances of the event;
3. Reasons the SSMP was not followed;
4. Describe all excess emissions and/or parameter monitoring exceedances that occurred during the event; and
5. Describe all actions taken to minimize emissions during the event.

“Periodic” SSMP Reporting Requirements

In accordance with the requirements of 40 CFR §63.10(d)(5)(i), if actions taken by Greer during a startup or shutdown cause an exceedance to any applicable emission limitation; or if a malfunction occurred during the reporting period and the actions were consistent with this plan then a report will be made. The startup, shutdown, and malfunction report must consist of a letter containing the following:

1. Name, title, and certifying signature of the responsible official;
2. Number of events;
3. Duration of each event; and
4. Brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded.

The report must be submitted to the regulatory authority on a semi-annual basis. The report must be postmarked by the 30th day following the end of each calendar half and may be submitted concurrently with other semiannual reports (i.e. opacity monitoring system performance report and the Title V monitoring report).

Fact Sheet



For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-07100001-2025**

Renewal Application Received: **February 27, 2025**

R30-07100001-2020(MM03) Application Received: **June 18, 2025**

Plant Identification Number: **03-54-071-00001**

Permittee: **Greer Industries, Inc. d.b.a. Greer Lime Company**

Facility Name: **Riverton Facility**

Mailing Address: **1088 Germany Valley Limestone Road, Riverton, WV 26814**

Physical Location:	Riverton, Pendleton County, West Virginia
UTM Coordinates:	640.00 km Easting • 4293.00 km Northing • Zone 17
Directions:	Approximately two (2) miles south of Seneca Rocks (Junction US Route 33 and WV Route 55) on US Route 33, turn left onto Germany Valley Limestone Road.

Facility Description

Greer Lime Company (SIC Codes 3274, 1422 and NAICS Codes 327410, 212312) operates a limestone quarry, crushing and sizing operation, limestone grinding system, storage and loadout systems of various lime and limestone products, hydrate plant, two (2) rotary lime kiln systems, lime handling system, and a portable limestone crushing and sizing facility.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2024 Actual Emissions
Carbon Monoxide (CO)	160.4	57.24
Nitrogen Oxides (NO _x)	301.4	234.66
Lead (Pb)	<0.01	<0.1
Particulate Matter (PM _{2.5})	84.54	78.99
Particulate Matter (PM ₁₀)	188.37	147.08
Total Particulate Matter (TSP)	407.13	256.07
Sulfur Dioxide (SO ₂)	134.6	1.79
Volatile Organic Compounds (VOC)	37.72	8.91
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2024 Actual Emissions
1,1,1 - Trichloroethane	<0.01	None Reported
1,3, - Butadiene	0.28	0.23
Acetaldehyde	4.64	3.96
Acrolein	0.56	0.47
Benzene	0.17	None Reported
Carbon Disulfide	0.25	0.21
Dioxin/Furans	<0.01	<0.01
Ethyl Benzene	0.16	0.13
Formaldehyde	0.69	0.58
HCl	39.7	32.58
Mercury (Hg)	<0.01	<0.01
Methanol	0.46	0.18
Naphthalene	0.16	0.13
Styrene	0.16	0.13
Toluene	0.47	0.38
Vinyl Chloride	1.94	1.60
Xylenes	0.31	0.26
Lead (Pb)	<0.01	<0.01
Total HAPs	49.94	40.98

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 160.4 tons/yr of CO, 301.4 tons/yr of NO_x, 188.37 tons/yr of PM₁₀, 134.6 tons/yr of SO₂, and 39.7 tons/yr of HCl. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Greer Lime Company's Riverton Facility is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR5	To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas
	45CSR6	Open burning prohibited.
	45CSR7	Control Of Particulate Matter Air Pollution From Manufacturing Processes And Associated Operations
	45CSR10	To Prevent and Control Air Pollution from the Emission of Sulfur Oxides
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR Permits
	45CSR16	Standards of Performance for New Stationary Sources
	WV Code § 22-5-4 (a) (15)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for Hazardous Air Pollutants
	40 C.F.R. 60 Subpart Y	Standards of Performance for Coal Preparation and Processing Plants
	40 C.F.R. 60 Subpart HH	Standards of Performance for Lime Manufacturing Plants
	40 C.F.R. 60 Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants
	40 C.F.R. 61 Subpart M	Asbestos inspection and removal
	40 C.F.R. 63 Subpart AAAAA	National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants
	40 C.F.R. 82 Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-1396E	September 10, 2019	
R13-1381B	May 29, 2024	
R13-1685C	June 27, 2025	
R13-2113K	April 21, 2016	
R13-2222-P2	March 19, 2002	
R13-2670B	May 1, 2014	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

This is the fourth Title V Permit renewal for the Greer Industries, Inc.'s Riverton facility and it includes changes from R30-07100001-2020(MM03).

The following changes were made as part of R30-07100001-2020(MM03) to incorporate changes made in R13-1685C to remove the trommel screen and associated equipment.

1.1. Emission Units

- The following emission units were removed from the PRIMARY AND SECONDARY CRUSHING (Group 002) section of the emission units table: H1, TS1, TS-BC1, TS-BC2, TS-BC3, OS1, OS2, OS3, and TS-DG1.
- Updated the emission units table footnote (2) to remove control device abbreviations no longer used in the emission units table.

4.0. Requirements for Primary and Secondary Crushing (Group 002)

- Removed H1, TS1, TS-BC1, TS-BC2, TS-BC3, OS1, OS2, OS3, and TS-DG1 from section title.
- Removed trommel screen requirements in conditions 4.1.2.a and 4.1.2.b that were removed with the issuance of R13-1685C.
- Removed conditions 4.1.5 and 4.1.9 which included the 40 C.F.R. 60, Subpart IIII and 40 C.F.R. 63 Subpart ZZZZ requirements for the diesel generator (TS-DG1) which was removed. Renumbered remaining conditions of section 4.1.

- Removed Condition 4.3.2 to remove trommel screen requirements that were removed with the issuance of R13-1685C. Renumbered remaining conditions of section 4.3.
- Removed conditions 4.4.1.c and 4.4.1.d to remove trommel screen and generator requirements that were removed with the issuance of R13-1685C.

The following changes were made as part of the Title V Permit renewal.

3.0 Facility-Wide Requirements

- This section contains boilerplate language which has been updated to the most recent language.
- This section contains applicable requirements from R13-1381, R13-1396, R13-1685, R13-2113, and R13-2670. There have been no changes to the applicable requirements from these R13 permits (with the exception of R13-1685) since the last modification of the Title V permit.
- This section contains applicable requirements from 45CSR7 which was amended on June 1, 2024 resulting in the following:
 - Conditions 3.1.14, 3.1.15, 3.3.2, and 3.3.3 were updated.
 - Old conditions 3.1.16, 3.1.17, and 3.1.18 were removed because 45CSR§§7-9.1, 10.3, and 10.4 were removed and reserved in 45CSR7.
- This section contains applicable requirements from 40 C.F.R. 60 Subpart OOO. There have been no changes to 40 C.F.R. 60 Subpart OOO since the issuance of the last Title V renewal.
- This section contains additional monitoring under 45CSR§30-5.1.c. There were no changes made to these requirements.

4.0 Requirements for Primary and Secondary Crushing (Group 002)

- This section contains applicable requirements from R13-1685. Changes made under R13-1685C were addressed above as part of R30-07100001-2020(MM03).
- This section contains applicable requirements from 40 C.F.R. 60 Subpart OOO. There have been no changes to 40 C.F.R. 60 Subpart OOO since the issuance of the last Title V renewal.
- With the removal of TS-DG1 in R30-07100001-2020(MM03) this section no longer contains applicable requirements from 40 C.F.R. 60 Subpart IIII or 40 C.F.R. 63 Subpart ZZZZ.

5.0 Requirements for Limestone Grinding (Group 011)

- This section contains applicable requirements from R13-2113. There have been no changes to the applicable requirements from this R13 permit since the last renewal of the Title V permit.
- This section contains applicable requirements from 40 C.F.R. 60 Subpart OOO. There have been no changes to 40 C.F.R. 60 Subpart OOO since the issuance of the last Title V renewal.

6.0 Requirements for 400 TPD Rotary Lime Kiln (Group 004)

- This section contains applicable requirements from R13-1381. There have been no changes to the applicable requirements from this R13 permit since the last modification of the Title V permit.
- This section contains applicable requirements from 40 C.F.R. 60 Subpart HH and 40 C.F.R. 60 Subpart OOO. There have been no changes to 40 C.F.R. 60 Subpart HH or 40 C.F.R. 60 Subpart OOO since the issuance of the last Title V renewal.
- This section contains applicable requirements from 45CSR10. 45CSR10 was last amended on June 1, 2024 resulting in the following changes to the permit.
 - Minor updates to conditions 6.1.5, 6.1.10, 6.1.11, 6.1.12, 6.1.13, 6.2.3, 6.3.1, 6.4.3 such as updates to the citations and changing references to “the Director” to “the Secretary.”
 - Removed old condition 6.1.14 since the cited requirement 45CSR§10-9.1 has been removed from 45CSR10 and that section has been changed to reserved..
- This section contains applicable requirements from 45CSR7. 45CSR7 was last amended on June 1, 2024, but none of the applicable requirements in this section were affected.

- This section contains additional monitoring under 45CSR§30-5.1.c. There were no changes made to these requirements.

7.0. Requirements for 500 TPD Rotary Lime Kiln (Group 005)

- This section contains applicable requirements from R13-1381 and R13-2113. There have been no changes to the applicable requirements from these R13 permits since the last modification of the Title V permit.
- This section contains applicable requirements from 40 C.F.R. 60 Subpart HH and 40 C.F.R. 60 Subpart OOO. There have been no changes to 40 C.F.R. 60 Subpart HH or 40 C.F.R. 60 Subpart OOO since the issuance of the last Title V renewal.
- This section contains applicable requirements from 45CSR10. 45CSR10 was last amended on June 1, 2024 resulting in the changes specified in section 6.0 which also pertain to the 500 TPD kiln according to conditions 7.1.19, 7.2.3, 7.3.3, and 7.4.3.
- This section contains applicable requirements from 45CSR7. 45CSR7 was last amended on June 1, 2024, but none of the applicable requirements in this section were affected.
- This section contains additional monitoring under 45CSR§30-5.1.c. There were no changes made to these requirements.

8.0. Requirements for Lime Handling System (Group 006)

- This section contains applicable requirements from R13-2113. There have been no changes to the applicable requirements from this R13 permit since the last renewal of the Title V permit.
- This section contains applicable requirements from 45CSR7. 45CSR7 was last amended on June 1, 2024, but none of the applicable requirements in this section were affected.

9.0. Requirements for Hydrate System (Group 007)

- This section contains applicable requirements from R13-1396. There have been no changes to the applicable requirements from this R13 permit since the last renewal of the Title V permit.
- This section contains applicable requirements from 45CSR7. 45CSR7 was last amended on June 1, 2024, but none of the applicable requirements in this section were affected.

10.0. Requirements for Portable Crushing and Screening Plant (Group 008)

- This section contains applicable requirements from R13-2222. There have been no changes to the applicable requirements from this R13 permit since the last renewal of the Title V permit.
- This section contains applicable requirements from 40 C.F.R. 60 Subpart OOO. There have been no changes to 40 C.F.R. 60 Subpart OOO since the issuance of the last Title V renewal.

11.0. Source-Specific Requirements for Coal Handling

- This section contains applicable requirements from R13-2670. There have been no changes to the applicable requirements from this R13 permit since the last renewal of the Title V permit.
- This section contains applicable requirements from 45CSR5. 45CSR5 was last amended on June 1, 2024, resulting in the following changes:
 - Minor update to condition 11.3.1.
- Condition 11.2.3 cited 45CSR7 in the previous Title V permit; this was incorrect so the citation was removed. With the removal of this citation this section no longer contains applicable requirements from 45CSR7.
- This section contains applicable requirements from 40 C.F.R. 60 Subpart Y. There have been no changes to 40 C.F.R. 60 Subpart Y since the issuance of the last Title V renewal.

12.0 Source-Specific Requirements Pertaining to National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Facilities (40 C.F.R. Part 63 Subpart AAAAA)

- This section contains applicable requirements from 40 C.F.R. 63 Subpart AAAAA. 40 C.F.R. 63 Subpart AAAAA was last amended on December 4, 2024 resulting in the following changes to the applicable requirements of this section:
 - Conditions 12.1.1, 12.1.2, and 12.1.3 were added to specify the compliance dates for the emission limits in 40 C.F.R. 63 Subpart AAAAA due to recent amendments of the regulation.
 - Old conditions 12.1.1 and 12.1.2 were combined and updated as new condition 12.1.4. to incorporate the emission limits added to 40 C.F.R. 63 Subpart AAAAA in the recent amendments. Note: the Riverton facility produces high-calcium quick lime.
 - In condition 12.1.5. (previously 12.1.3) references to Table 2 to Subpart AAAAA of Part 63 - Operating Limits were changed to Table 3 to Subpart AAAAA of Part 63 - Operating Limits.
 - Deleted old conditions 12.1.4, 12.1.5, 12.1.7, and 12.1.8 and the SSM plan in Appendix C. After January 20, 2021, these requirements were no longer applicable.
 - Old Condition 12.1.6 had minor updates and was moved to section 12.5 Reporting Requirements as condition 12.5.1 since it requires reporting related to visible emissions.
 - Added condition 12.1.6 to incorporate the startup and shutdown period emission limits of 40 C.F.R. §63.7090(c) and Table 2.
 - Added condition 12.1.7 to incorporate the HCl and mercury emission limits for an LMP using emissions averaging.
 - Added condition 12.1.8 to include the requirement to submit an OMM plan for review and approval.
 - Minor updates to condition 12.1.9.
 - Added condition 12.1.10 to incorporate the initial compliance requirements for the emission limits of 40 C.F.R. 63 Subpart AAAAA.
 - Updated conditions 12.2.1, 12.2.2, 12.2.4, and 12.2.5 with the most recent language from Subpart AAAAA of Part 63.
 - Added Condition 12.2.6 monitoring requirement to allow for the option to use emissions averaging to show compliance with HCl and mercury emission limits.
 - Minor updates to condition 12.3.1.
 - Added conditions 12.3.2, 12.3.3, 12.3.4, 12.3.5, 12.3.6, 12.3.7, 12.3.8, and 12.3.9 to incorporate testing requirements from Subpart AAAAA of Part 63.
 - Updated conditions 12.4.1, 12.4.3, with the most recent language from Subpart AAAAA of Part 63.
 - Added conditions 12.4.4 and 12.4.8 to incorporate 40 C.F.R. §63.7132(d) and 40 C.F.R. §63.7133(d).
 - Updated conditions 12.5.3 (previously 12.5.2), 12.5.4 (previously 12.5.3), 12.5.5 (previously 12.5.4), 12.5.6 (previously 12.5.5), and 12.5.7 (previously 12.5.6) with the most recent language from Subpart AAAAA of Part 63.
 - Added conditions 12.5.8, 12.5.9, 12.5.10, and 12.5.11 to incorporate new requirements, mainly related to CEDRI.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

- a. **45CSR§10-5.1** - This process is not defined as a refinery process gas stream or any other process gas stream that contains hydrogen sulfides to be combusted.
- b. **45CSR17** - Greer Lime Company is subject to 45CSR7 which exempts it from 45CSR17, To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter, as stated in 45CSR§7-10.2.
- c. **40 C.F.R. §§ 60.380 - 60.386 Subpart LL** - Standards of Performance for Metallic Mineral Processing do not apply because lime or limestone is not a metallic mineral.

- d. **40 C.F.R. §§ 60.674(a) and 60.676(c), (d), and (e) Subpart OOO** - These sections of 40 C.F.R. Part 60 Subpart OOO do not apply to Greer Lime Company since Greer Lime Company does not incorporate a wet scrubber in their non-metallic mineral processing plant subject to 40 C.F.R. 60 Subpart OOO. Wet scrubber 7-SCR-1 is not located in a process that is defined as a non-metallic mineral processing plant.
- e. **40 C.F.R. §§ 60.730 - 60.737 Subpart UUU** - Standards of Performance for Calciners and Dryers in Mineral Industries do not apply because lime is not listed as a mineral processed or produced in a mineral processing plant.
- f. **40 C.F.R. 64 Compliance Assurance Monitoring (CAM)** - The two rotary kilns have uncontrolled potential to be Title V major for PM, however they are subject to 40 C.F.R. 63 Subpart AAAAA standards, which were proposed after 11/15/1990 and therefore, exempts the pollutant specific emission unit “PSEU” from “CAM”.

The coal handling system (5-DH-1, 5-VF-1, 5-BC-0, 5-CR-1, 5-SI-1, 5-VF-2, 5-BC-1, 5-BC-2 and 5-BC-3) employs only passive control measures to meet the opacity requirements of 40 C.F.R. Part 60 Subpart Y and therefore, do not employ any add on control equipment that would require CAM monitoring.

The lime handling system (Group 006) does not encompass any individual PSEU having pre-controlled emissions exceeding major source thresholds for Title V.

The Hydrate Plant (Group 007) does not encompass any individual PSEU having pre-controlled emissions exceeding major source thresholds for Title V.

The fine grinding lines (Group 011) do not encompass any individual PSEU having pre-controlled emissions exceeding major source thresholds for Title V.

The open coal stockpiles (5-CS-1A and 5-CS-2) authorized by R13-2670B employ only passive control measures to meet the opacity requirements of 40 C.F.R. Part 60 Subpart Y and therefore, do not employ any add on control equipment that would require CAM monitoring.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: (Date of Notice Publication)
Ending Date: (Publication Date PLUS 30 Days)

Point of Contact

All written comments should be addressed to the following individual and office:

Robert Mullins
West Virginia Department of Environmental Protection
Division of Air Quality

601 57th Street SE
Charleston, WV 25304
304/926-0499 ext. 41286
Robert.A.Mullins@wv.gov

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

Not applicable.

Mullins, Robert A <robert.a.mullins@wv.gov>

Re: Greer Lime OMM Plan Approval

1 message

Mink, Stephanie R <stephanie.r.mink@wv.gov>
To: "Mullins, Robert A" <robert.a.mullins@wv.gov>
Cc: Carrie McCumbers <carrie.mccumbers@wv.gov>

Thu, Jul 17, 2025 at 11:52 AM

I'll take care of this now and label it as closely as I can. Some of the options in AX are a bit limited on how things can be named.

Thanks
Stephanie

On Thu, Jul 17, 2025 at 11:37 AM Mullins, Robert A <robert.a.mullins@wv.gov> wrote:

The attached OMM plan has been reviewed and approved as part of the Title V renewal. It needs to be uploaded to AX like we did the ROXUL OMM plan. Below is some of the info if you need any more let me know.

Primary ID: 071-00001
Permit Type: Operations Maintenance & Monitoring Plan
Permit Status: Approved
Document Date: 7-15-2025
Document Type: OMM Plan
Document Status: Public
Rule 1: 63 AAAAA Mineral Wool Production OMM Plan

Thanks
R.A.



west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
(304) 926-0475

Harold D. Ward, Cabinet Secretary
dep.wv.gov

MEMORANDUM

To: File

From: Robert Mullins

Date: July 15, 2025

Subject: Greer Industries, Inc
Riverton Facility
Facility ID No. 071-00001

Greer Industries, Inc's Riverton Facility is subject to the requirements of 40 C.F.R. 63, Subpart AAAAA – "National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants." Under 40 C.F.R. §63.7100(d), the permittee must submit an operations, maintenance, and monitoring (OMM) plan to the Administrator for review and approval as part of the application for the Title V permit. Greer Industries, Inc last revised their OMM plan in January 2021. This plan was submitted to WV DAQ on July 10, 2025 as additional information for the Title V Renewal application.

40 C.F.R. §63.7100(d) outlines the elements that must be included in the OMM plan. These are as follows:

1. Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable, for each emission unit.
2. A monitoring schedule for each emission unit.
3. Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in tables 1, 2, and 3 to this subpart, respectively. On and after the relevant compliance date for your source as specified in § 63.7083(g), your OM&M plan must address periods of startup and shutdown.
4. Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:
 - i. Calibration and certification of accuracy of each monitoring device;
 - ii. Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;

Promoting a healthy environment.

- iii. Prior to the relevant compliance date for your source as specified in § 63.7083(g), ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(i) and (ii), (c)(3), and (c)(4)(ii). On and after the relevant compliance date for your source as specified in § 63.7083(g), ongoing operation and maintenance procedures in accordance with the general requirements of paragraph (c) of this section and §§ 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii); and
 - iv. Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d).
- 5. Procedures for monitoring process and control device parameters.
 - 6. Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in table 3 to this subpart, including:
 - i. Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.
 - 7. A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

A review of Greer Industries, Inc.'s OMM plan has been conducted, and it has been determined that the plan contains the elements outlined in 40 C.F.R. §63.7100(d) for the rotary lime kiln (4-RK-1 and 4-RK-2) and the process stone handling equipment (4-BC-1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, and 4-STB-2) subject to the requirements of 40 C.F.R. 63, Subpart AAAAA. As such, this plan has been approved in accordance with 40 C.F.R. §63.7100(d). The OMM plan approval has been incorporated by reference in condition 12.1.8 and the OMM plan has been included as an attachment in R30-07100001-2025 .

40 CFR Part 63, Subpart AAAAAA – Lime Manufacturing MACT

Operations, Maintenance, & Monitoring Plan

Startup, Shutdown, & Malfunction Plan



Greer Lime Company
Riverton, West Virginia

Revision No. 2
January 2021

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1.1 Background

Greer Lime Company (Greer) operates a lime manufacturing plant near Riverton, Pendleton County, West Virginia. Emissions testing of the rotary lime kilns, conducted during October 2004, indicate that hydrochloric acid (HCl) emissions are greater than 10 tons/year, classifying the facility as a major source of hazardous air pollutants (HAP). As a major source of HAP, Greer is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Lime Manufacturing Plants, detailed in Title 40, Part 63, Subpart AAAAAA of the Code of Federal Regulations (40 CFR 63 Subpart AAAAAA). Typically, NESHAP regulations are also referred to as Maximum Achievable Control Technology (MACT) standards.

Both rotary lime kiln systems (4-RK-1 and 4-RK-2) are considered “existing sources” under the regulations. The compliance date for the equipment associated with these systems is January 5, 2007. Affected equipment subject to the Lime MACT rule is required to have in place an Operations, Maintenance, and Monitoring Plan (OM&MP) and a Startup, Shutdown, and Malfunction Plan (SSMP).

This document contains the OM&MP and the SSMP for the rotary lime kilns and processed stone handling equipment. As defined within the rule, the processed stone handling equipment at Greer consists of tunnel belt 4-BC-1, reclaim belt 4-BC-2, stone bin feed belt 4-BC-4, stone bin feed belt 4-BC-5, stone bin 4-STB-1, and stone bin 4-STB-2.

This document was revised during January 2021 to reflect changes made to the Rule following a Risk and Technology Review (RTR) conducted under the Clean Air Act. On June 4, 2020, the US EPA finalized amendments to the 2004 NESHAP for Lime Manufacturing Plants. The changes become effective on January 20, 2021. Specifically, the US EPA changed the following:

- Revised requirements for startup, shutdown and malfunction (SSM) to be consistent with recent court decisions; and
- Require electronic reporting of performance test results and compliance reports.

1.2 Action Items & Responsible Personnel

The following table address the critical action items and responsible personnel associated with the OM&M Plan and the SSMP provisions.

Action Item	Responsible Personnel	Discussion
Maintain the written OM&M Plan.	Environmental Manager	Will maintain the written plan and will update as necessary.
Submit the OM&M Plan to WVDAQ for review and approval.	Environmental Manager	Will submit to WVDAQ upon finalization with the updated Title V application. Changes to OM&M Plan must also be submitted to WVDAQ for review and approval.
Maintain the written startup, shutdown, and malfunction procedures.	Environmental Manager	Will maintain the written startup, shutdown, and malfunction procedures and update as necessary.
Keep records on each startup, shutdown, and malfunction.	Kiln Control Operator	Will keep records on each startup, shutdown, and malfunction event.
Submit a Compliance Report	Environmental Manager	Semiannually according to the requirements in §63.7131(b)
Submit a Performance Test Report	Environmental Manager	As required according to the requirements of §63.7131.

2. Operations, Maintenance, and Monitoring Plan

The OM&M plan requirements of 40 CFR §63.7100(d) are discussed in detail below. The actual regulatory language appears in *italic font*. Greer's response to each requirement appears in plain text.

- (d) *You must prepare and implement for each LMP, a written operations, maintenance, and monitoring (OM&M) plan. You must submit the plan to the applicable permitting authority for review and approval as part of the application for a 40 CFR part 70 or 40 CFR part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, you must comply with the provisions of the submitted plan. Each plan must contain the following information:*
- (1) *Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable for each emission unit.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The opacity from the fabric filter dust collectors serving each lime kiln system is continuously monitored with a continuous opacity monitoring system (COMS). A computerized data acquisition system records all opacities in electronic form. The opacity limit is 15% per startup period block average per Item 1 in Table 2, Startup and Shutdown Emission Limits, and 15% per 6-minute block average all other times per Item 1 of Table 3, Operating Limits, but the actual opacity is typically less during startup, shutdown and operation.
Rotary Lime Kiln – 500 TPD 4-RK-2	
	Measured opacity for compliance purposes will be taken from the data acquisition system.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The opacity limit for processed stone handling (PSH) equipment is 10% per Item 7 in Table 1, Emission Limits, and Item 4 in Table 4, Initial Compliance, of the Lime MACT rule. Dust emissions from the affected equipment are minimized through full enclosures and water sprays.

(2) *A monitoring schedule for each emission unit.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The opacity from each fabric filter dust collector serving its respective lime kiln is continuously monitored with a COMS. Data is stored electronically.
Rotary Lime Kiln – 500 TPD 4-RK-2	
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The Title V permit (R30-07100001-2020) the Lime MACT Rule, specifically, Item 1 in Table 7, Periodic Monitoring for Compliance with Opacity and Visible Emissions Limits, requires monthly visible emission observations for these sources. Data is stored in a written or electronic log and maintained on-site.

(3) *Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1, 2 and 3 to this subpart, respectively. Your OM&M plan must address periods of startup and shutdown.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	The dust collectors are operated in conjunction with the lime kilns due to the system's physical design and process control interlocks. The induced draft fan is the first item in sequence of process equipment to be started on kiln startup and the last item to shut down after lime kiln shutdown. This must occur to control preheat and cool down of the kilns to prevent damage to internal refractory. Computer system interlocks are used to assure proper startup and shutdown. The condition of the fabric filter bags is monitored continuously by the COMS. Each dust collector is equipped with a Bag Leak Detection System (BLDS) for operational purposes only. The BLDS is able to detect excess particulate matter exiting the dust collector in very small quantities, often prior to causing a significant increase in opacity on the COMS. The BLDS is able to determine the specific module (there are four in each dust collector) and row of bags causing the particulate matter detection. That

Emission Unit	Discussion
	information, combined with regular tracking of stack opacity through the COMS, allows Greer to determine when bag(s) may need replaced. Kilns are shutdown for scheduled, preventative maintenance approximately every six months. During this time, kiln systems, including the induced draft fan and dust collector are inspected, with work conducted as needed. Preventative maintenance is performed by Greer's on-site maintenance crew or contractors as needed.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The PSH equipment has an opacity limit of 10%. Full enclosures and water sprays are used to minimize dust generation from the affected equipment. The Title V permit and Lime MACT Rule requires monthly visible emission observations and fugitive dust control system inspections for these sources. Any issues identified during VE observations will be corrected using Greer's on-site maintenance crew or contractors as needed.

- (4) *Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:*
- (i) *Calibration and certification of accuracy of each monitoring device;*
 - (ii) *Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;*
 - (iii) *Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (3), and (4)(ii); and*
 - (iv) *Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d).*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	The opacity of exhaust gas released via the stack through the dust collectors is continuously monitored with a COMS. Data is maintained in electronic format by the plant's data acquisition system. The COMS are installed, maintained, calibrated, and operated in accordance with PS-1 of 40 CFR Part 60, Appendix B (specification in effect at the time the monitor was installed).

Tunnel Belt: 4-BC-1	There are no monitoring devices on these fugitive emissions sources. The Title V permit and Lime MACT Rule requires monthly visible emission observations.
Reclaim Belt: 4-BC-2	
4-STB-1 Feed Belt: 4-BC-4	
4-STB-2 Feed Belt: 4-BC-5	
Stone Bin: 4-STB-1	
Stone Bin: 4-STB-2	

(5) *Procedures for monitoring process and control device parameters.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The kilns utilize an Optimizing Control System (OCS) to supplement traditional PLC controls. The OCS continuously determines and implements optimized set points to maintain a required product quality. The system assists the kiln operator in determining the necessary balance of fuel, air, and stone input that results in consistent operation. Over 70 parameters on each kiln are continuously monitored, recorded, and displayed on the kiln operator's computer screens with other remote access terminals available within the plant. Opacity from the dust collectors serving the lime kilns is continuously monitored with a COMS. The measurements are continuously recorded from the monitor and displayed to the kiln operator's computer screens and other remote access plant terminals as with the process parameters. The measurements are viewable as an instantaneous opacity and 6-minute average. Exceedances of the 6-minute block average are recorded and maintained for compliance determination. The kiln operator is in nearly continuous attendance to monitor system alarms and is trained to take any necessary corrective action. Fault conditions occurring with the COMS are also recorded in order to determine if data collected is valid. Total fault condition time will be used to determine if the 95% data availability standard is being met. Startup block averages will be calculated based upon time at coal start to time at production of on spec lime. The opacity average during that period will be compared to the kiln startup emission limit standard.
Rotary Lime Kiln – 500 TPD 4-RK-2	

Tunnel Belt: 4-BC-1	The Title V permit and Lime MACT Rule requires monthly visible emission observations. The results of these observations are recorded in a log that is maintained on site.
Reclaim Belt: 4-BC-2	
4-STB-1 Feed Belt: 4-BC-4	
4-STB-2 Feed Belt: 4-BC-5	
Stone Bin: 4-STB-1	
Stone Bin: 4-STB-2	

- (6) *Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in Table 3 to this subpart, including:*
- (i) *Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and*
 - (ii) *Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The opacity limit is 15% per startup period block average per Item 1 in Table 2, Startup and Shutdown Emission Limits, and 15% per 6-minute block average all other times per Item 1 of Table 3, Operating Limits. The COMS will be used to determine if a deviation of the operating limit has occurred. If a deviation occurs, the kiln system and dust collector will be inspected as soon as practicable to determine the cause and necessary corrective action. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. Information on each deviation will be collected and used to record the cause, duration and corrective action taken.
Rotary Lime Kiln – 500 TPD 4-RK-2	

Emission Unit	Discussion
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	These are fugitive emissions sources. The only requirement for these sources is to follow this OM&M plan per Item 5 in Table 3, Operating Limits, and Item 1 of Table 7, Periodic Monitoring for Compliance with Opacity and Visible Emissions Limits.

- (7) *A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	The opacity monitor provides an indication of the performance condition of the respective dust collector in conjunction with other constantly measured parameters such as temperature and pressure drop. The opacity monitor thereby may be used as a predictive tool. Maintenance functions, bag usage, inventory, and parts purchase orders are tracked and recorded. Maintenance history is used to determine semi-annual outage needs. Kilns are shutdown for scheduled, preventative maintenance approximately every six months. Preventative maintenance is performed by Greer's on-site maintenance crew with assistance from outside contractors as needed. Additionally, in accordance with 40 CFR §63.7113(f), an annual inspection of the ductwork leading to the fabric filter dust collector will be conducted. The results of this annual inspection will be recorded in a log that is maintained on site.

Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	Potential fugitive emissions are minimized by full enclosures. The Title V permit and Lime MACT Rule requires monthly fugitive dust control system inspections.

3. Startup, Shutdown, and Malfunction Plan

A startup, shutdown, and malfunction plan (SSMP) is required by 40 CFR §63.7100(e). The requirements of the SSMP are contained in 40 CFR §63.6(e)(3).

3.1 SSMP Requirements Checklist

The critical elements of the SSMP are shown in the following table.

Item	Summary	Discussion
§63.6(e)(3)(i)	Develop and implement written SSMP.	Ensure emissions are minimized at all times, correct malfunctions as soon as practicable and reduce the reporting burden associated with SSM.
§63.6(e)(3)(iii)	Keep records of SSM events where consistent with the SSMP.	Keep records of SSM events where actions are consistent with the SSMP, but the event may cause an exceedance to an applicable emissions standard. Report these in the semiannual Compliance Report.
§63.6(e)(3)(iv)	Keep records of SSM events where not consistent with the SSMP and immediate reporting obligations.	Keep records of SSM events where actions are NOT consistent with the SSMP, and the event causes an exceedance to an applicable emissions standard. Report actions inconsistent with the SSMP within working 2 days, followed by a letter within 7 working days after the end of the event.
§63.6(e)(3)(v)	Maintain current and previous versions of SSMP.	Current and previous versions of the SSMP are maintained at the affected source and will be made available upon request.
§63.6(e)(3)(vi)	May use other documents to satisfy SSMP requirements.	A formal SSMP has been developed (this document). Other documents and records maintained by the affected facility may be used for recordkeeping.
§63.6(e)(3)(vii)	Administrator may require changes in SSMP.	Revision may be required by the Administrator if the SSMP is inadequate.

§63.6(e)(3)(viii)	Owner may periodically revise SSMP as necessary.	Revision of the SSMP may be made by the owner as necessary to satisfy requirements. Revision must be reported in the semiannual compliance report required by §63.10(d)(5).
§63.6(e)(3)(ix)	Title V permit must address requirement for SSMP.	This requirement will be addressed in the Title V application update to be submitted to WVDAQ as required by the Lime MACT rule.

3.2 Startup and Shutdown Procedures

Emission Unit	Startup and Shutdown Procedures
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	<u>Startup:</u> Before starting a kiln, ensure that the respective fabric filter dust collector and continuous opacity monitoring system (COMS) is operating properly. This is accomplished by the fabric filter dust collector being control interlocked with the lime kiln. COMS operation will be verified visually through the kiln control program by the Kiln Control Operator. If the dust collector and COMS were operating properly prior to shutdown, it is satisfactorily assumed that this equipment will operate properly prior to startup. For purposes of startup, proper operation is defined as no 6-minute block average of 15% or greater for the previous 24-hour period of operation, unless the kiln system was shutdown to correct opacity compliance issues. <u>Shutdown:</u> Before intentionally taking the fabric filter dust collector and COMS out of operation, ensure that the kiln is out of operation which is defined as no longer firing on coal.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The full enclosures are in place to minimize fugitive dust regardless if equipment is operating or not.

3.3 Malfunction Events

Emission Unit	Malfunction Events
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	<u>Fabric filter dust collector malfunction:</u> If a fabric filter dust collector system is malfunctioning in a manner that consistently causes the opacity limit (>15% in a 6-minute block average) to be exceeded, then the dust collector will be inspected by Greer’s maintenance crew and repaired as soon as safely practicable. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. The cause of the malfunction, malfunction start and end times, and corrective action taken will be recorded. <u>COMS malfunction:</u> If the continuous opacity monitoring system (COMS) is malfunctioning, repairs will be made as soon as practicable. COMS malfunctions are identified by a fault alarm. Fault alarms are recorded by the data acquisition system. Fault alarms will be investigated in a timely manner to determine if the underlying fault condition is harming the validity of COMS data. Most faults can be cleared in-house by performing the manufacturer’s prescribed routine maintenance followed by an on-stack calibration. If this does not correct the fault condition, then the COMS manufacturer will be contacted to secure their technical services. There are some fault alarms that do not negatively impact the validity of the COMS data, but instead are used to notify the operator of an undesirable condition that needs addressed. If the fault alarm is not related to a condition causing invalid data, then those fault times will not be counted as a malfunction. A COMS malfunction is a condition causing invalid data. During a COMS outage caused by a malfunction lasting longer than 24-hours, visible emissions observations by a Method 9 certified observer will be conducted at least once per day during daylight hours. The results will be maintained in a written log and made available for review upon request.

Emission Unit	Malfunction Events
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	If dust emissions are evident and the 10% opacity limit is in jeopardy of being violated, the full enclosures and/or water sprays will be inspected for defects and corrected as necessary.

Section 4

40 CFR Part 63, Subpart AAAAA (Lime MACT Rule)



Federal Register

**Monday,
January 5, 2004**

Part II

Environmental Protection Agency

40 CFR Part 63

**National Emission Standards for
Hazardous Air Pollutants for Lime
Manufacturing Plants; Final Rule**

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 63**

[Docket ID No. OAR-2002-0052; FRL-7551-7]

RIN 2060-AG72

National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for the lime manufacturing source category. The lime manufacturing emission units regulated will include lime kilns, lime coolers, and various types of processed stone handling (PSH) operations. The EPA has identified the lime manufacturing industry as a major source of hazardous air pollutant (HAP) emissions including, but not limited to, hydrogen chloride (HCl), antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, mercury, nickel, and selenium. Exposure to these substances has been demonstrated to cause adverse health effects such as cancer; irritation of the lung, skin, and mucus membranes; effects on the central nervous system; and kidney damage. The final NESHAP will require all major sources subject to the rule to meet HAP emission standards reflecting the application of maximum achievable control technology (MACT). Implementation of the final NESHAP will reduce non-volatile and semi-volatile metal HAP emissions from the lime manufacturing industry source category by approximately 6.5 tons per year (tpy) and will reduce emissions of particulate matter (PM) by 5,900 tpy.

EFFECTIVE DATE: January 5, 2004.

ADDRESSES: *Docket.* The EPA has established an official public docket for this action including both Docket ID No. OAR-2002-0052 and Docket ID No. A-95-41. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. All items may not be listed under both docket numbers, so interested parties

should inspect both docket numbers to ensure that they have received all materials relevant to the final rule. The official public docket is available for public viewing at the EPA Docket Center (Air Docket), EPA West, Room B-102, 1301 Constitution Avenue, NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For further information concerning applicability and rule determinations, contact the appropriate State or local agency representative. For information concerning analyses performed in developing the final NESHAP, contact Keith Barnett, U.S. EPA, Emission Standards Division, Minerals and Inorganic Chemicals Group, C504-05, Research Triangle Park, North Carolina 27711, (919) 541-5605, barnett.keith@epa.gov.

SUPPLEMENTARY INFORMATION: *Docket.* The EPA has established an official public docket for this action including both Docket ID No. OAR-2002-0052 and Docket ID No. A-95-41. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. All items may not be listed under both docket numbers, so interested parties should inspect both docket numbers to ensure that they have received all materials relevant to the final rule. Although a part of the official public docket, the public docket does not include Confidential Business Information or other information whose disclosure is restricted by statute. The docket is a dynamic file because information is added throughout the rulemaking process. The docketing system is intended to allow members of the public and industries involved to easily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated standards and their preambles, the contents of the docket, excluding interagency review materials, will serve as the record in the case of judicial review. (See section 307(d)(7)(A) of the Clean Air Act

(CAA).) The regulatory text and other materials related to this rulemaking are available for review in the docket, or copies may be mailed from the Air Docket on request by calling (202) 566-1742. A reasonable fee may be charged for copying docket materials. *Electronic Access.* You may access this **Federal Register** document electronically through the EPA Internet under the "Federal Register" listings at <http://www.epa.gov/fedrgstr/>. An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at <http://www.epa.gov/edocket/> to access the index of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the appropriate docket identification number.

Certain types of information will not be placed in the EPA dockets. Information claimed as confidential business information (CBI) and other information whose disclosure is restricted by statute, which is not included in the official public docket, will not be available for public viewing in EPA's electronic public docket. The EPA's policy is that copyrighted material will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified in this document.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of today's final NESHAP will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of this action will be posted on the TTN's policy and guidance page for final rules at <http://www.epa.gov/ttn/oarpg>. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541-5384.

Regulated Entities. Categories and entities potentially regulated by this action include:

Category	NAICS	Examples of regulated entities
	32741	Commercial lime manufacturing plants.
	33111	Captive lime manufacturing plants at iron and steel mills.
	3314	Captive lime manufacturing plants at nonferrous metal production facilities.

Category	NAICS	Examples of regulated entities
	327125	Producers of dead-burned dolomite (Non-clay refractory manufacturing).

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the applicability criteria in § 63.7081 of the final NESHAP. If you have any questions regarding the applicability of this action to a particular entity, consult the technical contact person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Judicial Review. The NESHAP for Lime Manufacturing were proposed in December 20, 2002 (67 FR 78046). This action announces EPA's final decisions on the NESHAP. Under section 307(b)(1) of the CAA, judicial review of the final NESHAP is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by March 5, 2004. Under section 307(d)(7)(B) of the CAA, only an objection to a rule or procedure raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by the final NESHAP may not be challenged separately in any civil or criminal proceeding brought to enforce these requirements.

Outline. The information presented in this preamble is organized as follows:

I. Introduction

- A. What Is the Purpose of the Final NESHAP?
- B. What Is the Source of Authority for Development of NESHAP?
- C. What Criteria Are Used in the Development of NESHAP?
- D. How Was the Final NESHAP Developed?
- E. What Are the Health Effects of the HAP Emitted From the Lime Manufacturing Industry?
- F. What Are Some Lime Manufacturing Industry Characteristics?
- G. What Are the Processes and Their Emissions at a Lime Manufacturing Plant?

II. Summary of the Final NESHAP

- A. What Lime Manufacturing Plants Are Subject to the Final NESHAP?
- B. How Do We Define the Affected Source and What Emissions Units Are Included?
- C. What Pollutants Are Regulated by the Final NESHAP?
- D. What Are the Emission Limits and Operating Limits?
- E. When Must I Comply With the Final NESHAP?
- F. How Do I Demonstrate Initial Compliance With the Final NESHAP?

G. How Do I Continuously or Periodically Demonstrate Compliance With the Final NESHAP?

H. How Do I Determine if My Lime Manufacturing Plant Is a Major Source and Thus Subject to the Final NESHAP?

III. Summary of Changes Since Proposal

IV. Summary of Environmental, Energy and Economic Impacts

A. How Many Facilities Are Subject to the Final NESHAP?

B. What Are the Air Quality Impacts?

C. What Are the Water Impacts?

D. What Are the Solid Waste Impacts?

E. What Are the Energy Impacts?

F. What Are the Cost Impacts?

G. What Are the Economic Impacts?

V. Responses To Major Comments

VI. Statutory and Executive Order Reviews

A. Executive Order 12866, Regulatory Planning and Review

B. Paperwork Reduction Act

C. Regulatory Flexibility Analysis

D. Unfunded Mandates Reform Act

E. Executive Order 13132, Federalism

F. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments

G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

H. Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

I. National Technology Transfer and Advancement Act

J. Congressional Review Act

I. Introduction

A. What Is the Purpose of the Final NESHAP?

The purpose of the final NESHAP is to protect the public health by reducing emissions of HAP from lime manufacturing plants.

B. What Is the Source of Authority for Development of NESHAP?

Section 112(c) of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. We listed Lime Manufacturing in the category of major sources on July 16, 1992 (57 FR 31576). Major sources of HAP are those that have the potential to emit, considering controls, 10 tpy or more of any one HAP or 25 tpy or more of any combination of HAP.

C. What Criteria Are Used in the Development of NESHAP?

Section 112(d) of the CAA requires that we establish NESHAP for the control of HAP from both new and

existing major sources. The CAA requires NESHAP to reflect the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator of EPA determines has been adequately demonstrated. This level of control is commonly referred to as MACT.

The CAA further provides that MACT standards must attain at least a minimum level of stringency, known as the MACT floor. The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing 5 sources for categories or subcategories with fewer than 30 sources) for which the Agency has emissions information.

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of cost of achieving the emissions reductions, any health and environmental impacts, and energy requirements.

D. How Was the Final NESHAP Developed?

We used several resources to develop the final NESHAP, including questionnaire responses from industry, emissions test data, site surveys of lime manufacturing facilities, operating and new source review permits, permit applications, and comments on the proposed rule. We researched the relevant technical literature and existing State and Federal regulations and

consulted and met with representatives of the lime manufacturing industry, State and local representatives of air pollution agencies, Federal agency representatives (e.g., United States Geological Survey) and emission control and emissions measurement device vendors in developing the final NESHAP. We also conducted an extensive emissions test program. Industry representatives provided emissions test data, arranged site surveys of lime manufacturing plants, participated in the emissions test program, reviewed draft questionnaires, provided information about their manufacturing processes and air pollution control technologies, and identified technical and regulatory issues. State representatives provided existing emissions test data, copies of permits and other information.

E. What Are the Health Effects of the HAP Emitted From the Lime Manufacturing Industry?

The HAP emitted by lime manufacturing facilities include, but are not limited to, HCl, antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, mercury, nickel, and selenium. Exposure to these compounds has been demonstrated to cause adverse health effects when present in concentrations higher than those typically found in ambient air.

We have detailed data on each of the currently operating facilities for emissions of HCl. Human exposures to ambient levels of HCl resulting from lime manufacturing facilities' emissions were estimated by industry as part of the risk assessment they conducted for purposes of demonstrating, pursuant to section 112(d)(4) of the CAA, that HCl emissions from lime kilns are below the threshold level of adverse effects, within an ample margin of safety.

We do not have the type of current detailed data on each of the facilities that will be covered by the final NESHAP, and the people living around the facilities, that will be necessary to conduct an analysis to determine the actual population exposures to the metals HAP emitted from these facilities and the potential for resultant health effects. Therefore, we do not know the extent to which the adverse health effects described below occur in the populations surrounding these facilities. However, to the extent the adverse effects do occur, the final NESHAP will reduce emissions and subsequent exposures.

The HAP that will be controlled with the final NESHAP are associated with a variety of adverse health effects, including chronic health disorders (e.g.,

irritation of the lung, skin, and mucus membranes; effects on the central nervous system; cancer; and damage to the kidneys), and acute health disorders (e.g., lung irritation and congestion, alimentary effects such as nausea and vomiting, and effects on the kidney and central nervous system). We have classified three of the HAP—arsenic, chromium, and nickel—as human carcinogens and three others—beryllium, cadmium, and lead—as probable human carcinogens.

F. What Are Some Lime Manufacturing Industry Characteristics?

There are approximately 70 commercial and 40 captive lime manufacturing plants in the U.S., not including captive lime manufacturing operations at pulp and paper production facilities. About 30 of the captive plants in the U.S. produce lime that is used in the beet sugar manufacturing process, but captive lime manufacturing plants are also found at steel, other metals, and magnesia production facilities. Lime is produced in about 35 States and Puerto Rico by about 47 companies, which include commercial and captive producers (except for lime manufacturing plants at pulp and paper production facilities), and those plants which produce lime hydrate only.

G. What Are the Processes and Their Emissions at a Lime Manufacturing Plant?

There are many synonyms for lime, the main ones being quicklime and its chemical name, calcium oxide. High calcium lime consists primarily of calcium oxide, and dolomitic lime consists of both calcium and magnesium oxides. Lime is produced via the calcination of high calcium limestone (calcium carbonate) or other highly calcareous materials such as aragonite, chalk, coral, marble, and shell; or via the calcination of dolomitic limestone. Calcination occurs in a high temperature furnace called a kiln, where lime is produced by heating the limestone to about 2000° F, driving off carbon dioxide in the process. Dead-burned dolomite is a type of dolomitic lime produced to obtain refractory characteristics in the lime.

The kiln is the heart of the lime manufacturing plant, where various fossil fuels (such as coal, petroleum coke, natural gas, and fuel oil) are combusted to produce the heat needed for calcination. There are five different types of kilns: rotary, vertical, double-shaft vertical, rotary hearth, and fluidized bed. The most popular is the rotary kiln, but the double-shaft vertical kiln is an emerging new kiln technology

gaining in acceptance because of its energy efficiency. Rotary kilns may also have preheaters associated with them to improve energy efficiency. As discussed further in this preamble, additional energy efficiency is obtained by routing exhaust from the lime cooler to the kiln, a common practice. Emissions from lime kilns include, but are not limited to, metallic HAP, HCl, PM, sulfur dioxide, nitrogen oxides, and carbon dioxide. These emissions predominately originate from compounds in the limestone feed material and fuels (e.g., metals, sulfur, chlorine) and are formed from the combustion of fuels and the heating of feed material in the kiln.

All types of kilns use external equipment to cool the lime product, except vertical (including double-shaft) kilns, where the cooling zone is part of the kiln. Ambient air is most often used to cool the lime (although a few use water as the heat transfer medium), and typically all of the heated air stream exiting the cooler goes to the kiln to be used as combustion air for the kiln. The exception to this is the grate cooler, where more airflow is generated than is needed for kiln combustion, and consequently a portion (about 40 percent) of the grate cooler exhaust is vented to the atmosphere. We estimate that there are about five to ten kilns in the U.S. that use grate coolers. The emissions from grate coolers include the lime dust (PM) and the trace metallic HAP found in the lime dust.

Lime manufacturing plants may also produce hydrated lime (also called calcium hydroxide) from some of the calcium oxide (or dolomitic lime) produced. Hydrated lime is produced in a hydrator via the chemical reaction of calcium oxide (or magnesium oxide) and water. The hydration process is exothermic, and part of the water in the reaction chamber is converted to steam. A wet scrubber is integrated with the hydrator to capture the lime (calcium oxide and calcium hydroxide) particles carried in the gas steam, with the scrubber water recycled back to the hydration chamber. The emissions from the hydrator are the PM comprised of lime and hydrated lime.

Operations that prepare the feed materials and fuels for the kiln and process the lime product for shipment or further on-site use are found throughout a lime manufacturing plant. The equipment includes grinding mills, crushers, storage bins, conveying systems (such as bucket elevator, belt conveyors), bagging systems, bulk loading or unloading systems, and screening operations. The emissions from these operations include limestone

and lime dust (PM) and the trace metallic HAP found in the dust.

II. Summary of the Final NESHAP

A. What Lime Manufacturing Plants Are Subject to the Final NESHAP?

The final NESHAP will regulate HAP emissions from all new and existing lime manufacturing plants that are major sources, co-located with major sources, or are part of major sources. However, lime manufacturing plants located at pulp and paper mills or at beet sugar factories are not subject to the final NESHAP. Other captive lime manufacturing plants, such as (but not limited to) those at steel mills and magnesia production facilities, will be subject to the final NESHAP. See 67 FR 78053 explaining the basis for these determinations. We define a lime manufacturing plant as any plant which uses a lime kiln to produce lime product from limestone or other calcareous material by calcination. However, we specifically exclude lime kilns that use only calcium carbonate waste sludge from water softening processes as the feedstock. Lime product means the product of the lime kiln calcination process including calcitic lime, dolomitic lime, and dead-burned dolomite.

B. How Do We Define the Affected Source and What Emissions Units Are Included?

The final NESHAP defines the affected source as follows: each lime kiln and its associated cooler, each individual PSH system. The individual types of emission units in a PSH system are conveying system transfer points, bulk loading or unloading systems, screening operations, bucket elevators, and belt conveyors—if they follow the processed stone storage bin or storage pile in the sequence of PSH operations. The materials processing operations (MPO) associated with lime products (such as quicklime and hydrated lime), lime kiln dust handling, quarry or mining operations, limestone sizing operations, and fuels are not subject to today's final NESHAP. Processed stone handling operations are further distinguished in the final NESHAP as follows: (1) Whether their emissions are vented through a stack, (2) whether their emissions are fugitive emissions, (3) whether their emissions are vented through a stack with some fugitive emissions from the partial enclosure, and/or (4) whether the source is enclosed in a building. Finally, lime hydrators and cooler nuisance dust collectors are not included under the

definition of affected source under the final NESHAP.

C. What Pollutants Are Regulated by the Final NESHAP?

The final NESHAP establishes PM emission limits for lime kilns, coolers, and PSH operations with stacks. Particulate matter will be measured solely as a surrogate for the non-volatile and semi-volatile metal HAP. (Particulate matter of course is not itself a HAP, but is a typical and permissible surrogate for HAP metals. See *National Lime Ass'n v. EPA*, 233 F. 3d 625, 637–40 (D.C. Cir., 2000). The final NESHAP also regulate opacity or visible emissions from most of the PSH operations, with opacity also serving as a surrogate for non-volatile and semi-volatile HAP metals.

D. What Are the Emission Limits and Operating Limits?

Emission Limits

The PM emission limit for the existing kilns and coolers is 0.12 pounds PM per ton of stone feed (lb/tsf) for kilns using dry air pollution control systems prior to January 5, 2004. Existing kilns that have installed and operating wet scrubbers prior to January 5, 2004 must meet an emission limit of 0.60 lb/tsf. Kilns which meet the criteria for the 0.60 lb/tsf emission limit must continue to use a wet scrubber for PM emission control in order to be eligible to meet the 0.60 lb/tsf limit. If at any time such a kiln switches to a dry control, they would become subject to the 0.12 lb/tsf PM emission limit, regardless of the type of control device used in the future. The PM emission limit for all new kilns and lime coolers is 0.10 lb/tsf. As a compliance option, these emission limits (except for the 0.60 lb/tsf limit) may be applied to the combined emissions of all the kilns and coolers (assuming the cooler(s) has a separate exhaust vent to the atmosphere) at the lime manufacturing plant. In other words, the sum of the PM emissions from all of the kilns and coolers at the lime manufacturing plant, divided by the sum of the production rates of the kilns at the existing lime manufacturing plant, will be used to determine compliance with the appropriate emission limit for kilns and coolers. If the lime manufacturing plant has both new and existing kilns and coolers, then the emission limit will be an average of the existing and new kiln PM emissions limits, weighted by the annual actual production rates of the individual kilns, except that no new kiln may exceed the PM emission level of 0.10 lb/tsf. Kilns that are required to

meet a 0.60 lb/tsf PM emission limit must meet that limit individually, and may not be included in any averaging calculations.

Emissions from PSH operations that are vented through a stack will be subject to a limit of 0.05 grams PM per dry standard cubic meter (g/dscm) PM and 7 percent opacity. Stack emissions from PSH operations that are controlled by wet scrubbers are subject to the 0.05 g/dscm but not subject to the opacity limit. Fugitive emissions from PSH operations are subject to a 10 percent opacity limit.

For each building enclosing any PSH operation, each of the affected PSH operations in the building must comply individually with the applicable PM and opacity emission limitations discussed above. Otherwise, there must be no visible emissions from the building, except from a vent, and the building's vent emissions must not exceed 0.05 g/dscm and 7 percent opacity. For each fabric filter (FF) that controls emissions from only an individual, enclosed processed stone storage bin, the opacity must not exceed 7 percent. For each set of multiple processed stone storage bins with combined stack emissions, emissions must not exceed 0.05 g/dscm and 7 percent opacity. Because the opacity requirement for PSH operations is used as an indicator that a control device is functioning properly, it is not appropriate, or meaningful, to average the opacity readings from multiple PSH operations. The final rule does not allow averaging of PSH operations.

We are not regulating HCl emissions from lime kilns in the final NESHAP. Under the authority of section 112(d)(4) of the CAA, we have determined that no further control is necessary because HCl is a "health threshold pollutant," and HCl levels emitted from lime kilns are below the threshold value within an ample margin of safety. See generally, 67 FR 78054–057. As explained there, the risk analysis sought to assure that emissions from every source in the category result in exposures less than the threshold level even for an individual exposed at the upper end of the exposure distribution. The upper end of the exposure distribution is calculated using the "high end exposure estimate," defined as a plausible estimate of individual exposure for those persons at the upper end of the exposure distribution, conceptually above the 90th percentile, but not higher than the individual in the population who has the highest exposure. We believe that assuring protection to persons at the upper end of the exposure distribution is consistent with

the "ample margin of safety" requirement in section 112(d)(4).

In the proposed rule, we published the results of the risk analysis on which we based this decision. More information on the risk analysis may be found in the published proposed rule (67 FR 78054–78057) and in the docket. We received only one comment on our risk analysis.

We also are not establishing a limit for mercury emissions from lime kilns. The only control technique would reflect control of the raw materials and/or fossil fuels. This control is not duplicable or replicable. We also determined that an emission limit for mercury based on a beyond-the-MACT-floor option is not justified after consideration of the cost, energy, and non-air environmental impacts. See 67 FR 78057 for additional discussion. We received no adverse comments on this aspect of the rule as proposed.

Operating Limits

For lime kilns that use a wet scrubber PM control device, you are required to maintain the 3-hour block average gas stream pressure drop across the scrubber and the 3-hour block average scrubber liquid flow rate equal to or above the levels for the parameters that were established during the PM performance test.

For kilns using a FF or electrostatic precipitator (ESP) PM control device, you must monitor opacity (as an operating limit) with a continuous opacity monitoring system (COMS). You are required to install and operate the COMS in accordance with Performance Specification 1 (PS-1), 40 CFR part 60, Appendix B, and maintain the opacity level of the lime kiln exhaust at or below 15 percent for each 6-minute block period. Facilities that installed COMS on or before February 6, 2001, should continue to meet the requirements in effect in 40 CFR part 60, Appendix B, at the time of COMS installation unless specifically required to re-certify the COMS by their permitting authority.

As an alternative to a COMS, lime kilns that use ESP or FF PM controls can elect to monitor PM levels with a PM detector that meets the requirements in § 63.7113(e) of the final rule. You must maintain and operate the ESP or FF such that the PM detector alarm is not activated, and the alarm condition does not exist for more than 5 percent of the operating time in each 6-month period.

For lime kilns that use a FF PM control device, you may install, maintain and operate a bag leak detection system (BLDS) as an

alternative to a COMS or PM detector. The FF must be operated and maintained so that the BLDS alarm is not activated, and an alarm condition does not exist for more than 5 percent of the operating time in each 6-month period. The BLDS must 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.

For PSH operation emission points subject to a PM emission limit and controlled by a wet scrubber, you are required to collect and record the exhaust gas stream pressure drop across the scrubber and the scrubber liquid flow rate during the PM performance test. You are required to continuously maintain the 3-hour average gas stream pressure drop across the scrubber and the 3-hour average scrubber liquid flow rate equal to or above the levels for the parameters that were established during the PM performance test.

You are required to prepare a written operations, maintenance, and monitoring (OM&M) plan to cover all affected emission units. The plan must include procedures for proper operation and maintenance of each emission unit and its air pollution control device(s); procedures for monitoring and proper operation of monitoring systems in order to meet the emission limits and operating limits; standard procedures for the use of a BLDS and PM detector; and corrective actions to be taken when there is either a deviation from operating limits, or when PM detector or BLDS alarms indicate corrective action is necessary.

E. When Must I Comply With the Final NESHAP?

The compliance date for existing affected sources is January 5, 2004. (Three years may be needed to install new, or retrofit existing, air pollution control equipment.) A new affected source (*i.e.*, a kiln or PSH system for which construction or reconstruction commenced after December 20, 2002) must be in compliance upon initial startup or January 5, 2007, whichever is later.

F. How Do I Demonstrate Initial Compliance With the Final NESHAP?

Kiln and Coolers

For the kiln and cooler PM emission limit, you must conduct a PM emissions test on the exhaust of each kiln at the lime manufacturing plant and measure the stone feed rate to each kiln during the test. Each individual kiln must meet their applicable PM emission limit

(0.10, 0.12, or 0.60 lb/tsf). Alternately, kilns subject to the 0.10 (new kilns) or 0.12 (existing kilns) lb/tsf PM emission limits are in compliance if the sum of the emissions from these kilns at the lime manufacturing plant, divided by the sum of the stone feed rates entering each of these kilns, do not exceed the applicable PM emission limit, or if the facility has both new and existing kilns, it must not exceed an average of the 0.12 and 0.10 lb/tsf PM emission limits weighted by individual kiln throughput. Kilns subject to the 0.60 lb/tsf PM emission limit can not be included in any averaging scheme. If you have a lime cooler(s) that has a separate exhaust to the atmosphere, you must conduct a PM test on the cooler's exhaust concurrently with the kiln PM test, and add the cooler emissions to the appropriate kiln emissions. For kilns with a wet scrubber, you must collect and record the applicable operating parameters during the PM performance test and then establish the operating limits based on those data.

Processed Stone Handling Operations

For PSH operations with stacks that are subject to PM emission limits, you are required to conduct a PM emissions test on each stack exhaust, and the stack emissions must not exceed the emission limit of 0.05 g/dscm. For PSH operations with stack opacity limits, you are required to conduct a 3-hour test on the exhaust in accordance with Method 9 in Appendix B of 40 CFR part 60, and each of the 30 consecutive, 6-minute opacity averages must not exceed 7 percent. The PSH operations controlled using wet scrubbers do not have an opacity limit, but you are required to collect and record the wet scrubber operating parameters during the PM performance test and then establish the applicable operating limits based on those data.

For PSH operations with fugitive emissions, you are required to conduct a Method 9 test, and each of the consecutive 6-minute opacity averages must not exceed the applicable opacity limit. These Method 9 tests are for 3 hours, but the test duration may be reduced to 1 hour if certain criteria are met. Lastly, Method 9 tests or visible emissions checks may be performed on PSH operations inside of buildings, but additional lighting, improved access to equipment, and temporary installation of contrasting backgrounds may be needed. For additional guidance, see page 116 of the "Regulatory and Inspection Manual for Nonmetallic Minerals Processing Plants," EPA report 305-B-97-008, November 1997.

G. How Do I Continuously or Periodically Demonstrate Compliance With the Final NESHAP?

General

You are required to install, operate, and maintain each required continuous parameter monitoring system (CPMS) such that the CPMS completes a minimum of one cycle of operation for each successive 15-minute period. The CPMS will be required to have valid data from at least three equally spaced data values for that hour during periods that it is not out of control according to your OM&M plan. To calculate the block average for each 3-hour averaging period, you must have at least two of three of the hourly averages for that period using only hourly average values that are based on valid data (*i.e.*, not from out-of-control periods). When required, the 3-hour block average value for each operating parameter must be calculated as the average of each set of three successive 1-hour average values.

You are required to develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the general provisions in 40 CFR 63.6(e)(3).

Kilns and Coolers

For kilns controlled by a wet scrubber, you are required to maintain the 3-hour block average of the exhaust gas stream pressure drop across the wet scrubber greater than, or equal to, the pressure drop operating limit established during the most recent PM performance test. You are also required to maintain the 3-hour block average of the scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the most recent performance test.

Sources opting to monitor PM emissions from an ESP with a PM detector in lieu of monitoring opacity are required to maintain and operate the ESP such that the PM detector alarm is not activated, and alarm condition does not exist for more than 5 percent of the operating time in a 6-month period. Each time the alarm sounds and the owner or operator initiates corrective actions (per the OM&M plan) within 1 hour of the alarm, 1 hour of alarm time will be counted. If inspection of the ESP demonstrates that no corrective actions are necessary, no alarm time will be counted. The sensor on the PM detection system must provide an output of relative PM emissions. The PM detection system must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level. The PM detection systems are

required to be installed, operated, adjusted, and maintained according to the manufacturer's written specifications and recommendations.

Sources opting to monitor PM emissions from a FF with a BLDS or PM detector in lieu of monitoring opacity are required to maintain and operate the FF such that the BLDS or PM detector alarm is not activated, and alarm condition does not exist for more than 5 percent of the operating time in a 6-month period. Each time the alarm sounds and the owner or operator initiates corrective actions (per the OM&M plan) within 1 hour of the alarm, 1 hour of alarm time will be counted. If inspection of the FF demonstrates that no corrective actions are necessary, no alarm time will be counted. The sensor on the BLDS is required to provide an output of relative PM emissions. The BLDS is required to have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level. The BLDS is required to be installed, operated, adjusted, and maintained in accordance with the manufacturer's written specifications and recommendations.

Standard operating procedures for the BLDS and PM detection systems must be incorporated into the OM&M plan. We recommend that for electrodynamic (or other similar technology) BLDS, the standard operating procedures include concepts from EPA's "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). This document may be found on the world wide web at www.epa.gov/ttn/emc.

For kilns and lime coolers monitored with a COMS, you are required to maintain each 6-minute block average opacity level at or below 15 percent opacity. For COMS installed after February 6, 2001, the COMS must be installed and operated in accordance with PS-1, 40 CFR part 60, Appendix B. Facilities that installed COMS on or before February 6, 2001, should continue to meet the requirements in effect in 40 CFR part 60, Appendix B, at the time of COMS installation unless specifically required to re-certify the COMS by their permitting authority.

Processed Stone Handling Operations

For stack emissions from PSH operations which are controlled by a wet scrubber, you are required to maintain the 3-hour average exhaust gas stream pressure drop across the wet scrubber greater than, or equal to, the pressure drop operating limit established during the most recent PM performance test. You are required to also maintain the 3-hour average

scrubbing liquid flow rate greater than, or equal to, the flow rate operating limit established during the most recent PM performance test.

For PSH operations subject to opacity limitations that do not use a wet scrubber control device, you are required to periodically demonstrate compliance as follows. You must conduct a monthly 1-minute visible emissions check of each emissions unit in the affected source. If no visible emissions are observed in six consecutive monthly tests for any emission unit, you may decrease the frequency of testing from monthly to semiannually for that emissions unit. If visible emissions are observed during any semiannual test, you must resume testing of that emissions unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests. If no visible emissions are observed during the semiannual test for any emissions unit, you may decrease the frequency of testing from semiannually to annually for that emissions unit. If visible emissions are observed during any annual test, you must resume visible emissions testing of that emissions unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

If visible emissions are observed during any visible emissions check, you must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test is required to begin within 1 hour of any observation of visible emissions, and the 6-minute opacity reading must not exceed the applicable opacity limit.

H. How Do I Determine if My Lime Manufacturing Plant Is a Major Source and Thus Subject to the Final NESHAP?

The final NESHAP apply to lime manufacturing plants that are major sources, co-located with major sources, or are part of major sources. Each lime facility owner/operator must determine whether their plant is a major or area source since this determines whether the lime manufacturing plant is an affected source under the final NESHAP. Section 112 of the CAA defines a major source as a "stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons/yr or more of any HAP or 25 tons/yr or more of any combination of HAP." This definition requires evaluation of the facility's potential to emit all HAP from

all emission sources in making a determination of whether the source is major or area. However, based on our data analysis, HCl is most likely the HAP that will account for the largest quantity of HAP emissions from a lime manufacturing plant. Although lime manufacturing plants emit HAP metals from most of the emission units at the plant site and organic HAP from the kiln, our analysis indicates that most likely the metal and organic HAP emissions will each be well below the 10 tpy criteria.

We are requiring that all lime manufacturing facilities potentially subject to the final NESHAP demonstrate, with an emissions test, that they emit less than 10 tpy of HCl if they wish to claim area source status. We are allowing three HCl test methods to be used. These are EPA Method 320 or 321 in Appendix A to 40 CFR part 63, or ASTM Method D 6735-01. If ASTM Method D 6735-01 is used, we require that the paired-train option in section 11.2.6 and the post-test analyte spike option in section 11.2.7 be used.

III. Summary of Changes Since Proposal

We proposed a PM standard (as a surrogate for non-mercury HAP metals) of 0.12 lb/tsf reflecting the performance of dry pollution control systems (baghouses). We also solicited comment on having a separate PM standard of 0.60 lb/tsf for kilns controlled with wet scrubbers. In the final rule, we have decided to adopt these two different standards for PM emissions from existing lime kilns. We are also indicating that existing kilns subject to the 0.60 lb/tsf PM emission limit are not to be included in any averaging scheme for demonstrating compliance with a PM standard.

In the proposed NESHAP, we required facilities using wet scrubbers to monitor scrubber pressure drop and liquid flow rate. We have written the final NESHAP to explicitly state that alternative monitoring procedures are allowed under the procedures described in 40 CFR 63.8(f). However, we do not delegate that authority.

The proposed NESHAP stated that you must install, operate, and maintain COMS as required by 40 CFR part 63, subpart A, General Provisions, and according to PS-1 in Appendix B to 40 CFR part 60. We have stated in the rule that COMS installed, relocated, or substantially refurbished after February 6, 2001, must meet the requirements of PS-1 as revised on August 10, 2000. Any COMS installed on or before February 6, 2001, should continue to meet the requirements in effect at the

time of installation unless specifically required by the local regulatory agency to re-certify the COMS in question.

In the proposed NESHAP, we required you to monitor the performance of FF with either a COMS or a PM detector. In the final NESHAP, we are allowing existing facilities to monitor FF performance using daily EPA Method 9, in Appendix A to 40 CFR part 60, visible emission readings if the facility has a positive pressure FF with multiple stacks, or if it is infeasible to install a COMS in accordance with PS-1 in Appendix B to 40 CFR part 60.

In the proposed NESHAP, we allowed three alternatives for monitoring ESP performance. These were a COMS, a PM detector, or monitoring ESP voltage and current. In the final NESHAP, we are allowing only two alternatives, a COMS or a PM detector. There are no requirements to establish ESP voltage and current operating limits.

In the proposed NESHAP, we specified that EPA Method 9 in Appendix A to 40 CFR part 60 should be used to determine opacity from fugitive emissions. We have retained this requirement in the final NESHAP, but we have added additional requirements on how EPA method 9 in Appendix A to 40 CFR part 60 should be implemented to determine fugitive visible emissions. This language was taken directly from 40 CFR 60.675(c)(1).

In the proposed NESHAP, § 63.7120(b) could be interpreted to imply that PSH operations must be continuously monitored. In the final NESHAP, PSH operations are subject to monthly (not continuous) visible emission testing.

In the proposed NESHAP, we required that lime kiln emission testing be conducted at the highest production level reasonably expected to occur. In the final NESHAP, we require that lime kilns be tested under representative operating conditions.

In the proposed NESHAP, we required reporting of deviations from operating, visible emissions, and opacity limits, including those deviations that occur during periods of startup, shutdown, or malfunction. In the final NESHAP, we require that reports are to be made in accordance with 40 CFR 63.10(d).

In the proposed NESHAP, we required testing of all kilns in order to claim area source status. In the final NESHAP, we have included a provision that allows the permitting authority to determine if idled kilns must be tested, and also to determine whether all kilns that use identical feed materials, fuels, and emission controls must still all be tested.

In the proposed NESHAP, the raw material storage bin was the first emission unit in the sequence of lime manufacturing that was part of the affected source. Materials processing operations between the storage bin and the kiln were also covered. In the final NESHAP, material stockpiles prior to the processed stone storage bin are not covered, open processed stone piles are not covered, storage bins are defined as manmade enclosures, and use the term processed stone handling operations instead of materials processing operations.

In the proposed NESHAP, we included as an affected source lime kilns that produced lime product from any calcareous substance. In the final NESHAP, we have excluded lime kilns that produce lime from water softening sludge that contain calcium carbonate.

In the proposed NESHAP, we excluded materials handling operations associated with lime product. In the final NESHAP, we have specifically stated that nuisance dust collectors are part of lime product handling systems and, therefore, are not part of the affected source.

In the proposed NESHAP, we required that facilities use rolling 3-hour averages to show compliance with wet scrubber operating limits. We noted that in the proposed rule, we did not clearly state how to calculate the rolling average. Based on compliance requirements of other NESHAP, we determined that a rolling average was not necessary to ensure compliance, but did increase the complexity of the average calculation and recordkeeping process. Therefore, in the final NESHAP, we require block 3-hour averages instead of rolling 3-hour averages, which is consistent with the requirement to use block averaging required for ESP that choose to monitor using COM.

In the proposed NESHAP, we allowed averaging among all lime kilns and coolers at existing sources, and all new lime kilns and coolers at new sources, but did not allow averaging of existing and new lime kilns and coolers together. In addition, the averaging provisions and equations applied whether or not the facility desired to average. We have written the final NESHAP to state that each individual new lime kiln and its associated cooler must meet a 0.10 lb/tsf PM emission limit, and each individual existing lime kilns and its associated cooler must meet a 0.12 lb/tsf PM emission limit. Averaging is optional, so that if each individual kiln meets its emission limit, averaging is not required. The exception to this is for existing kilns which are subject to the

0.60 lb/tsf PM emission limit. These kilns are not eligible for averaging.

If the lime manufacturing plant has multiple kilns and wants to average kilns together to meet the PM emission limit, this is allowed (with one limitation discussed below, and the exception for kilns subject to the 0.60 lb/tsf PM emission limit noted above) and the averaging equations in the final rule must be used. However, in no case may a new kiln exceed a 0.10 lb/tsf emission limit. Where there are both new and existing lime kilns at a facility, then the PM emission limit will be an average of the existing and new kiln PM emissions limits, weighted by the annual actual production rates of the individual kilns. We believe that allowing averaging is appropriate here because of the identity of the units (kilns and coolers in all cases), and the emissions (same HAP in same type of emissions, since all emissions result from kilns and coolers). Averaged emissions under these circumstances would, thus, still reflect MACT for the affected source. The averaging provisions are included in the final NESHAP as a result of the recommendations of the Small Business Advocacy Panel convened as required by section 609(b) of the Regulatory Flexibility Act (RFA) and improves the compliance flexibility options for small businesses, which is the intent of the RFA.

The only limitation we are requiring on averaging is that any new kiln, when considered alone, must meet the 0.10 lb/tsf emission limit. We do not consider this to be a significant limitation because the most likely averaging scenario involving new and existing kilns will be a facility that erects a new kiln that is designed to meet a level below the 0.10 lb/tsf emission limit. It is also appropriate to prevent a situation where a new kiln could be erected that did not perform at the same level as the best controlled facility.

We are not allowing kilns equipped with wet scrubbers for PM emissions control to be eligible for averaging. As explained more fully below, we are establishing a separate PM emissions standard for kilns equipped with wet scrubbers to avoid potentially forcing

wet scrubbers to be replaced with dry systems, which could lead to less control of SO₂ emissions and atmospheric formation of sulfate PM (a type of PM_{2.5}). These considerations, however, do not justify allowing averaging between kilns with such large differences in PM emission limits. Our intent in allowing averaging was to avoid the situation where some kilns at a facility were slightly above the 0.12 lb/tsf emission limit would have to completely replace existing PM controls for only a slight reduction on overall PM emissions. If we were to allow averaging where some of the kilns only have to meet a 0.60 lb/tsf emission limit, it could result in some kilns being allowed to emit PM at levels significantly above the levels that have been determined to be best control.

We are not allowing averaging for other emission sources. Processed stone handling operations that exhaust through stacks have an emission limit of 0.50 g/dscm. We did not see an advantage to allowing averaging for these operations because they are small compared to the PM emissions for the lime kilns. The other emission limits in the final rule are for PSH operations, and the limits are expressed as opacity. As stated previously, averaging opacity limits is not appropriate. No commenter requested averaging for PSH operations.

In the proposed rule, we defined the affected source as the collection of all of the lime kilns, lime coolers and materials processing operations. We noted that this language could be misinterpreted to imply that a new lime kiln erected at an existing lime manufacturing plant would be considered existing, not new. In the final NESHAP, we have written the language in 40 CFR 63.7082 to make our intent clear. New lime kilns, whether or not they are built at an existing lime manufacturing plant, must meet the PM emission limits for new sources.

IV. Summary of Environmental, Energy and Economic Impacts

We considered water, solid waste, and energy impacts as part of our so-called beyond-the-floor analysis pursuant to section 112(d)(2) of the CAA, which requires consideration of "non-air

quality health and environmental impacts and energy requirements," as well as "the cost of achieving such emissions reduction," in deciding whether or not to adopt standards more stringent than the MACT floor. The following section summarize portions of these analyses.

A. How Many Facilities Are Subject to the Final NESHAP?

There are approximately 110 lime manufacturing plants in the U.S., not including lime production facilities at pulp and paper mills. About 30 of these 110 plants are located at beet sugar manufacturing facilities which are not subject to the final rule. We estimate that 70 percent of the remaining 80 lime manufacturing plants will be major sources co-located with major sources, or part of major sources, and, thus, about 56 lime manufacturing plants will be subject to the final rule. The other 24 facilities will incur a small, one-time cost for HCl testing to demonstrate that they are area sources.

B. What Are the Air Quality Impacts?

We estimate that all sources (not including lime manufacturing plants at beet sugar factories) in the lime manufacturing source category collectively emit approximately 10,720 tpy of HAP. These HAP estimates include emissions of HCl and HAP metals from existing sources and projected new sources over the next 5 years. We estimate that the final NESHAP will reduce HAP metals emissions from the lime manufacturing source category by about 3.6 tpy, and will reduce HCl emissions by about 235 tpy. In addition, we estimate that the final NESHAP will reduce PM emissions by about 3,880 tpy from a baseline level of 16,730 tpy, and the final NESHAP will reduce SO₂ emissions by about 6,150 tpy from a baseline of 34,650 tpy. The roughly 14 percent decrease in HCl and SO₂ emissions is the projected result of uncontrolled sources installing baghouses to comply with the final PM standards.

Table 1 to this preamble summarizes the baseline emissions and emissions reductions.

TABLE 1.—TOTAL NATIONAL BASELINE EMISSIONS AND EMISSIONS REDUCTIONS FOR BOTH NEW AND EXISTING LIME MANUFACTURING PLANTS

Emissions	PM (tpy)	HAP metals (tpy)	HCl (tpy)	SO ₂ (tpy)
Baseline emissions—existing sources	13,588	13.5	8,541	30,783
Baseline emissions—new sources	3,140	2.8	2,161	3,868

TABLE 1.—TOTAL NATIONAL BASELINE EMISSIONS AND EMISSIONS REDUCTIONS FOR BOTH NEW AND EXISTING LIME MANUFACTURING PLANTS—Continued

Emissions	PM (tpy)	HAP metals (tpy)	HCl (tpy)	SO ₂ (tpy)
Total baseline emissions	16,728	16.3	10,702	34,651
Emissions reductions—existing sources	3,786	3.4	235	6,147
Emissions reductions—new sources	96	0.2	0	0
Total emissions reductions	3,882	3.6	235	6,147

The final NESHAP will also result in some offsetting emissions increases. These increases are due to additional emissions that will occur at electricity generating facilities as a result of the need to generate the electricity required to operate the control equipment, and power the fans necessary to overcome control device pressure drop. We estimate these emission increases to be 0.3 tpy for PM, 12.4 tpy for sulfur dioxide (SO₂), and 6.1 tpy for nitrogen oxides (NO_x). It should be noted that these emissions increases are insignificant when compared to the emissions decreases that result from the final NESHAP.

C. What Are the Water Impacts?

We expect overall water consumption for existing sources to increase by about 1,250 million gallons per year from current levels as a result of the final rule. This estimate is based on the assumption that sources will upgrade or replace about 30 percent of the existing wet scrubbers to comply with the PM standards, and these new or upgraded scrubbers will require a higher water flow rate that the scrubbers currently installed. For new sources, we expect no additional water consumption, as we do not expect new sources to install wet scrubbers for PM control.

D. What Are the Solid Waste Impacts?

As a result of the final rule, solid waste will be generated as additional PM is collected in complying with the PM standards. We estimate that about 3,880 tpy of additional solid waste will be generated as a result of today's final rule. This estimate does not include consideration that some of this will most likely be recycled directly to the lime kiln as feedstock or sold as byproduct material (agricultural lime).

E. What Are the Energy Impacts?

We expect electricity demand from existing sources to increase by about 4.0 million kilowatt-hours/yr (kWh/yr) as a result of the final rule. This estimate is based on the assumption that sources will replace existing wet scrubbers with

new, more efficient venturi wet scrubbers (that require more electricity). For new sources, we expect an increase in electricity usage of about 0.1 million kWh/yr as a result of the final rule. This electricity demand is associated with complying with the PM standards for new sources.

F. What Are the Cost Impacts?

The estimated total national capital cost of today's final rule is \$28.2 million. This capital cost applies to projected new and existing sources and includes the cost to purchase and install emissions control equipment (e.g., existing PM control equipment upgrades); monitoring equipment; the costs of initial performance tests; and emissions tests to measure HCl to determine whether a source is a major source, and, hence subject to the final standards.

The estimated annualized costs of the final NESHAP are \$18.0 million. The annualized costs account for the annualized capital costs of the control and monitoring equipment, operation and maintenance costs, periodic monitoring of materials handling operations, and annualized costs of the initial emissions testing.

G. What Are the Economic Impacts?

It should be noted that the economic impacts and social costs described below slightly overestimate the impacts for today's action, for they reflect the higher cost estimates (\$22.4 million annualized costs) associated with the proposed rule.

The results of our economic impact analysis indicate the average price per ton for lime will increase by 2.1 percent (or \$1.17 per metric ton) as a result of the final standards for lime manufacturers. Overall lime production is projected to decrease by 1.8 percent as a result of the final standards. Because of the uncertainty of control cost information for large firms, we accounted for these firms as a single aggregate firm in the economic model, so it is not plausible to estimate closures for large firms. However, among the 19

small firms in this industry, we project that two firms are at risk for closure.

Based on the market analysis, we project the annual social costs of the final rule to be \$20.2 million. As a result of higher prices and lower consumption levels, we project the consumers of lime (both domestic and foreign) will lose \$19.7 million annually, while domestic producer surplus will decline by \$0.8 million. Foreign producers will gain as a result of the final rule with profit increasing by \$0.2 million. For more information regarding the economic impacts, consult the economic impact analysis in the docket for the final rule.

V. Responses to Major Comments

This section presents a summary of responses to major comments. A summary of all comments received and our responses to those comments may be found in Docket ID No. OAR 2002–0052.

Comment: In the preamble to the proposed rule, EPA requested comment on establishing a subcategory for existing kilns equipped with wet scrubbers, if it could be demonstrated factually that there will otherwise be significant environmentally counterproductive effects due to increased emissions of acid gases, increased energy use, or increased water use. Several commenters asked that a subcategory for scrubber-equipped kilns be established since wet scrubbers cannot meet the proposed PM emission limit of 0.12 lb/tsf for existing affected kilns and, therefore, existing kilns with scrubbers will have to replace them with baghouses. They also asserted that in most cases, wet scrubbers have higher annualized costs than baghouses. Therefore, even if a wet scrubber could meet a PM emission limit of 0.12 lb/tsf, facilities will opt to use baghouses due to cost considerations. This will result in an increase in emissions of HCl (a HAP) and SO₂ (a non-HAP criteria pollutant) for a nominal decrease in HAP metal emissions. In later discussions, this same commenter (the industry trade association) pointed out that SO₂ can undergo chemical reactions

in the atmosphere to form sulfate PM, which is a type of PM which is less than 2.5 micrometers in diameter (fine PM). In support of this request, one commenter provided estimates that not establishing the requested wet scrubber subcategory will result in a HAP metals emissions decrease of 3 tpy nationwide, but will result in increased emissions of 2,220 tpy for HCl and 2,475 tpy for SO₂. They also provided data indicating that 46 percent of the increased SO₂ emissions would react to form fine PM in the form of sulfates. They estimate that this would result in an increase of 1,645 tpy of fine PM emissions. Other commenters provided site-specific examples they claimed demonstrated the same effect. One commenter also claimed that the higher operating temperatures of dry systems cause metals to vaporize and pass through a particulate collector, resulting in a lower metal concentration in the captured particulate. As a result, they claimed that even though dry control equipment may reduce HAP metals emissions, the reduction will be minimal, while the release of HCl and SO₂ emissions will increase significantly. The commenter provided data which they claimed show the only conventional pollutant that will be reduced with the installation of a dry control system will be PM and, "fugitive dust emissions from a dry system could more than offset the improved particulate collection on the kiln exhausts."

Response: Standards implementing section 112(d) of the CAA must, of course, be of a minimum level of stringency, usually referred to as the MACT floor. For existing sources, this floor level of control cannot be less stringent than "the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information)." In the final rule, EPA is establishing section 112(d) standards to control emissions of HAP metals, for which PM is a surrogate. None of the commenters challenged that the level of PM emissions reflecting the average of the 12 percent of the best performing sources (for HAP metals reduction) is 0.12 lb/tsf. Notwithstanding, the commenters contended that EPA should subcategorize on the basis of the type of air pollution control device used and then separately determine the floor for each subcategory.

Although the CAA contemplates that EPA may establish subcategories when promulgating MACT standards, subcategorization typically reflects "differences in manufacturing process,

emission characteristics, or technical feasibility" (67 FR 78058). A classic example, provided in the legislative history to CAA section 112(d), is of a different process leading to different emissions and different types of control strategies, the specific example being Soderberg and prebaked anode primary aluminum processes (see *A Legislative History of the Clean Air Act Amendments of 1990*, vol. 1 at 1138–39 (floor debates on Conference Report)).

Normally, it is legally impermissible to subcategorize based on the type of air pollution control device. See *Chemicals Manufacturers Association v. EPA*, 870 F. 2d 177, 218–19 (5th Cir. 1989) modified on different grounds on rehearing 884 F. 2d 253 (5th Cir. 1989) (rejecting subcategorization based on type of control device for purposes of the technology-based standards under the Clean Water Act, which are analogous to the CAA section 112 standards). The problem with subcategorizing on the basis of pollution control device, quite simply, is that it leads to situations where floors are established based on performance of sources that are not the best performing. For example, suppose a source category consists of 100 sources using the same process and having the same emission characteristics, but that 50 sources use control device A to control HAP emissions, and 50 use control device B which is two orders of magnitude less efficient. If one subcategorized based on the type of pollution control device, the MACT floor for the 50 sources with control device B would reflect worst, rather than best performance. Although the disparity in levels of emission control between the best-performing sources here, and the best-performing sources using wet scrubbers is not this dramatic, the difference is nonetheless evident.

Commenters provided no technical data that would justify subcategorizing. Nor are we aware of any. The commenters maintain instead that the best performing sources with respect to HAP metal reduction should not be considered "best performing" because that performance (achieved by use of FF) comes at an environmental cost, namely increased emissions of HCl and SO₂ compared to what lime kilns equipped with wet scrubbers will emit. There is some support for the idea that if an ostensibly best-performing pollution control device creates potentially significant and counterproductive environmental effects, its performance need no longer be considered best due to the counterproductive effects and could justify differentiation in the form of

separate standards. Commenters suggested that the increased emissions of HCl and SO₂ will inevitably result (they maintain) if the owners of lime kilns replace wet scrubbers with baghouses. (The commenters did not suggest, however, that kilns with FF should replace them with a different type of control system to avoid these impacts; they sought the result of separate standards for FF-equipped kilns and wet system-equipped kilns.)

Although it is not clear that the commenters' starting premise, that baghouses are either needed or will be used to achieve the PM standard, is invariably correct (see Response to Comment Document where EPA responds to comments regarding the performance capabilities of venturi wet scrubber systems), EPA estimated at proposal and continues to estimate that at least in some cases, kilns would replace wet scrubbers with dry systems (for example, where it is more economical to do so).

The commenters provided no data to refute that a PM emission limit of a 0.12 lb/tsf represents best control of HAP emissions if we do not create any kiln subcategories. (We note that as part of their comments, they claimed that the higher temperatures of dry PM controls result in metals vaporizing and passing through the PM control. However, the data provided in their comment do not substantiate that claim, and studies done for the Hazardous Waste Combustor NESHAP indicate that all but a few percent of the metals in question exit the kilns as solid particulate.) However, our analysis indicates that the extent to which SO₂ and HCl emissions actually increase may have been overstated by the commenter. The EPA estimates that if all facilities currently using wet scrubbers switched to dry controls, HCl emissions would increase by approximately 1,310 tpy (vs. 1,800 tpy estimated by the commenter), and SO₂ emissions would increase by about 1,830 tpy (vs 2,900 tpy estimated by the commenter). (See the memorandum "Environmental Impacts of Decision on Best Control for Wet Scrubber-Controlled Kilns" in the docket for the final rule.) We do not regard either level of increased HCl emissions as significant. We modeled this emission increase as part of our determination (pursuant to CAA section 112(d)(4)) that emissions of HCl from lime kilns are below an HCl risk threshold within an ample margin of safety. See 67 FR 78054–78057 and the risk analysis in the docket for the final rule. Given this determination, we cannot view these HCl increases as being so significant as

to raise a question whether the best-performing sources with respect to HAP metal reductions are in fact best performing.

The commenters also cited projected increases in the criteria pollutant SO₂. They did not initially address the reductions in PM emissions resulting from the decision not to subcategorize by control device. The EPA estimates that nearly 1,080 tpy of additional PM is removed if all existing kilns were to meet a standard of 0.12 lb/tsf, of which approximately 1.6 tpy are metal HAP. Although EPA may not promulgate standards for non-HAP under CAA section 112(d), Congress expected reductions in emissions of criteria pollutants such as PM to be a benefit of the MACT program. In comparison to estimates of increased emissions of SO₂ and HCl by either the commenter or EPA, the decrease in captured PM emissions (and the attendant decrease in capture of non-mercury metal HAP) is significant.

There is a further consideration, however. Based on the available size distribution data from Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources, 73 percent of the PM emitted directly by lime kilns is coarse PM (PM in the size range of 10 to 2.5 micrometers). Some of the SO₂ emitted to the atmosphere undergoes chemical reactions to form fine PM. (See generally the respective Criteria Documents for PM (EPA/600/P-95/001aF-cF. 3v, 1996) and SO₂ (EPA/600/8-82-029aF-cF. 3v., 1982 and addenda)). Thus, in assessing whether some potential factor might justify a decision that kilns with dry systems are not best performing, some comparison of coarse v. fine PM emissions here is needed.

If we retain a single PM emission limit of 0.12 lb/tsf for all existing kilns, total PM emissions would be reduced (compared to separate standards for kilns with wet scrubbers and dry controls) by an additional 1,080 tpy. Of that number, 630 tpy is fine PM and 450 is coarse PM. The potential amount of increased SO₂ emissions is 1,830. A portion of this 1,830 tpy of SO₂ will be converted in the atmosphere to produce 1,270 tpy of fine PM. Therefore, the incremental impact of a single PM standard of 0.12 lb/tsf for both wet scrubbers and dry controls would be an increase of 640 (1,270-630) tpy in fine PM emissions, and a decrease of 450 tpy in coarse PM emissions. This assumes that all facilities that currently have wet scrubbers switch to dry controls, and that 46 percent of the SO₂ converts to fine PM. The 46 percent conversion estimate used by the commenter is

consistent with information in the respective Criteria Documents for PM and SO₂ discussed above.

As recently summarized by EPA (68 FR 28339, May 23, 2003), scientific studies show ambient PM (both fine and coarse) is associated with a series of adverse health effects. Fine PM is associated with increases in daily mortality. Coarse PM is more strongly linked to morbidity (e.g. hospital admissions). See generally the respective Criteria Documents for PM (EPA/600/P-95/001aF-cF. 3v, 1996) and SO₂ (EPA/600/8-82-029aF-cF. 3v., 1982 and addenda). Therefore, it is difficult to make comparisons between the relative benefits of reducing emissions of fine and coarse PM.

The EPA views this situation as equivocal: It is unclear which of these types of performance is best since on the one hand there is reduced emissions of HAP metals and coarse PM but foregone control of SO₂ and sulfate (fine) PM, and, for kilns controlled with wet systems, the converse. In this situation, and based on these facts, which, with current analytic tools seem to us to be largely in equipoise, we are not prepared to view either wet or dry systems as best performing and instead are promulgating a separate PM standard for each.

The EPA emphasizes that considerations of risk and relative environmental benefits are normally irrelevant to MACT floor determinations (unless expressly authorized by statute, as in CAA section 112(d)(4) as applied in the final rule), since floor standards must reflect the performance of the specified number of designated sources. See *National Lime Ass'n v. EPA*, 233 F. 3d at 640 (considerations of cost and *de minimis* risk cannot be considered in making MACT floor determinations). We are considering these factors in the final rule solely for the purpose of evaluating the commenters' claim that sources using wet and dry control systems should be evaluated separately for MACT floor purposes due to environmental benefits and disbenefits associated with dry and dry control systems.

Comment: One commenter stated that wet scrubbers cannot meet the proposed PM emission limit of 0.12 lb/tsf. They claimed that a wet scrubber manufacturer will only guarantee this limit if less than 1 percent of the particles to be removed are less than 1 micrometer in diameter. The commenter stated that EPA assumes that the average mass diameter of particles in lime kiln gas effluent is 2 micrometers, and that this assumption is based on a single reference, and that reference was

actually fugitive lime dust, not lime kiln particulate. They further claimed that volatilization and homogenous nucleation of potassium chloride particles in the gas stream generates particles in the 0.1 to 0.5 micrometers size range. "As particle size decreases below 1 micrometer, inertial compaction becomes decreasingly effective. Above 0.1 micrometers, Brownian displacement is ineffective. In the range between 0.1 and 0.5 micrometers, neither of these two main particle capture mechanisms relied upon in wet scrubber design is very effective." The commenter presented data from a recent scrubber installation to demonstrate the point.

A second commenter claimed that a scrubber performance efficiency of 99.9 percent will be required to meet the 0.0072 grain/dry standard cubic foot (gr/dscf) particulate concentration which they claimed corresponds to the proposed PM emission limit of 0.12 lb/tsf. The commenter's environmental consultant advised that it is unlikely a wet scrubber with a 35-inch pressure drop could achieve this level of performance with the facility's current inlet exhaust particulate loading.

Response: We have serious technical disagreements with this comment, as set out in the Response to Comment Background Document. However, because EPA feels that some kilns with wet systems would replace them with dry systems to comply with a PM emission limit of 0.12 lb/tsf, the potential tradeoff between coarse PM/HAP metals and fine PM/SO₂ reductions likely will still occur.

Comment: One commenter contended that EPA asserts incorrectly that lime plants will choose high-efficiency venturi scrubbers to replace their current wet scrubbers because high-efficiency venturi scrubbers have lower capital costs and sometimes lower annual costs than FF. They further stated that five of the six model kilns the Agency examined had much higher annualized costs for high-efficiency venturi scrubbers than for FF. This commenter submitted a manufacturer's cost proposal that shows a scrubber with a 35-inch pressure drop costs substantially more than EPA estimates. They conclude from this that lime kilns will be forced to use FF, with attendant increases in HCl and SO₂ emissions. Another commenter stated that the cost for the installation of a FF will be higher than EPA estimated due to the location of existing equipment in the area where the collector should be located, construction of the duct collector in a congested area with plant operations,

and accessibility to existing lime kiln dust handling systems.

Response: Regarding modeled high costs for scrubbers compared to FF, individual models may show this characteristic. However, the distribution of kiln sizes in the lime industry and the allocation of model plants to those kilns shows that estimated nationwide total annual costs for replacing existing wet scrubbers with high-efficiency venturi scrubbers is \$6.6 million. The total annual cost if the existing wet scrubbers are replaced with FF is \$7.0 million. So there is essentially no cost difference on a nationwide basis.

For both types of control system, costs for any specific plant may be more or less than the value shown by the model used to estimate nationwide cost. The plant is expected to buy whatever system its management believes is in the best business interests of the owners, but in the aggregate, estimated annual cost for control systems is about the same whether all plants replace existing equipment with venturi scrubbers or with FF. It is for this reason that EPA is finding that at least some kilns would replace wet systems with dry if required to meet a uniform PM limit of 0.12 lb/tsf.

There were two comments where specific facilities claimed that their costs will be higher than EPA estimated in our model plant analysis. One was a vendor's actual cost proposal for a scrubber with 35-inch w.g. pressure drop, and one was for installation of a FF. Our costs are based on model plants developed from industry responses to questionnaires. Given that we do not have site specific information on every facility, this is a reasonable approach to calculating costs. It is always possible that there are site specific factors that will result in any one facility having higher or lower costs than costs estimated using model plants. Our methodology is based on estimates of basic equipment costs, and factors to calculate direct and indirect capital costs that constitute total capital investment. Unit costs are applied to labor, utilities, waste disposal, and other operating and maintenance costs to obtain direct annual costs. Indirect annualized costs based on capital recovery and other service charges are also estimated and added to direct annual costs to obtain total annual cost. Costing based on a model plant gives an estimate that can be included in an aggregate estimation of costs across all model plants weighted by their representation in the nationwide population. This approach necessarily will not address each specific case found in industry. Therefore, one

facility's reported costs not corresponding to our model plant costs does not indicate that our costs are underestimated. We also note that, except for a comment on flue gas flow which we previously addressed, the commenters did not take exception to the basic equipment costs, energy costs, or cost factors used by us in our model plant assessment of the rule's cost analysis as proposed.

One commenter also mentioned the cost resulting from the location of existing equipment and plant congestion. We have accounted for these costs by including factors for demolition and salvage of existing equipment that will have to be replaced by the new control system. A retrofit factor is also included to account for difficulties in replacing existing equipment with new equipment in an existing plant (see "Costing Algorithm for Venturi Scrubber on Lime Kilns with Existing Scrubbers").

Comment: Several commenters claimed that not establishing a subcategory for scrubber-equipped kilns will adversely affect small businesses. They stated that the annualized cost of upgrading all scrubbers is \$9.45 million, based on EPA's estimate of total annualized costs. According to the commenter, EPA predicts that upgrading these kilns will reduce HAP metals by 3.1 tpy, resulting in a cost effectiveness of \$3.0 million/ton of metal HAP. The commenter stated that EPA's assumption that 30 percent of lime plants are area sources and won't be affected by the final rule reduces the removal of metal HAP attributed to upgrading scrubber-equipped kilns to 2.2 tpy (although the commenter stated that EPA has provided no support for the assumption that 30 percent of lime plants are area sources).

Another commenter noted that EPA's estimated annualized cost for the commenter to install FF is \$2,236,000, which equates to \$9.3 million per ton of particulate HAP control.

Response: Section 112 of the CAA precludes us from considering cost when calculating MACT floors. Therefore, none of the cost issues discussed above are sufficient to support a separate subcategory for existing kilns with wet scrubbers, or otherwise support a different standard.

Though costs cannot be a consideration here, our estimate shows a cost of \$6.6 million to upgrade all scrubbers to meet the rule as proposed, versus the \$9.45 million figure provided by the commenter. Our estimate assumed 70 percent of kilns are located at major sources, and 90 percent of scrubbers would require an upgrade.

This was probable an overly conservative way to estimate costs. In reality, it is reasonable to assume that, on average, the existing scrubbers have only 50 percent of their useful life remaining. Because we allocated all of the capital cost of a new scrubber to the rule, our costs are conservative.

However, we have written the final rule to allow separate PM emission limits for kilns with wet versus dry controls. Therefore, the premise of the comment, that not subcategorizing by control device will adversely affect small business, is now moot. In the final costs, we estimate that only 30 percent of existing wet scrubbers will require upgrade or replacement. As noted previously, because we are allocating all the capital replacement cost to the final rule, our costs are still conservative.

Comment: One commenter objected to EPA's rationale of using PM as a surrogate for controlling toxic metals emissions. The commenter stated that if EPA has sufficient data to indicate that toxic emissions from lime kilns are an ambient air problem, then the regulation should focus on reducing gaseous emissions such as HCl.

Response: By limiting emissions of PM, the final rule will reduce emissions of non-volatile and semi-volatile metal HAP, which are a subset of PM, and are necessarily removed when PM is removed by air pollution control equipment. As stated in the preamble to the proposed rule, air pollution controls for HAP metals are the same as the PM controls used by the lime manufacturing industry, i.e., FF, ESP, and wet scrubbers. These controls capture non-volatile and semi-volatile metal HAP non-preferentially along with other PM, thus making PM an acceptable indicator of these HAP metals. Particulate matter control technology, thus, indiscriminately captures HAP metals along with other particulate. Consequently, it is an appropriate indicator when the technical basis of the standard is performance of back-end particulate control technology.

Another reason for using a surrogate is the lower cost of emissions testing and monitoring for PM as compared to the cost of emissions testing and monitoring for multiple metal HAP that will be required to demonstrate compliance. Because PM control devices control metal HAP to the same efficiency and because of the associated cost savings associated with emissions testing and monitoring, the Agency has promulgated several other NESHAP where PM is a surrogate for non-volatile and semi-volatile metal HAP.

Regarding the commenter's second point concerning regulating emission of

HCl, the preamble to the proposed rule explained in detail the Agency's decision not to regulate HCl emissions from lime kilns. To summarize that discussion, the EPA determined that, under the authority of section 112(d)(4) of the CAA, no further control was necessary because HCl is a threshold pollutant, and HCl levels emitted from lime kilns are below the threshold value within an ample margin of safety to humans and to the environment, and considering the possibility that facilities that currently have wet scrubbers for PM emissions control may switch to dry PM controls. (The CAA section 112(d)(4) analysis also considered the potential for environmental harm posed by HCl emissions from these sources.)

Comment: One commenter stated that the PM emission limit for new lime kilns should be 0.12 lb/tsf, the same as the emission limit for existing kilns. The commenter noted that the proposed limit is based on two 3-hour test runs at one plant. According to the commenter, EPA recognized in the proposal preamble that 3-hour test results are just a snapshot in time and should not be used as the basis for establishing an enforceable standard, and that EPA expressly rejected such an approach when establishing the MACT floor for existing kilns. The commenter stated that data in the docket shows that 0.10 lb/tsf is not continuously achievable by lime kilns, and EPA should not establish a separate PM limit for new lime kilns.

Another commenter stated 0.10 lbs PM/ton stone feed for a new kiln is too restrictive, and EPA does not have adequate data to determine that a FF or scrubber-equipped kiln could achieve this low level of emissions on a sustained basis.

Response: The approach to which the commenter refers whereby EPA rejected the use of the "average or mean" in establishing the MACT floor for existing sources did not refer to the average of individual test runs as implied by the comment. Rather, it refers to EPA's decision to use the median (instead of a simple mean) of the top-performing 12 percent to set the MACT floor. Furthermore, as an indication of the achievability of the technology over the long term, EPA chose to rely on State-imposed permit limits (in conjunction with emissions test data showing that those permit limits are representative of actual performance) in arriving at the MACT floor emission limit.

In test data cited by the commenter, the three-run averages for two sets of emissions tests for the kiln used to set the MACT new PM limit are below (0.079 and 0.091 lb/tsf) the proposed

PM limit of 0.1 lb/tsf for new lime kilns. The commenter noted that one of the test runs was at the proposed 0.1 lb/tsf PM limit and that the proposed 0.1 lb/tsf limit was, therefore, inappropriate.

It is reasonable for EPA to establish a standard based on the same methodology that will be used for complying with that standard. See, e.g., *Chemical Waste Management v. EPA*, 976 F. 2d 2, 34 (D.C. Cir. 1992). We note that compliance with emission limits is normally based on a three-run average which can accommodate occasional elevated results as long as the average is at or below the established limit. Furthermore, the emission test results for five of the six top performing kilns were 0.0091, 0.013, 0.026, 0.027, and 0.091 lb/tsf. These results adequately account for operating variability and indicate that any new kiln using well designed and operated control devices can meet the 0.1 lb/tsf limit. Based on this, we see no basis to state that a 0.10 lb/tsf PM emission limit is not achievable or appropriate.

Comment: One commenter claimed that the proposed NESHAP will require the replacement of their two wet scrubbers with baghouses. They claim there is no space for FF retrofit, and that converting to baghouses will trigger prevention of significant deterioration (PSD) nonattainment review due to increased SO₂ emissions.

Response: While we recognize that a facility may (or may not) have site-specific space restrictions, we have, on average, adequately accounted for these factors by incorporating cost analysis factors to account for retrofit and equipment demolition. We have also allowed a facility 3 years to comply with the final NESHAP. This should allow sufficient time for facilities to replace or upgrade existing equipment during scheduled outages. The averaging provisions in the final NESHAP also provide facilities with additional flexibility concerning replacement or upgrade of existing equipment.

Requiring an existing facility with a wet scrubber to upgrade their PM controls to meet 0.12 lb/tsf will not necessarily trigger new source review (NSR). First, as previously discussed, the facility can choose to replace or upgrade their existing scrubbers, which means there will be no SO₂ (or other collateral pollutant) emissions increase to trigger NSR requirements. Second, if they choose to use a baghouse, they may be able to avoid NSR by qualifying for a pollution control project exclusion (67 FR 80186).

Comment: One commenter stated the particulate matter emission limits

proposed for lime manufacturing kilns and coolers do not represent the maximum achievable control technology and are much less stringent than the limits actually required by the CAA. The commenter noted that the proposed rule discredits performance test data which demonstrate that particulate emissions of less than half the proposed standard for existing plants are routinely achieved by claiming they may not be consistently achievable, but EPA has provided no statistics. The commenter claimed that EPA has chosen instead to base the standards on permit limits, but has selectively eliminated from consideration those permits calling for stringent controls which are currently in place. The commenter gives the examples of Continental Lime which is in compliance with a best available control technology (BACT) limit for PM emissions of 0.05 lb/ton limestone, and Western Lime which is in compliance with a permit limit for PM emissions of 0.06 lb/ton limestone.

The commenter noted that if performance data do not represent achievable emission limits, EPA should consider design standards based on air-to-cloth ratios. The commenter also stated the proposed particulate emission limits for grinders, conveyors, and bins are also based on data which overstate emissions (in nearly all cases) and do not represent MACT. The commenter stated EPA should examine actual performance test data test or actual permit limitations.

Response: The EPA reviewed data on the kilns referred to in the comment. The permit limits cited by the commenter were apparently reported on the EPA Technology Transfer Network (TTN) website. The EPA contacted the Montana Department of Environment and found that the limit for one of these kilns is actually 0.5 lb/tsf and not 0.05 lb/tsf as reported on the TTN website. Also, the complete permit for the other kiln mentioned was located on the Wisconsin Department of Natural Resources website, which showed the permit limit for the kiln in question as being 0.12 lb/tsf rather than the 0.058 lb/tsf as reported on the TTN website. Based on the correct PM permit limits for these two lime sources, EPA's conclusions regarding MACT PM limits for existing and new sources are still appropriate. As the response to the previous question shows, these permit limits are also representative of actual performance.

The floor for grinders, conveyors, and bins is based on the existing new source performance standards (NSPS). We have no data to support a different floor.

Comment: One commenter stated that opacity does not correlate to PM mass emissions. The commenter noted the EPA has stated on several occasions that a COMS can determine opacity, but a COMS cannot determine PM emissions. And if particle density changes but the particle size remains the same, opacity will not change while the mass emission rate will change in proportion to the density change. The commenter agreed that PM is a technically sound surrogate for HAP metals, but disagreed that opacity serves as a surrogate for HAP metals as stated in the proposal preamble.

The commenter stated that a COMS can not be used to evaluate the continuous compliance status of kilns, coolers, or PSH operations that have a mass emission limit. The commenter was not aware of any data that show a definitive link between opacity and mass emissions except in very limited and controlled situations. In addition, the commenter did not understand how a 15 percent 6-minute average opacity limit can be correlated to a 3-hour rolling average PM emission limit of lb/ton of stone feed.

The commenter stated a better alternative is to use a PM continuous emissions monitor system (CEMS) that measures PM mass emissions in units that are directly related to the mass emission limit. The commenter noted that EPA's stated reluctance to use a PM CEMS in the absence of performance specifications is inconsistent with the remainder of the standard, since the use of BLDS and a PM detector are proposed without performance specifications. The commenter also noted that an extractive type PM CEMS designed to operate in wet exhaust streams can provide a direct indication of compliance for wet scrubbers.

Response: We agree that a COMS cannot directly measure PM emissions. However, a properly calibrated and maintained COMS is sufficient to demonstrate long term PM control device performance. The purpose of the monitor is to demonstrate with reasonable certainty that the PM control device is operating as well as it did during the PM emission test used to demonstrate compliance.

We also note that PM CEMS are significantly more expensive to purchase and maintain than a COMS or PM detector. Also, PM CEMS measure concentration, while the basis of the standard is mass per unit of feed input. Because the standard is not based on PM concentration, and no PM CEMS are currently installed and operating on the best controlled kilns, we have no data

to develop a PM standard based on the use of PM CEMS.

Comment: Several commenters stated EPA Method 9 in Appendix A to 40 CFR part 60 should be allowed for a positive pressure baghouse. According to one commenter, the bag leak detector guidance document recognizes that requiring BLDS will be very costly, and stated that the document does not apply to this type of baghouse (EPA's "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997, pg 2). This commenter gave the example of a small business that will be required to have a bag leak detector for each of the eight compartments in its baghouse under the final rule, and whose title V permit allows Method 9 monitoring for the baghouse. According to one commenter, the associated costs of installing a separate bag leak detector or PM CEM sensor on each discharge or new common stack could easily exceed \$1,000,000. The commenter noted that, "baghouse pressure differential readings, together with fan amperage and daily visible emission notations will provide the necessary performance assurance with ample and timely indication of baghouse failures or malfunctions."

Response: We acknowledge that there are precedents for the use of alternatives to COMS, BLDS, and PM detectors on positive pressure baghouses that have multiple stacks. The NESHAP for portland cement, an industry that has similarities to the lime manufacturing industry, allows the use of opacity monitoring using Method 9 in Appendix A of 40 CFR part 60 for kilns having control devices with multiple stacks. Based on this analogous situation, we have decided that existing lime kilns controlled by control devices having multiple stacks will have the option of using Method 9 in Appendix A of 40 CFR part 60 for daily opacity monitoring.

Comment: One commenter stated that a single excursion from operating parameters recorded during a 3-hour compliance test should not constitute a violation. The commenter stated that, "the new source performance standard (NSPS) kilns are the lime industry's top performers, and their monitoring regime should be the benchmark against which monitoring under the MACT rule is prescribed." Since a violation under the NSPS does not occur unless the parameter is greater than 30 percent below the rates established during the performance test, the commenter recommends a 30 percent "buffer" between the permit limit and the 3-hour average recorded during the compliance test. Or, "alternatively, like the Pulp and

Paper MACT, the rule should specify that a violation of the standard does not occur unless 6 or more 3-hour average parameter values are recorded outside the established range within the 6 month reporting period."

The commenter noted that EPA's compliance assurance monitoring (CAM) guidance document states, "Use of only 3 hours of parameter data may not be sufficient to fully characterize parameter values during normal operation." The commenter also noted that language in the proposal preamble cautions against developing enforceable emission standards based on 3-hour compliance tests. The commenter also noted that none of the CAM plans for scrubbers base a permit limit on the 3-hour average reading that occurred during a compliance test, and two of the plans allow a 15 percent buffer to account for variability.

The commenter provided gas pressure drop readings and concurrent PM test data for three kilns, and noted that for each of them, gas pressure drop during one or more 1-hour runs was below the proposed 3-hour average. The commenter stated that under the proposed rules, these readings below the 3-hour average would constitute a violation.

The commenter also stated the final rule should provide an exemption from the PM emission limit during performance testing. The commenter stated, "plant operators may need to conduct a series of performance tests to determine the minimum pressure drop and liquid flow rate levels that will assure compliance for each set of operating conditions used for a particular kiln. Results for these tests are not available until post-test laboratory analyses are completed."

Response: Each owner/operator is required to define the compliance parameters to be monitored in their OM&M plan. Then, during the initial performance tests, they are required to monitor and establish the value or range of the parameters. The 30 percent buffers referred to by the commenters refer to NSPS, which, in general, predate NESHAP. In developing various NESHAP, we determined that the 30 percent buffers were not necessary. For this reason, most NESHAP specify that exceeding an operating parameter over the specified averaging period is a deviation. The commenters also mentioned the Pulp and Paper MACT. However, the Pulp and Paper MACT would appear to be unusual in regards to the allowance for exceedances. The commenters did not provide any rationale why we should add provisions similar to the Pulp and Paper MACT

when other MACT standards do not allow exceedances.

The commenters also referred to a statement in the CAM proposal and guidance document. The CAM rule only applies to emission limitations or standards proposed by the Administration on or before November 15, 1990. Monitoring and control technology have progressed significantly since the technology available when these older rules were developed. Also, facilities have 3 years to install control equipment and learn their processes' operating parameters and set up compliance test conditions that result in operating limits that both result in compliance with the PM emission limit and can be met on a continuous basis. For these reasons, we do not agree that the CAM applies here.

Most operating parameters are required to be calculated as 3-hour averages. This is generally consistent with performance test times. Thus, a 1-hour period of insufficient gas pressure drop will not, by itself, be considered an excursion.

Facilities must complete their performance tests prior to the compliance date. Therefore, they are not required to be in compliance with the emission limits during testing, and there is no reason to provide an exemption.

Comment: In response to EPA's request for comments on the appropriate opacity limit (EPA was considering an opacity limit of 10 to 15 percent), several commenters stated that the opacity standard for lime kilns should be 15 percent, as proposed. One commenter provided additional data in the form of opacity data from four kilns. According to this commenter, the opacity data for selected kilns are not reliable for establishing an opacity standard because they are from visible emission data collected for brief periods of time under poor viewing conditions.

Response: Based on information considered prior to proposal as well as additional information supplied by commenters, EPA is retaining the 15 percent opacity limit for sources controlled using FF and ESP. Information considered by EPA in proposing the opacity limit suggested that the average opacity permit limit of the top performing lime kilns was 15 percent. Information provided by the commenters supporting the proposed opacity limit indicated that opacity levels may vary between 10 and 15 percent even for well operated and maintained kilns. No information was provided supporting a more stringent, or more lenient opacity limit than the one proposed. Therefore, EPA is retaining

the proposed 15 percent opacity limit in the final NESHAP.

Comment: Several commenters requested that the final rule specify a time period during which opacity readings greater than 15 percent are not considered a violation. One commenter requested that a minimum that the final rule state that opacity readings greater than 15 percent for less than 1 percent of the reporting period are not considered to be a violation.

Another commenter noted that they operate two of the top six performers in the industry, and it is impossible not to have occasional readings that would be violations if there were no allowances for them. The commenter's State permits allow 1 percent of operating time per quarter to exceed the opacity limit.

Another commenter suggested other time frames for allowable exceedances. Two commenters referred to the Pulp and Paper MACT as an example of an existing rule with such an exemption.

Response: We find no justification to support allowing excursions above the 15 percent opacity limit. Well operated and maintained control devices will typically operate at opacity levels much lower than 15 percent. Other NESHAP, including the portland cement NESHAP, contain opacity limits for which no exceedances are allowed. Data from limes kilns, cited below, support this. Because we have industry specific data, the Pulp and Paper MACT example is not applicable.

In response to the commenters' concerns about occasional excursions above the opacity limit, there are times when opacity levels above 15 percent are not considered to be a violation of the final rule. These include periods when a control device malfunctions, or is in a period startup or shutdown (as long as the facility follows its SSMP). If opacity levels exceed 15 percent as a result of a control device startup, shutdown, or malfunction, it will not be considered a violation of the opacity limit (see § 63.7121(b) of the final rule). The same is true during periods when a monitoring system malfunctions or is being calibrated (see § 63.7120(b) of the final rule).

Information supplied by one commenter showed opacity readings for several kilns over several days. Nearly all of the readings were well below the 15 percent limit with just a few exceptions for each kiln. The commenter who supplied the opacity readings was asked to supply additional information regarding the opacity excursions above 15 percent. In each instance, the high opacity reading was explained by a startup, shutdown, or

malfunction of the control device or by a malfunctioning monitor or a monitoring system that was undergoing calibration, none of which will be considered a violation of the opacity limit as long as the facility follows its SSMP. Well run and maintained control devices can meet the opacity limit and the occasional excursion above the limit due to control device or monitoring system malfunction will not be a violation of the operating limit.

Comment: One commenter claimed that the economic impacts analysis (EIA) neglected to include some significant costs of implementing the rule, including the cost of dismantling existing equipment, lost sales during downtime, and the cost of re-hiring personnel after plant modifications if scrubbers must be replaced. The commenter also noted that maintenance and supervisory personnel currently do not work evening and weekend shifts, but will likely be required in the event of failure of the recommended monitoring equipment.

A second commenter stated EPA's estimated \$1.17 per ton of lime cost estimate for control costs is low, and the cost to a typical lime producer will be significantly higher. In particular, the commenter noted that the additional power required for high pressure drop scrubbers alone would be approximately \$1.30 per ton of produced lime. In addition, EPA's estimated equipment costs appear to be low.

Response: As discussed in the response to comments regarding a separate subcategory for scrubbers, estimated implementation costs used for the EPA model plants include costs for demolition of existing equipment and credits for salvage value. Because plants have a 3-year period in which to comply with the final NESHAP, it is expected that scheduled downtime will be used for disconnecting an existing scrubber and connecting a new scrubber. As a general practice, building a new scrubber while the existing scrubber remains in operation is preferable to taking the associated kiln out of service for an extended period of time and losing production from the kiln. The plant is expected to use its labor force in the manner normally found for planned downtime. Such labor costs (or savings) would not be attributable to compliance with the final NESHAP.

Power costs for new scrubbers are calculated incrementally, i.e., costs are estimated for the difference between 35-inch w.g. (new scrubbers) and 14 inch w.g. (existing scrubbers). For individual model kilns, summing the power costs and dividing by the model's production rate gives estimated incremental power

costs ranging from \$0.82 to \$1.47/ton of lime. On a nationwide basis, aggregating the model kiln costs apportioned among the affected kiln population provides average costs as estimated by EPA.

Comment: One commenter claimed that the EIA is seriously flawed because it assumes lime producers can pass control costs through to consumers. The commenter maintained that lime producers cannot raise prices. The reasons cited included a highly competitive market due to overcapacity, competition from unregulated sources, the existence of competitive substitutes for most key markets, and significant market resistance. The commenter also claimed that recent history proves that prices cannot be increased. Finally, the commenter stated that because the price increase assumed by EPA is erroneous, EPA's prediction that only two lime plants will close seriously understates the impact. One other commenter also stated that they could not increase prices.

Response: We conducted an economic analysis primarily as part of the Executive Order 12866 analysis and partly to ascertain impacts on small businesses for purposes of compliance with the Small Business Regulatory and Enforcement Fairness Act (SBREFA). The analysis is also used to determine economic impacts of any beyond-the-floor considerations under section 112(d)(2) of the CAA. However, as provided by section 112(d)(3), and confirmed by the D.C. Circuit in the *National Lime* case, considerations of costs are simply irrelevant to determinations of MACT floors. Thus, EPA did not consider any of the economic analysis as part of its floor determinations, and that context should be understood in all of the responses to comments relating to the Agency's economic impact analysis.

The fact that many lime plants are currently operating at less than full capacity implies that their supply curves should be relatively elastic (flat) at current production levels because lime producers can fairly easily change output without running into capacity constraints.

Assuming that the lime industry is very competitive (as stated by the commenter) and has substantial overcapacity implies that the industry marginal cost curve (and the market supply curve) should be relatively flat at current production levels. To the extent that the costs of the lime manufacturing MACT standards increase the marginal costs of lime production, having a very elastic (flat) supply curve is a textbook case where the majority of the costs are passed on to consumers. A highly

competitive market implies, by definition, that individual producers cannot unilaterally increase their prices without losing most, if not all, of their customers. It does not imply that the market price will not increase in response to a general increase in the cost of lime production due to environmental regulations.

It is certainly true that foreign lime suppliers (including suppliers located in Mexico) gain because the final rule applies only to domestic lime producers. However, imports of lime account for an extremely tiny share of the lime market prior to the final rule (about 1 percent nationally), and even a fairly large percentage increase in imports shows up as a very small change in absolute terms. High transportation costs are expected to prevent significant replacement of domestic lime with imported lime.

To examine the historical supply responsiveness in the lime market, we estimated the supply elasticity for lime using data from 1983–2001. These estimates capture the overall change in the quantity of lime supplied in response to a change in the real (inflation-adjusted) price of lime, including any entry or exit of captive suppliers from the market. Based on estimates obtained from the econometric model, the domestic lime supply elasticity was 1.24 at the average price and quantity for the period and 0.98 using the lime price and quantity for 1997, the baseline year for the EIA. The value for the baseline year implies that a 1 percent increase in price would lead lime producers to increase their lime production by 0.98 percent, other things being equal.

For the lime price to remain constant due to entry into the commercial market by captive suppliers, that entry would need to be sufficient that it led to the market supply curve being perfectly elastic. There is no evidence for a perfectly elastic market supply curve due to large-scale entry based on historical estimates of the responsiveness of lime supply to changes in real price.

There are substitutes for lime in many of the markets in which it competes, such as crushed limestone, caustic soda, soda ash, and other products. However, unless the alternatives are perfect substitutes, this does not imply that the price of lime will not increase in response to an increase in production costs.

The fact that lime prices have not increased in recent years despite plant closures and increases in real prices in no way implies that those events do not exert upward pressure on prices. The

relevant comparison is the price with and without those events, not before and after they occur. It is expected that prices would have been even lower if there had not been closures and increases in input prices.

As outlined in the responses to these comments, there is no evidence to support the claim that the assumption that lime price will increase is erroneous, and that the estimated economic impact of the final rule is understated.

Comment: One commenter stated that the EPA economic model for the lime market assumes a nationally perfectly competitive market, but lime prices are primarily dictated by large producers who sell capacity regardless of price.

Response: This comment suggests that large lime producers have market power and, therefore, face a downward sloping demand curve and have some ability to set prices. If large lime producers do possess market power, then profit-maximizing behavior would imply that they would restrict output below the levels expected under perfect competition in order to increase market price to the point that their marginal revenue is equal to their marginal cost. The large producers may have lower marginal costs such that the resulting price makes it difficult for the small producers that take the market price as given to remain in business. However, the presence of market power in the lime industry would tend to increase prices relative to the perfectly competitive case, not decrease them.

Comment: One commenter was concerned over EPA's use of the Acute Exposure Guideline Level (AEGL) in assessing the health risk associated with HCl. While not directly objecting to the conclusions reached by EPA, the commenter noted that the intended use of the AEGL, according to the National Research Council, is in conjunction with "once in a lifetime" exposures for emergency exposures ranging from 10 minutes to 8 hours. Because the AEGL values are intended to be used in conjunction with a single lifetime exposure, they can be higher than short term limits recommended for populations with repeated exposures. It is not clear in the description of the industry analysis, if in their use of AEGL they were contemplating a once in a lifetime exposure or whether exposures would be occurring repeatedly. The commenter stated that EPA should explicitly state how they believe AEGL values should be used in their risk assessment process and what are the possible exposure levels to the public. The commenter was also troubled by the use in the rationale of

both the reference concentration (estimated daily exposure that over a lifetime is not likely to result in significant noncancer effect in humans) and the AEGL (once in a lifetime exposure).

The commenter asked that EPA clarify their position on the use of AEGL values for environmental risk assessments, and whether its use represents a "reasonable methodology" and "consistent with EPA methodology" as claimed in the preamble.

Response: In order to evaluate short-term exposure to hydrochloric acid, EPA reviewed the available acute dose-response values for this compound. Among these, the Calliope reference exposure level (REL) and AEGL-1 values (2.1 and 2.7 mg/M³, respectively) were found to be the most health protective. Since these benchmarks were effectively the same, and AEGL values are products of a Federal effort in which EPA participates, we gave priority to the AEGL. Therefore, the AEGL-1 selected for analysis represented the most appropriate value.

Comment: Several commenters stated the final rule should not require HCl testing of all kilns. The commenters note that in recent years, many lime plants have been forced to idle or infrequently operate kilns at operating plants due to increased fuel cost, reduced customer demand, etc., and start up of every kiln for the purpose of conducting HCl testing will require significant expenditures. This will also result in PM and other emissions that otherwise would not be generated. As a result, it was requested the final rule be written to provide state agencies with the discretion to determine whether testing of all kilns at a lime plant is necessary in order to demonstrate that a plant is an area source.

Response: In the final NESHAP, we have included language allowing the permitting authority discretion concerning whether idle kilns must be tested.

Comment: Several commenters stated that performance testing should be conducted under "representative" conditions rather than under the "highest production level reasonably expected to occur." One commenter noted inconsistencies between what is proposed in Table 4 in the proposed rule and what is required under the General Provisions at 40 CFR 63.7(e)(1). The EPA has recently amended the Cement MACT to fix similar inconsistencies, and the commenter suggested the lime MACT be similarly revised.

Response: We have written the requirement in the final rule to require

testing under representative conditions, which is in agreement with the language in the General Provisions.

Comment: Two commenters stated the final rule should provide a risk-based exemption from the entire rule (not just from HCl standards) for plants at which modeled risks are below health based thresholds. One commenter noted that EPA recently solicited comment on providing risk-based exemptions in proposed MACT standards for several source categories. This commenter strongly supported the view that such exemptions should be provided in MACT standards that impose substantial costs while achieving negligible reductions in risks to public health and stated the lime MACT fits this description.

Response: Other than the decision to not regulate emissions of HCl from lime manufacturing, EPA did not consider and did not request comments on providing risk-based exemptions for lime manufacturing facilities. Although EPA is aware that risk-based exemptions were being discussed in other proposed rules, no decisions have been made by the Agency regarding risk-based exemptions and application to industry groups or individual plants. Due to the uncertainty of how these exemptions would be structured, it would not be appropriate to include these site specific risk-based exemptions in the final rule. Including such a substantive statement change in the final rule without allowing the general public an opportunity to comment would be a violation of the notice and comment requirements found in section 307(d) of the CAA, especially in light of the fact that their inclusion in other proposed rules have generated significant negative public comment.

Comment: One commenter stated the benefits analysis is based on inaccurate assumptions, and presented conclusions regarding reductions in metal HAP that are greatly overstated.

The commenter also claimed that the emission factor for existing uncontrolled stone handling operations is also overstated; it was derived using AP-42 emission factors with "E" ratings. The commenter stated that it presented to the SBREFA Panel a more reliable emission factor for these units that is rated "C" and was revised in 1995.

In addition, the commenter claimed that EPA overstated the amount of new capacity and the emissions from new rotary kilns. The commenter stated, "EPA should either reflect (our) estimates in the preamble to the final rule, or provide a reasoned response to our comments that EPA's estimates are overstated" * * * we believe the best

estimate of metal HAP reductions is 3.5 tons (7,000 pounds) per year. Based on the 56 lime plants predicted to be subject to the MACT rule, this translates into an annual reduction in metal HAP per lime plant of 124 pounds.

Response: We reviewed the new information on PM emissions presented by the commenter, as well as their calculations of baseline emissions and emission reductions resulting from the final rule. In the case of baseline emissions from kilns and coolers, the information provided by the commenter is a more reasonable estimate than the emission factors we used at proposal. Therefore, we revised our baseline PM emissions estimates to incorporate this new information. In the case of emissions from PSH operations, we based our emission estimates on a mass balance approach. This method is reasonably accurate, and we did not revise baseline emission estimates for PSH operations. This resulted in our estimate of metal HAP emission reductions to be changed to 14.4 tpy, compared to an estimate of 23 tpy.

V. Statutory and Executive Order Reviews

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), we are required to determine whether the regulatory action is "significant" and, therefore, subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, OMB notified EPA at proposal that it considered this rulemaking a "significant regulatory action" within the meaning of the Executive Order. The EPA submitted the

proposed rule to OMB for review. Changes made in response to OMB suggestions or recommendations are documented and included in the public record. The OMB has informed EPA that it considers this final action nonsignificant. Therefore, it is not subject to further OMB review. The OMB was briefed on the responses to major comments, and was provided a copy of the regulation and preamble prior to publication. However, they did not request any changes in the final rule.

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to the Office of Management and Budget under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* We have prepared an Information Collection Request (ICR) document (2072.01), and a copy may be obtained from Susan Auby by mail at U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822T), 1200 Pennsylvania Avenue, NW., Washington DC 20460, by e-mail at auby.susan@epa.gov, or by calling (202) 566-1672. You may also download a copy off the Internet at <http://www.epa.gov/icr>. The information requirements are not effective until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emission standards. These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies set forth in 40 CFR part 2, subpart B.

The final rule will require development and implementation of an OM&M plan, which will include inspections of the control devices but will not require any notifications or reports beyond those required by the NESHAP General Provisions (40 CFR part 63, subpart A). The recordkeeping requirements require only the specific information needed to determine compliance.

The annual monitoring, reporting, and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the rule) is estimated to be 7,800 labor hours per year, at a total annual cost of \$621,600. This estimate

includes notifications that facilities are subject to the rule; notifications of performance tests; notifications of compliance status, including the results of performance tests and other initial compliance demonstrations that do not include performance tests; startup, shutdown, and malfunction reports; semiannual compliance reports; and recordkeeping. Total capital/startup costs associated with the testing, monitoring, reporting, and recordkeeping requirements over the 3-year period of the ICR are estimated to be \$1,000,000, with annualized costs of \$377,900.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to: Review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for our regulations are listed in 40 CFR part 9 and 48 CFR chapter 15. When the OMB approves the information collection requirements of the final rule, the EPA will amend the table in 40 CFR part 9 of currently approved ICR control numbers issued by OMB for various regulations.

C. Regulatory Flexibility Analysis

The EPA has prepared a final regulatory flexibility analysis (FRFA) in connection with the final rule. For purposes of assessing the impacts of today's final rule on small entities, a small entity is defined as (1) a small business as a lime manufacturing company with less than 500 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small

entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. Despite the determination that the final rule will have no significant impact on a substantial number of small entities, EPA prepared a Small Business Flexibility Analysis that has all the components of a FRFA. An FRFA examines the impact of the final rule on small entities. The Small Business Flexibility Analysis (which is included in the economic impact analysis) is available for review in the docket, and is summarized below.

It should be noted that the small business impacts described below slightly overestimate the impacts for today's action, for they reflect the higher cost estimates (\$22.4 million) associated with the proposed rule.

Based on SBA's size definitions for the affected industries and reported sales and employment data, EPA identified 19 of the 45 companies owning potentially affected facilities as small businesses. Eight of these 45 companies manufacture beet sugar (which will not be subject to the final NESHAP), three of which are small firms. Further, an additional 3 of the 19 small companies will not be subject to the final NESHAP because they do not manufacture lime in a kiln (e.g., they are only depot or hydration facilities), and/or we do not expect them to be major sources. It is, therefore, expected that 13 small businesses will be subject to the final NESHAP. Although small businesses represent 40 percent of the companies within the source category, they are expected to incur 30 percent of the total industry annual compliance costs of \$18.0 million.

The economic impact analysis we prepared for the final NESHAP includes an estimate of the changes in product price and production quantities for the firms that the final NESHAP would affect. The analysis shows that of the facilities owned by potentially affected small firms, two may shut down rather than incur the cost of compliance with the final rule. Because of the nature of their production processes and existing controls, we expect these two firms will incur significantly higher compliance costs than the other small firms.

Although any facility closure is cause for concern, it should be noted that in general, the burden on most small firms is low when compared to that of large firms. The average annual compliance costs for all small firms is \$358,000, compared to \$592,000 per year for large firms. If the two small firms expected to incur significantly higher control costs are excluded, the average annual compliance cost for the remaining firms

will be \$205,000, which is much less than the average control costs for large firms.

The EPA's efforts to minimize small business impacts have materially improved today's final rule. Economic analysis of provisions under earlier consideration prior to the rule's proposal indicated greater impacts on small businesses than those in today's final rule. For the small companies expected to incur compliance costs, the average total annual compliance cost would have been roughly \$567,000 per small company (compared with \$358,000 in today's final rule). About 85 percent (11 firms) of those small businesses expected to incur compliance costs would have experienced an impact greater than 1 percent of sales (compared with 69 percent of those small businesses in today's final rule). And, 77 percent (10 firms) of those small businesses expected to incur compliance costs would have experienced impacts greater than 3 percent of sales (compared with 31 percent of those small businesses in today's final rule).

Before concluding that the Agency could properly certify today's final rule under the terms of the RFA, EPA conducted outreach to small entities and convened a Panel as required by section 609(b) of the RFA to obtain the advice and recommendations from representatives of the small entities that potentially would be subject to the proposed rule requirements. The Panel convened on January 22, 2002, and was comprised of representatives from OMB, the SBA Office of Advocacy, the EPA Small Business Advocacy Chair, and the Emission Standards Division of the Office of Air Quality Planning and Standards of EPA. The Panel solicited advice from eight small entity representatives (SER), including the National Lime Association (NLA) and member companies and non-member companies of the NLA. On January 30, 2002, the Panel distributed a package of descriptive and technical materials explaining the rule-in-progress to the SER. On February 19, 2002, the Panel met with the SER to hear their comments on preliminary options for regulatory flexibility and related information. The Panel also received written comments from the SER in response to both the outreach materials and the discussions at the meeting.

Consistent with RFA/SBREF requirements, the Panel evaluated the assembled materials and small-entity comments on issues related to the elements of the initial RFA. A copy of the Panel report is included in the docket for the final rule.

The Panel considered numerous regulatory flexibility options in response to concerns raised by the SER. The major concerns included the affordability and technical feasibility of add-on controls.

These are the Panel recommendations and EPA's responses:

- Recommend that the proposed rule should not include the HCl work practice standard, invoking section 112(d)(4) of CAA.

Response: The proposed rule did not include an emission standard for HCl. The final rule also contains no emission standard for HCl.

- Recommend that in the proposed rule, the MPO in the quarry should not be considered as emission units under the definition of affected source.

Response: The MPO in the quarry were excluded from the definition of affected source in the proposed rule. They are also excluded in the final rule.

- Recommend that the proposed rule allow for the "bubbling" of PM emissions from all of the lime kilns and coolers at a lime plant, such that the sum of all kilns' and coolers' PM emissions at a lime plant would be subject to the PM emission limit, rather than each individual kiln and cooler.

Response: The proposed rule defined the affected source as including all kilns and coolers (among other listed emission units) at the lime manufacturing plant. This would allow the source to average emissions from the kilns and coolers for compliance determination. In the final rule we have retained averaging provisions with the following modifications. New kilns and existing kilns may be averaged together, new kilns must individually meet the 0.10 lb/tsf PM emission limit, and existing kilns subject to the 0.60 lb/tsf PM emission limit may not be included in any averaging scheme. Due to other changes in the rule, the changes in the averaging provisions do not increase the stringency of the final rule compared to the proposed rule.

- Recommend that we request comment on establishing a subcategory for existing kilns that currently have wet scrubbers for PM control because of the potential increase in SO₂ and HCl emissions that may result in complying with the PM standard in the proposed rule.

Response: We requested comment on this issue in the proposed rule. Based on the comments received, we determined that a separate subcategory for scrubber equipped kilns was not appropriate. However, we have included in the final rule separate standards for kilns with dry PM emissions control systems, and wet scrubbers. This change addresses

the underlying concern of the original comment.

- Recommend that we undertake an analysis of the costs and emissions impacts of replacing scrubbers with dry APCD and present the results of that analysis in the preamble; and that we request comment on any operational, process, product, or other technical and/or spatial constraints that would preclude installation of a dry APCD.

Response: We requested comment on these issues in the proposed rule and presented said analysis. We responded to all comments on these issues in the final rule.

- Recommend that the proposed rule allow a source to use the ASTM HCl manual method for the measurement of HCl for area source determinations.

Response: The proposed rule included this provision. This provision has been retained in the final rule.

- Recommend that we clarify in the preamble to the proposed rule that we are not specifically requiring sources to test for all HAP to make a determination of whether the lime plant is a major or area source, and that we solicit public comment on related issues.

Response: The preamble of the proposed rule contained this language. In the final rule, we do not specify that testing for all HAP is required. However, we do not specifically say it is precluded because these determinations are better made on a case-by-case basis by the permitting authority.

- Recommend that we solicit comment on providing the option of using COMS in place of BLDS; recommend that we solicit comment on various approaches to using COMS; and recommend soliciting comment on what an appropriate opacity limit would be.

Response: The preamble of the proposed rule solicited comment on these issues.

- Recommend that EPA take comment on other monitoring options or approaches, including the following: using longer averaging time periods (or greater frequencies of occurrence) for demonstrating compliance with parameter limits; demonstrating compliance with operating parameter limits using a two-tier approach; and the suitability of other PM control device operating parameters that can be monitored to demonstrate compliance with the PM emission limits, in lieu of or in addition to the parameters currently required in the draft rule.

Response: The preamble of the proposed rule solicited comment on these issues.

- Recommend that the incorporation by reference of Chapters 3 and 5 of the American Conference of Governmental

Industrial Hygienists (ACGIH) Industrial Ventilation manual be removed from the proposed rule.

Response: The proposed rule did not include this requirement. This requirement is also not present in today's final rule.

- Recommend that EPA reevaluate the assumptions used in modeling the economic impacts of the standards and conduct a sensitivity analysis using different price and supply elasticities reflective of the industry's claims that there is little ability to pass on control costs to their customers, and there is considerable opportunity for product substitution in a number of the lime industry's markets.

Response: The EIA does include the aforementioned considerations and analyses at proposal. In addition, we have performed additional economic sensitivity analyses for the final rule.

In summary, to better understand the implications of the proposed rule from the industries' perspective, we engaged with the lime manufacturing companies in an exchange of information, including small entities, during the overall rule development. Prior to convening the Panel, we had worked aggressively to minimize the impact of the proposed rule on small entities, consistent with our obligations under the CAA. These efforts are summarized below.

- Lime manufacturing operations at beet sugar plants, of which three are small businesses, will not be affected sources.

- Lime manufacturing plants that produce hydrated lime only will not be affected sources as well.

- We proposed PM emission limits which allow the affected source, including small entities, flexibility in choosing how they will meet the emission limit. And in general, the emission limitations selected are all based on the MACT floor, as opposed to more costly beyond-the-MACT-floor options that we considered. An emission limit for mercury was rejected since it would have been based on a beyond-the-MACT-floor control option.

- We proposed that compliance demonstrations for PSH operations be conducted monthly rather than on a daily basis. This reduced the amount of records needed to demonstrate compliance with the rule when implemented. Furthermore, we proposed the minimum performance testing frequency (every 5 years), monitoring, recordkeeping, and reporting requirements specified in the General Provisions (40 CFR part 63, subpart A).

- Finally, many lime manufacturing plants owned by small businesses will not be subject to the proposed standards because they are area sources.

We received several comments on the economic analysis for the proposed rule. The majority of these comments related to the analysis in general, rather than the initial regulatory flexibility analysis. Two comments that specifically addressed small business concerns follow.

Comment: One commenter claimed that EPA did not perform a sufficient sensitivity analysis of different price and supply elasticities in the EIA as recommended in the Panel's final report.

Response: We estimated the market supply and demand elasticities for lime. The values from the preferred model for 1997 are very close to the primary elasticities used in the main text of the EIA for the proposed rule and are well within the range of elasticities used in the sensitivity analysis in Appendix B of the EIA for the proposed rule. In addition to the preferred model, numerous alternative models were estimated. As with any modeling exercise, there were some differences in results across different model specifications. However, the results were generally similar across specifications and there were no cases in which the estimated supply or demand elasticity fell outside the ranges currently used in the Appendix B sensitivity analysis included in the EIA. Thus, the current analysis adequately responds to SBREFA panel recommendations that a reasonable sensitivity analysis be employed and the empirical evidence is supportive of the current scenario presented in the main text.

Comment: One commenter claimed that although EPA has indicated its rule will have larger impacts on small businesses than large ones, the disparity is even greater than EPA estimates. The reductions in pre-tax earnings presented in the EIA understate losses for small firms because the costs of implementation will be higher than EPA estimates and the price of lime will not increase. They also state that even if only 2 to 3 of the 14 small lime firms close, that would still be closure of 14 percent to 21 percent of the small lime firms in the domestic industry. This seems to be such a significant economic impact that it should encourage the EPA to seriously consider additional ways to minimize the impact on small businesses.

Response: It is unclear what the basis for the first part of this comment is (it seems the same claims they are making

for small firms would also apply to large firms). As far as the second part, to the extent that actual costs differ from EPA estimates, it is possible that the actual losses experienced by firms will be higher or lower than presented in the EIA. However, the costs of implementation currently used for analysis reflect EPA's best estimate of actual costs. The assertion that lime prices cannot increase in response to an increase in production costs is not credible.

We also disagree that the number of small firms at risk of closure, 2 to 3, can be considered a significant number in the context of SBREFA. In any case, EPA has seriously considered ways to minimize the impact on small businesses based on comments from industry and has substantially reduced the costs of the rule relative to the draft of the rule we were considering prior to the small business advocacy review panel. As previously discussed, EPA, along with the SBA and the OMB, convened a panel under the authority of SBREFA to talk with small business representatives on how to mitigate potential impacts to small businesses associated with the lime manufacturing NESHAP. This panel yielded a report that included many recommendations on how potential impacts to small businesses from the proposal could be mitigated. All of these recommendations are reflected in the final rule.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, we generally would be required to prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures by State, local, and tribal governments, in aggregate, or by the private sector, of \$100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least-costly, most cost-effective, or least-burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least-costly, most cost-effective, or least-burdensome alternative if the

Administrator publishes with the final rule an explanation why that alternative was not adopted. Before we establish any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, we would be required to have developed under section 203 of the UMRA a small government agency plan. The plan will be required to provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of our regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

We have determined that the final rule does not contain a Federal mandate that may result in expenditures of \$100 million or more by State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The total cost to the private sector is approximately \$22.4 million per year. The final rule contains no mandates affecting State, local, or tribal governments. Thus, today's final rule is not subject to the requirements of sections 202 and 205 of the UMRA.

We have determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them.

E. Executive Order 13132, Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) requires us to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under Section 6 of Executive Order 13132, we may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or we consult with State and local officials early in the process of developing the proposed regulation. We also may not issue a

regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

If we comply by consulting, Executive Order 13132 requires us to provide to OMB, in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS would be required to include a description of the extent of our prior consultation with State and local officials, a summary of the nature of their concerns and the agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when we transmit a draft final NESHAP with federalism implications to OMB for review pursuant to Executive Order 12866, we would be required to include a certification from the Agency's Federalism Official stating that we have met the requirements of Executive Order 13132 in a meaningful and timely manner.

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The final rule will not impose directly enforceable requirements on States, nor will it preempt them from adopting their own more stringent programs to control emissions from lime manufacturing facilities. Moreover, States are not required under the CAA to take delegation of Federal NESHAP and bear their implementation costs, although States are encouraged and often choose to do so. Thus, Executive Order 13132 does not apply to the final rule.

F. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." The final rule does not have tribal implications, as specified in Executive Order 13175. There are no lime manufacturing plants located on tribal land. Thus, Executive Order 13175 does not apply to the final rule.

G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that we have reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, we would be required to evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by us.

We interpret Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is based on technology performance and not on health or safety risks.

H. Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

The final rule is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Although compliance with the final rule could possibly lead to increased electricity consumption as sources may replace existing wet scrubbers with venturi wet scrubbers that require more electricity, the final rule will not require that venturi scrubbers be installed, and in fact, there are some alternatives that may decrease electrical demand. Further, the final rule will have no effect on the supply or distribution of energy. Although we considered certain fuels as potential bases for MACT, none of our MACT determinations are based on fuels. Finally, we acknowledge that an interpretation limiting fuel use to the top 6 percent of 'clean HAP' fuels (if they existed) could potentially have adverse implications on energy supply.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. No. 104-113; 15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in their regulatory and procurement

activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through annual reports to the OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

The final rule involves technical standards. The EPA cites the following standards in the final rule: EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 5, 5D, 9, 17, 18, 22, 320, 321. Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. No applicable voluntary consensus standards were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 5D, 9, 22, and 321. The search and review results have been documented and are placed in the docket (OAR-2002-0052) for the final rule.

The three voluntary consensus standards described below were identified as acceptable alternatives to EPA test methods for the purposes of the final rule.

The voluntary consensus standard ASME PTC 19-10-1981-Part 10, "Flue and Exhaust Gas Analyses," is cited in the final rule for its manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas. This part of ASME PTC 19-10-1981-Part 10 is an acceptable alternative to Method 3B.

The voluntary consensus standard ASTM D6420-99, "Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (GC/MS)," is appropriate in the cases described below for inclusion in the final rule in addition to EPA Method 18 codified at 40 CFR part 60, appendix A, for the measurement of organic HAP from lime kilns.

Similar to EPA's performance-based Method 18, ASTM D6420-99 is also a performance-based method for measurement of gaseous organic compounds. However, ASTM D6420-99 was written to support the specific use of highly portable and automated GC/MS. While offering advantages over the traditional Method 18, the ASTM method does allow some less stringent criteria for accepting GC/MS results than required by Method 18. Therefore, ASTM D6420-99 is a suitable alternative to Method 18 only where the

target compound(s) are those listed in Section 1.1 of ASTM D6420-99, and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.

For target compound(s) not listed in Section 1.1 of ASTM D6420-99, but potentially detected by mass spectrometry, the final rule specifies that the additional system continuing calibration check after each run, as detailed in Section 10.5.3 of the ASTM method, must be followed, met, documented, and submitted with the data report even if there is no moisture condenser used or the compound is not considered water soluble. For target compound(s) not listed in Section 1.1 of ASTM D6420-99, and not amenable to detection by mass spectrometry, ASTM D6420-99 does not apply.

As a result, EPA will cite ASTM D6420-99 in the final rule. The EPA will also cite Method 18 as a GC option in addition to ASTM D6420-99. This will allow the continued use of GC configurations other than GC/MS.

The voluntary consensus standard ASTM D6735-01, "Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method," is an acceptable alternative to EPA Method 320 for the purposes of the final rule provided that the additional requirements described in Section 63.7142 of the final rule are also addressed in the methodology.

In addition to the voluntary consensus standards EPA uses in the final rule, the search for emissions measurement procedures identified 15 other voluntary consensus standards. The EPA determined that 12 of these 15 standards identified for measuring emissions of the HAP or surrogates subject to emission standards in the final rule were impractical alternatives to EPA test methods for the purposes of this rule. Therefore, EPA does not intend to adopt these standards for this purpose. The reasons for this determination can be found in the docket for the final rule.

Three of the 15 voluntary consensus standards identified in this search were not available at the time the review was conducted for the purposes of the final rule because they are under development by a voluntary consensus body: ASME/BSR MFC 13M, "Flow Measurement by Velocity Traverse," for EPA Method 2 (and possibly 1); ASME/BSR MFC 12M, "Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters," for EPA Method 2; and ASTM D6348-98, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier

Transform (FTIR) Spectroscopy," for EPA Method 320.

The standard ASTM D6348-98, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy" has been reviewed by the EPA and comments were sent to ASTM. Currently, the ASTM Subcommittee D22-03 is undertaking a revision of ASTM D6348-98. Upon successful ASTM balloting and demonstration of technical equivalency with the EPA FTIR methods, the revised ASTM standard could be incorporated by reference for EPA regulatory applicability.

Section 63.7112 and Table 4 to subpart A of 40 CFR part 63 list the EPA testing methods included in the final rule. Under §§ 63.7(f) and 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any of the EPA testing methods, performance specifications, or procedures.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the SBREFA, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). The final rule will be effective on January 5, 2004.

List of Subjects in 40 CFR Part 63

Administrative practice and procedure, Air pollution control, Environmental protection, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: August 25, 2003.

Marianne Lamont Horinko,
Acting Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of the Federal Regulations is to be amended as follows:

PART 63—[AMENDED]

■ 1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

Subpart A—[Amended]

■ 2. Part 63 is amended by adding subpart AAAAA to read as follows:

Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

Sec.

What This Subpart Covers

- 63.7080 What is the purpose of this subpart?
 63.7081 Am I subject to this subpart?
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Emission Limitations

- 63.7090 What emission limitations must I meet?

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Continuous Compliance Requirements

- 63.7120 How do I monitor and collect data to demonstrate continuous compliance?
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Notifications, Reports, and Records

- 63.7130 What notifications must I submit and when?
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Other Requirements and Information

- 63.7140 What parts of the General Provisions apply to me?
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Tables to Subpart AAAAA of Part 63

- Table 1 to Subpart AAAAA of Part 63—Emission Limits
 Table 2 to Subpart AAAAA of Part 63—Operating Limits
 Table 3 to Subpart AAAAA of Part 63—Initial Compliance with Emission Limits
 Table 4 to Subpart AAAAA of Part 63—Requirements for Performance Tests
 Table 5 to Subpart AAAAA of Part 63—Continuous Compliance with Operating Limits
 Table 6 to Subpart AAAAA of Part 63—Periodic Monitoring for Compliance with Opacity and Visible Emissions Limits
 Table 7 to Subpart AAAAA of Part 63—Requirements for Reports
 Table 8 to Subpart AAAAA of Part 63—Applicability of General Provisions to Subpart AAAAA

What This Subpart Covers**§ 63.7080 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for lime manufacturing plants. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.7081 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a lime manufacturing plant (LMP) that is a major source, or that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions, unless the LMP is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, beet sugar manufacturing plant, or only processes sludge containing calcium carbonate from water softening processes.

(1) An LMP is an establishment engaged in the manufacture of lime product (calcium oxide, calcium oxide with magnesium oxide, or dead burned dolomite) by calcination of limestone, dolomite, shells or other calcareous substances.

(2) A major source of HAP is a plant site that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year from all emission sources at the plant site.

(b) [Reserved]

§ 63.7082 What parts of my plant does this subpart cover?

(a) This subpart applies to each existing or new lime kiln(s) and their associated cooler(s), and processed stone handling (PSH) operations system(s) located at an LMP that is a major source.

(b) A new lime kiln is a lime kiln, and (if applicable) its associated lime cooler,

for which construction or reconstruction began after December 20, 2002, if you met the applicability criteria in § 63.7081 at the time you began construction or reconstruction.

(c) A new PSH operations system is the equipment in paragraph (g) of this section, for which construction or reconstruction began after December 20, 2002, if you met the applicability criteria in § 63.7081 at the time you began construction or reconstruction.

(d) A lime kiln or PSH operations system is reconstructed if it meets the criteria for reconstruction defined in § 63.2.

(e) An existing lime kiln is any lime kiln, and (if applicable) its associated lime cooler, that does not meet the definition of a new kiln of paragraph (b) of this section.

(f) An existing PSH operations system is any PSH operations system that does not meet the definition of a new PSH operations system in paragraph (c) of this section.

(g) A PSH operations system includes all equipment associated with PSH operations beginning at the processed stone storage bin(s) or open storage pile(s) and ending where the processed stone is fed into the kiln. It includes man-made processed stone storage bins (but not open processed stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors. No other materials processing operations are subject to this subpart.

(h) Nuisance dust collectors on lime coolers are part of the lime materials processing operations and are not covered by this subpart.

(i) Lime hydrators are not subject to this subpart.

(j) Open material storage piles are not subject to this subpart.

§ 63.7083 When do I have to comply with this subpart?

(a) If you have a new affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section.

(1) If you start up your affected source before January 5, 2004, you must comply with the emission limitations no later than January 5, 2004, and you must have completed all applicable performance tests no later than July 5, 2004.

(2) If you start up your affected source after January 5, 2004, then you must comply with the emission limitations for new affected sources upon startup of your affected source and you must have completed all applicable performance tests no later than 180 days after startup.

(b) If you have an existing affected source, you must comply with the applicable emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than January 5, 2007.

(c) If you have an LMP that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the deadlines specified in paragraphs (c)(1) and (2) of this section apply.

(1) New affected sources at your LMP you must be in compliance with this subpart upon startup.

(2) Existing affected sources at your LMP must be in compliance with this subpart within 3 years after your source becomes a major source of HAP.

(d) You must meet the notification requirements in § 63.7130 according to the schedule in § 63.7130 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limitations in this subpart.

Emission Limitations

§ 63.7090 What emission limitations must I meet?

(a) You must meet each emission limit in Table 1 to this subpart that applies to you.

(b) You must meet each operating limit in Table 2 to this subpart that applies to you.

General Compliance Requirements

§ 63.7100 What are my general requirements for complying with this subpart?

(a) After your initial compliance date, you must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction.

(b) You must be in compliance with the opacity and visible emission (VE) limits in this subpart during the times specified in § 63.6(h)(1).

(c) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).

(d) You must prepare and implement for each LMP, a written operations, maintenance, and monitoring (OM&M) plan. You must submit the plan to the applicable permitting authority for review and approval as part of the application for a 40 CFR part 70 or 40 CFR part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending

approval by the applicable permitting authority of an initial or amended plan, you must comply with the provisions of the submitted plan. Each plan must contain the following information:

(1) Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable, for each emission unit.

(2) A monitoring schedule for each emission unit.

(3) Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1 and 2 to this subpart, respectively.

(4) Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:

(i) Calibration and certification of accuracy of each monitoring device;

(ii) Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;

(iii) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1), (3), and (4)(ii); and

(iv) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d).

(5) Procedures for monitoring process and control device parameters.

(6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in Table 2 to this subpart, including:

(i) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and

(ii) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.

(7) A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

(e) You must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in § 63.6(e)(3).

Testing and Initial Compliance Requirements

§ 63.7110 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) If you have an existing affected source, you must complete all applicable performance tests within January 5, 2007, according to the provisions in §§ 63.7(a)(2) and 63.7114.

(b) If you have a new affected source, and commenced construction or reconstruction between December 20, 2002, and January 5, 2004, you must demonstrate initial compliance with either the proposed emission limitation or the promulgated emission limitation no later than 180 calendar days after January 5, 2004 or within 180 calendar days after startup of the source, whichever is later, according to §§ 63.7(a)(2)(ix) and 63.7114.

(c) If you commenced construction or reconstruction between December 20, 2002, and January 5, 2004, and you chose to comply with the proposed emission limitation when demonstrating initial compliance, you must conduct a demonstration of compliance with the promulgated emission limitation within January 5, 2007 or after startup of the source, whichever is later, according to §§ 63.7(a)(2)(ix) and 63.7114.

(d) For each initial compliance requirement in Table 3 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within existing affected sources at LMP begins at 12:01 a.m. on the compliance date for existing affected sources, that is, the day following completion of the initial compliance demonstration, and ends at 3:01 a.m. on the same day.

(e) For each initial compliance requirement in Table 3 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within new or reconstructed affected sources at LMP begins at 12:01 a.m. on the day following completion of the initial compliance demonstration, as required in paragraphs (b) and (c) of this section, and ends at 3:01 a.m. on the same day.

§ 63.7111 When must I conduct subsequent performance tests?

You must conduct a performance test within 5 years following the initial performance test and within 5 years following each subsequent performance test thereafter.

§ 63.7112 What performance tests, design evaluations, and other procedures must I use?

(a) You must conduct each performance test in Table 4 to this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements in § 63.7(e)(1) and under the specific conditions specified in Table 4 to this subpart.

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1).

(d) Except for opacity and VE observations, you must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour.

(e) The emission rate of particulate matter (PM) from each lime kiln (and each lime cooler if there is a separate exhaust to the atmosphere from the lime cooler) must be computed for each run using Equation 1 of this section:

$$E = (C_k Q_k + C_c Q_c) / PK \quad (\text{Eq. 1})$$

Where:

E = Emission rate of PM, pounds per ton (lb/ton) of stone feed.

C_k = Concentration of PM in the kiln effluent, grain/dry standard cubic feet (gr/dscf).

Q_k = Volumetric flow rate of kiln effluent gas, dry standard cubic feet per hour (dscf/hr).

C_c = Concentration of PM in the cooler effluent, grain/dscf. This value is zero if there is not a separate cooler exhaust to the atmosphere.

Q_c = Volumetric flow rate of cooler effluent gas, dscf/hr. This value is zero if there is not a separate cooler exhaust to the atmosphere.

P = Stone feed rate, tons per hour (ton/hr).

K = Conversion factor, 7000 grains per pound (grains/lb).

(f)(1) If you choose to meet a weighted average emission limit as specified in item 4 of Table 1 to this subpart, you must calculate a combined particulate emission rate from all kilns and coolers within your LMP using Equation 2 of this section:

$$E_T = \sum_{i=1}^n E_i P_i / \sum_{i=1}^n P_i \quad (\text{Eq. 2})$$

Where:

E_T = Emission rate of PM from all kilns and coolers, lb/ton of stone feed.

E_i = Emission rate of PM from kiln i, or from kiln/cooler combination i, lb/ton of stone feed.

P_i = Stone feed rate to kiln i, ton/hr.

n = Number of kilns you wish to include in averaging.

(2) You do not have to include every kiln in this calculation, only include kilns you wish to average. Kilns that have a PM emission limit of 0.60 lb/tsf are ineligible for any averaging.

(g) The weighted average PM emission limit from all kilns and coolers for which you are averaging must be calculated using Equation 3 of this section:

$$E_{TN} = \sum_{j=1}^m E_j P_j / \sum_{j=1}^m P_j \quad (\text{Eq. 3})$$

Where:

E_{TN} = Weighted average PM emission limit for all kilns and coolers being included in averaging at the LMP, lb/ton of stone feed.

E_j = PM emission limit (0.10 or 0.12) for kiln j, or for kiln/cooler combination j, lb/ton of stone feed.

P_j = Stone feed rate to kiln j, ton/hr.

m = Number of kilns and kiln/cooler combinations you are averaging at your LMP. You must include the same kilns in the calculation of E_T and E_{TN} . Kilns that have a PM emission limit of 0.60 lb/tsf are ineligible for any averaging.

(h) Performance test results must be documented in complete test reports that contain the information required by paragraphs (h)(1) through (10) of this section, as well as all other relevant information. The plan to be followed during testing must be made available to the Administrator at least 60 days prior to testing.

(1) A brief description of the process and the air pollution control system;

(2) Sampling location description(s);

(3) A description of sampling and analytical procedures and any modifications to standard procedures;

(4) Test results, including opacity;

(5) Quality assurance procedures and results;

(6) Records of operating conditions during the test, preparation of standards, and calibration procedures;

(7) Raw data sheets for field sampling and field and laboratory analyses;

(8) Documentation of calculations;

(9) All data recorded and used to establish operating limits; and

(10) Any other information required by the test method.

(i) [Reserved]

(j) You must establish any applicable 3-hour block average operating limit indicated in Table 2 to this subpart according to the applicable requirements in Table 3 to this subpart and paragraphs (j)(1) through (4) of this section.

(1) Continuously record the parameter during the PM performance test and include the parameter record(s) in the performance test report.

(2) Determine the average parameter value for each 15-minute period of each test run.

(3) Calculate the test run average for the parameter by taking the average of all the 15-minute parameter values for the run.

(4) Calculate the 3-hour operating limit by taking the average of the three test run averages.

(k) For each building enclosing any PSH operations that is subject to a VE limit, you must conduct a VE check according to item 18 in Table 4 to this subpart, and in accordance with paragraphs (k)(1) through (3) of this section.

(1) Conduct visual inspections that consist of a visual survey of the building over the test period to identify if there are VE, other than condensed water vapor.

(2) Select a position at least 15 but not more 1,320 feet from each side of the building with the sun or other light source generally at your back.

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A to part 60 of this chapter, but must meet the training requirements as described in EPA Method 22 in appendix A to part 60 of this chapter.

(l) When determining compliance with the opacity standards for fugitive emissions from PSH operations in item 7 of Table 1 to this subpart, you must conduct EPA Method 9 in appendix A to part 60 of this chapter according to item 17 in Table 4 to this subpart, and in accordance with paragraphs (l)(1) through (3) of this section.

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun must be followed.

(3) If you use wet dust suppression to control PM from PSH operations, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered VE. When a water mist of this nature is present, you must observe emissions at a point in the plume where the mist is no longer visible.

§ 63.7113 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to your OM&M plan required by § 63.7100(d) and paragraphs (a)(1) through (5) of this section, and you must install, operate, and maintain each continuous opacity monitoring system (COMS) as required by paragraph (g) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period.

(2) To calculate a valid hourly value, you must have at least four equally spaced data values (or at least two, if that condition is included to allow for periodic calibration checks) for that hour from a CPMS that is not out of control according your OM&M plan, and use all valid data.

(3) To calculate the average for each 3-hour block averaging period, you must use all valid data, and you must have at least 66 percent of the hourly averages for that period using only hourly average values that are based on valid data (*i.e.*, not from out-of-control periods).

(4) You must conduct a performance evaluation of each CPMS in accordance with your OM&M plan.

(5) You must continuously operate and maintain the CPMS according to the OM&M plan, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(b) For each flow measurement device, you must meet the requirements in paragraphs (a)(1) through (5) and (b)(1) through (4) of this section.

(1) Use a flow sensor with a minimum tolerance of 2 percent of the flow rate.

(2) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(3) Conduct a flow sensor calibration check at least semiannually.

(4) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(c) For each pressure measurement device, you must meet the requirements in paragraphs (a)(1) through (5) and (c)(1) through (7) of this section.

(1) Locate the pressure sensor(s) in or as close to as possible a position that provides a representative measurement of the pressure.

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a gauge with a minimum tolerance of 0.5 inch of water or a

transducer with a minimum tolerance of 1 percent of the pressure range.

(4) Check pressure tap pluggage daily.

(5) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

(6) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(7) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(d) For each bag leak detection system (BLDS), you must meet any applicable requirements in paragraphs (a)(1) through (5) and (d)(1) through (8) of this section.

(1) The BLDS must 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.

(2) The sensor on the BLDS must provide output of relative PM emissions.

(3) The BLDS must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level.

(4) The alarm must be located in an area where appropriate plant personnel will be able to hear it.

(5) For a positive-pressure fabric filter (FF), each compartment or cell must have a bag leak detector (BLD). For a negative-pressure or induced-air FF, the BLD must be installed downstream of the FF. If multiple BLD are required (for either type of FF), the detectors may share the system instrumentation and alarm.

(6) Bag leak detection systems must be installed, operated, adjusted, and maintained according to the manufacturer's written specifications and recommendations. Standard operating procedures must be incorporated into the OM&M plan.

(7) At a minimum, initial adjustment of the system must consist of establishing the baseline output in both of the following ways:

(i) Adjust the range and the averaging period of the device.

(ii) Establish the alarm set points and the alarm delay time.

(8) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the OM&M plan required by § 63.7100(d). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless a responsible official, as defined

in § 63.2, certifies in writing to the Administrator that the FF has been inspected and found to be in good operating condition.

(e) For each PM detector, you must meet any applicable requirements in paragraphs (a)(1) through (5) and (e)(1) through (8) of this section.

(1) The PM detector must 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.

(2) The sensor on the PM detector must provide output of relative PM emissions.

(3) The PM detector must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level.

(4) The alarm must be located in an area where appropriate plant personnel will be able to hear it.

(5) For a positive-pressure electrostatic precipitator (ESP), each compartment must have a PM detector. For a negative-pressure or induced-air ESP, the PM detector must be installed downstream of the ESP. If multiple PM detectors are required (for either type of ESP), the detectors may share the system instrumentation and alarm.

(6) Particulate matter detectors must be installed, operated, adjusted, and maintained according to the manufacturer's written specifications and recommendations. Standard operating procedures must be incorporated into the OM&M plan.

(7) At a minimum, initial adjustment of the system must consist of establishing the baseline output in both of the following ways:

(i) Adjust the range and the averaging period of the device.

(ii) Establish the alarm set points and the alarm delay time.

(8) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the OM&M plan required by § 63.7100(d). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless a responsible official as defined in § 63.2 certifies in writing to the Administrator that the ESP has been inspected and found to be in good operating condition.

(f) For each emission unit equipped with an add-on air pollution control device, you must inspect each capture/ collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating

requirements in item 6 of Table 2 to this subpart and record the results of each inspection.

(g) For each COMS used to monitor an add-on air pollution control device, you must meet the requirements in paragraphs (g)(1) and (2) of this section.

(1) Install the COMS at the outlet of the control device.

(2) Install, maintain, calibrate, and operate the COMS as required by 40 CFR part 63, subpart A, General Provisions and according to Performance Specification (PS)-1 of appendix B to part 60 of this chapter. Facilities that operate COMS installed on or before February 6, 2001, may continue to meet the requirements in effect at the time of COMS installation unless specifically required to re-certify the COMS by their permitting authority.

§ 63.7114 How do I demonstrate initial compliance with the emission limitations standard?

(a) You must demonstrate initial compliance with each emission limit in Table 1 to this subpart that applies to you, according to Table 3 to this subpart. For existing lime kilns and their associated coolers, you may perform VE measurements in accordance with EPA Method 9 of appendix A to part 60 in lieu of installing a COMS or PM detector if any of the conditions in paragraphs (a)(1) through (3) of this section exist:

(1) You use a FF for PM control, and the FF is under positive pressure and has multiple stacks; or

(2) The control device exhausts through a monovent; or

(3) The installation of a COMS in accordance with PS-1 of appendix B to part 60 is infeasible.

(b) You must establish each site-specific operating limit in Table 2 to this subpart that applies to you according to the requirements in § 63.7112(j) and Table 4 to this subpart. Alternative parameters may be monitored if approval is obtained according to the procedures in § 63.8(f).

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7130(e).

Continuous Compliance Requirements

§ 63.7120 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required quality assurance or control activities (including, as applicable, calibration

checks and required zero adjustments), and except for PSH operations subject to monthly VE testing, you must monitor continuously (or collect data at all required intervals) at all times that the emission unit is operating.

(c) Data recorded during the conditions described in paragraphs (c)(1) through (3) of this section may not be used either in data averages or calculations of emission or operating limits; or in fulfilling a minimum data availability requirement. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(1) Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;

(2) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and

(3) Start-ups, shutdowns, and malfunctions.

§ 63.7121 How do I demonstrate continuous compliance with the emission limitations standard?

(a) You must demonstrate continuous compliance with each emission limitation in Tables 1 and 2 to this subpart that applies to you according to the methods specified in Tables 5 and 6 to this subpart.

(b) You must report each instance in which you did not meet each operating limit, opacity limit, and VE limit in Tables 2 and 6 to this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. These instances are deviations from the emission limitations in this subpart. These deviations must be reported according to the requirements in § 63.7131.

(c) You must operate in accordance with the SSMP during periods of startup, shutdown, and malfunction.

(d) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the SSMP. The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

(e) For each PSH operation subject to an opacity limit as specified in Table 1 to this subpart, and any vents from buildings subject to an opacity limit, you must conduct a VE check according

to item 1 in Table 6 to this subpart, and as follows:

(1) Conduct visual inspections that consist of a visual survey of each stack or process emission point over the test period to identify if there are VE, other than condensed water vapor.

(2) Select a position at least 15 but not more 1,320 feet from the affected emission point with the sun or other light source generally at your back.

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A to part 60 of this chapter, but must meet the training requirements as described in EPA Method 22 of appendix A to part 60 of this chapter.

(f) For existing lime kilns and their associated coolers, you may perform VE measurements in accordance with EPA Method 9 of appendix A to part 60 in lieu of installing a COMS or PM detector if any of the conditions in paragraphs (f)(1) or (3) of this section exist:

(1) You use a FF for PM control, and the FF is under positive pressure and has multiple stacks; or

(2) The control device exhausts through a monovent; or

(3) The installation of a COMS in accordance with PS-1 of appendix B to part 60 is infeasible.

Notification, Reports, and Records

§ 63.7130 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.6(h)(4) and (5); 63.7(b) and (c); 63.8(e); (f)(4) and (6); and 63.9 (a) through (j) that apply to you, by the dates specified.

(b) As specified in § 63.9(b)(2), if you start up your affected source before January 5, 2004, you must submit an initial notification not later than 120 calendar days after January 5, 2004.

(c) If you startup your new or reconstructed affected source on or after January 5, 2004, you must submit an initial notification not later than 120 calendar days after you start up your affected source.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, as required in § 63.7(b)(1).

(e) If you are required to conduct a performance test, design evaluation, opacity observation, VE observation, or other initial compliance demonstration as specified in Table 3 or 4 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 3 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(2) For each compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 4 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to § 63.10(d)(2).

§ 63.7131 What reports must I submit and when?

(a) You must submit each report listed in Table 7 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date specified in Table 7 to this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section:

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.7083 and ending on June 30 or December 31, whichever date is the first date following the end of the first half calendar year after the compliance date that is specified for your source in § 63.7083.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first half calendar year after the compliance date that is specified for your affected source in § 63.7083.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, if the permitting authority has established dates for submitting semiannual reports pursuant to

§§ 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter, you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates specified in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information specified in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that apply to you, the compliance report must include a statement that there were no deviations from the emission limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring systems (CMS) were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS were out-of-control during the reporting period.

(d) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information specified in paragraphs (c)(1) through (4) and (d)(1) and (2) of this section. The deviations must be reported in accordance with the requirements in § 63.10(d).

(1) The total operating time of each emission unit during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) occurring at an affected source where you are using a CMS to comply with the emission limitation in this subpart, you must include the information specified in paragraphs

(c)(1) through (4) and (e)(1) through (11) of this section. This includes periods of startup, shutdown, and malfunction.

(1) The date and time that each malfunction started and stopped.

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(5) A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total affected source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total emission unit operating time during that reporting period.

(8) A brief description of the process units.

(9) A brief description of the CMS.

(10) The date of the latest CMS certification or audit.

(11) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each facility that has obtained a title V operating permit pursuant to part 70 or part 71 of this chapter must report all deviations as defined in this subpart in the semiannual monitoring report required by §§ 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter. If you submit a compliance report specified in Table 7 to this subpart along with, or as part of, the semiannual monitoring report required by §§ 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter, and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation you may have to report deviations from permit requirements to the permit authority.

§ 63.7132 What records must I keep?

(a) You must keep the records specified in paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity and VE observations as required in § 63.10(b)(2)(viii).

(b) You must keep the records in § 63.6(h)(6) for VE observations.

(c) You must keep the records required by Tables 5 and 6 to this subpart to show continuous compliance with each emission limitation that applies to you.

(d) You must keep the records which document the basis for the initial applicability determination as required under § 63.7081.

§ 63.7133 In what form and for how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record,

according to § 63.10(b)(1). You may keep the records offsite for the remaining 3 years.

Other Requirements and Information**§ 63.7140 What parts of the General Provisions apply to me?**

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. When there is overlap between subpart A and subpart AAAAA, as indicated in the "Explanations" column in Table 8, subpart AAAAA takes precedence.

§ 63.7141 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. EPA, or by a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (6) of this section.

(1) Approval of alternatives to the non-opacity emission limitations in § 63.7090(a).

(2) Approval of alternative opacity emission limitations in § 63.7090(a).

(3) Approval of alternatives to the operating limits in § 63.7090(b).

(4) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(5) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(6) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

§ 63.7142 What are the requirements for claiming area source status?

(a) If you wish to claim that your LMP is an area source, you must measure the emissions of hydrogen chloride from all lime kilns, except as provided in paragraph (c) of this section, at your plant using either:

(1) EPA Method 320 of appendix A to this part,

(2) EPA Method 321 of appendix A to this part, or

(3) ASTM Method D6735–01, Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method, provided that the provisions in paragraphs (a)(3)(i) through (vi) of this section are followed.

(i) A test must include three or more runs in which a pair of samples is obtained simultaneously for each run according to section 11.2.6 of ASTM Method D6735–01.

(ii) You must calculate the test run standard deviation of each set of paired samples to quantify data precision, according to Equation 1 of this section:

$$RSD_a = (100) \text{ Absolute Value } \left[\frac{C1_a - C2_a}{C1_a + C2_a} \right] \quad (\text{Eq. 1})$$

Where:

RSD_a = The test run relative standard deviation of sample pair a, percent.

$C1_a$ and $C2_a$ = The HCl concentrations, milligram/dry standard cubic meter (mg/dscm), from the paired samples.

(iii) You must calculate the test average relative standard deviation according to Equation 2 of this section:

$$RSD_{TA} = \frac{\sum_{a=1}^p RSD_a}{p} \quad (\text{Eq. 2})$$

Where:

RSD_{TA} = The test average relative standard deviation, percent.

RSD_a = The test run relative standard deviation for sample pair a.

p = The number of test runs, ≥ 3 .

(iv) If RSD_{TA} is greater than 20 percent, the data are invalid and the test must be repeated.

(v) The post-test analyte spike procedure of section 11.2.7 of ASTM Method D6735–01 is conducted, and the percent recovery is calculated according to section 12.6 of ASTM Method D6735–01.

(vi) If the percent recovery is between 70 percent and 130 percent, inclusive,

the test is valid. If the percent recovery is outside of this range, the data are considered invalid, and the test must be repeated.

(b) If you conduct tests to determine the rates of emission of specific organic HAP from lime kilns at LMP for use in applicability determinations under § 63.7081, you may use either:

(1) Method 320 of appendix A to this part, or

(2) Method 18 of appendix A to part 60 of this chapter, or

(3) ASTM D6420–99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass

Spectrometry (GC/MS), provided that the provisions of paragraphs (b)(3)(i) through (iv) of this section are followed:

(i) The target compound(s) are those listed in section 1.1 of ASTM D6420–99;

(ii) The target concentration is between 150 parts per billion by volume and 100 parts per million by volume;

(iii) For target compound(s) not listed in Table 1.1 of ASTM D6420–99, but potentially detected by mass spectrometry, the additional system continuing calibration check after each run, as detailed in section 10.5.3 of ASTM D6420–99, is conducted, met, documented, and submitted with the data report, even if there is no moisture condenser used or the compound is not considered water soluble; and

(iv) For target compound(s) not listed in Table 1.1 of ASTM D6420–99, and not amenable to detection by mass spectrometry, ASTM D6420–99 may not be used.

(c) It is left to the discretion of the permitting authority whether or not idled kilns must be tested for (HCl) to claim area source status. If the facility has kilns that use common feed materials and fuel, are essentially identical in design, and use essentially identical emission controls, the permitting authority may also determine if one kiln can be tested, and the HCl emissions for the other essentially identical kilns be estimated from that test.

§ 63.7143 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section as follows:

Bag leak detector system (BLDS) is a type of PM detector used on FF to identify an increase in PM emissions resulting from a broken filter bag or other malfunction and sound an alarm.

Belt conveyor means a conveying device that transports *processed stone* from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a *processed stone* conveying device consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport PM to a control device.

Control device means the air pollution control equipment used to reduce PM emissions released to the atmosphere

from one or more process operations at an LMP.

Conveying system means a device for transporting *processed stone* from one piece of equipment or location to another location within a plant.

Conveying systems include but are not limited to feeders, belt conveyors, bucket elevators and pneumatic systems.

Deviation means any instance in which an affected source, subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation (including any operating limit);

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation (including any operating limit) in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is allowed by this subpart.

Emission limitation means any emission limit, opacity limit, operating limit, or VE limit.

Emission unit means a lime kiln, lime cooler, storage bin, conveying system transfer point, bulk loading or unloading operation, bucket elevator or belt conveyor at an LMP.

Fugitive emission means PM that is not collected by a capture system.

Hydrator means the device used to produce hydrated lime or calcium hydroxide via the chemical reaction of the lime product with water.

Lime cooler means the device external to the lime kiln (or part of the lime kiln itself) used to reduce the temperature of the lime produced by the kiln.

Lime kiln means the device, including any associated preheater, used to produce a lime product from stone feed by calcination. Kiln types include, but are not limited to, rotary kiln, vertical kiln, rotary hearth kiln, double-shaft vertical kiln, and fluidized bed kiln.

Lime manufacturing plant (LMP) means any plant which uses a lime kiln to produce lime product from limestone or other calcareous material by calcination.

Lime product means the product of the lime kiln calcination process including, calcitic lime, dolomitic lime, and dead-burned dolomite.

Limestone means the material comprised primarily of calcium carbonate (referred to sometimes as

calcitic or high calcium limestone), magnesium carbonate, and/or the double carbonate of both calcium and magnesium (referred to sometimes as dolomitic limestone or dolomite).

Monovent means an exhaust configuration of a building or emission control device (e.g., positive pressure FF) 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.

Particulate matter (PM) detector means a system that is continuously capable of monitoring PM loading in the exhaust of FF or ESP in order to detect bag leaks, upset conditions, or control device malfunctions and sounds an alarm at a preset level. A PM detector system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other effects to continuously monitor relative particulate loadings. A BLDS is a type of PM detector.

Positive pressure FF or ESP means a FF or ESP with the fan(s) on the upstream side of the control device.

Process stone handling operations means the equipment and transfer points between the equipment used to transport *processed stone*, and includes, storage bins, conveying system transfer points, bulk loading or unloading systems, screening operations, bucket elevators, and belt conveyors.

Processed stone means limestone or other calcareous material that has been processed to a size suitable for feeding into a lime kiln.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series and retaining oversize material on the mesh surfaces (screens).

Stack emissions means the PM that is released to the atmosphere from a capture system or control device.

Storage bin means a manmade enclosure for storage (including surge bins) of *processed stone* prior to the lime kiln.

Transfer point means a point in a conveying operation where the material is transferred to or from a belt conveyor.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying PM emissions from one or more emission units.

Tables to Subpart AAAAA of Part 63

TABLE 1 TO SUBPART AAAAA OF PART 63.—EMISSION LIMITS

[As required in § 63.7090(a), you must meet each emission limit in the following table that applies to you.]

For . . .	You must meet the following emission limit
1. Existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004.	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).
2. Existing lime kilns and their associated lime coolers that have a wet scrubber, where the scrubber itself was installed and operating prior to January 5, 2004.	PM emissions must not exceed 0.60 lb/tsf. If at any time after January 5, 2004 the kiln changes to a dry control system, then the PM emission limit in item 1 of this Table 1 applies, and the kiln is hereafter ineligible for the PM emission limit in item 2 of this Table 1 regardless of the method of PM control.
3. New lime kilns and their associated lime coolers	PM emissions must not exceed 0.10 lb/tsf.
4. All existing and new lime kilns and their associated coolers at your LMP, and you choose to average PM emissions, except that any kiln that is allowed to meet the 0.60 lb/tsf PM emission limit is ineligible for averaging.	Weighted average PM emissions calculated according to Eq. 2 in § 63.7112 must not exceed 0.12 lb/tsf (if you are averaging only existing kilns) or 0.10 lb/tsf (if you are averaging only new kilns). If you are averaging existing and new kilns, your weighted average PM emissions must not exceed the weighted average emission limit calculated according to Eq. 3 in § 63.7112, except that no new kiln and its associated cooler considered alone may exceed an average PM emissions limit of 0.10 lb/tsf.
5. Stack emissions from all PSH operations at a new or existing affected source.	PM emissions must not exceed 0.05 grams per dry standard cubic meter (g/dscm).
6. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device.	Emissions must not exceed 7 percent opacity.
7. Fugitive emissions from all PSH operations at a new or existing affected source, except as provided by item 8 of this Table 1.	Emissions must not exceed 10 percent opacity.
8. All PSH operations at a new or existing affected source enclosed in a building.	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations in items 5 through 7 of this Table 1, or the building must comply with the following: There must be no VE from the building, except from a vent; and vent emissions must not exceed the stack emissions limitations in items 5 and 6 of this Table 1.
9. Each FF that controls emissions from only an individual, enclosed storage bin.	Emissions must not exceed 7 percent opacity.
10. Each set of multiple storage bins at a new or existing affected source, with combined stack emissions.	You must comply with the emission limits in items 5 and 6 of this Table 1.

TABLE 2 TO SUBPART AAAAA OF PART 63.—OPERATING LIMITS

[As required in § 63.7090(b), you must meet each operating limit in the following table that applies to you.]

For . . .	You must . . .
1. Each lime kiln and each lime cooler (if there is a separate exhaust to the atmosphere from the associated lime cooler) equipped with an FF.	Maintain and operate the FF such that the BLDS or PM detector alarm condition does not exist for more than 5 percent of the total operating time in a 6-month period; and comply with the requirements in § 63.7113(d) through (f) and Table 5 to this subpart. In lieu of a BLDS or PM detector maintain the FF such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent; and comply with the requirements in § 63.7113(f) and (g) and Table 5 to this subpart.
2. Each lime kiln equipped with a wet scrubber	Maintain the 3-hour block exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the most recent PM performance test; and maintain the 3-hour block scrubbing liquid flow rate greater than the flow rate operating limit established during the most recent performance test.
3. Each lime kiln equipped with an electrostatic precipitator	Install a PM detector and maintain and operate the ESP such that the PM 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 period, and comply with § 63.7113(e); or, maintain the ESP such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent, and comply with the requirements in § 63.7113(g); and comply with the requirements in § 63.7113(f) and Table 5 to this subpart.
4. Each PSH operation subject to a PM limit which uses a wet scrubber.	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.

TABLE 2 TO SUBPART AAAAA OF PART 63.—OPERATING LIMITS—Continued

[As required in § 63.7090(b), you must meet each operating limit in the following table that applies to you.]

For . . .	You must . . .
5. All affected sources	Prepare a written OM&M plan; the plan must include the items listed in § 63.7100(d) and the corrective actions to be taken when required in Table 5 to this subpart.
6. Each emission unit equipped with an add-on air pollution control device.	a. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to an FF; and b. Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

TABLE 3 TO SUBPART AAAAA OF PART 63.—INITIAL COMPLIANCE WITH EMISSION LIMITS

[As required in § 63.7114, you must demonstrate initial compliance with each emission limitation that applies to you, according to the following table.]

For . . .	For the following emission limit . . .	You have demonstrated initial compliance, if after following the requirements in § 63.7112 . . .
1. All new or existing lime kilns and their associated lime coolers (kilns/coolers).	PM emissions must not exceed 0.12 lb/tsf for all existing kilns/coolers with dry controls, 0.60 lb/tsf for existing kilns/coolers with wet scrubbers, 0.10 lb/tsf for all new kilns/coolers, or a weighted average calculated according to Eq. 3 in § 63.7112.	The kiln outlet PM emissions (and if applicable, summed with the separate cooler PM emissions), based on the PM emissions measured using Method 5 in appendix A to part 60 of this chapter and the stone feed rate measurement over the period of initial performance test, do not exceed the emission limit; if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions with a BLDS or PM detector, you have installed and are operating the monitoring device according to the requirements in § 63.7113(d) or (e), respectively; and if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions using a COMS, you have installed and are operating the COMS according to the requirements in § 63.7113(g).
2. Stack emissions from all PHS operations at a new or existing affected source.	PM emissions must not exceed 0.05 g/dscm ..	The outlet PM emissions, based on Method 5 or Method 17 in appendix A to part 60 of this chapter, over the period of the initial performance test do not exceed 0.05 g/dscm; and if the emission unit is controlled with a wet scrubber, you have a record of the scrubber's pressure drop and liquid flow rate operating parameters over the 3-hour performance test during which emissions did not exceed the emissions limitation.
3. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device.	Emissions must not exceed 7 percent opacity	Each of the thirty 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit. At least thirty 6-minute averages must be obtained.
4. Fugitive emissions from all PSH operations at a new or existing affected source.	Emissions must not exceed 10 percent opacity.	Each of the 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 10 percent opacity limit.
5. All PSH operations at a new or existing affected source, enclosed in building.	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations for items 2 through 4 of this Table 3, or the building must comply with the following: There must be no VE from the building, except from a vent, and vent emissions must not exceed the emission limitations in items 2 and 3 of this Table 3.	All the PSH operations enclosed in the building have demonstrated initial compliance according to the applicable requirements for items 2 through 4 of this Table 3; or if you are complying with the building emission limitations, there are no VE from the building according to item 18 of Table 4 to this subpart and § 63.7112(k), and you demonstrate initial compliance with applicable building vent emissions limitations according to the requirements in items 2 and 3 of this Table 3.

TABLE 3 TO SUBPART AAAAA OF PART 63.—INITIAL COMPLIANCE WITH EMISSION LIMITS—Continued

[As required in § 63.7114, you must demonstrate initial compliance with each emission limitation that applies to you, according to the following table.]

For . . .	For the following emission limit . . .	You have demonstrated initial compliance, if after following the requirements in § 63.7112 . . .
6. Each FF that controls emissions from only an individual storage bin.	Emissions must not exceed 7 percent opacity	Each of the ten 6-minute averages during the 1-hour initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit.
7. Each set of multiple storage bins with combined stack emissions.	You must comply with emission limitations in items 2 and 3 of this Table 3.	You demonstrate initial compliance according to the requirements in items 2 and 3 of this Table 3.

TABLE 4 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS

[As required in § 63.7112, you must conduct each performance test in the following table that applies to you.]

For . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Select the location of the sampling port and the number of traverse ports.	Method 1 or 1A of appendix A to part 60 of this chapter; and § 63.6(d)(1)(i).	Sampling sites must be located at the outlet of the control device(s) and prior to any releases to the atmosphere.
2. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Determine velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter.	Not applicable.
3. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Conduct gas molecular weight analysis.	Method 3, 3A, or 3B in appendix A to part 60 of this chapter.	Not applicable.
4. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Measure moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.	Not applicable.
5. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a negative pressure PM control device.	Measure PM emissions	Method 5 in appendix A to part 60 of this chapter.	Conduct the test(s) when the source is operating at representative operating conditions in accordance with § 63.7(e); the minimum sampling volume must be 0.85 dry standard cubic meter (dscm) (30 dry standard cubic foot (dscf)); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the cooler exhaust concurrently with the kiln exhaust test.
6. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a positive pressure FF or ESP.	Measure PM emissions	Method 5D in appendix A to part 60 of this chapter.	Conduct the test(s) when the source is operating at representative operating conditions in accordance with § 63.7(e); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the separate cooler exhaust concurrently with the kiln exhaust test.
7. Each lime kiln	Determine the mass rate of stone feed to the kiln during the kiln PM emissions test.	Any suitable device	Calibrate and maintain the device according to manufacturer's instructions; the measuring device used must be accurate to within ± 5 percent of the mass rate of stone feed over its operating range.

TABLE 4 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

[As required in § 63.7112, you must conduct each performance test in the following table that applies to you.]

For . . .	You must . . .	Using . . .	According to the following requirements . . .
8. Each lime kiln equipped with a wet scrubber.	Establish the operating limit for the average gas stream pressure drop across the wet scrubber.	Data for the gas stream pressure drop measurement device during the kiln PM performance test.	The continuous pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to § 63.7112(j).
9. Each lime kiln equipped with a wet scrubber.	Establish the operating limit for the average liquid flow rate to the scrubber.	Data from the liquid flow rate measurement device during the kiln PM performance test.	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to § 63.7112(j).
10. Each lime kiln equipped with a FF or ESP that is monitored with a PM detector.	Have installed and have operating the BLDS or PM detector prior to the performance test.	Standard operating procedures incorporated into the OM&M plan.	According to the requirements in § 63.7113(d) or (e), respectively.
11. Each lime kiln equipped with a FF or ESP that is monitored with a COMS.	Have installed and have operating the COMS prior to the performance test.	Standard operating procedures incorporated into the OM&M plan and as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2).	According to the requirements in § 63.7113(g).
12. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to a PM emission limit.	Measure PM emissions	Method 5 or Method 17 in appendix A to part 60 of this chapter.	The sample volume must be at least 1.70 dscm (60 dscf); for Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters; and if the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter (Method 17 may be used only with exhaust gas temperatures of not more than 250 °F).
13. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to an opacity limit.	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 3 hours and you must obtain at least thirty, 6-minute averages.
14. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber.	Establish the average gas stream pressure drop across the wet scrubber.	Data for the gas stream pressure drop measurement device during the PSH operation stack PM performance test.	The pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to § 63.7112(j).
15. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber.	Establish the operating limit for the average liquid flow rate to the scrubber.	Data from the liquid flow rate measurement device during the PSH operation stack PM performance test.	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to § 63.7112(j).

TABLE 4 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

[As required in § 63.7112, you must conduct each performance test in the following table that applies to you.]

For . . .	You must . . .	Using . . .	According to the following requirements . . .
16. Each FF that controls emissions from only an individual, enclosed, new or existing storage bin.	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 1 hour and you must obtain ten 6-minute averages.
17. Fugitive emissions from any PSH operation subject to an opacity limit.	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 3 hours, but the 3-hour test may be reduced to 1 hour if, during the first 1-hour period, there are no individual readings greater than 10 percent opacity and there are no more than three readings of 10 percent during the first 1-hour period.
18. Each building enclosing any PSH operation, that is subject to a VE limit.	Conduct VE check	The specifications in § 63.7112(k)	The performance test must be conducted while all affected PSH operations within the building are operating; the performance test for each affected building must be at least 75 minutes, with each side of the building and roof being observed for at least 15 minutes.

TABLE 5 TO SUBPART AAAAA OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS

[As required in § 63.7121, you must demonstrate continuous compliance with each operating limit that applies to you, according to the following table.]

For . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
1. Each lime kiln controlled by a wet scrubber	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.	Collecting the wet scrubber operating data according to all applicable requirements in § 63.7113 and reducing the data according to § 63.7113(a); maintaining the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintaining the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test (the continuous scrubbing liquid flow rate measuring device must be accurate within $\pm 1\%$ and the continuous pressure drop measurement device must be accurate within $\pm 1\%$).
2. Each lime kiln or lime cooler equipped with a FF and using a BLDS, and each lime kiln equipped with an ESP or FF using a PM detector.	a. Maintain and operate the FF or ESP such that the bag leak or PM detector alarm, is not activated and alarm condition does not exist for more than 5 percent of the total operating time in each 6-month period.	(i) Operating the FF or ESP so that the alarm on the bag leak or PM detection system is not activated and an alarm condition does not exist for more than 5 percent of the total operating time in each 6-month reporting period; and continuously recording the output from the BLD or PM detection system; and (ii) Each time the alarm sounds and the owner or operator initiates corrective actions within 1 hour of the alarm, 1 hour of alarm time will be counted (if the owner or operator takes longer than 1 hour to initiate corrective actions, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions); if inspection of the FF or ESP system demonstrates that no corrective actions are necessary, no alarm time will be counted.

TABLE 5 TO SUBPART AAAAA OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS—Continued

[As required in § 63.7121, you must demonstrate continuous compliance with each operating limit that applies to you, according to the following table.]

For . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
3. Each stack emissions source from a PSH operation subject to an opacity limit, which is controlled by a wet scrubber.	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.	Collecting the wet scrubber operating data according to all applicable requirements in § 63.7113 and reducing the data according to § 63.7113(a); maintaining the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintaining the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test (the continuous scrubbing liquid flow rate measuring device must be accurate within $\pm 1\%$ and the continuous pressure drop measurement device must be accurate within $\pm 1\%$).
4. For each lime kiln or lime cooler equipped with a FF or an ESP that uses a COMS as the monitoring device.	a. Maintain and operate the FF or ESP such that the average opacity for any 6-minute block period does not exceed 15 percent.	i. Installing, maintaining, calibrating and operating a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2); and ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.

TABLE 6 TO SUBPART AAAAA OF PART 63.—PERIODIC MONITORING FOR COMPLIANCE WITH OPACITY AND VISIBLE EMISSIONS LIMITS

[As required in § 63.7121 you must periodically demonstrate compliance with each opacity and VE limit that applies to you, according to the following table]

For . . .	For the following emission limitation . . .	You must demonstrate ongoing compliance . . .
1. Each PSH operation subject to an opacity limitation as required in Table 1 to this subpart, or any vents from buildings subject to an opacity limitation.	a. 7–10 percent opacity, depending on the PSH operation, as required in Table 1 to this subpart.	(i) Conducting a monthly 1-minute VE check of each emission unit in accordance with § 63.7121(e); the check must be conducted while the affected source is in operation; (ii) If no VE are observed in 6 consecutive monthly checks for any emission unit, you may decrease the frequency of VE checking from monthly to semi-annually for that emission unit; if VE are observed during any semiannual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; (iii) If no VE are observed during the semi-annual check for any emission unit, you may decrease the frequency of VE checking from semi-annually to annually for that emission unit; if VE are observed during any annual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and

TABLE 6 TO SUBPART AAAAA OF PART 63.—PERIODIC MONITORING FOR COMPLIANCE WITH OPACITY AND VISIBLE EMISSIONS LIMITS—Continued

[As required in § 63.7121 you must periodically demonstrate compliance with each opacity and VE limit that applies to you, according to the following table]

For . . .	For the following emission limitation . . .	You must demonstrate ongoing compliance . . .
2. Any building subject to a VE limit, according to item 8 of Table 1 to this subpart.	a. No VE	(iv) If VE are observed during any VE check, you must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter; you must begin the Method 9 test within 1 hour of any observation of VE and the 6-minute opacity reading must not exceed the applicable opacity limit. (i) Conducting a monthly VE check of the building, in accordance with the specifications in § 63.7112(k); the check must be conducted while all the enclosed PSH operations are operating; (ii) The check for each affected building must be at least 5 minutes, with each side of the building and roof being observed for at least 1 minute; (iii) If no VE are observed in 6 consecutive monthly checks of the building, you may decrease the frequency of checking from monthly to semi-annually for that affected source; if VE are observed during any semi-annual check, you must resume checking on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and (iv) If no VE are observed during the semi-annual check, you may decrease the frequency of checking from semi-annually to annually for that affected source; and if VE are observed during any annual check, you must resume checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks (the source is in compliance if no VE are observed during any of these checks).

TABLE 7 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR REPORTS

[As required in § 63.7131, you must submit each report in this table that applies to you.]

You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that applies to you, a statement that there were no deviations from the emission limitations during the reporting period; b. If there were no periods during which the CMS, including any operating parameter monitoring system, was out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period; c. If you have a deviation from any emission limitation (emission limit, operating limit, opacity limit, and VE limit) during the reporting period, the report must contain the information in § 63.7131(d); d. If there were periods during which the CMS, including any operating parameter monitoring system, was out-of-control, as specified in § 63.8(c)(7), the report must contain the information in § 63.7131(e); and	Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b).

TABLE 7 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR REPORTS—Continued

[As required in § 63.7131, you must submit each report in this table that applies to you.]

You must submit a . . .	The report must contain . . .	You must submit the report . . .
	e. If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).	Semiannually according to the requirements in § 63.7131(b).
2. An immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	Actions taken for the event	By fax or telephone within 2 working days after starting actions inconsistent with the SSMP.
3. An immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	The information in § 63.10(d)(5)(ii)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. See § 63.10(d)(5)(ii).

TABLE 8 TO SUBPART AAAAA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA

[As required in § 63.7140, you must comply with the applicable General Provisions requirements according to the following table.]

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.1(a)(1)–(4)	Applicability	Yes.	§§ 63.7081 and 63.7142 specify additional applicability determination requirements.
§ 63.1(a)(5)	Applicability	No.	
§ 63.1(a)(6)	Applicability	Yes.	
§ 63.1(a)(7)–(a)(9)	Applicability	No.	
§ 63.1(a)(10)–(a)(14)	Applicability	Yes.	
§ 63.1(b)(1)	Initial Applicability Determination	Yes	Area sources not subject to subpart AAAAA, except all sources must make initial applicability determination.
§ 63.1(b)(2)	Initial Applicability Determination	No.	
§ 63.1(b)(3)	Initial Applicability Determination	Yes.	
§ 63.1(c)(1)	Applicability After Standard Established.	Yes.	
§ 63.1(c)(2)	Permit Requirements	No	
§ 63.1(c)(3)	Extensions, Notifications	No.	Additional definitions in § 63.7143.
§ 63.1(c)(4)–(5)	Extensions, Notifications	Yes.	
§ 63.1(d)	Applicability of Permit Program	No.	
§ 63.1(e)	Applicability of Permit Program	Yes.	
§ 63.2	Definitions	Yes.	
§ 63.3(a)–(c)	Units and Abbreviations	Yes.	See § 63.7100 for OM&M requirements.
§ 63.4(a)(1)–(a)(2)	Prohibited Activities	Yes.	
§ 3.4(a)(3)–(a)(5)	Circumvention, Severability	No.	
§ 63.4(b)–(c)	Construction/Reconstruction	Yes.	
§ 63.5(a)(1)–(2)	Construction/Reconstruction	Yes.	
§ 63.5(b)(1)	Compliance Dates	Yes.	
§ 63.5(b)(2)	Compliance Dates	No.	
§ 63.5(b)(3)–(4)	Construction Approval, Applicability ...	Yes.	
§ 63.5(b)(5)	Construction Approval, Applicability ...	No.	
§ 63.5(b)(6)	Applicability	Yes.	
§ 63.5(c)	Approval of Construction/Reconstruction.	No.	
§ 63.5(d)(1)–(4)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(f)(1)–(2)	Approval of Construction/Reconstruction.	Yes.	
§ 63.6(a)	Compliance for Standards and Maintenance.	Yes.	
§ 63.6(b)(1)–(5)	Compliance Dates	Yes.	
§ 63.6(b)(6)	Compliance Dates	No.	
§ 63.6(b)(7)	Compliance Dates	Yes.	
§ 63.6(c)(1)–(2)	Compliance Dates	Yes.	
§ 63.6(c)(3)–(c)(4)	Compliance Dates	No.	
§ 63.6(c)(5)	Compliance Dates	Yes.	
§ 63.6(d)	Operation & Maintenance	No.	
§ 63.6(e)(1)	Operation & Maintenance	Yes	
§ 63.6(e)(2)	Operation & Maintenance	No.	

TABLE 8 TO SUBPART AAAAA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued
[As required in § 63.7140, you must comply with the applicable General Provisions requirements according to the following table.]

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.6(e)(3)	Startup, Shutdown Malfunction Plan ..	Yes.	This requirement only applies to opacity and VE performance checks required in Table 4 to subpart AAAAA.
§ 63.6(f)(1)–(3)	Compliance with Emission Standards	Yes.	
§ 63.6(g)(1)–(g)(3)	Alternative Standard	Yes.	
§ 63.6(h)(1)–(2)	Opacity/VE Standards	Yes.	
§ 63.6(h)(3)	Opacity/VE Standards	No.	
§ 63.6(h)(4)–(h)(5)(i)	Opacity/VE Standards	Yes	Test durations are specified in subpart AAAAA; subpart AAAAA takes precedence.
§ 63.6(h)(5) (ii)–(iii)	Opacity/VE Standards	No	
§ 63.6(h)(5)(iv)	Opacity/VE Standards	No.	
§ 63.6(h)(5)(v)	Opacity/VE Standards	Yes.	
§ 63.6(h)(6)	Opacity/VE Standards	Yes.	
§ 63.6(h)(7)	COM Use	Yes.	§ 63.7110 specifies deadlines; § 63.7112 has additional specific requirements.
§ 63.6(h)(8)	Compliance with Opacity and VE	Yes.	
§ 63.6(h)(9)	Adjustment of Opacity Limit	Yes.	
§ 63.6(i)(1)–(i)(14)	Extension of Compliance	Yes.	
§ 63.6(i)(15)	Extension of Compliance	No.	
§ 63.6(i)(16)	Extension of Compliance	Yes.	
§ 63.6(j)	Exemption from Compliance	Yes.	
§ 63.7(a)(1)–(a)(3)	Performance Testing Requirements ..	Yes	
§ 63.7(b)	Notification	Yes.	
§ 63.7(c)	Quality Assurance/Test Plan	Yes.	
§ 63.7(d)	Testing Facilities	Yes.	See § 63.7113.
§ 63.7(e)(1)–(4)	Conduct of Tests	Yes.	
§ 63.7(f)	Alternative Test Method	Yes.	
§ 63.7(g)	Data Analysis	Yes.	
§ 63.7(h)	Waiver of Tests	Yes.	
§ 63.8(a)(1)	Monitoring Requirements	Yes	Flares not applicable.
§ 63.8(a)(2)	Monitoring	Yes.	
§ 63.8(a)(3)	Monitoring	No.	
§ 63.8(a)(4)	Monitoring	No	
§ 63.8(b)(1)–(3)	Conduct of Monitoring	Yes.	
§ 63.8(c)(1)–(3)	CMS Operation/Maintenance	Yes.	See § 63.7121.
§ 63.8(c)(4)	CMS Requirements	No	
§ 63.8(c)(4)(i)–(ii)	Cycle Time for COM and CEMS	Yes	
§ 63.8(c)(5)	Minimum COM procedures	Yes	
§ 63.8(c)(6)	CMS Requirements	No	
§ 63.8(c)(7)–(8)	CMS Requirements	Yes.	See § 63.7113.
§ 63.8(d)	Quality Control	No	
§ 63.8(e)	Performance Evaluation for CMS	No.	
§ 63.8(f)(1)–(f)(5)	Alternative Monitoring Method	Yes.	
§ 63.8(f)(6)	Alternative to Relative Accuracy test ..	No.	
§ 63.8(g)(1)–(g)(5)	Data Reduction; Data That Cannot Be Used.	No	See data reduction requirements in §§ 63.7120 and 63.7121. See § 63.7130.
§ 63.9(a)	Notification Requirements	Yes	
§ 63.9(b)	Initial Notifications	Yes.	
§ 63.9(c)	Request for Compliance Extension	Yes.	
§ 63.9(d)	New Source Notification for Special Compliance Requirements.	Yes.	
§ 63.9(e)	Notification of Performance Test	Yes.	This requirement only applies to opacity and VE performance tests required in Table 4 to subpart AAAAA. Notification not required for VE/opacity test under Table 6 to subpart AAAAA.
§ 63.9(f)	Notification of VE/Opacity Test	Yes	
§ 63.9(g)	Additional CMS Notifications	No	
§ 63.9(h)(1)–(h)(3)	Notification of Compliance Status	Yes.	
§ 63.9(h)(4)	Notification of Compliance Status	No.	
§ 63.9(h)(5)–(h)(6)	Notification of Compliance Status	Yes.	Not required for operating parameter monitoring.
§ 63.9(i)	Adjustment of Deadlines	Yes.	
§ 63.9(j)	Change in Previous Information	Yes.	

TABLE 8 TO SUBPART AAAAA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued
 [As required in § 63.7140, you must comply with the applicable General Provisions requirements according to the following table.]

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.10(a)	Recordkeeping/Reporting General Requirements.	Yes	See §§ 63.7131 through 63.7133.
§ 63.10(b)(1)–(b)(2)(xii)	Records	Yes.	
§ 63.10(b)(2)(xiii)	Records for Relative Accuracy Test ..	No.	
§ 63.10(b)(2)(xiv)	Records for Notification	Yes.	
§ 63.10(b)(3)	Applicability Determinations	Yes.	
§ 63.10(c)	Additional CMS Recordkeeping	No	See § 63.7132.
§ 63.10(d)(1)	General Reporting Requirements	Yes.	
§ 63.10(d)(2)	Performance Test Results	Yes.	
§ 63.10(d)(3)	Opacity or VE Observations	Yes	For the periodic monitoring requirements in Table 6 to subpart AAAAA, report according to § 63.10(d)(3) only if VE observed and subsequent visual opacity test is required.
§ 63.10(d)(4)	Progress Reports	Yes.	
§ 63.10(d)(5)	Startup, Shutdown, Malfunction Reports.	Yes.	
§ 63.10(e)	Additional CMS Reports	No	See specific requirements in subpart AAAAA, see § 63.7131.
§ 63.10(f)	Waiver for Recordkeeping/Reporting ..	Yes.	
§ 63.11(a)–(b)	Control Device Requirements	No	Flares not applicable.
§ 63.12(a)–(c)	State Authority and Delegations	Yes.	
§ 63.13(a)–(c)	State/Regional Addresses	Yes.	
§ 63.14(a)–(b)	Incorporation by Reference	No.	
§ 63.15(a)–(b)	Availability of Information	Yes.	

* * * * *

[FR Doc. 03–23057 Filed 12–31–03; 8:45 am]

BILLING CODE 6560–50–P

Environmental Protection Agency**40 CFR Part 63****[EPA-HQ-OAR-2017-0015; FRL-10009-60-OAR]****RIN 2060-AT08****National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants Residual Risk and Technology Review****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

SUMMARY: This action finalizes the residual risk and technology review (RTR) conducted for the Lime Manufacturing source category regulated under national emission standards for hazardous air pollutants (NESHAP). In addition, we are taking final action addressing periods of startup, shutdown, and malfunction (SSM). These final amendments include new provisions requiring electronic reporting. We are finalizing our proposed determination that the risks are acceptable and that the current NESHAP provides an ample margin of safety to protect public health. We determined that there are no developments in practices, processes, or control technologies that necessitate revisions to the standards.

DATES: This final rule is effective on July 24, 2020. The incorporation by reference (IBR) of certain publications listed in the rule is approved by the Director of the Federal Register as of July 24, 2020.

ADDRESSES: The U.S. Environmental Protection Agency (EPA) has established a docket for this action under Docket ID No. EPA-HQ-OAR-2017-0015. All documents in the docket are listed on the <https://www.regulations.gov/> website. Although listed, some information is not publicly available, e.g., Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through <https://www.regulations.gov/>. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room was closed to public visitors on March 31, 2020, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. There is a temporary suspension of mail delivery

to the EPA, and no hand deliveries are currently accepted. For further information and updates on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: For questions about this final action, contact Jim Eddinger, Sector Policies and Programs Division (D243-01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5426; and email address: eddinger.jim@epa.gov. For specific information regarding the risk modeling methodology, contact James Hirtz, Health and Environmental Impacts Division (C539-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0881; and email address: hirtz.james@epa.gov. For information about the applicability of the NESHAP to a particular entity, contact Sara Ayres, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, U.S. EPA Region 5 (Mail Code E-19), 77 West Jackson Boulevard, Chicago, Illinois 60604; telephone number: (312) 353-6266; and email address: ayres.sara@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

ACI activated carbon injection
 AEGL acute exposure guideline level
 ASME American Society of Mechanical Engineers
 ASTM American Society for Testing and Materials
 CAA Clean Air Act
 CDX Central Data Exchange
 CEDRI Compliance and Emissions Data Reporting Interface
 CEMS continuous emission monitoring system
 CFR Code of Federal Regulations
 CRA Congressional Review Act
 D/F dioxins and furans
 EPA Environmental Protection Agency
 ERPG emergency response planning guideline
 ESP electrostatic precipitator
 FF fabric filter
 FTIR Fourier-transform infrared spectroscopy
 HAP hazardous air pollutants(s)
 HCl hydrochloric acid
 HF hydrofluoric acid
 HI hazard index
 HQ hazard quotient
 IBR incorporation by reference

ICR Information Collection Request
 km kilometer
 MACT maximum achievable control technology
 MIR maximum individual risk
 NAAQS National Ambient Air Quality Standards
 NESHAP national emission standards for hazardous air pollutants
 NTTAA National Technology Transfer and Advancement Act
 OMB Office of Management and Budget
 OM&M operations, maintenance, and monitoring
 PB-HAP hazardous air pollutants known to be persistent and bio-accumulative in the environment
 PM particulate matter
 POM polycyclic organic matter
 PRA Paperwork Reduction Act
 PS Performance Specification
 PSH processed stone handling
 REL recommended exposure limit
 RFA Regulatory Flexibility Act
 RIN Regulatory Information Number
 RTR Risk and Technology Review
 SSM startup, shutdown, and malfunction
 the Court United States Court of Appeals for the District of Columbia Circuit
 TOSHI target organ-specific hazard index
 tpy tons per year
 UMRA Unfunded Mandates Reform Act
 VCS voluntary consensus standard

Background information. On September 16, 2019, the EPA proposed revisions to the Lime Manufacturing Plants NESHAP based on our RTR. In this action, we are finalizing decisions and revisions for the rule. We summarize some of the more significant comments we timely received regarding the proposed rule and provide our responses in this preamble. A summary of all other public comments on the proposal and the EPA's responses to those comments is available in *Summary of Public Comments and Responses for the Lime Manufacturing Plants Residual Risk and Technology Review*, Docket ID No. EPA-HQ-OAR-2017-0015. A "track changes" version of the regulatory language that incorporates the changes in this action is available in the docket.

Organization of this document. The information in this preamble is organized as follows:

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- G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
- H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks
- I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
- J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR part 51
- K. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- L. Congressional Review Act (CRA)

I. General Information

A. Does this action apply to me?

Regulated entities. Categories and entities potentially regulated by this action are shown in Table 1 of this preamble.

TABLE 1—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS FINAL ACTION

NESHAP and source category	NAICS ¹ code
Lime Manufacturing Plants	32741, 33111, 3314, 327125

¹ North American Industry Classification System.

Table 1 of this preamble is not intended to be exhaustive, but rather to provide a guide for readers regarding entities likely to be affected by the final action for the source category listed. To determine whether your facility is affected, you should examine the applicability criteria in the appropriate NESHAP. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this final action will also be available on the internet. Following signature by the EPA Administrator, the EPA will post a copy of this final action at: <https://www.epa.gov/lime-manufacturing-plants-national-emission-standards-hazardous-air>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version and key technical documents at this same website.

Additional information is available on the RTR website at <https://www.epa.gov/stationary-sources-air-pollution/risk-and-technology-review->

national-emissions-standards-hazardous. This information includes an overview of the RTR program and links to project websites for the RTR source categories.

C. Judicial Review and Administrative Reconsideration

Under Clean Air Act (CAA) section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit (the Court) by September 22, 2020. Under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

Section 307(d)(7)(B) of the CAA further provides that only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also provides a mechanism for the EPA to reconsider the rule if the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time

specified for judicial review) and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

II. Background

A. What is the statutory authority for this action?

Section 112 of the CAA establishes a two-stage regulatory process to address emissions of hazardous air pollutants (HAP) from stationary sources. In the first stage, we must identify categories of sources emitting one or more of the HAP listed in CAA section 112(b) and then promulgate technology-based NESHAP for those sources. "Major sources" are those that emit, or have the potential to emit, any single HAP at a rate of 10 tons per year (tpy) or more, or 25 tpy or more of any combination of

HAP. For major sources, these standards are commonly referred to as maximum achievable control technology (MACT) standards and must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). In developing MACT standards, CAA section 112(d)(2) directs the EPA to consider the application of measures, processes, methods, systems, or techniques, including, but not limited to, those that reduce the volume of or eliminate HAP emissions through process changes, substitution of materials, or other modifications; enclose systems or processes to eliminate emissions; collect, capture, or treat HAP when released from a process, stack, storage, or fugitive emissions point; are design, equipment, work practice, or operational standards; or any combination of the above.

For these MACT standards, the statute specifies certain minimum stringency requirements, which are referred to as MACT floor requirements, and which may not be based on cost considerations. See CAA section 112(d)(3). For new sources, the MACT floor cannot be less stringent than the emission control achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than floors for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). In developing MACT standards, we must also consider control options that are more stringent than the floor under CAA section 112(d)(2). We may establish standards more stringent than the floor, based on the consideration of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.

In the second stage of the regulatory process, the CAA requires the EPA to undertake two different analyses, which we refer to as the technology review and the residual risk review. Under the technology review, we must review the technology-based standards and revise them “as necessary (taking into account developments in practices, processes, and control technologies)” no less frequently than every 8 years, pursuant to CAA section 112(d)(6). Under the residual risk review, we must evaluate the risk to public health remaining after application of the technology-based

standards and revise the standards, if necessary, to provide an ample margin of safety to protect public health or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. The residual risk review is required within 8 years after promulgation of the technology-based standards, pursuant to CAA section 112(f).¹ In conducting the residual risk review, if the EPA determines that the current standards provide an ample margin of safety to protect public health, it is not necessary to revise the MACT standards pursuant to CAA section 112(f).¹ For more information on the statutory authority for this rule, see 84 FR 48708, September 16, 2019.

B. What is the Lime Manufacturing source category and how does the NESHAP regulate HAP emissions from the source category?

The EPA promulgated the Lime Manufacturing Plants NESHAP on January 5, 2004 (69 FR 394). The standards are codified at 40 CFR part 63, subpart AAAAA. The lime manufacturing industry consists of facilities that use a lime kiln to produce lime product from limestone by calcination. The source category covered by this MACT standard currently includes 35 facilities.

As promulgated in 2004, the NESHAP regulates HAP emissions from all new and existing lime manufacturing plants that are major sources, co-located with major sources, or are part of major sources. However, lime manufacturing plants located at pulp and paper mills or at beet sugar factories are not subject to the NESHAP. Other captive lime manufacturing plants, such as (but not limited to) those at steel mills and magnesia production facilities, are subject to the NESHAP. See 67 FR 78053 explaining the basis for these determinations. A lime manufacturing plant is defined as any plant which uses a lime kiln to produce lime product from limestone or other calcareous material by calcination. However, the NESHAP specifically excludes lime kilns that use only calcium carbonate waste sludge from water softening processes as the feedstock.

The NESHAP defines the affected source as follows: Each lime kiln and its associated cooler and each individual processed stone handling (PSH)

operations system. The PSH operations system includes all equipment associated with PSH operations beginning at the process stone storage bin(s) or open storage pile(s) and ending where the process stone is fed into the kiln. It includes man-made process stone storage bins (but not open process stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors. The materials processing operations associated with lime products, lime kiln dust handling, quarry or mining operations, limestone sizing operations, and fuels are not subject to the NESHAP. Finally, lime hydrators and cooler nuisance dust collectors are not included under the definition of affected source under the NESHAP.

The NESHAP established particulate matter (PM) emission limits for lime kilns, coolers, and PSH operations with stacks. The NESHAP also established opacity limits for PSH operations without stacks and for kilns equipped with electrostatic precipitators (ESP) and fabric filters (FF). For kilns equipped with wet scrubbers, the NESHAP established scrubbing liquid flow rate and exhaust gas stream pressure drop limits. PM serves as a surrogate for the non-volatile and semi-volatile metal HAP. The NESHAP also regulates opacity or visible emissions from most of the PSH operations, with opacity also serving as a surrogate for non-volatile and semivolatile HAP metals. Refer to section II.B of the proposal preamble (84 FR 48711, September 16, 2019) for additional information on the HAP emissions regulated by the NESHAP.

C. What changes did we propose for the Lime Manufacturing source category in our September 16, 2019, proposal?

On September 16, 2019, the EPA published a proposed rule in the **Federal Register** for the Lime Manufacturing Plants NESHAP, 40 CFR part 63, subpart AAAAA, that took into consideration the RTR analyses. In the proposed rule, we proposed:

- No revisions to the numerical emission limits based on the RTR;
- revisions to the SSM provisions of the NESHAP in order to ensure that they are consistent with the Court decision in *Sierra Club v. EPA*, 551 F. 3d 1019 (D.C. Cir. 2008), which vacated two provisions that exempted source owners and operators from the requirement to comply with otherwise applicable CAA section 112(d) emission standards during periods of SSM;

¹ The Court has affirmed this approach of implementing CAA section 112(f)(2)(A): *NRDC v. EPA*, 529 F.3d 1077, 1083 (D.C. Cir. 2008) (“If EPA determines that the existing technology-based standards provide an ‘ample margin of safety,’ then the Agency is free to readopt those standards during the residual risk rulemaking.”).

- a requirement for electronic submittal of notifications, semi-annual reports, and compliance reports (which includes performance test reports); and
- IBR of alternative test methods and references.

III. What is included in this final rule?

This action finalizes the EPA's determinations pursuant to the RTR provisions of CAA section 112 for the Lime Manufacturing source category. This action also finalizes other changes to the NESHAP, including revising the SSM provisions of the NESHAP; a requirement for electronic submittal of notifications, semi-annual reports, compliance reports, and performance test reports; adding an alternative test method to EPA Method 320; and IBR of alternative test methods and references to updated alternative test methods. This action also reflects several changes to the September 2019 proposal in consideration of comments received during the public comment period described in section IV of this preamble.

A. What are the final rule amendments based on the risk review for the Lime Manufacturing source category?

The EPA proposed no changes to 40 CFR part 63, subpart AAAAA NESHAP based on the risk review conducted pursuant to CAA section 112(f). In this action, we are finalizing our proposed determination that risks from the source category are acceptable, the standards provide an ample margin of safety to protect public health, and more stringent standards are not necessary to prevent an adverse environmental effect. The EPA received no new data or other information during the public comment period that causes us to change that proposed determination. Therefore, we are not making any revisions to the existing standards under CAA section 112(f), and we are readopting the existing standards.

B. What are the final rule amendments based on the technology review for the Lime Manufacturing source category?

We determined that there are no developments in practices, processes, and control technologies that necessitate revisions to the MACT standards for this source category. Therefore, we are not finalizing revisions to the MACT standards under CAA section 112(d)(6).

C. What are the final rule amendments addressing emissions during periods of SSM?

The EPA is finalizing, with some revisions, the proposed amendments to the Lime Manufacturing Plants NESHAP to remove and revise provisions related

to SSM. In its 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the Court vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and (h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemption violates the CAA's requirement that there must always be a CAA section 112 standard that applies. We are finalizing our proposal to eliminate the SSM exemption in this rule. As detailed in section IV.D of the proposal preamble (84 FR 48727, September 16, 2019), we proposed to require that the emission limitations apply at all times (see 40 CFR 63.7100(a)), consistent with the Court decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008).

We have also revised Table 8 to subpart AAAAA of part 63 (the General Provisions applicability table) in several respects, as is explained in more detail below in section IV.C. For example, we have eliminated the incorporation of the General Provisions' requirement that the source develops an SSM plan. We have also eliminated and revised certain recordkeeping and reporting that is related to the SSM exemption as described in detail in the proposal and summarized below in section IV.C. As discussed in the proposal preamble, these revisions are consistent with the requirement in 40 CFR 63.7100(a) that the standards apply at all times. Refer to section IV.C of this preamble for a detailed discussion of these amendments.

The EPA is finalizing standards for startup and shutdown that differ in some respects from the startup and shutdown standards that were proposed. Changes from the proposal to the standards for periods of startup and shutdown being finalized reflect the EPA's re-evaluation of appropriate startup and shutdown standards in light of public comments. The EPA's rationale for those changes is discussed in section IV.C. below.

The proposed definition of "Startup" has been revised by changing the wording from "lime product" to "on-specification lime product" and adding an alternate ending to startup. Commenters stated that the term "lime product" is not specific enough and that off-specification product is discharged almost simultaneously upon startup. In addition, the EPA is not finalizing the proposed work practices for periods of startup. For periods of startup, the EPA

has instead established opacity emission limits for kilns equipped with FFs or ESPs. The EPA is not establishing different standards for kilns equipped with wet scrubbers during periods of startup and such kilns must comply with the same standard that apply at all other times. Also, during shutdown, kilns equipped with FFs, ESPs, or wet scrubbers must comply with the same standards that apply during normal operation. (See Table 2 of 40 CFR part 63, subpart AAAAA—Startup and Shutdown Emission Limits).

Further, the EPA is not finalizing different standards for malfunctions and sources must meet applicable standards during periods of malfunction. As discussed in the September 16, 2018, proposal preamble, the EPA interprets CAA section 112 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 112 standards, although the EPA has the discretion to set standards for malfunctions where feasible. Refer to section IV.D of the proposal preamble for further discussion of the EPA's rationale for the decision not to set standards for malfunctions.

D. What other changes have been made to the NESHAP?

Consistent with the proposal, the EPA is finalizing the electronic reporting requirements, specifically that owners or operators of lime manufacturing plants submit electronic copies of required performance test reports, performance evaluation reports, and semiannual compliance reports through the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI).

We are finalizing an alternative test method to EPA Method 320 and incorporating several test methods by reference, as discussed further in section IV.E of this preamble. We are also finalizing additional changes that address technical and editorial corrections, as proposed and as described in section IV.F of this preamble.

E. What are the effective and compliance dates of the standards?

The revisions to the MACT standards being promulgated in this action are effective on July 24, 2020. The compliance date for the revised requirements for affected sources that commenced construction or reconstruction on or before September 16, 2019, is January 20, 2021, with the exception of the vacated SSM exemptions contained in 40 CFR 63.6(f)(1) and (h)(1). We are revising

Table 9 of 40 CFR part 63, subpart AAAAA to clarify that for all affected sources, these exemptions do not apply given the court vacatur in *Sierra Club v. EPA*, 551 F. 3d 1019 (D.C. Cir. 2008). The compliance date for the revised requirements for affected sources that commence construction or reconstruction after September 16, 2019, is July 24, 2020 or upon initial startup, whichever is later. We are finalizing changes, as proposed, that would impact ongoing compliance requirements for 40 CFR part 63, subpart AAAAA. As discussed elsewhere in this preamble, we are finalizing the requirement that performance test results, performance evaluation reports, and the semiannual reports using the new template be submitted electronically. We are also finalizing changes to the requirements for SSM. For example, we are removing the exemption from the requirements to meet the standard during SSM periods and removing the requirement to develop and implement an SSM plan, as proposed. Our experience with similar industries that have been required to convert reporting mechanisms, install necessary hardware, install necessary software, become familiar with the process of submitting performance test results electronically through the EPA's CEDRI, test these new electronic submission capabilities, reliably employ electronic reporting, and convert logistics of reporting processes to different time-reporting parameters,

shows that a time period of a minimum of 90 days, and more typically, 180 days, is generally necessary to successfully complete these changes. Our experience with similar industries further shows that this sort of regulated facility generally requires a time period of 180 days to read and understand the amended rule requirements; evaluate their operations to ensure that they can meet the required standards during periods of startup and shutdown as defined in the rule and make any necessary adjustments; adjust parameter monitoring and recording systems to accommodate revisions; and update their operations to reflect the revised requirements. The EPA recognizes the confusion that multiple different compliance dates for individual requirements would create and the additional burden such an assortment of dates would impose. From our assessment of the timeframe needed for compliance with the entirety of the revised requirements, the EPA considers a period of 180 days to be the most expeditious compliance period practicable, and, thus, is finalizing the requirement that existing affected sources be in compliance with all of this regulation's revised requirements within 180 days of the regulation's effective date.

IV. What is the rationale for our final decisions and amendments for the Lime Manufacturing source category?

For each issue, this section provides a description of what we proposed and

what we are finalizing for the issue, the EPA's rationale for the final decisions and amendments, and a summary of key comments and responses. For all comments not discussed in this preamble, comment summaries and the EPA's responses can be found in the comment summary and response document available in the docket.

A. Residual Risk Review for the Lime Manufacturing Source Category

1. What did we propose pursuant to CAA section 112(f) for the Lime Manufacturing source category?

Pursuant to CAA section 112(f), the EPA conducted a risk review and presented the results for the review, along with our proposed decisions regarding risk acceptability and ample margin of safety, in the September 16, 2019, proposed rule for the Lime Manufacturing source category (84 FR 48708). The results of the risk assessment are presented briefly in Table 1 of this preamble and in the risk report titled *Residual Risk Assessment for the Lime Manufacturing Plants Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, and sections III and IV of the proposal preamble (84 FR 48708, September 16, 2019) available in the docket for this action.

TABLE 1—INHALATION RISK ASSESSMENT SUMMARY FOR LIME MANUFACTURING¹ SOURCE CATEGORY

Number of facilities ²	Maximum individual cancer risk (in 1 million) ³ based on . . .		Population at increased risk of cancer ≥ 1-in-1 million based on . . .		Annual cancer incidence (cases per year) based on . . .		Maximum chronic noncancer TOSHI ⁴ based on . . .		Maximum screening acute noncancer HQ ⁵ based on actual emissions level
	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	
35	1	2	12	450	0.001	0.003	0.04	0.05	0.6 (REL)

¹ Based on actual and allowable emissions.
² Number of facilities evaluated in the risk assessment. Includes 35 operating facilities subject to 40 CFR part 63, subpart AAAAA.
³ Maximum individual excess lifetime cancer risk due to HAP emissions from the source category.
⁴ Maximum target organ-specific hazard index (TOSHI). The target organ with the highest TOSHI for the Lime Manufacturing source category is the respiratory system.
⁵ The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of hazard quotient (HQ) values. The acute HQ shown was based upon the lowest acute 1-hour dose-response value, the recommended exposure limit (REL) for elemental mercury. When an HQ exceeds 1, we also show the HQ using the next lowest available acute dose-response value.

The results of the chronic inhalation cancer risk assessment, based on actual emissions, show the estimated maximum individual cancer risk (MIR) posed by the 35 facilities is 1-in-1 million, with metals, aldehydes, and organic HAP emissions from the lime kiln and cooler exhaust as the major contributors to the risk. The total

estimated cancer incidence based on actual emission levels is 0.001 excess cancer cases per year, or one excess case every 1,000 years. About 12 people are estimated to have cancer risks greater than or equal to 1-in-1 million based on actual emissions from HAP emitted from the 35 facilities in this source category. The maximum chronic

noncancer hazard index (HI) for the source category is estimated to be less than 1 (0.04) based on actual emissions of hydrochloric acid (HCl), nickel compounds, and acrolein emitted from lime kiln and cooler exhaust. No one is estimated to have a TOSHI greater than 1 based on actual emissions.

The EPA also evaluated the cancer risk at the maximum emissions allowed by the MACT standard, or “MACT-allowable emissions.” Risk results from the inhalation risk assessment using the MACT-allowable emissions indicate that the cancer MIR is 2-in-1 million with metals, aldehydes, and organic HAP emissions from lime kiln and cooler exhaust driving the risks, and that the maximum chronic noncancer TOSHI value is 0.05 with HCl, nickel compounds, and acrolein emissions from lime kiln and cooler exhaust driving the TOSHI. The total cancer incidence estimated based on allowable emissions from this source category is 0.003 excess cancer cases per year or one excess case every 333 years. Based on MACT-allowable emission rates, approximately 450 people are estimated to have cancer risks above 1-in-1 million. No people are estimated to have a noncancer HI above 1 based on allowable emissions.

For the Lime Manufacturing source category, the maximum acute HQ is 0.6 based on the REL, driven by actual emissions of elemental mercury. By definition, the acute REL represents a health-protective level of exposure, with effects not anticipated below those levels, even for repeated exposures.

We also conducted a multipathway screening assessment for the source category, and the results of the screening assessment are presented in the risk report titled *Residual Risk Assessment for the Lime Manufacturing Plants Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, and section IV of the proposal preamble (84 FR 48708, September 16, 2019) available in the docket for this action. A screening value is not an estimate of the cancer risk or a noncancer HQ (or HI). Rather, a screening value represents a high-end estimate of what the risk or HQ may be. For this source category the highest screening values were from mercury emissions, with a Tier 2 screening value of 5 and a Tier 3 screening value of 2 for this noncarcinogen. We are confident that if a refined multipathway risk assessment was conducted, the HQ for mercury would be lower than 2. Further details on the Tier 3 screening assessment can be found in Appendix 11 of *Residual Risk Assessment for the Lime Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*. Dioxin and arsenic emissions resulted in a Tier 2 cancer screening value of 20, which means that we are confident that the multipathway cancer risk is lower than 20-in-1 million.

The EPA has determined that it is not necessary to go beyond the Tier 3 assessment for mercury (to a site-specific assessment) or beyond the Tier 2 cancer screening assessment. As explained above, the mercury screening value of 2 is a high-end estimate of what the risk or hazard may be and can be interpreted to mean that we are confident that the HQ would be lower than 2. Similarly, we are confident that the excess cancer risk is less than 20-in-1 million, and evaluation under Tier 3 or a site-specific assessment would further reduce the estimated risk. Further, risk results from four site-specific mercury assessments the EPA has conducted for four RTR source categories resulted in noncancer HQs that range from 50 times to 800 times lower than the respective Tier 2 mercury screening value for those facilities (refer to Docket ID No. EPA-HQ-OAR-2017-0015 for a copy of these reports).² Based on our review of these analyses, we expect if we were to perform a site-specific assessment for the Lime Manufacturing source category, the mercury HQ would be at least a one order of magnitude less than the Tier 2 non-cancer screening value for mercury. Thus, the EPA is confident that the mercury HQ would be less than 1, if further refined to incorporate enhanced site-specific analyses such as improved model boundary identification with improved soil/water run-off calculations and AERMOD deposition outputs used in the TRIM.FaTE model.

In evaluating the potential for multipathway effects from emissions of lead, the EPA compared modeled annual lead concentrations to the secondary National Ambient Air Quality Standards (NAAQS) level for lead (0.15 milligram per cubic meter (mg/m³), arithmetic mean concentration over a 3-month period). The highest annual average lead concentration, 0.0007 mg/m³, is far below the NAAQS level for lead, indicating a low potential for multipathway impacts.

The EPA also conducted an environmental risk screening assessment for the Lime Manufacturing

source category for the following pollutants: Arsenic, cadmium, dioxins and furans (D/F), HCl, hydrogen fluoride (HF), lead, mercury (methyl mercury and mercuric chloride), and polycyclic organic matter (POM). In the Tier 1 screening analysis for HAP known to be persistent and bio-accumulative in the environment (PB-HAP) (other than lead, which was evaluated differently), arsenic, cadmium, and POM emissions had no exceedances of any of the ecological benchmarks evaluated. D/F emissions had a Tier 1 exceedance at 31 facilities for a surface soil benchmark by a maximum screening value of 30. Divalent mercury emissions had Tier 1 exceedances for the following benchmarks: Sediment threshold level (one facility), surface soil threshold level—plant communities (25 facilities), and surface soil threshold level—invertebrate communities (32 facilities) by a maximum screening value of 20. Methyl mercury emissions had Tier 1 exceedances for the following benchmarks: Fish (avian/piscivores) NOAEL—Merganser (one facility), surface soil no-observed-adverse-effect-level (NOAEL) for mammalian insectivores—shrew (13 facilities), and surface soil NOAEL for avian ground insectivores—woodcock (33 facilities) by a maximum screening value of 40. A Tier 2 screening analysis was performed for D/F, divalent mercury, and methyl mercury emissions. In the Tier 2 screening analysis, there were no exceedances of any of the ecological benchmarks evaluated for any of the pollutants. For lead, we did not estimate any exceedances of the secondary lead NAAQS. For HCl and HF, the average modeled concentration around each facility (*i.e.*, the average concentration of all off-site data points in the modeling domain) did not exceed any ecological benchmark. In addition, each individual modeled concentration of HCl and HF (*i.e.*, each off-site data point in the modeling domain) was below the ecological benchmarks for all facilities. Based on the results of the environmental risk screening analysis, we do not expect an adverse environmental effect as a result of HAP emissions from this source category.

An assessment of risk from facility-wide actual emissions was performed to provide context for the source category risks. The maximum lifetime individual cancer risk posed by the 35 facilities, based on facility-wide emissions, is 1-in-1 million (estimated for three facilities), with arsenic, chromium (VI) compounds, and nickel emissions from fugitive PSH operations driving the risk.

² EPA Docket records: Appendix 11 of the *Residual Risk Assessment for the Taconite Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*; Appendix 11 of the *Residual Risk Assessment for the Integrated Iron and Steel Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*; Appendix 11 of the *Residual Risk Assessment for the Portland Cement Manufacturing Source Category in Support of the 2018 Risk and Technology Review Final Rule*; and Appendix 11 of the *Residual Risk Assessment for the Coal and Oil-Fired EGU Source Category in Support of the 2018 Risk and Technology Review Proposed Rule*.

The total estimated cancer incidence from facility-wide emissions is 0.004 excess cancer cases per year, or one case in every 250 years. Approximately 30 people are estimated to have cancer risk equal to 1-in-1 million from facility-wide emissions. The maximum facility-wide chronic noncancer TOSHI is estimated to be less than 1 (0.4), mainly driven by emissions of HCl from a facility-wide fugitive area source.

To examine the potential for any environmental justice issues that might be associated with the source category, the EPA performed a demographic analysis, which is an assessment of risk to individual demographic groups of the populations living within 5 kilometers (km) and within 50 km of the facilities. The results of the Lime Manufacturing source category demographic analysis indicated that emissions from the source category expose approximately 12 people to a cancer risk at or above 1-in-1 million and no people to a chronic noncancer TOSHI greater than 1. The percentages of the at-risk population indicated that three of the 10 demographic groups (White, African American and people below the poverty level) that are living within 50 km of facilities in the source category exceeded the corresponding national percentage for the same demographic groups. The methodology and the results of the demographic analysis are presented in a technical report, *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Lime Manufacturing Source Category Operations*, available in the docket for this action.

The EPA weighed all health risk factors in our risk acceptability determination, and we proposed that the residual risks from this source category are acceptable. We then considered whether the NESHAP provides an ample margin of safety to protect public health, and whether more stringent standards were necessary to prevent an adverse environmental effect, by taking into consideration costs, energy, safety, and other relevant factors. In determining whether the standards provide an ample margin of safety to protect public health, we examined the same risk factors that we investigated for our acceptability determination and also considered the costs, technological feasibility, and other relevant factors related to emissions control options that might reduce risk associated with emissions from the source category. We proposed that the 2004 Lime Manufacturing Plants NESHAP requirements provide an ample margin of safety to protect public health. Based on the results of

our environmental risk screening assessment, we also proposed that more stringent standards are not necessary to prevent an adverse environmental effect.

2. How did the risk review change for the Lime Manufacturing source category?

Since proposal, neither the risk assessment nor our determinations regarding risk acceptability, ample margin of safety, or adverse environmental effects have changed.

3. What key comments did we receive on the risk review, and what are our responses?

Additional comments and our specific responses can be found in the comment summary and response document titled *Summary of Public Comments and Responses for Lime Manufacturing Plants Residual Risk and Technology Review*, which is available in the docket for this action. The EPA received comments in support of and opposed to the proposed risk review and our determination that no revisions were warranted under CAA section 112(f)(2). Key comments and responses are discussed below.

Comment: One commenter stated that there are substantial health threats from the lime manufacturing industry. The commenter stated that it is unlawful, arbitrary and capricious for the EPA to do nothing to reduce any of these emissions or resulting health threats from lime manufacturing. The commenter stated that the EPA may not lawfully or rationally find health risks to be “acceptable” under CAA section 112(f)(2) when the record shows the opposite, and the EPA has ignored significant health impacts. The commenter stated that the EPA’s proposal is incomplete and based on analyses that underestimate and ignore the health risks from the toxic pollution that lime manufacturing facilities emit into communities.

Response: The EPA disagrees with the comment. Results of the EPA’s risk assessment for the Lime Manufacturing source category indicate that both the actual and allowable inhalation cancer risks to the individual most exposed are less than or equal to 2-in-1 million, well below the presumptive limit of acceptability of 100-in-1 million. The actual and allowable inhalation noncancer risks to the individual most exposed are below a HQ of 1. Based on the conservative nature of the multipathway screens, we find the Tier 2 screening values (D/F and arsenic) for cancer and Tier 3 noncancer screening values (cadmium and mercury)

acceptable for the Lime Manufacturing source category. This determination is based upon the upper-bound cancer screening values of 20 being significantly below an excess cancer risk of 100-in-1 million and on results from facility-specific assessments for mercury performed for other source categories. Based upon this experience, we conclude that if we were to conduct a site-specific risk assessment for the Lime Manufacturing source category, the risk would result in a HQ value of 1 or lower. For this reason and considering the conservative nature of the multipathway exposure screening scenario, no further analysis was performed. In our ample margin of safety analysis, we investigated available emissions control options that might reduce the risk from the source category. We considered this information along with all of the health risks and other health information considered in our determination of risk acceptability. As part of the proposed ample margin of safety analysis, we considered activated carbon injection (ACI) systems, which have not been used or demonstrated on lime kilns, for controlling D/F and mercury emissions. In both cases, considering the potential negligible reductions in emissions and the results of our risk analysis, we concluded that the use of ACI would have little effect on the source category risks. Due to the already low risk, along with the substantial costs associated with more stringent standards, we determined that additional emissions controls for this source category were not required to provide an ample margin of safety to protect public health. We have retained this determination in the final rule. We note that the commenter did not provide detail or supporting documentation for their comment.

Comment: A commenter urged the EPA to set stronger standards to bring further protection to communities from lime manufacturing facilities. The commenter requested that the EPA consider the people exposed to these facilities’ emissions and affected by its proposed decision not to strengthen the emission limits. The commenter urged the EPA to exercise its legal authority to end unacceptable risk for exposed communities and set the “ample margin of safety to protect public health” and prevent an adverse environmental effect, instead of attempting to avoid the science and the health threats shown in the record.

Response: The risk assessment demonstrated that health risks due to air emissions from lime manufacturing sources are acceptable and after considering available control options

and all available risk information, the EPA concluded that the current standards provide an ample margin of safety to protect public health. These conclusions support the EPA's decision to not revise the existing emission limits. However, we have amended the final rule to make corrections to certain provisions and have amended provisions to clarify their intent and these revisions will result in improved monitoring and compliance with and implementation of the rule. In addition, the elimination of the SSM exemption may result in lower HAP emissions.

Comment: A commenter stated that the EPA underestimated the health threats to children and from early-life exposure by ignoring increased risk in childhood and from prenatal exposure.

Response: The EPA disagrees with the comment that the risk assessment for this source category does not consider the groups that may be most at-risk (e.g., children). When the EPA derives exposure reference concentrations and unit risk estimates for metal HAP, it also considers the most sensitive populations identified in the available literature and, importantly, these are the values used in our risk assessments.

We acknowledge that population subgroups, including children, may have a potential for risk that is greater than the general population due to greater relative exposure and/or greater susceptibility to the toxicant. The assessments we undertake to estimate risk account for this potential vulnerability, for example; the EPA includes exposure from D/F through ingestion of breast-milk for infants less than 1 year of age. The EPA also estimates age-specific risks to account for the higher sensitivity of developing children to mutagens. With respect to inhalation exposure, the risk assessments we perform implicitly account for this greater potential for exposure by assuming lifetime exposure, in which populations are conservatively presumed to be exposed to airborne concentrations at their residence continuously, 24 hours per day for a full lifetime, including childhood. With regard to children's potentially greater susceptibility to noncancer toxicants, the assessments rely on the EPA's (or comparable) hazard identification and dose-response values that have been developed to be protective for all subgroups of the general population, including children.

For example, a review of the chronic reference value process concluded that the EPA's reference concentration (RfC) derivation processes adequately considered potential susceptibility of different subgroups with specific

consideration of children, such that the resultant RfC values pertain to the full human population, "including sensitive subgroups," a phrase which is inclusive of childhood.³ With respect to cancer, the EPA uses the age-dependent adjustment factor approach referred to by the commenter but limits the use of those factors only to carcinogenic pollutants that are known to act via mutagenic mode of action (MOA), in contrast to the California Office of Environmental Health Hazard Assessment approach, which uses them across the board for all carcinogens regardless of MOA. In lieu of chemical-specific data on which age or life-stage specific risk estimates or potencies can be determined, default age dependent adjustment factors can be applied when assessing cancer risk for early-life exposures to chemicals that cause cancer through a mutagenic MOA. With regard to other carcinogenic pollutants for which early-life susceptibility data are lacking, it is the EPA's long-standing science policy position that use of the linear low-dose extrapolation approach (without further adjustment) provides adequate public health conservatism in the absence of chemical-specific data indicating differential early-life susceptibility or when the mode of action is not mutagenicity. The basis for this methodology is provided in the 2005 Supplemental Guidance.⁴

The estimated risks must be considered in the context of the full set of assumptions used for this risk assessment. Our unit risk estimates for HAP are considered a plausible upper-bound estimate with an appropriate age dependent adjustment; actual potency is likely to be lower and could be as low as zero. Our chronic noncancer reference values have been derived considering the potential susceptibility of different subgroups, with specific consideration of children.

Comment: One commenter stated that the EPA underestimated health threats to communities exposed to multiple sources by neglecting to add factors to account for the increased risks caused by such exposure. The commenter stated that the EPA underestimated the cancer, chronic noncancer, and acute health risks by using modeling assumptions that ignore real-world exposures, underestimating risk from

chemicals such as benzene and lead due to the EPA's refusal to follow the best available science, and neglecting to aggregate cumulative risks.

Response: The EPA's chronic risk assessment modeling accounts for cumulative cancer risks from emitted carcinogens and for pollutants that have similar modes of action or (where this information is absent) that affect the same target organ, we aggregated the HQs. This process creates, for each target organ, a TOSHI, defined as the sum of HQs for individual HAP that affect the same organ or organ system.

The modeling conducted also includes the effects of multiple facilities that may be in close proximity when estimating concentration and risk impacts at each block centroid. When evaluating the risks associated with a particular source category, we combined the impacts of all facilities within the same source category and assessed chronic exposure and risk for all census blocks with at least one resident (i.e., locations where people may reasonably be assumed to reside rather than receptor points at the fence line of a facility). The MIR considers the combined impacts of all sources in the category that may be in close proximity. This approach is similar for those facilities within the source category that have an associated or cumulative impact on neighboring lakes as it relates to assessing multi-pathway impacts for each of the PB-HAP. Background risks or contributions to risk from sources outside the source category under review could be one of the relevant factors considered in the ample margin of safety determination, along with cost and economic factors, technological feasibility, and other factors. Background risks and contributions to risk from sources outside the facilities under review were not considered in the ample margin of safety determination for this source category, mainly because of the significant uncertainties associated with emissions estimates for such sources. Our approach here is consistent with the approach we took regarding this issue in the Hazardous Organic NESHAP (HON) RTR (71 FR 76603, December 21, 2006), which the Court upheld in the face of claims that the EPA had not adequately considered background (*NRDC v. EPA*, 529 F.3d 1077 (D.C. Cir. 2008)).

Comment: A commenter stated that the EPA has ignored all multipathway cancer and noncancer chronic health risks that result when persistent or bioaccumulative pollutants emitted by lime manufacturing facilities fall into the Great Lakes, bays, rivers, and other large waterbodies. The commenter

³ USEPA, 1994. Methods for derivation of inhalation reference concentrations and application of inhalation dosimetry. EPA/600/8-90/066F; https://www.epa.gov/sites/production/files/2014-11/documents/rfc_methodology.pdf.

⁴ USEPA, 2005b. Supplemental guidance for assessing early-life exposure to carcinogens. EPA/630/R-03003F. https://www3.epa.gov/ttn/atw/childrens_supplement_final.pdf.

stated that by excluding all impacts from deposition in these waterbodies, the EPA ignored both health threats and ecological threats, and violated its legal obligation to assess health and environmental risk and reduce these hazards as the statute directs.

Response: Very large lakes and bays (*i.e.*, those larger than 100,000 acres) are not considered because their large volumes significantly dilute air deposition from point sources. Such large lakes, including the Great Lakes, the Great Salt Lake, Lake Okeechobee, Lake Pontchartrain, Lake Champlain, Green Bay, and Galveston Bay also dilute contaminants in the vast biomass of fish in the large aquatic food webs. Contaminants derived from emissions to air by a point source would be distributed among populations of millions of fish resulting in negligible increases in fish tissue concentrations attributable to the point source. Also, very large lakes are rare (only 35 such lakes exist in the conterminous United States). Moreover, for facilities near large lakes, there usually are other, smaller lakes that the EPA does consider for which contaminant dilution would be lower, and, therefore, for which human health and ecological risks would be higher. Thus, the EPA does model exposure via fish consumption for populations that are near large lakes in a manner that generally will be more health protective than modeling the very large lake. The EPA also does not model lakes adjacent or connected to a river or saltwater body (estuaries and rivers) or bays; these waterbodies are likely to have high outflow with limited chemical retention. Less retention time for these types of waterbodies result in significantly lower media concentrations when compared to lakes.

4. What is the rationale for our final approach and final decisions for the risk review?

The EPA evaluated all of the comments on the EPA's risk review and determined that no changes to the review are needed. In the proposed rule, we proposed that the risks from the Lime Manufacturing source category are acceptable, the current standards provide an ample margin of safety to protect public health, and more stringent standards are not necessary to prevent an adverse environmental effect. For the reasons explained in the proposal and in our responses to public comments and pursuant to CAA section 112(f)(2), we are finalizing our risk review as proposed.

B. Technology Review for the Lime Manufacturing Source Category

1. What did we propose pursuant to CAA section 112(d)(6) for the Lime Manufacturing source category?

Pursuant to CAA section 112(d)(6), the EPA conducted a technology review, which focused on identifying and evaluating developments in practices, processes, and control technologies that would necessitate revision to the existing emission standards for the Lime Manufacturing source category. No cost-effective developments in practices, processes, or control technologies were identified in our technology review to necessitate revisions to the PM or opacity standards, which are both used as a surrogate for HAP metals, standards. More information concerning our technology review is in the memorandum titled *Technology Review for the Lime Manufacturing Source Category*, which is in the docket for this action, and in the preamble to the proposed rule (84 FR 48726).

2. How did the technology review change for the Lime Manufacturing source category?

The technology review has not changed since proposal.

3. What key comments did we receive on the technology review, and what are our responses?

The EPA received comments in support of the proposed determination from the technology review that no revisions were necessary under CAA section 112(d)(6). We also received comments asserting that the technology review was inadequate for a variety of reasons, primarily because of failure to consider control technologies for unregulated HAP emissions.

Comment: A commenter stated the EPA does not discuss or perform any review under CAA section 112(d)(6) for all emitted HAP. The commenter noted that the EPA failed to complete a technology review for HCl, mercury, D/F, and organic HAP. The commenter stated that the EPA cannot determine whether developments in pollution control make it "necessary" to revise the emission standards without determining what developments have occurred for these HAP. The commenter stated that the fact that these HAP are emitted from the source category requires the EPA to evaluate them pursuant the technology review.

Response: Section 112(d)(6) of the CAA requires the EPA to "review and revise, as necessary (taking into account developments in practices, processes, and control technologies), emission

standards promulgated under this section" The EPA reads CAA section 112(d)(6) as a limited provision requiring the Agency to review the original emission standards already promulgated and to revise those standards as necessary, taking into account developments in practices, processes, and control technologies. Under this reading, section 112(d)(6) of the CAA does not impose upon the Agency any obligation to promulgate new emission standards or expand the scope of an existing regulation.⁵ Accordingly, we disagree with the commenter that CAA section 112(d)(6) requires a technology review for HCl, mercury, D/F, and organic HAP. The EPA notes that we have completed our statutory requirements under CAA section 112(d)(6) in reference to the promulgated standards.

Any new MACT standards would not be established pursuant to CAA section 112(d)(6), but instead would be established under CAA sections 112(d)(2) and (3) or CAA section 112(h). Establishing emissions standards under CAA sections 112(d)(2) and (3) or 112(h) involves a different analytical approach than reviewing emissions standards under CAA section 112(d)(6).

Comment: One commenter stated that there are multiple HAP emitted from the Lime Manufacturing source category that have no numeric emission standards, including HCl, organic HAP (*e.g.*, formaldehyde, styrene), mercury, and D/F. The commenter stated that CAA section 112(d) requires limits for each HAP that a source category emits and that CAA section 112(d)(6) requires the EPA to review and revise its existing emission standards "as necessary." The commenter stated that when the EPA reviewed the Lime Manufacturing source category and found that they lack emission limits for emitted HAP, it is necessary under CAA section 112(d)(6) to revise the standard (*i.e.*, set limits for these HAP). The commenter noted that the EPA's failure to set emission limits for these HAP causes public suffering from uncontrolled exposure to these HAP.

The commenter cited prior court rulings that found that the Agency has a "clear statutory obligation to set emission standards for each listed HAP." [*National Lime Ass'n*, 233 F.3d

⁵ On April 21, 2020, as the Agency was preparing the final rule for signature, a decision was issued in *LEAN v. EPA*, 955 F.3d 1088 (D.C. Cir. 2020) in which the Court held that the EPA has an obligation to set standards for unregulated pollutants as part of technology reviews under CAA section 112(d)(6). At the time of signature, the mandate in that case had not been issued and the EPA is continuing to evaluate the decision.

625, 634 (D.C. Cir. 2000) and *Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C. Cir. 2007)] The commenter cited prior rulemakings where the EPA has acknowledged this issue and has subsequently set emission limits for pollutants without standards.

The commenter noted that the Lime Manufacturing Plants RTR clearly demonstrates that these pollutants are emitted from the source category, but that the EPA has not acknowledged its obligation to set limits on these uncontrolled HAP and has not explained why it is not “necessary” to revise the existing standards to set limits for these HAP. The commenter stated that the EPA has emissions data from at least some sources, and it must complete its obligation to set a limit for these HAP.

The commenter stated that it is unlawful and arbitrary for the EPA not to set limits for these HAP in this rulemaking. The commenter stated that if the EPA does not do this, it will fail to complete the review and revision rulemaking as CAA section 112(d)(6) requires, will violate the Court’s order in *California Communities Against Toxics v. Pruitt*, 241 F. Supp. 3d 199 (D.C. 2017), and will also issue a final rule that is unlawful and inadequate.

Response: CAA section 112(d)(6) requires the EPA to review and revise, as necessary (taking into account developments in practices, processes, and control technologies), emission standards promulgated under this section. We do not read section CAA section 112(d)(6) as supporting the commenter’s assertion that the EPA must establish new standards for unregulated emission points or pollutants as part of a technology review of the existing standards (but see footnote 5). The EPA reads CAA section 112(d)(6) as a limited provision requiring the Agency to, at least every 8 years, review the emission standards already promulgated in the NESHAP and to revise those standards as necessary taking into account developments in practices, processes, and control technologies. The EPA does not read CAA section 112(d)(6) as directing the Agency, as part of or in conjunction with the mandatory 8-year technology review, to develop new emission standards to address HAP or emission points for which standards were not previously promulgated.

When the EPA established standards for previously unregulated emissions, we did not establish those initial standards pursuant to CAA section 112(d)(6) but instead established the standards under one of the provisions that govern initial standard setting—

CAA sections 112(d)(2) and (3) or, if the prerequisites are met, CAA sections 112(d)(4) or 112(h). Establishing emissions standards under these provisions of the CAA involves a different analytical approach from reviewing emissions standards under CAA section 112(d)(6).

Additional comments and our specific responses can be found in the comment summary and response document titled *Summary of Public Comments and Responses for Lime Manufacturing Plants Residual Risk and Technology Review*, which is available in the docket for this action.

4. What is the rationale for our final approach for the technology review?

The EPA evaluated all of the comments on the EPA’s technology review and determined that no changes to the review are needed. For the reasons explained in the proposed rule, we determined that no cost-effective developments in practices, processes, or control technologies were identified in our technology review to necessitate revisions to the standards. More information concerning our technology review can be found in the memorandum titled *Technology Review for the Lime Manufacturing Source Category*, which is in the docket for this action. Therefore, pursuant to CAA section 112(d)(6), we are finalizing our technology review as proposed.

C. SSM for the Lime Manufacturing Source Category

1. What did we propose for the Lime Manufacturing source category?

The EPA proposed amendments to the Lime Manufacturing Plants NESHAP to remove and revise provisions related to SSM that are not consistent with the requirement that the standards apply at all times or that are unnecessary or redundant in the absence of an SSM exemption. More information concerning the elimination of SSM provisions is in the preamble to the proposed rule (84 FR 48708, September 16, 2019).

2. How did the SSM provisions change from proposal for the Lime Manufacturing source category?

The EPA is finalizing the SSM provisions with the following changes from the proposal:

- Replacing the proposed startup work practice standards for kilns and coolers equipped with a FF or ESP with opacity emission standards.
- Replacing the proposed startup work practice standards for kilns and coolers equipped with a wet scrubber

with a requirement to meet standards applicable during normal operation.

- Revising the definition of “Startup” to add “on-specification” prior to “lime product” and to add an alternate ending to startup.

- Adding testing requirements for determining when lime product is deemed on-specification.

With respect to the revisions to the proposed startup standards, the EPA is finalizing standards for startup that differ from what we proposed based on a re-evaluation of the need for work practice standards. The EPA proposed work practice standards for kilns equipped with wet scrubbers, FFs, and ESPs. However, the final rule requires kilns and coolers that are equipped with ESPs or FFs to meet numerical opacity limits and kilns and coolers equipped with wet scrubbers to meet the scrubbing liquid flow rate requirements that apply during normal operations. The EPA’s determination in the proposed rule (84 FR 48727) that work practice standards were appropriate was based on a finding that the application of measurement methodology for PM emissions was impracticable because the test methods required for compliance are to be conducted under steady-state conditions which are difficult to achieve during startup. In addition to the reference test method (EPA Method 5), we considered PM emission monitors, which also requires steady-state conditions. However, based on comments claiming that the EPA has not shown a lack of practicable measurement methodology for startup periods, we reconsidered the issue. The 2004 final NESHAP rule established opacity as an emission standard limiting PM emissions. We are not aware of factors that would prevent the monitoring of opacity during startup periods.

For kilns equipped with FFs or ESPs, 40 CFR part 63, subpart AAAAA allows compliance with opacity standards to ensure PM is controlled between stack tests.⁶ In this rule, for periods of startup, the EPA is requiring kilns equipped with FFs or ESPs to meet the 15-percent opacity limit that applies during normal operation averaged over the period of startup. The EPA has determined that a longer averaging time is appropriate for startup periods since we are aware that emissions during startup can be variable in light of the sequence of events that

⁶ The EPA notes that under 40 CFR part 63, subpart AAAAA stack testing is not permitted during startup and shutdown. As proposed, this rule replaces the reference in Table 9 to 40 CFR 63.7(e)(1) (which prohibits performance testing during periods of startup and shutdown) with identical language at 40 CFR 63.7112(c).

occur during startup of a kiln. Thus, the longer averaging time being finalized is to account for this variability that could result in spikes in opacity during the startup period. During startup, even the best performing units are constantly making adjustments in terms of fuel flow and combustion air flow rate. Every increase in fuel rate or feed rate requires the source to adjust air flow to the proper level. Each adjustment can lead to a spike in opacity. Accounting for such variability in setting emission standards is consistent with the CAA case law. See, *United States Sugar Corp. v. EPA*, 830 F.3d 579, 632 (D.C. Cir. 2016) (“We have held, see *Mossville Env’tl. Action Now v. EPA*, 370 F.3d 1232, 1242 (D.C. Cir. 2004), and recently reaffirmed, see *NACWA*, 734 F.3d at 1133–34, that the EPA can consider this variability when setting MACT floors.”). As proposed, the EPA is not establishing different shutdown standards for kilns equipped with FFs or wet scrubbers and, thus, such kilns must meet otherwise applicable limits during shutdown.

3. What key comments did we receive on the SSM provisions, and what are our responses?

The EPA received 16 comments related to our proposed revisions to the SSM provisions. Commenters generally supported the proposed removal of the SSM exemptions but disagreed with either the proposing of work practice standards for the startup period or certain aspects of the proposed work practice standards. We evaluated the comments and determined that changes to the proposed SSM provisions are warranted. A summary of these comments and our responses are located in the memorandum titled *Summary of Public Comments and Responses for Lime Manufacturing Plants Residual Risk and Technology Review*, which is in the docket for this action.

Comment: Commenters stated that the EPA’s work practice standard requiring all kilns to start and operate on “clean fuels” until the kiln reaches a temperature of 1200 degrees Fahrenheit is unnecessary, not based on information in the administrative record, inconsistent with processes required to safely and properly commence kiln operation, and, for some kilns, is impractical based on the realities of operating kilns in the lime industry.

The commenters stated that for operational and safety reasons, electrostatic precipitators (ESP) cannot be started immediately to effectively remove PM upon startup of the kiln. Therefore, the clean fuel work practice for startup makes sense for ESP-

equipped kilns. The commenters confirmed that the limited number of ESP-equipped kilns in the lime industry can be started on natural gas or other listed clean fuels.

The commenters stated that for baghouse and scrubber-equipped kilns, clean fuel startup is not needed because the air pollution control device is operating at the beginning of startup and begins removing PM immediately. The commenters stated that since stone feed rates are low during startup, total PM emissions exiting the kiln will be less than during normal operation, and the operating air pollution control devices will ensure that PM will be removed. The commenters also noted that clean fuels are not available at all lime manufacturing locations (for example, natural gas is not readily available in areas far from gas pipelines).

The commenters stated that the proposed requirement to meet the opacity and scrubber liquid flow rate operating limits is sufficient to show that emissions are not excessive for baghouse and scrubber-equipped kilns. The commenters recommended that the EPA delete the requirement for baghouse and scrubber-equipped kilns to start on clean fuels but add a requirement that the air pollution control devices for such kilns be in operation at the beginning of startup.

Response: The EPA agrees that the requirement to start and operate on “clean fuels” is unnecessary for kilns equipped with FFs or wet scrubbers because the control devices can be operational at the time of startup. Therefore, we are not finalizing the work practice requirement to startup on clean fuel for kilns equipped for FFs or wet scrubbers. As explained above in section C.2, we are instead requiring kilns equipped with FFs, ESPs or wet scrubbers to comply with standards as described in section C.2 above and in Table 2 during startup and shutdown.

Comment: The proposed definition of the end of startup was “Startup ends 60 minutes after the lime kiln generates lime product.” Commenters stated that the term “lime product” is not specific enough to provide certainty to regulated sources. The commenters highlighted that a kiln will start to discharge off-spec product almost simultaneously with the lighting of the primary fuel. The commenters stated that it can take up to 12 hours to produce quality grade lime following first discharge from a rotary kiln, and even longer for a vertical kiln.

The commenters recommended that the end of startup should be related to levels of stone feed, because the applicable PM emissions limits are

based on tons of stone feed. The commenters recommended that the definition of the end of startup should be revised to read “Startup ends 60 minutes after stone feed reaches planned production quantities.”

Response: The EPA appreciates the commenters feedback regarding the definition of the end of startup. Commenters provided further information (Docket ID Item No. EPA–HQ–OAR–2017–0015–0015, *SSM Letter from Industry (1/31/2019)*) regarding what constitutes on-specification lime product and the time when on-specification lime product is produced. Commenters note that on-specification lime is produced when steady-state conditions are achieved. The EPA determined that the definition of the end of startup is the time when steady-state conditions are achieved such that PM testing could be conducted with the reference test method. We have determined that these steady-state conditions are achieved either when first producing on-specification lime product or 12 hours following first discharge from the kiln, whichever is earlier.

We are finalizing the definition of the end of startup to provide more clarity, as follows: “*Startup ends when the lime kiln generates on-specification lime product or 12 hours following first discharge from the lime kiln, whichever is earlier.*” We are also finalizing a new definition for on-specification lime product, as follows: “*On-specification lime product means lime product that has been sufficiently calcined to meet end use requirements.*”

Finally, we are finalizing a requirement for facilities to test hourly during startup to determine when lime product meets the definition of on-specification, to maintain records of the time the kiln first began producing on-specification lime product, and the time of first discharge from the lime kiln.

Comment: Commenters stated that the best way to address malfunction events would be for plants to develop site-specific protocols for malfunctions that would be embodied in a rule required plan, and that compliance with those protocols would constitute compliance with an applicable work practice standard. The commenters suggested retaining the requirement for a SSM plan that would contain these protocols, or requiring them in the plant’s operations, maintenance, and monitoring (OM&M) plan.

The commenters stated that this would allow work practices for malfunctions to be tailored to the specific equipment and operating conditions present at each plant, and

the presence of the protocols in a required plan would allow for the EPA review and enforcement. The commenters stated that the EPA's consideration of work practice standards for specified malfunctions (84 FR 48728) would be better than not setting separate standards at all, but that this approach would omit some malfunctions, and will not have the same degree of "fit" as tailored OM&M protocols would have.

The commenters stated that adopting work practice standards for specified malfunctions (as opposed to tailored OM&M protocols) could also cause confusion as to what malfunctions are covered by the regulation. The commenters summarized the definition of malfunction in 40 CFR 63.2. The commenters noted that not all operational malfunctions of kilns and their associated air pollution control and monitoring equipment constitute "malfunctions" under the definition in section 63.2, because some problems do not have the potential to cause emissions limitations to be exceeded.

The commenters stated that local engineering expertise may be required to determine whether particular operational malfunctions are "malfunctions" under the statute and rule and that this is a reason why tailored procedures in OM&M plans would be preferable to work practice standards for specified malfunctions.

Response: The EPA does not agree with the commenter that malfunctions should be addressed through source-specific enforceable "plans" that would contain these protocols for malfunctions. Establishing source-specific protocols for malfunctions that met MACT stringency requirements would be difficult, if not impossible, given the myriad different types of malfunctions that can occur. *See, U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 608 (2016) ("Any possible standard is likely to be hopelessly generic to govern such a wide array of circumstances.")

The EPA is also not finalizing specific work practice standards for specific malfunction events, although we may do so if available information supports separate MACT-compliant standards in the future. In this case, we received comment and information on potential work practice standards during periods of malfunction, however we do not have information to support that the suggested standards met the MACT stringency requirements. The EPA also agrees that finalizing specific work practice standards for malfunctions has the potential to omit certain malfunction events and cause confusion regarding what malfunctions are

covered by the regulation, as it would be difficult to capture all malfunction events.

Comment: A commenter stated support for the EPA's proposed removal of the existing exemption of emissions during SSM periods. The commenter stated that the CAA requires that standards are continuous and applicable at all times and referenced various court rulings upholding this determination.

The commenter stated that the EPA may not finalize the new SSM exemptions it has proposed. The commenter stated that the EPA has not cited and can cite no statutory language granting it authority or "discretion" to set such standards, because it has none. The commenter stated that the EPA has only the discretion provided by the Act and delegated by Congress. [*Clean Air Council v. Pruitt*, 862 F.3d 1, 9 (DC Cir. 2017)] The commenter stated that relevant statutory language denies, rather than gives, the EPA authority to set malfunction-based standards or exemptions. See 42 U.S.C. 7412(d), (h), and 7602(k).

Response: The EPA disagrees that it has proposed new SSM exemptions or that the EPA does not have authority to establish different standards for periods of startup, shutdown or malfunction. In fact, the EPA proposed to (1) eliminate the SSM exemption, (2) require compliance with the existing standard for periods of malfunction and (3) require compliance with standards during periods of startup and shutdown. The commenter does not explain and cannot support the general claim that the statutory language denies the EPA authority to set different standards for startup or shutdown. The 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (DC Cir. 2008) ("2008 Sierra Club decision"), held that emissions standards or limitations must be continuous in nature and that "some" section 112 standards apply continuously. The DC Circuit reiterated this principle in *Sierra Club v. EPA*, 884 F.3d 1185, 1203 (DC Cir. 2018) ("2018 Sierra Club decision") explaining that the 2014 Sierra Club decision "held that, whenever HAP sources are in operation, including during startup and shutdown, the EPA must continuously subject them to either numeric limits or Section 112(h)-compliant work practice standards." Consistent with the 2008 Sierra Club decision, and taking into account startup and shutdown periods, the EPA proposed work practice standards for these periods based on a determination under CAA section 112(h) that for kilns and coolers it was not feasible to prescribe or enforce a numeric standard during these periods

of startup and shutdown. See 84 FR 48727. As discussed in the preamble to the final rule, based on public comments, we have made changes from the proposal to the standards for periods of startup and shutdown.

Comment: One commenter stated that the EPA does not have statutory authority to create work practice requirements for startups. The commenter summarized the requirements and applicable definitions of CAA sections 7412(h)(1) and (h)(2) and stated that the EPA has not satisfied either of the statute's definitions of "not feasible to prescribe or enforce and emission standard." The commenter stated that promulgating work practice requirements instead of numeric emission limitations for periods of startup would violate the statute. The commenter stated that CAA section 112(h)(2)(B) covers situations where "the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations." The commenter stated that startup and shutdown are "events," not a "particular class of source." The commenter stated that section 112(h)(2)(B) cannot be used as justification for work practice standards in lieu of numeric emission limits.

Response: As discussed above, based on public comments, we have made changes from the proposal to the standards for periods of startup and shutdown. The EPA's final rule does not establish work practice standards for period of startup and shutdown, so the comment is no longer relevant. However, the EPA notes that it does not agree with the commenter that section 112(h)(2)(B) can be invoked to justify a work practice standard only for categories or subcategories of sources under section 112(h)(2)(B), not for periods of operation. Section 112(h) provides that the EPA may "promulgate a design, equipment, work practice, or operational standard, or combination thereof" in lieu of a numeric emission standard if the Administrator determines that it is not feasible, in his/her judgment, to prescribe or enforce a numeric standard. More specifically, section 112(h)(2) states it is infeasible to prescribe or enforce an emission standard if the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations. Nothing in this section limits the Agency's discretion to establish work practice standards to particular sources, subcategories of sources, or source categories, or to certain periods of operations if, in the

Administrator's judgment, it is not feasible to prescribe or enforce a numeric emission standard during those periods. The reference to "a particular class of sources" in section 112(h)(2) does not limit the EPA's authority to determine, for a category or subcategory of sources, that it is infeasible to prescribe or enforce an emission standard for those sources during certain identifiable time periods, such as startup and shutdown.

Comment: A commenter stated that the EPA has proposed to excuse sources from using their ESPs during startup. The commenter stated that the EPA argues that industry stakeholders have claimed it may be unsafe to run ESPs during these times. The commenter stated that CAA section 112(h)(2)(B) does not authorize the EPA to set work practice requirements based on the Agency's views about the safety implications of running a particular control device.

The commenter stated that nothing in the CAA or existing rule requires lime kilns to control their PM emissions with ESPs. The commenter stated that if lime kiln owners and operators believe it is unsafe to run ESPs during startup and shutdown, the appropriate solution is for them to deploy other control devices (e.g., FFs), not to excuse them from meeting numeric emission limits during these events.

Response: As discussed above, based on public comments, we have made changes from the proposal to the standards for periods of startup and shutdown. The EPA's final rule does not establish work practice standards for period of startup and shutdown so the comment is no longer relevant.

4. What is the rationale for our final approach for the SSM provisions?

We evaluated all comments on the EPA's proposed amendments to the SSM provisions. For the reasons explained in the proposed rule, we determined that it is appropriate to remove and revise provisions related to SSM that are not consistent with the requirement that the standards apply at all times or that are unnecessary or redundant in the absence of an SSM exemption. Therefore, we are finalizing our approach for the SSM provisions as proposed with changes as detailed in section IV.C.2 of this preamble. More information concerning the amendments we are finalizing for SSM is discussed above and in the preamble to the proposed rule (84 FR 48727–48730, September 16, 2019).

D. Electronic Reporting Requirements for the Lime Manufacturing Source Category

1. What did we propose for the Lime Manufacturing source category?

The EPA proposed that owners or operators of lime manufacturing plants submit electronic copies of required performance test reports, performance evaluation reports, and semiannual compliance reports through the EPA's CDX using the CEDRI. More information concerning our proposal on electronic reporting requirements can be found in the proposed rule (84 FR 48708).

2. How did the electronic reporting provisions change for the Lime Manufacturing source category?

Since proposal, the electronic reporting provisions have not changed.

3. What key comments did we receive on the electronic reporting provisions, and what are our responses?

The EPA received comments related to the proposed electronic reporting provisions. The commenters generally supported the proposed provisions but disagreed with certain aspects of the provisions.

Comment: Commenters provided feedback on the electronic semiannual compliance report (spreadsheet template), per the EPA's request (84 FR 48730). The commenters noted the following:

- In tab "CMS Deviation Summary," column D (Total Source Operating Time (hours)), and column F (Total Duration of CMS Downtime as a percentage of Total Emissions Unit Operating Time) are both protected so it is not possible for an operator to input this data. This should be corrected.
- The example source operating time is shown as 6,240 hours. For semi-annual reporting, the maximum possible hours are 4,380.

The commenters stated that the EPA should compare the final template reporting form to the final rule to ensure each reporting element is required in the rule and that the template reporting form instructions are accurate and detailed enough to ensure consistent reporting across the industry.

Response: The EPA will check the final reporting template to be sure each reporting requirement marked as a required element is required by the final rule and will also provide adequate instructions for filling out the reporting template. The EPA will also check to be sure columns D (operating time) and F are unprotected in order that manual inputs can be entered by the user. The example operating time for semi-annual

reporting will be updated to 4,380 hours.

Comment: One commenter stated that the EPA may not create an unlawful exemption or extension for compliance reporting as it proposes to do for web outages or so-called "*force majeure* events," as this violates the requirement for standards to be continuous and would allow unreported exceedances to go unchecked, indefinitely.

Response: The commenter asserts that the brief case-by-case extension of report submittal deadlines is an unlawful exemption from compliance with the emissions standards. This is not the case. The EPA notes that there is no exemption to reporting, much less an exemption from compliance with the emission standards, only a method for requesting an extension of the reporting deadline. Reporters are required to justify their request and identify a reporting date. While no new fixed duration deadline is set, the regulation does require that the report be submitted electronically as soon as possible after the CEDRI outage is resolved or after the *force majeure* event occurs. The Administrator may even request that the report be sent in hardcopy until electronic reporting can be resumed.

The Administrator has full discretion to accept or reject the claim of a CEDRI system outage or *force majeure*. As such, an extension is not automatic and is agreed to on an individual basis by the Administrator. If the Administrator determines that a facility has not acted in good faith to reasonably report in a timely manner, the Administrator can reject the claim and find that the failure to report timely is a deviation from the regulation.

The EPA also disagrees that the ability to request a reporting extension violates the requirement for emissions standards to be continuous. While reporting is an important mechanism for the EPA and air agencies to assess whether owners or operators are in compliance with emissions standards, reporting obligations are separate from (*i.e.*, in addition to) requirements that an owner or operator be in compliance with an emissions standard. The EPA has discretion to establish reporting schedules, and also discretion to allow a mechanism for extension of those schedules on a case-by-case basis.

Additional comments and our specific responses can be found in the comment summary and response document titled *Summary of Public Comments and Responses for Lime Manufacturing Plants Residual Risk and Technology Review*, which is available in the docket for this action.

4. What is the rational for our final approach for the electronic reporting provisions?

The EPA evaluated all of the comments on the EPA's proposed amendments to the electronic reporting provisions. For the reasons explained in the proposed rule (84 FR 48708), we have determined the electronic submittal of the reports addressed in this final rulemaking will:

- Increase the usefulness of the data contained in those reports;
- be consistent with current trends in data availability and transparency;
- further assist in the protection of public health and the environment;
- improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements;
- facilitate the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance; and
- ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA.

Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public. Moreover, electronic reporting is consistent with the EPA's plan ⁷ to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy ⁸ developed in response to the White House's Digital Government Strategy.⁹ For more information on the benefits of electronic reporting, see the memorandum titled *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in Docket ID No. EPA-HQ-OAR-2017-0015.

E. IBR

In accordance with the requirements of 1 CFR 51.5, the EPA will incorporate by reference the following documents

described in the amendments to 40 CFR 63.14:

- ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981, IBR approved for table 5 to subpart AAAAAA. This method is approved as an alternative to EPA Method 3B of appendix A to part 60.

- ASTM D6348–03 (Reapproved 2010), Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, including Annexes A1 through A8, Approved October 1, 2010, IBR approved for 40 CFR 63.7142(a) and 63.7142(b). This method is approved as an alternative to EPA Method 320 of appendix A to part 63.

- ASTM D6348–12e1, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for 40 CFR 63.7142(a) and 40 CFR 63.7142(b). This method is approved as an alternative to EPA Method 320 of appendix A to part 63.

- ASTM D6735–01 (Reapproved 2009), Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method, IBR approved for 40 CFR 63.7142(a). This method is approved as an alternative to EPA Method 321 of appendix A to part 63.

- ASTM D6420–99 (Reapproved 2010), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, Approved October 1, 2010, IBR approved for 40 CFR 63.7142(b). This method is approved as an alternative to EPA Method 18 of appendix A to part 60.

- EPA-454/R-98-015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997, IBR approved for 40 CFR 63.7113(d). This method was added in accordance with final revisions to the bag leak detection requirements under 40 CFR 63.7113(d).

The ANSI/ASME document is available from the American Society of Mechanical Engineers (ASME) at <http://www.asme.org>; by mail at Two Park Avenue, New York, NY 10016-5990; or by telephone at (800) 843-2763. The ASTM documents are available from the American Society for Testing and Materials (ASTM) at <https://www.astm.org>; by mail at 100 Barr Harbor Drive, P.O. Box C700, West

Conshohocken, PA 19428-2959; or by telephone at (610) 832-9500. The EPA has made, and will continue to make, the EPA document generally available electronically through <https://www.regulations.gov/> and at the EPA Docket Center (see the **ADDRESSES** section of this preamble for more information).

F. Technical and Editorial Changes for the Lime Manufacturing Source Category

1. What did we propose for the Lime Manufacturing source category?

The EPA proposed the following technical and editorial changes:

- Revising the monitoring requirements in 40 CFR 63.7113 to the provision that triboelectric bag leak detection system must be installed, calibrated, operated, and maintained according to EPA-454/R-98-015, *Fabric Filter Bag Leak Detection Guidance*;
- revising 40 CFR 63.7142 to add an alternative test method to EPA Method 320;
- revising 40 CFR.7142 to add the latest version of ASTM Method D6735–01;
- revising 40 CFR.7142 to add the latest version of ASTM Method D6420–99; and
- revising Table 4 to 40 CFR part 63, subpart AAAAAA, to add alternative compliance option.

2. How did the technical and editorial changes change for the Lime Manufacturing source category?

Since proposal, the technical and editorial changes have not changed.

3. What key comments did we received on the technical and editorial changes, and what are our responses?

No comments were received on the technical and editorial changes detailed above.

4. What is the rationale for our final approach for the technical and editorial changes?

Because no comments were received on the technical and editorial changes that the EPA proposed, we determined that these changes should be finalized as proposed.

V. Summary of Cost, Environmental, and Economic Impacts and Additional Analyses Conducted

A. What are the affected facilities?

There are currently 35 lime manufacturing facilities operating in the United States that are subject to the Lime Manufacturing Plants NESHAP. The 40 CFR part 63, subpart AAAAAA,

⁷ The EPA's Final Plan for Periodic Retrospective Reviews, August 2011. Available at: <https://www.regulations.gov/documentD=EPA-HQ-OA-2011-0156-0154>.

⁸ E-Reporting Policy Statement for EPA Regulations, September 2013. Available at: <https://www.epa.gov/sites/production/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf>.

⁹ Digital Government: Building a 21st Century Platform to Better Serve the American People, May 2012. Available at: <https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digitalgovernment.html>.

affected source is the lime kiln and its associated cooler, and the PSH operation system located at a major source of HAP emissions. A new or reconstructed affected source is a source that commenced construction after December 20, 2002, or meets the definition of reconstruction and commenced reconstruction after December 20, 2002.

B. What are the air quality impacts?

At the current level of control, emissions of total HAP are estimated to be approximately 2,320 tpy. This represents a reduction in HAP emissions of about 240 tpy due to the current (2004) Lime Manufacturing Plants NESHAP. The final amendments will require all affected sources subject to the emission standards in the Lime Manufacturing Plants NESHAP to operate without the SSM exemption. We were unable to quantify the specific emissions reduction associated with eliminating the SSM exemption. However, eliminating the SSM exemption will reduce emissions by requiring facilities to meet emissions standards during SSM periods.

Indirect or secondary air emissions impacts are impacts that would result from the increased electricity usage associated with the operation of control devices (*i.e.*, increased secondary emissions of criteria pollutants from power plants). Energy impacts consist of the electricity and steam needed to operate control devices and other equipment that would be required under this proposed rule. The EPA expects no secondary air emissions impacts or energy impacts from this rulemaking.

C. What are the cost impacts?

The 35 lime manufacturing plants that would be subject to the final amendments would incur minimal net costs to meet revised recordkeeping and reporting requirements and the standards for periods of startup and shutdown. Nationwide costs associated with the final requirements are estimated to be \$15,271. The EPA believes that the lime manufacturing plants which are subject to the NESHAP can meet the final requirements with minimal additional capital or operational costs. Each facility will experience costs to read and understand the rule amendments. Costs associated with the elimination of the SSM exemption were estimated as part of the reporting and recordkeeping costs and include time for re-evaluating previously developed SSM record systems. Costs associated with the requirement to electronically submit

notifications and semi-annual compliance reports using CEDRI were estimated as part of the reporting and recordkeeping costs and include time for becoming familiar with CEDRI and the reporting template for semi-annual compliance reports.

D. What are the economic impacts?

Economic impact analyses focus on changes in market prices and output levels. If changes in market prices and output levels in the primary markets are significant enough, impacts on other markets may also be examined. Both the magnitude of costs needed to comply with a final rule and the distribution of these costs among affected facilities can have a role in determining how the market will change in response to a final rule. The total costs associated with reviewing the final rule, meeting the revised recordkeeping and reporting requirements, and complying with the revised final standards are estimated to be \$15,271. This is an estimated cost of \$266 to \$2,925 per facility, depending on the number of lime kilns operated and the type of controls installed. These costs are not expected to result in a significant market impact, regardless of whether they are passed on to the purchaser or absorbed by the firms. Based on the costs associated with the elimination of the SSM exemption and the costs associated with the requirement to electronically submit compliance reports, we do not anticipate any significant economic impacts from these final amendments.

E. What are the benefits?

Although the EPA is unable to quantify reductions in HAP emissions as a result of the final amendments, we believe that the action improves the rule. Specifically, the final amendments remove SSM exemptions such that standards apply at all times. Additionally, the final amendments requiring electronic submittal of initial notifications, initial startup reports, annual compliance certifications, deviation reports, and performance test results will increase the usefulness of the data, is in keeping with current trends of data availability, will further assist in the protection of public health and the environment, and will ultimately result in less burden on the regulated community.

F. What analysis of environmental justice did we conduct?

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous

peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained in the *Risk and Technology Review Analysis of Demographic Factors for Populations Living Near Lime Manufacturing Source Category Operations*, which is available in the docket for this action. The results of the Lime Manufacturing source category demographic analysis indicated that emissions from the source category expose approximately 12 people to a cancer risk at or above 1-in-1 million and no people to a chronic noncancer TOSHI greater than 1. The percentages of the at-risk population indicate that three of the 10 demographic groups (White, African American and people below the poverty level) that are living within 50 km of facilities in the source category exceed the corresponding national percentage for the same demographic groups.

G. What analysis of children's environmental health did we conduct?

The EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are contained in the *Residual Risk Assessment for the Lime Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <https://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Orders 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was, therefore, not submitted to the Office of Management and Budget (OMB) for review.

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is not an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

The information collection activities in this final rule have been submitted for approval to OMB under the PRA. The Information Collection Request (ICR) document that the EPA prepared

has been assigned EPA ICR number 2072.09. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

We are finalizing changes to the reporting and recordkeeping requirements for the Lime Manufacturing Plants NESHAP in the form of eliminating the SSM reporting and SSM plan requirements and requiring electronic submittal of all compliance reports (including performance test reports). Any information submitted to the Agency for which a claim of confidentiality is made will be safeguarded according to the Agency policies set forth in title 40, chapter 1, part 2, subpart B—Confidentiality of Business Information (see 40 CFR part 2; 41 FR 36902, September 1, 1976; amended by 43 FR 40000, September 8, 1978; 43 FR 42251, September 20, 1978; 44 FR 17674, March 23, 1979).

Respondents/affected entities:

Owners or operators of lime manufacturing plants that are major sources, or that are located at, or are part of, major sources of HAP emissions, unless the lime manufacturing plant is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, sugar beet manufacturing plant, or only processes sludge containing calcium carbonate from water softening processes.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart AAAAA).

Estimated number of respondents: On average over the next 3 years, approximately 36 existing major sources will be subject to these standards. It is also estimated that one additional respondent will become subject to the emission standards over the 3-year period.

Frequency of response: The frequency of responses varies depending on the burden item.

Total estimated burden: The average annual burden to industry over the next 3 years from these recordkeeping and reporting requirements is estimated to be 9,690 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: The annual recordkeeping and reporting cost for all facilities to comply with all of the requirements in the NESHAP is estimated to be \$1,810,000 (per year), of which \$15,271 (first year) is for this rule, and the rest is for other costs related to continued compliance with the NESHAP including \$684,000 in annualized capital and operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. This action only eliminates the SSM exemption, revises other SSM related requirements, and adds electronic reporting. None of the changes will impact the small entities. The rule removes the SSM exemption and establishes emission standard for startup and shutdown. Based on the controls used at the small entities, they will not be impacted by the alternate emission standards. Thus, this action will not impose any requirements on small entities.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. While this action creates an enforceable duty on the private sector, the cost does not exceed \$100 million or more.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. The EPA does not know of any lime manufacturing facilities owned or operated by Indian tribal governments. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are contained in sections III and IV of the proposal preamble (84 FR 48708, September 16, 2019) and further documented in the risk report titled *Residual Risk Assessment for the Lime Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action involves technical standards. The EPA has decided to use ANSI/ASME PTC 19.10–1981 Part 10 (2010), “Flue and Exhaust Gas Analyses,” as an acceptable alternative to EPA Method 3B manual portion only and not the instrumental portion. This method determines quantitatively the gaseous constituents of exhausts resulting from stationary combustion sources. This standard may be obtained from <https://www.asme.org> or from the American Society of Mechanical Engineers (ASME) at Three Park Avenue, New York, New York 10016–5990.

The EPA has decided to use ASTM D6348–03(2010) and ASTM D6348–12e1, “Determination of Gaseous Compounds by Executive Direct Interface Fourier Transform (FTIR) Spectroscopy,” as alternatives to using EPA Method 320 under certain conditions and incorporate these alternatives by reference. ASTM D6348–03(2010) was previously determined equivalent to EPA Method 320 with caveats. ASTM D6348–12e1 is a revised version of ASTM D6348–03(2010) and includes a new section on accepting the results from direct measurement of a certified spike gas cylinder, but still lacks the caveats we placed on the ASTM D6348–03(2010) version. The

voluntary consensus standard (VCS), ASTM D6348–12e1, “Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy,” is an acceptable alternative to EPA Method 320 at this time with caveats requiring inclusion of selected annexes to the standard as mandatory. When using ASTM D6348–12e1, the conditions that must be met are defined in 40 CFR 63.7142(a)(2). This field test method employs an extractive sampling system to direct stationary source effluent to an FTIR spectrometer for the identification and quantification of gaseous compounds. The ASTM D6348–03(2010) and ASTM D6348–12e1 standards were developed and adopted by the American Society for Testing and Materials (ASTM).

The EPA has also decided to use ASTM D6735–01 (Reapproved 2009), “Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources Impinger Method,” as an alternative to EPA Method 321 provided that the provisions in 40 CFR 63.7142(a)(4) are followed. The EPA used ASTM D6735–01 for the determination of HCl in EPA Methods 26, 26A, and 321 from mineral calcining exhaust sources. This method will measure the gaseous HCl and other gaseous chlorides and fluorides that pass through a PM filter. The ASTM D6735–01 standard was developed and adopted by the ASTM.

The EPA has decided to use VCS ASTM D6420–99 (Reapproved 2010), “Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry” as an alternative to EPA Method 18 only when the target compounds are all known, and the target compounds are all listed in ASTM D6420 as measurable. ASTM D6420 should not be used for methane and ethane because atomic mass is less than 35. ASTM D6420 should never be specified as a total volatile organic compound method. This field method determines the mass concentration of volatile organic HAP.

The ASTM standards may be obtained from <http://www.astm.org> or from the ASTM at 100 Barr Harbor Drive, Post Office C700, West Conshohocken, Pennsylvania 19428–2959.

The EPA has decided to use EPA–454/R–98–015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997 as guidance for how a triboelectric bag leak detection system must be installed, calibrated, operated, and maintained. This document includes FF and

monitoring system descriptions; guidance on monitor selection, installation, set up, adjustment, and operation; and quality assurance procedures. This document may be obtained from <http://www.epa.gov> or from the EPA, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

While the EPA has identified another 10 VCS as being potentially applicable to this proposed rule, we have decided not to use these VCS in this rulemaking. The use of these VCS would not be practical due to lack of equivalency, documentation, validation date, and other import technical and policy considerations. See the memorandum titled *Voluntary Consensus Standard Results for NESHAPE: Lime Manufacturing Residual Risk and Technology Review*, in the docket for this proposed rule for the reasons for these determinations.

Under 40 CFR 63.7(f) and 40 CFR 63.8(f) of subpart A of the General Provisions, a source may apply to the EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule or any amendments.

K. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained in section IV.B of the proposal preamble and the technical report, *Risk and Technology Review Analysis of Demographic Factors for Populations Living Near Lime Manufacturing Source Category Operations*, which is available in the docket for this action.

L. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Lime manufacturing, Intergovernmental

relations, Reporting and recordkeeping requirements.

Andrew Wheeler,
Administrator.

For the reasons set forth in the preamble, the EPA amends 40 CFR part 63 as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart A—General Provisions

■ 2. Section 63.14 is amended by revising paragraphs (e)(1), (h)(85), (86), (93), (100), and (n)(3) to read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(e) * * *

(1) ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981, IBR approved for §§ 63.309(k), 63.457(k), 63.772(e) and (h), 63.865(b), 63.997(e), 63.1282(d) and (g), 63.1625(b), table 5 to subpart EEEE, 63.3166(a), 63.3360(e), 63.3545(a), 63.3555(a), 63.4166(a), 63.4362(a), 63.4766(a), 63.4965(a), 63.5160(d), table 4 to subpart UUUU, table 3 to subpart YYYY, 63.7822(b), 63.7824(e), 63.7825(b), 63.9307(c), 63.9323(a), 63.11148(e), 63.11155(e), 63.11162(f), 63.11163(g), 63.11410(j), 63.11551(a), 63.11646(a), and 63.11945, table 5 to subpart AAAAA, table 5 to subpart DDDDD, table 4 to subpart JJJJJ, table 4 to subpart KKKKK, tables 4 and 5 of subpart UUUUU, table 1 to subpart ZZZZZ, and table 4 to subpart JJJJJ.

* * * * *

(h) * * *

(85) ASTM D6348–03 (Reapproved 2010), Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, including Annexes A1 through A8, Approved October 1, 2010, IBR approved for §§ 63.1571(a), 63.4751(i), 63.4752(e), 63.4766(b), 63.7142(a) and (b), tables 4 and 5 to subpart JJJJJ, tables 4 and 6 to subpart KKKKK, tables 1, 2, and 5 to subpart UUUUU and appendix B to subpart UUUUU.

(86) ASTM D6348–12e1, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for

§§ 63.997(e), 63.1571(a), 63.2354(b), table 5 to subpart EEEE, table 4 to subpart UUUU, and 63.7142(a) and (b).

* * * * *

(93) ASTM D6420–99 (Reapproved 2010), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, Approved October 1, 2010, IBR approved for §§ 63.670(j), Table 4 to subpart UUUU, 63.7142(b), and appendix A to this part: Method 325B.

* * * * *

(100) ASTM D6735–01 (Reapproved 2009), Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method, IBR approved for § 63.7142(b), tables 4 and 5 to subpart JJJJ, and tables 4 and 6 to subpart KKKK.

* * * * *

(n) * * *

(3) EPA–454/R–98–015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997, IBR approved for §§ 63.548(e), 63.864(e), 63.7113(d), 63.7525(j), 63.7831(f), 63.8450(e), 63.8600(e), and 63.11224(f).

* * * * *

Subpart AAAAA—[Amended]

■ 3. Section 63.7083 is amended by revising paragraphs (a)(1), (2), and (b) and by adding paragraph (e) to read as follows:

§ 63.7083 When do I have to comply with this subpart?

(a) * * *

(1) If you start up your affected source before January 5, 2004, you must comply with the emission limitations no later than January 5, 2004, and you must have completed all applicable performance tests no later than July 5, 2004, except as noted in paragraphs (e)(1) and (2) of this section.

(2) If you start up your affected source after January 5, 2004, then you must comply with the emission limitations for new affected sources upon startup of your affected source and you must have completed all applicable performance tests no later than 180 days after startup, except as noted in paragraphs (e)(1) and (2) of this section.

(b) If you have an existing affected source, you must comply with the applicable emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than January 5, 2007, except as noted in paragraphs (e)(1) and (2) of this section.

* * * * *

(e)(1) If your affected source commenced construction or reconstruction on or before September 16, 2019, then the compliance date for the revised requirements promulgated at §§ 63.7090, 63.7100, 63.7112, 63.7113, 63.7121, 63.7130, 63.7131, 63.7132, 63.7140, 63.7141, 63.7142, and 63.7143 and Tables 2, 3, 4, 5, 7, 8 and 9 (except changes to the cross references to 63.6(f)(1) and (h)(1)) of 40 CFR 63, subpart AAAAA, published on July 24, 2020 is January 20, 2021.

(2) If your affected source commenced construction or reconstruction after September 16, 2019, then the compliance date for the revised requirements promulgated at §§ 63.7090, 63.7100, 63.7112, 63.7113, 63.7121, 63.7130, 63.7131, 63.7132, 63.7140, 63.7141, 63.7142, and 63.7143 and Tables 2, 3, 4, 5, 7, 8 and 9 to this subpart, published on July 24, 2020 is July 24, 2020 or the date of initial startup, whichever is later.

■ 4. Section 63.7090 is amended by revising paragraph (b) and adding paragraph (c) to read as follows:

§ 63.7090 What emission limitations must I meet?

* * * * *

(b) You must meet each operating limit in Table 3 to this subpart that applies to you.

(c) On or after the relevant compliance date for your source as specified in §§ 63.7083(e), you must meet each startup and shutdown period emission limit in Table 2 to this subpart that applies to you.

■ 5. Section 63.7100 is amended by revising paragraphs (a), (b), (c), (d)(3), (d)(4)(iii), (d)(6) introductory text, and (e) to read as follows:

§ 63.7100 What are my general requirements for complying with this subpart?

(a) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction. On and after the relevant compliance date for your source as specified in § 63.7083(e), you must be in compliance with the applicable emission limitations (including operating limits) at all times.

(b) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you must be in compliance with the opacity and visible emission (VE) limits in this subpart at all times, except during periods of startup, shutdown, and malfunction. On and after the relevant compliance date for

your source as specified in § 63.7083(e), you must be in compliance with the applicable opacity and VE limits at all times.

(c) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i). On and after the relevant compliance date for your source as specified in § 63.7083(e), you must always 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. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator 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.

(d) * * *

(3) Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1, 2 and 3 to this subpart, respectively. On and after the relevant compliance date for your source as specified in § 63.7083(e), your OM&M plan must address periods of startup and shutdown.

(4) * * *

(iii) Prior to the relevant compliance date for your source as specified in § 63.7083(e), ongoing operation and maintenance procedures in accordance with the general requirements of §§ 63.8(c)(1)(i) and (ii), (3), and (4)(ii). On and after the relevant compliance date for your source as specified in § 63.7083(e), ongoing operation and maintenance procedures in accordance with the general requirements of paragraph (c) of this section and §§ 63.8(c)(1)(ii), (3), and (4)(ii); and

* * * * *

(6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits

specified in Table 3 to this subpart, including:

* * * * *

(e) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in § 63.6(e)(3).

■ 6. Section 63.7110 is amended by revising paragraphs (d) and (e) to read as follows:

§ 63.7110 By what date must I conduct performance tests and other initial compliance demonstrations?

* * * * *

(d) For each initial compliance requirement in Table 4 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within existing affected sources at LMP begins at 12:01 a.m. on the compliance date for existing affected sources, that is, the day following completion of the initial compliance demonstration, and ends at 3:01 a.m. on the same day.

(e) For each initial compliance requirement in Table 4 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within new or reconstructed affected sources at LMP begins at 12:01 a.m. on the day following completion of the initial compliance demonstration, as required in paragraphs (b) and (c) of this section, and ends at 3:01 a.m. on the same day.

■ 7. Section 63.7112 is amended by revising paragraphs (a), (b), (c), (j) introductory text, (k) introductory text, (k)(3), and (l) introductory text, and adding paragraph (m) to read as follows:

§ 63.7112 What performance tests, design evaluations, and other procedures must I use?

(a) You must conduct each performance test in Table 5 to this subpart that applies to you.

(b) Prior to the relevant compliance date for your source as specified in § 63.7083(e), each performance test must be conducted according to the requirements in § 63.7(e)(1) and under the specific conditions specified in Table 5 to this subpart. On and after the relevant compliance date for your source as specified in § 63.7083(e), each performance test must be conducted based on representative performance (i.e., performance based on normal operating conditions) of the affected source and under the specific

conditions in Table 5 to this subpart. Representative conditions exclude periods of startup and shutdown. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(c) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1). On and after the relevant compliance date for your source as specified in § 63.7083(e), you may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in paragraph (b) of this section.

* * * * *

(j) You must establish any applicable 3-hour block average operating limit indicated in Table 3 to this subpart according to the applicable requirements in Table 4 to this subpart and paragraphs (j)(1) through (4) of this section.

* * * * *

(k) For each building enclosing any PSH operations that is subject to a VE limit, you must conduct a VE check according to item 18 in Table 5 to this subpart, and in accordance with paragraphs (k)(1) through (3) of this section.

* * * * *

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A-4 to part 60 of this chapter. However, the observer must meet the training requirements as described in EPA Method 22 in appendix A-7 to part 60 of this chapter.

(l) When determining compliance with the opacity standards for fugitive emissions from PSH operations in item 8 of Table 1 to this subpart, you must conduct EPA Method 9 in appendix A-4 to part 60 of this chapter according to item 17 in Table 5 to this subpart, and in accordance with paragraphs (l)(1) through (3) of this section.

* * * * *

(m) On and after the relevant compliance date for your source as specified in § 63.7083(e), during startup, kilns must be tested hourly to determine

when lime product meets the definition of on-specification lime product.

■ 8. Section 63.7113 is amended by revising paragraphs (d) and (f) to read as follows:

§ 63.7113 What are my monitoring installation, operation, and maintenance requirements?

* * * * *

(d) For each bag leak detection system (BLDS), you must meet any applicable requirements in paragraphs (a)(1) through (5) and (d)(1) through (10) of this section.

(1) The BLDS must 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.

(2) The sensor on the BLDS must provide output of relative PM emissions.

(3) The BLDS must be equipped with a device to continuously record the output signal from the sensor.

(4) The BLDS must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level.

(5) The alarm must be located in an area where appropriate plant personnel will be able to hear it.

(6) For a positive-pressure fabric filter (FF), each compartment or cell must have a bag leak detector (BLD). For a negative-pressure or induced-air FF, the BLD must be installed downstream of the FF. If multiple BLD are required (for either type of FF), the detectors may share the system instrumentation and alarm.

(7) Each triboelectric BLDS must be installed, calibrated, operated, and maintained according to EPA-454/R-98-015, "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see § 63.14). Other types of bag leak detection systems must be installed, operated, calibrated, and maintained according to the manufacturer's written specifications and recommendations. Standard operating procedures must be incorporated into the OM&M plan.

(8) At a minimum, initial adjustment of the system must consist of establishing the baseline output in both of the following ways, according to section 5.0 of the EPA-454/R-98-015, "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see § 63.14):

(i) Adjust the range and the averaging period of the device.

(ii) Establish the alarm set points and the alarm delay time.

(9) After initial adjustment, the sensitivity or range, averaging period,

alarm set points, or alarm delay time may not be adjusted except as specified in the OM&M plan required by § 63.7100(d). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless such adjustment follows a complete FF inspection that demonstrates that the FF is in good operating condition, as defined in section 5.2 of the "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see § 63.14). Record each adjustment.

(10) Record the results of each inspection, calibration, and validation check.

* * * * *

(f) For each emission unit equipped with an add-on air pollution control device, you must inspect each capture/ collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in item 6 of Table 3 to this subpart and record the results of each inspection.

* * * * *

■ 9. Section 63.7114 is amended by revising paragraphs (a) introductory text and (b) to read as follows:

§ 63.7114 How do I demonstrate initial compliance with the emission limitations standard?

(a) You must demonstrate initial compliance with each emission limit in Table 1 to this subpart that applies to you, according to Table 4 to this subpart. For existing lime kilns and their associated coolers, you may perform VE measurements in accordance with EPA Method 9 of appendix A to part 60 in lieu of installing a COMS or PM detector if any of the conditions in paragraphs (a)(1) through (3) of this section exist:

* * * * *

(b) You must establish each site-specific operating limit in Table 3 to this subpart that applies to you according to the requirements in § 63.7112(j) and Table 5 to this subpart. Alternative parameters may be monitored if approval is obtained according to the procedures in § 63.8(f).

* * * * *

■ 10. Section 63.7120 is amended by revising paragraph (c) introductory text to read as follows and removing paragraph (c)(3).

§ 63.7120 How do I monitor and collect data to demonstrate continuous compliance?

* * * * *

(c) Data recorded during the conditions described in paragraphs

(c)(1) and (2) of this section may not be used either in data averages or calculations of emission or operating limits; or in fulfilling a minimum data availability requirement. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

* * * * *

■ 11. Section 63.7121 is amended by revising paragraphs (a), (b), (d), (e) introductory text, and (e)(3) to read as follows:

§ 63.7121 How do I demonstrate continuous compliance with the emission limitations standard?

(a) You must demonstrate continuous compliance with each emission limitation in Tables 1 and 3 to this subpart that applies to you according to the methods specified in Tables 6 and 7 to this subpart.

(b) You must report each instance in which you did not meet each operating limit, opacity limit, and VE limit in Tables 2, 3 and 7 to this subpart that applies to you. These deviations must be reported according to the requirements in § 63.7131.

* * * * *

(d) Prior to the relevant compliance date for your source as specified in § 63.7083(e), consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with § 63.6(e)(1). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

(e) For each PSH operation subject to an opacity limit as specified in Table 1 to this subpart, and any vents from buildings subject to an opacity limit, you must conduct a VE check according to item 1 in Table 7 to this subpart, and as follows:

* * * * *

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A–4 to part 60 of this chapter but must meet the training requirements as described in EPA Method 22 of appendix A–7 to part 60 of this chapter.

* * * * *

■ 12. Section 63.7130 is amended by revising paragraph (e) to read as follows:

§ 63.7130 What notifications must I submit and when?

* * * * *

(e) If you are required to conduct a performance test, design evaluation, opacity observation, VE observation, or other initial compliance demonstration as specified in Table 4 or 5 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). Beginning on the relevant compliance date for your source as specified in § 63.7083(e), submit all subsequent Notification of Compliance Status following the procedure specified in § 63.7131(h).

(1) For each initial compliance demonstration required in Table 4 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(2) For each compliance demonstration required in Table 6 to this subpart that includes a performance test conducted according to the requirements in Table 5 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to § 63.10(d)(2).

■ 13. Section 63.7131 is amended by:

- a. Revising paragraphs (a) and paragraph (b) introductory text;
- b. Adding paragraph (b)(6);
- c. Revising paragraphs (c)(4), paragraphs (d), (e) introductory text, and (e)(2);
- d. Adding paragraph (e)(12);
- e. Revising paragraph (f); and
- f. Adding paragraphs (g) through (j).

The revisions and additions read as follows:

§ 63.7131 What reports must I submit and when?

(a) You must submit each report listed in Table 8 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date specified in Table 8 to this subpart and according to the requirements in paragraphs (b)(1) through (6) of this section:

* * * * *

(6) Beginning on the relevant compliance date for your source as specified in § 63.7083(e), submit all subsequent compliance reports following the procedure specified in paragraph (h) of this section.

(c) * * *

(4) Prior to the relevant compliance date for your source as specified in

§ 63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).

* * * * *

(d) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information specified in paragraphs (c)(1) through (4) and (d)(1) and (2) of this section. The deviations must be reported in accordance with the requirements in § 63.10(d) prior to the relevant compliance date for your source as specified in § 63.7083(e) and the requirements in § 63.10(d)(1)–(4) beginning on the relevant compliance date for your source as specified in § 63.7083(e).

(1) The total operating time of each emission unit during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), and the corrective action taken.

(3) An estimate of the quantity of each regulated pollutant emitted over a particulate matter emission limit, and a description of the method used to estimate the emissions.

(e) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) occurring at an affected source where you are using a CMS to comply with the emission limitation in this subpart, you must include the information specified in paragraphs (c)(1) through (4) and (e)(1) through (11) of this section, except that beginning on the relevant compliance date for your source as specified in § 63.7083(e), the semiannual compliance report must also include the information included in paragraph (e)(12) of this section. This includes periods of startup, shutdown, and malfunction.

* * * * *

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

* * * * *

(12) An estimate of the quantity of each regulated pollutant emitted over a particulate matter emission limit, and a description of the method used to estimate the emissions.

(f) Each facility that has obtained a title V operating permit pursuant to part 70 or part 71 of this chapter must report

all deviations as defined in this subpart in the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter. If you submit a compliance report specified in Table 8 to this subpart along with, or as part of, the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter, and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation you may have to report deviations from permit requirements to the permit authority.

(g) If you are required to submit reports following the procedure specified in this paragraph, you must submit reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is confidential business information (CBI), submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate form on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(h) Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) *Data collected using test methods supported by the EPA's Electronic*

Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test. Submit the results of the performance test to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) *Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test.* The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) *Confidential business information (CBI).* If you claim some of the information submitted under paragraph (i) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (i) of this section.

(i) If you are required to electronically submit a report or notification through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (i)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(j) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (j)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

■ 14. Section 63.7132 is amended by revising paragraphs (a)(2) and (c) to read as follows:

§ 63.7132 What records must I keep?

(a) * * *

(2) Prior to the relevant compliance date for your source as specified in § 63.7083(e), the records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. On and after the relevant compliance date for your source as specified in § 63.7083(e), the records in paragraphs (a)(2)(i) and (ii) of this section.

(i) You must keep records for each startup period of the date, the time startup began, the time began producing on-specification lime product, and the time discharge from the kiln began for any affected source that is subject to a standard during startup that differs from the standard applicable at other times.

(ii) You must keep records of the date, time, cause and duration of each malfunction (as defined in 40 CFR 63.2) that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time, cause, and duration of the monitoring malfunction; the record must list the affected source or equipment; if there was a failure to meet a particulate matter emissions limit, an estimate of the volume of each regulated pollutant emitted over the limit, and a description of the method used to estimate the emissions.

* * * * *

(c) You must keep the records required by Tables 6 and 7 to this subpart to show continuous compliance with each emission limitation that applies to you.

* * * * *

■ 15. Section 63.7133 is amended by adding paragraph (d) to read as follows:

§ 63.7133 In what form and for how long must I keep my records?

* * * * *

(d) Any records required to be maintained by this part that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

■ 16. Section 63.7140 is amended to read as follows:

§ 63.7140 What parts of the General Provisions apply to me?

Table 9 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.16 apply to you. When there is overlap between subpart A and subpart AAAAA, as indicated in the "Explanations" column in Table 8, subpart AAAAA takes precedence.

■ 17. Section 63.7141 is amended by revising paragraph (c) to read as follows:

§ 63.7141 Who implements and enforces this subpart?

* * * * *

(c) The authorities that will not be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (7) of this section.

(1) Approval of alternatives to the non-opacity emission limitations in § 63.7090(a).

(2) Approval of alternative opacity emission limitations in § 63.7090(a) and (c).

(3) Approval of alternatives to the operating limits in § 63.7090(b).

(4) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(5) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(6) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

(7) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

■ 18. Section 63.7142 is amended by:

■ a. Revising paragraph (a)(1);

■ b. Redesignating paragraphs (a)(2) and (a)(3) as paragraphs (a)(3) and (a)(4);

■ c. Adding new paragraph (a)(2);

■ d. Revising newly designated paragraph (a)(4) introductory text, and paragraphs (a)(4)(i), and (a)(4)(v);

■ e. Redesignating paragraphs (b)(2) and (b)(3) as paragraphs (b)(3) and (b)(4);

■ f. Adding new paragraph (b)(2); and

■ g. Revising newly designated paragraphs (b)(3) and (b)(4).

The revisions and additions read as follows:

§ 63.7142 What are the requirements for claiming area source status?

(a) * * *

(1) EPA Method 320 of appendix A to this part, or

(2) As an alternative to Method 320 of Appendix A, ASTM D6348–03 (Reapproved 2010) including Annexes A1 through A8 (incorporated by reference—see § 63.14). ASTM D6348–12e1 (incorporated by reference—see § 63.14) is an acceptable alternative to EPA Method 320 of appendix A, provided that the provisions of paragraphs (a)(2)(i) and (ii) of this section are followed:

(i) The test plan preparation and implementation in the Annexes to ASTM D6348–03 (Reapproved 2010), Sections A1 through A8 are mandatory.

(ii) In ASTM D6348–03 (Reapproved 2010) Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack))/(%R) × 100; or

* * * * *

(4) As an alternative to EPA Method 321, ASTM Method D6735–01 (Reapproved 2009), (incorporated by reference—see § 63.14), provided that the provisions in paragraphs (a)(3)(i) through (vi) of this section are followed.

(i) A test must include three or more runs in which a pair of samples is obtained simultaneously for each run according to section 11.2.6 of ASTM Method D6735–01 (Reapproved 2009).

* * * * *

(v) The post-test analyte spike procedure of section 11.2.7 of ASTM Method D6735–01 (Reapproved 2009) is conducted, and the percent recovery is calculated according to section 12.6 of

ASTM Method D6735–01 (Reapproved 2009).

* * * * *

(b) * * *

(2) As an alternative to Method 320 of Appendix A, ASTM D6348–03 (Reapproved 2010) including Annexes A1 through A8 (incorporated by reference—see § 63.14). ASTM D6348–12e1 (incorporated by reference—see § 63.14) is an acceptable alternative to EPA Method 320 of appendix A, provided that the provisions of paragraphs (b)(2)(i) and (ii) of this section are followed:

(i) The test plan preparation and implementation in the Annexes to ASTM D6348–03 (Reapproved 2010), Sections A1 through A8 are mandatory.

(ii) In ASTM D6348–03 (Reapproved 2010) Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack))/(%R) × 100; or

(3) Method 18 of appendix A–6 to part 60 of this chapter; or

(4) As an alternative to Method 18, ASTM D6420–99 (Reapproved 2010), (incorporated by reference—see § 63.14), provided that the provisions of paragraphs (b)(3)(i) through (iv) of this section are followed:

(i) The target compound(s) are those listed in section 1.1 of ASTM D6420–99 (Reapproved 2010) as measurable;

(ii) This ASTM should not be used for methane and ethane because their atomic mass is less than 35 and

(iii) ASTM D6420–99 (Reapproved 2010) should never be specified as a total VOC method.

* * * * *

■ 19. Section 63.7143 is amended by:

■ a. Revising paragraph (3) under the definition of “Deviation.”

■ b. Adding in alphabetical order definitions for “On-specification lime product,” “Shutdown” and “Startup.”

The revisions read as follows:

§ 63.7143 What definitions apply to this subpart?

* * * * *

Deviation * * *

(3) Prior to the relevant compliance date for your source as specified in § 63.7083(e), fails to meet any emission limitation (including any operating limit) in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is allowed by this subpart.

* * * * *

On-specification Lime Product means lime product that has been sufficiently calcined to meet end use requirements.

* * * * *

Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is reduced below planned production quantities and ends when stone feed is halted and fuel combustion from the main burner ceases.

* * * * *

Startup means the beginning of kiln operation. Startup begins when a shutdown kiln begins firing fuel in the main burner. Startup ends when the lime kiln first generates on-specification lime product or 12 hours following first discharge from the kiln, whichever is earlier.

* * * * *

■ 20. Table 1 to subpart AAAAA is amended by revising the introductory text to read as follows:

Table 1 to Subpart AAAAA of Part 63—Emission Limits

As required in § 63.7090(a), you must meet each emission limit in the following table that applies to you, except for kilns and coolers during startup and shutdown (See Table 2 for emission limits for kilns and coolers during startup and shutdown).

* * * * *

■ 21. Redesignate tables 2 through 8 to subpart AAAAA as tables 3 through 9 to subpart AAAAA.

■ 22. Add new Table 2 to subpart AAAAA to read as follows:

As required in § 63.7090(b), on and after the relevant compliance date for your source as specified in § 63.7083(e), you must meet each emission limit in the following table that applies to you.

TABLE 2 TO SUBPART AAAAA OF PART 63—STARTUP AND SHUTDOWN EMISSION LIMITS FOR KILNS AND COOLERS

For . . .	You must meet the following emission limit	You have demonstrated compliance, if after following the requirements in § 63.7112 . . .
1. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during each startup.	Emissions must not exceed 15 percent opacity (based on startup period block average).	i. Installed, maintained, calibrated and operated a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2); ii. Collected the COMS data at a frequency of at least once every 15 seconds, determining block averages for each startup period and demonstrating for each startup block period the average opacity does not exceed 15 percent.
2. All existing lime kilns and their associated coolers that have a wet scrubber during each startup.	See item 2.b of Table 3 of subpart AAAAA for emission limit.	See item 1 of Table 6 of subpart AAAAA for requirements for demonstrating compliance.
3. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during shutdown.	Emissions must not exceed 15 percent opacity (based on 6-minute average opacity for any 6-minute block period does not exceed 15 percent).	i. Installed, maintained, calibrated and operated a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2); ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.
4. All existing lime kilns and their associated coolers that have a wet scrubber during shutdown.	See item 2.b of Table 3 of subpart AAAAA for emission limit.	See item 1 of Table 6 of subpart AAAAA for requirements for demonstrating compliance.

■ 23. Revise newly redesignated Table 3 to subpart AAAAA to read as follows:
As required in § 63.7090(b), you must meet each operating limit in the

following table that applies to you, except for kilns and coolers during startup and shutdown (See Table 2 for

operating limits during startup and shutdown).

TABLE 3 TO SUBPART AAAAA OF PART 63—OPERATING LIMITS

For . . .	You must . . .
1. Each lime kiln and each lime cooler (if there is a separate exhaust to the atmosphere from the associated lime cooler) equipped with an FF.	Maintain and operate the FF such that the BLDS or PM detector alarm condition does not exist for more than 5 percent of the total operating time in a 6-month period; and comply with the requirements in § 63.7113(d) through (f) and Table 6 to this subpart. In lieu of a BLDS or PM detector maintain the FF such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent; and comply with the requirements in § 63.7113(f) and (g) and Table 6 to this subpart.
2. Each lime kiln equipped with a wet scrubber.	a. Maintain the 3-hour block exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the most recent PM performance test; and b. Maintain the 3-hour block scrubbing liquid flow rate greater than the flow rate operating limit established during the most recent performance test.
3. Each lime kiln equipped with an electrostatic precipitator.	Install a PM detector and maintain and operate the ESP such that the PM 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 period, and comply with § 63.7113(e); or, maintain the ESP such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent, and comply with the requirements in § 63.7113(g); and comply with the requirements in § 63.7113(f) and Table 6 to this subpart.
4. Each PSH operation subject to a PM limit which uses a wet scrubber.	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.
5. All affected sources	Prepare a written OM&M plan; the plan must include the items listed in § 63.7100(d) and the corrective actions to be taken when required in Table 6 to this subpart.
6. Each emission unit equipped with an add-on air pollution control device.	a. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to an FF; and b. Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

■ 24. Revise newly redesignated Table 4 to subpart AAAAA to read as follows:

As required in § 63.7114, you must demonstrate initial compliance with

each emission limitation that applies to you, according to the following table.

TABLE 4 TO SUBPART AAAAA OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITS

For . . .	For the following emission limit . . .	You have demonstrated initial compliance, if after following the requirements in § 63.7112 . . .
1. All new or existing lime kilns and their associated lime coolers (kilns/coolers).	PM emissions must not exceed 0.12 lb/tsf for all existing kilns/coolers with dry controls, 0.60 lb/tsf for existing kilns/coolers with wet scrubbers, 0.10 lb/tsf for all new kilns/coolers, or a weighted average calculated according to Eq. 3 in § 63.7112.	The kiln outlet PM emissions (and if applicable, summed with the separate cooler PM emissions), based on the PM emissions measured using Method 5 in appendix A to part 60 of this chapter and the stone feed rate measurement over the period of initial performance test, do not exceed the emission limit; if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions with a BLDS or PM detector, you have installed and are operating the monitoring device according to the requirements in § 63.7113(d) or (e), respectively; and if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions using a COMS, you have installed and are operating the COMS according to the requirements in § 63.7113(g).
2. Stack emissions from all PHS operations at a new or existing affected source.	PM emissions must not exceed 0.05 g/dscm	The outlet PM emissions, based on Method 5 or Method 17 in appendix A to part 60 of this chapter, over the period of the initial performance test do not exceed 0.05 g/dscm; and if the emission unit is controlled with a wet scrubber, you have a record of the scrubber's pressure drop and liquid flow rate operating parameters over the 3-hour performance test during which emissions did not exceed the emissions limitation.
3. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device.	Emissions must not exceed 7 percent opacity	Each of the thirty 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit. At least thirty 6-minute averages must be obtained.
4. Fugitive emissions from all PSH operations at a new or existing affected source.	Emissions must not exceed 10 percent opacity	Each of the 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 10 percent opacity limit.
5. All PSH operations at a new or existing affected source, enclosed in building.	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations for items 2 through 4 of this Table 4, or the building must comply with the following: There must be no VE from the building, except from a vent, and vent emissions must not exceed the emission limitations in items 2 and 3 of this Table 4.	All the PSH operations enclosed in the building have demonstrated initial compliance according to the applicable requirements for items 2 through 4 of this Table 4; or if you are complying with the building emission limitations, there are no VE from the building according to item 18 of Table 5 to this subpart and § 63.7112(k), and you demonstrate initial compliance with applicable building vent emissions limitations according to the requirements in items 2 and 3 of this Table 4.
6. Each FF that controls emissions from only an individual storage bin.	Emissions must not exceed 7 percent opacity	Each of the ten 6-minute averages during the 1-hour initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit.
7. Each set of multiple storage bins with combined stack emissions.	You must comply with emission limitations in items 2 and 3 of this Table 4.	You demonstrate initial compliance according to the requirements in items 2 and 3 of this Table 4.

■ 25. Revise newly redesignated Table 5 to subpart AAAAA to read as follows:

As required in § 63.7112, you must conduct each performance test in the following table that applies to you.

TABLE 5 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS

For . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Select the location of the sampling port and the number of traverse ports.	Method 1 or 1A of appendix A to part 60 of this chapter; and § 63.6(d)(1)(i).	Sampling sites must be located at the outlet of the control device(s) and prior to any releases to the atmosphere.

TABLE 5 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

For . . .	You must . . .	Using . . .	According to the following requirements . . .
2. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Determine velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter.	Not applicable.
3. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Conduct gas molecular weight analysis.	Method 3, 3A, or 3B in appendix A to part 60 of this chapter.	You may use ASME PTC 19.10–1981—Part 10 (available for purchase from Three Park Avenue, New York, NY 10016–5990) as an alternative to using the manual procedures (but not instrumental procedures) in Method 3B.
4. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Measure moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.	Not applicable.
5. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a negative pressure PM control device.	Measure PM emissions.	Method 5 in appendix A to part 60 of this chapter.	Conduct the test(s) when the source is operating at representative operating conditions in accordance with § 63.7(e) before the relevant compliance date for your source as specified in § 63.7083(e) and § 63.7112(b) on and after the relevant compliance date for your source as specified in § 63.7083(e); the minimum sampling volume must be 0.85 dry standard cubic meter (dscm) (30 dry standard cubic foot (dscf)); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the cooler exhaust concurrently with the kiln exhaust test.
6. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a positive pressure FF or ESP.	Measure PM emissions.	Method 5D in appendix A to part 60 of this chapter.	Conduct the test(s) when the source is operating at representative operating conditions in accordance with § 63.7(e) before the relevant compliance date for your source as specified in § 63.7083(e) and § 63.7112(b) on and after the relevant compliance date for your source as specified in § 63.7083(e); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the separate cooler exhaust concurrently with the kiln exhaust test.
7. Each lime kiln	Determine the mass rate of stone feed to the kiln during the kiln PM emissions test.	Any suitable device	Calibrate and maintain the device according to manufacturer's instructions; the measuring device used must be accurate to within ± 5 percent of the mass rate of stone feed over its operating range.
8. Each lime kiln equipped with a wet scrubber.	Establish the operating limit for the average gas stream pressure drop across the wet scrubber.	Data for the gas stream pressure drop measurement device during the kiln PM performance test.	The continuous pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to § 63.7112(j).
9. Each lime kiln equipped with a wet scrubber.	Establish the operating limit for the average liquid flow rate to the scrubber.	Data from the liquid flow rate measurement device during the kiln PM performance test.	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to § 63.7112(j).
10. Each lime kiln equipped with a FF or ESP that is monitored with a PM detector.	Have installed and have operating the BLDS or PM detector prior to the performance test.	Standard operating procedures incorporated into the OM&M plan.	According to the requirements in § 63.7113(d) or (e), respectively.

TABLE 5 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

For . . .	You must . . .	Using . . .	According to the following requirements . . .
11. Each lime kiln equipped with a FF or ESP that is monitored with a COMS.	Have installed and have operating the COMS prior to the performance test.	Standard operating procedures incorporated into the OM&M plan and as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2).	According to the requirements in § 63.7113(g).
12. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to a PM emission limit.	Measure PM emissions.	Method 5 or Method 17 in appendix A to part 60 of this chapter.	The sample volume must be at least 1.70 dscm (60 dscf); for Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters; and if the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter (Method 17 may be used only with exhaust gas temperatures of not more than 250 °F).
13. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to an opacity limit.	Conduct opacity observations.	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 3 hours and you must obtain at least thirty, 6-minute averages.
14. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber.	Establish the average gas stream pressure drop across the wet scrubber.	Data for the gas stream pressure drop measurement device during the PSH operation stack PM performance test.	The pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to § 63.7112(j).
15. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber.	Establish the operating limit for the average liquid flow rate to the scrubber.	Data from the liquid flow rate measurement device during the PSH operation stack PM performance test.	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to § 63.7112(j).
16. Each FF that controls emissions from only an individual, enclosed, new or existing storage bin.	Conduct opacity observations.	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 1 hour and you must obtain ten 6-minute averages.
17. Fugitive emissions from any PSH operation subject to an opacity limit.	Conduct opacity observations.	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 3 hours, but the 3-hour test may be reduced to 1 hour if, during the first 1-hour period, there are no individual readings greater than 10 percent opacity and there are no more than three readings of 10 percent during the first 1-hour period.
18. Each building enclosing any PSH operation, that is subject to a VE limit.	Conduct VE check	The specifications in § 63.7112(k)	The performance test must be conducted while all affected PSH operations within the building are operating; the performance test for each affected building must be at least 75 minutes, with each side of the building and roof being observed for at least 15 minutes.

■ 26. Amend newly redesignated Table 6 to subpart AAAAA by revising the introductory text to read as follows:

As required in § 63.7121, you must demonstrate continuous compliance with each operating limit listed in Table

3 to subpart AAAAA that applies to you, according to the following table:

Table 6 to Subpart AAAAA of Part 63—Continuous Compliance With Operating Limits

* * * * *

■ 27. Revise newly redesignated Table 7 to subpart AAAAA to read as follows:

As required in § 63.7121 you must periodically demonstrate compliance with each opacity and VE limit that applies to you, according to the following table:

TABLE 7 TO SUBPART AAAAA OF PART 63—PERIODIC MONITORING FOR COMPLIANCE WITH OPACITY AND VISIBLE EMISSIONS LIMITS

For . . .	For the following emission limitation . . .	You must demonstrate ongoing compliance . . .
1. Each PSH operation subject to an opacity limitation as required in Table 1 to this subpart, or any vents from buildings subject to an opacity limitation.	a. 7–10 percent opacity, depending on the PSH operation, as required in Table 1 to this subpart.	(i) Conducting a monthly 1-minute VE check of each emission unit in accordance with § 63.7121(e); the check must be conducted while the affected source is in operation; (ii) If no VE are observed in 6 consecutive monthly checks for any emission unit, you may decrease the frequency of VE checking from monthly to semi-annually for that emission unit; if VE are observed during any semiannual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; (iii) If no VE are observed during the semiannual check for any emission unit, you may decrease the frequency of VE checking from semi-annually to annually for that emission unit; if VE are observed during any annual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and (iv) If VE are observed during any VE check, you must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter; you must begin the Method 9 test within 1 hour of any observation of VE and the 6-minute opacity reading must not exceed the applicable opacity limit.
2. Any building subject to a VE limit, according to item 8 of Table 1 to this subpart.	a. No VE	(i) Conducting a monthly VE check of the building, in accordance with the specifications in § 63.7112(k); the check must be conducted while all the enclosed PSH operations are operating; (ii) The check for each affected building must be at least 5 minutes, with each side of the building and roof being observed for at least 1 minute; (iii) If no VE are observed in 6 consecutive monthly checks of the building, you may decrease the frequency of checking from monthly to semi-annually for that affected source; if VE are observed during any semi-annual check, you must resume checking on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and (iv) If no VE are observed during the semi-annual check, you may decrease the frequency of checking from semi-annually to annually for that affected source; and if VE are observed during any annual check, you must resume checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks (the source is in compliance if no VE are observed during any of these checks).

- 28. Revise newly redesignated Table 8 to subpart AAAAA to read as follows:
- As required in § 63.7131, you must submit each report in this table that applies to you.

TABLE 8 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR REPORTS

You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that applies to you, a statement that there were no deviations from the emission limitations during the reporting period; b. If there were no periods during which the CMS, including any operating parameter monitoring system, was out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period; c. If you have a deviation from any emission limitation (emission limit, operating limit, opacity limit, and VE limit) during the reporting period, the report must contain the information in § 63.7131(d);	Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b).

TABLE 8 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR REPORTS—Continued

You must submit a . . .	The report must contain . . .	You must submit the report . . .
	d. If there were periods during which the CMS, including any operating parameter monitoring system, was out-of-control, as specified in § 63.8(c)(7), the report must contain the information in § 63.7131(e); and e. Before the relevant compliance date for your source as specified in § 63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i). On and after the relevant compliance date for your source as specified in § 63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you failed to meet an applicable standard, the compliance report must include the information in § 63.7131(c)(3).	Semiannually according to the requirements in § 63.7131(b).
2. Before the relevant compliance date for your source as specified in § 63.7083(e), an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	Actions taken for the event	Semiannually according to the requirements in § 63.7131(b).
3. Before the relevant compliance date for your source as specified in § 63.7083(e), an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	The information in § 63.10(d)(5)(ii)	By fax or telephone within 2 working days after starting actions inconsistent with the SSMP.
(4) Performance Test Report	The information required in § 63.7(g)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. See § 63.10(d)(5)(ii).
		According to the requirements of § 63.7131.

■ 29. Revise newly redesignated Table 9 to subpart AAAAA to read as follows:

As required in § 63.7140, you must comply with the applicable General

Provisions requirements according to the following table:

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.1(a)(1)–(4)	Applicability	Yes.	§§ 63.7081 and 63.7142 specify additional applicability determination requirements.
§ 63.1(a)(5)	Applicability	No.	
§ 63.1(a)(6)	Applicability	Yes.	
§ 63.1(a)(7)–(a)(9)	Applicability	No.	
§ 63.1(a)(10)–(a)(14)	Applicability	Yes.	
§ 63.1(b)(1)	Initial Applicability Determination ..	Yes	Area sources not subject to subpart AAAAA, except all sources must make initial applicability determination.
§ 63.1(b)(2)	Initial Applicability Determination ..	No.	
§ 63.1(b)(3)	Applicability After Standard Established.	Yes.	
§ 63.1(c)(1)	Permit Requirements	Yes.	
§ 63.1(c)(2)	Permit Requirements	No	
§ 63.1(c)(3)–(4)	Area Source Becomes Major	No.	Additional definitions in § 63.7143.
§ 63.1(c)(5)	Area Source Becomes Major	Yes.	
§ 63.1(d)	Applicability of Permit Program	No.	
§ 63.1(e)	Definitions	Yes.	
§ 63.2	Units and Abbreviations	Yes	
§ 63.3(a)–(c)	Prohibited Activities	Yes.	
§ 63.4(a)(1)–(a)(2)	Prohibited Activities	Yes.	
§ 63.4(a)(3)–(a)(5)	Prohibited Activities	No.	

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.4(b)–(c)	Circumvention, Severability	Yes.	
§ 63.5(a)(1)–(2)	Construction/Reconstruction	Yes.	
§ 63.5(b)(1)	Compliance Dates	Yes.	
§ 63.5(b)(2) .....	.....	No.	
§ 63.5(b)(3)–(4)	Construction Approval, Applicability.	Yes.	
§ 63.5(b)(5) .....	.....	No.	
§ 63.5(b)(6)	Applicability	Yes.	
§ 63.5(c) .....	.....	No.	
§ 63.5(d)(1)–(4)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(f)(1)–(2)	Approval of Construction/Reconstruction.	Yes.	
§ 63.6(a)	Compliance for Standards and Maintenance.	Yes.	
§ 63.6(b)(1)–(5)	Compliance Dates	Yes.	
§ 63.6(b)(6) .....	.....	No.	
§ 63.6(b)(7)	Compliance Dates	Yes.	
§ 63.6(c)(1)–(2)	Compliance Dates	Yes.	
§ 63.6(c)(3)–(c)(4) .....	.....	No.	
§ 63.6(c)(5)	Compliance Dates	Yes.	
§ 63.6(d) .....	.....	No.	
§ 63.6(e)(1)(i)	General Duty to Minimize Emissions.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7100 for general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to Correct Malfunctions ASAP.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.6(e)(1)(iii)	Operation and Maintenance Requirements.	Yes.	
§ 63.6(e)(2) .....	.....	No	[Reserved].
§ 63.6(e)(3)	Startup, Shutdown Malfunction Plan.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	On and after the relevant compliance date for your source as specified in § 63.7083(e), the OM&M plan must address periods of startup and shutdown. See § 63.7100(d).
§ 63.6(f)(1)	SSM exemption	No	See § 63.7100. For periods of startup and shutdown, see § 63.7090(c).
§ 63.6(f)(2)–(3)	Methods for Determining Compliance.	Yes.	
§ 63.6(g)(1)–(g)(3)	Alternative Standard	Yes.	
§ 63.6(h)(1)	SSM exemption	No	See § 63.7100. For periods of startup and shutdown, see § 63.7090(c).
§ 63.6(h)(2)	Methods for Determining Compliance.	Yes.	
§ 63.6(h)(3) .....	.....	No.	
§ 63.6(h)(4)–(h)(5)(i)	Opacity/VE Standards	Yes	This requirement only applies to opacity and VE performance checks required in Table 4 to subpart AAAAA.
§ 63.6(h)(5) (ii)–(iii)	Opacity/VE Standards	No	Test durations are specified in subpart AAAAA; subpart AAAAA takes precedence.
§ 63.6(h)(5)(iv)	Opacity/VE Standards	No.	
§ 63.6(h)(5)(v)	Opacity/VE Standards	Yes.	
§ 63.6(h)(6)	Opacity/VE Standards	Yes.	
§ 63.6(h)(7)	COM Use	Yes.	
§ 63.6(h)(8)	Compliance with Opacity and VE	Yes.	
§ 63.6(h)(9)	Adjustment of Opacity Limit	Yes.	
§ 63.6(i)(1)–(i)(14)	Extension of Compliance	Yes.	
§ 63.6(i)(15) .....	.....	No.	

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.6(i)(16)	Extension of Compliance	Yes.	§ 63.7110 specifies deadlines; § 63.7112 has additional specific requirements.
§ 63.6(j)	Exemption from Compliance	Yes.	
§ 63.7(a)(1)–(a)(3)	Performance Testing Requirements.	Yes	
§ 63.7(b)	Notification	Yes.	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7112(b).
§ 63.7(c)	Quality Assurance/Test Plan	Yes.	
§ 63.7(d)	Testing Facilities	Yes.	
§ 63.7(e)(1)	Conduct of Tests	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.7(e)(2)–(4)	Conduct of Tests	Yes.	
§ 63.7(f)	Alternative Test Method	Yes.	See § 63.7113.
§ 63.7(g)	Data Analysis	Yes.	
§ 63.7(h)	Waiver of Tests	Yes.	
§ 63.8(a)(1)	Monitoring Requirements	Yes	Flares not applicable.
§ 63.8(a)(2)	Monitoring	Yes.	
§ 63.8(a)(3)	Monitoring	No.	
§ 63.8(a)(4)	Monitoring	No	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7100 for OM&M requirements.
§ 63.8(b)(1)–(3)	Conduct of Monitoring	Yes.	
§ 63.8(c)(1)(i)	CMS Operation/Maintenance	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.8(c)(1)(ii)	CMS Spare Parts	Yes.	On and after the relevant compliance date for your source as specified in § 63.7083(e), no longer required.
§ 63.8(c)(1)(iii)	Requirement to Develop SSM Plan for CMS.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.8(c)(2)–(3)	CMS Operation/Maintenance	Yes.	
§ 63.8(c)(4)	CMS Requirements	No	See § 63.7121. No CEMS are required under subpart AAAAA; see § 63.7113 for CPMS requirements. COM not required. See § 63.7113.
§ 63.8(c)(4)(i)–(ii)	Cycle Time for COM and CEMS ..	Yes	
§ 63.8(c)(5)	Minimum COM procedures	Yes	
§ 63.8(c)(6)	CMS Requirements	No	See also § 63.7113.
§ 63.8(c)(7)–(8)	CMS Requirements	Yes.	
§ 63.8(d)(1)–(2)	Quality Control	Yes	
§ 63.8(d)(3)	Quality Control	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	See also § 63.7113.
§ 63.8(e)	Performance Evaluation for CMS	Yes	
§ 63.8(f)(1)–(f)(5)	Alternative Monitoring Method	Yes.	
§ 63.8(f)(6)	Alternative to Relative Accuracy Test for CEMS.	No	No CEMS required in subpart AAAAA. See data reduction requirements in §§ 63.7120 and 63.7121. See § 63.7130.
§ 63.8(g)(1)–(g)(5)	Data Reduction; Data That Cannot Be Used.	No	
§ 63.9(a)	Notification Requirements	Yes	
§ 63.9(b)	Initial Notifications	Yes.	This requirement only applies to opacity and VE performance tests required in Table 5 to subpart AAAAA. Notification not required for VE/opacity test under Table 7 to subpart AAAAA.
§ 63.9(c)	Request for Compliance Extension.	Yes.	
§ 63.9(d)	New Source Notification for Special Compliance Requirements.	Yes.	
§ 63.9(e)	Notification of Performance Test ..	Yes.	Not required for operating parameter monitoring.
§ 63.9(f)	Notification of VE/Opacity Test	Yes	
§ 63.9(g)	Additional CMS Notifications	No	

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.9(h)(1)–(h)(3)	Notification of Compliance Status	Yes.	See §§ 63.7131 through 63.7133.
§ 63.9(h)(4)	Notification of Compliance Status	No.	
§ 63.9(h)(5)–(h)(6)	Notification of Compliance Status	Yes.	
§ 63.9(i)	Adjustment of Deadlines	Yes.	
§ 63.9(j)	Change in Previous Information ...	Yes.	
§ 63.10(a)	Recordkeeping/Reporting General Requirements.	Yes	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7132 for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.
§ 63.10(b)(1)	Records	Yes.	
§ 63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.10(b)(2)(ii)	Recordkeeping of Failures to Meet a Standard.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.10(b)(2)(iii)	Maintenance Records	Yes.	
§ 63.10(b)(2)(iv)–(v)	Actions Taken to Minimize Emissions During SSM.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7100 for OM&M requirements.
§ 63.10(b)(2)(vi)–(xii)	Recordkeeping for CMS	Yes.	
§ 63.10(b)(2)(xiii)	Records for Relative Accuracy Test.	No.	
§ 63.10(b)(2)(xiv)	Records for Notification	Yes.	
§ 63.10(b)(3)	Applicability Determinations	Yes.	
§ 63.10(c)	Additional CMS Recordkeeping ...	No	See § 63.7132.
§ 63.10(d)(1)	General Reporting Requirements	Yes.	
§ 63.10(d)(2)	Performance Test Results	Yes.	
§ 63.10(d)(3)	Opacity or VE Observations	Yes	
§ 63.10(d)(4)	Progress Reports	Yes.	
§ 63.10(d)(5)(i)	Periodic Startup, Shutdown, Malfunction Reports.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7131 for malfunction reporting requirements.
§ 63.10(d)(5)(ii)	Immediate Startup, Shutdown, Malfunction Reports.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.10(e)	Additional CMS Reports	No	
§ 63.10(f)	Waiver for Recordkeeping/Reporting.	Yes.	
§ 63.11(a)–(b)	Control Device and Work Practice Requirements.	No	
§ 63.12(a)–(c)	State Authority and Delegations ...	Yes.	Flares not applicable.
§ 63.13(a)–(c)	State/Regional Addresses	Yes.	
§ 63.14(a)–(b)	Incorporation by Reference	No.	
§ 63.15(a)–(b)	Availability of Information and Confidentiality.	Yes.	

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.16	Performance Track Provisions	Yes.	

§ 63.7831 [AMENDED]

■ 30. In § 63.7831(f)(4), add the phrase “(incorporated by reference, see

§ 63.14)” immediately following the words “September 1997”.
[FR Doc. 2020–12588 Filed 7–23–20; 8:45 am]

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Section 5

Opacity Monitor Calibration & Maintenance

Opacity Monitor Calibration & Maintenance

Greer Lime Company maintains a continuing annual contract with Teledyne Instruments Monitor Labs (Teledyne) for preventative maintenance, corrective maintenance, monitor auditing, and clear stack calibration for both kiln opacity monitors. The contract specifies that the required maintenance and auditing will be conducted by a Teledyne technician on a semi-annual basis.

In addition to Teledyne's contract services, plant personnel have been trained to perform routine maintenance including purge air system filter replacement, lens cleaning, unit alignment, and on-stack calibration should it be needed between Teledyne's semi-annual visits.

Section 6

Template SSMP Forms, Reports, and Notifications and Completed SSMP Forms, Reports, and Notifications

- Startup/Shutdown Report**
- Malfunction Report**
- “Immediate” SSMP Reporting Requirements**
- “Periodic” SSMP Reporting Requirements**

Rotary Lime Kiln Startup/Shutdown Report - Lime MACT

Greer Lime Company – Riverton, West Virginia

Note: This report is to be completed only for startups and shutdowns of either rotary lime kiln system.

A. Person Completing Report: _____

B. Which Kiln? _____

C. Date & Time of Shutdown: _____

D. Date & Time of Startup: _____

E. Reason for Shutdown?

F. Were the Startup/Shutdown Procedures Followed? (*see below*)

_____ Yes

_____ No (*If no, then notify management immediately and document the procedures that were used to either startup or shutdown the kiln.*)

Startup and Shutdown Procedures

Startup: Before starting a kiln, ensure that the respective fabric filter dust collector and continuous opacity monitoring system (COMS) is operating properly. This is accomplished by the fabric filter dust collector being control interlocked with the lime kiln. COMS operation will be verified visually through the kiln control program by the Kiln Control Operator. If the dust collector and COMS were operating properly prior to shutdown, it is satisfactorily assumed that this equipment will operate properly prior to startup. For purposes of startup, proper operation is defined as no 6-minute block average of 15% or greater for the previous 24-hour period of operation, unless the kiln system was shutdown to correct opacity compliance issues.

Shutdown: Before intentionally taking the fabric filter dust collector and COMS out of operation, ensure that the kiln is out of operation which is defined as no longer firing on coal.

Rotary Lime Kiln Malfunction Report - Lime MACT

Greer Lime Company – Riverton, West Virginia

Note: This report is to be completed only for those malfunctions which resulted in excess particulate (dust) emissions from either rotary lime kiln system or involving the failure of the opacity monitoring system.

A. Person Completing Report: _____

B. Which Kiln? _____

C. Date: _____

D. Starting and Ending Times of the Malfunction and Corrective Actions:

Malfunction Starting Time/Date: _____

Corrective Action Starting Time/Date: _____

Corrective Action Ending Time/Date: _____

Malfunction Ending Time/Date: _____

E. Description of Malfunction and Corrective Actions:

F. Is this Specific Malfunction Listed in the Malfunction Plan? (see below)

_____ Yes _____ No (If no, then notify management immediately.)

G. Were the Corrective Actions Listed in the Malfunction Plan Followed?

_____ Yes _____ No (If no, then notify management immediately.)

Malfunction Events

Fabric filter dust collector malfunction: If a fabric filter dust collector system is malfunctioning in a manner that consistently causes the opacity limit (>15% in a 6-minute block average) to be exceeded, then the dust collector will be inspected by Greer's maintenance crew and repaired as soon as safely practicable. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. The cause of the malfunction, malfunction start and end times, and corrective action taken will be recorded.

COMS malfunction: If the continuous opacity monitoring system (COMS) is malfunctioning, repairs will be made as soon as practicable. COMS malfunctions are identified by a fault alarm. Fault alarms are recorded by the data acquisition system. Fault alarms will be investigated in a timely manner to determine if the underlying fault condition is harming the validity of the COMS data. Most faults can be cleared in-house by performing the manufacturer's prescribed routine maintenance followed by an on-stack calibration. If this does not correct the fault condition, then the COMS manufacturer will be contacted to secure their technical services. There are some fault alarms that do not negatively impact the validity of the COMS data, but instead are used to notify the operator of an undesirable condition that needs addressed. If the fault alarm is not related to a condition causing invalid data, then those fault times will not be counted as a malfunction. A COMS malfunction is a condition causing invalid data. During a COMS outage caused by a malfunction lasting longer than 24-hours, visible emissions observations by a Method 9 certified observer will be conducted at least once per day during daylight hours. The results will be maintained in a written log and made available for review upon request.

“Immediate” SSMP Reporting Requirements

In accordance with the requirements of 40 CFR §63.10(d)(5)(ii), if actions taken by Greer during a startup, shutdown, or malfunction event are not consistent with this plan and an applicable emission limit (15% opacity for lime kilns and 10% for) has been exceeded, then immediate notification must be made to the regulatory authority. This notification consists of:

1. Communication by phone or fax within two working days; and
2. Confirmation in writing within seven working days.

Fax number:

(304) 926-0479

Mailing address:

WV Division of Air Quality

601 57th Street

Charleston, WV 25304

The written notification must contain the following elements:

1. Name, title, and certifying signature of the responsible official;
2. Explanation of the circumstances of the event;
3. Reasons the SSMP was not followed;
4. Describe all excess emissions and/or parameter monitoring exceedances that occurred during the event; and
5. Describe all actions taken to minimize emissions during the event.

“Periodic” SSMP Reporting Requirements

In accordance with the requirements of 40 CFR §63.10(d)(5)(i), if actions taken by Greer during a startup or shutdown cause an exceedance to any applicable emission limitation; or if a malfunction occurred during the reporting period and the actions were consistent with this plan then a report will be made. The startup, shutdown, and malfunction report must consist of a letter containing the following:

1. Name, title, and certifying signature of the responsible official;
2. Number of events;
3. Duration of each event; and
4. Brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded.

The report must be submitted to the regulatory authority on a semi-annual basis. The report must be postmarked by the 30th day following the end of each calendar half and may be submitted concurrently with other semiannual reports (i.e. opacity monitoring system performance report and the Title V monitoring report).



Mullins, Robert A <robert.a.mullins@wv.gov>

Re: R30-07100001-2025 renewal questions

1 message

Scott Kisner <skisner@greerindustries.com>
To: "Mullins, Robert A" <robert.a.mullins@wv.gov>

Fri, Jul 11, 2025 at 7:37 AM

Glad to hear that. Thanks

From: Mullins, Robert A <robert.a.mullins@wv.gov>
Sent: Friday, July 11, 2025 7:36:18 AM
To: Scott Kisner <skisner@greerindustries.com>
Subject: Re: R30-07100001-2025 renewal questions

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Scott,

That was sufficient. I can include it in the permit record and do my review of it.

Thanks,
Robert Mullins

On Thu, Jul 10, 2025 at 2:27 PM Scott Kisner <skisner@greerindustries.com> wrote:

Robert,

Attached is the most recent OMM Plan that was revised in 2021. Is this sufficient or do I need to include a newly signed "General Form" and send via email at the DAQ permitting address?

Thanks

Scott Kisner
Greer Industries, Inc.
Environmental Compliance Manager
304-276-5263

From: Mullins, Robert A <robert.a.mullins@wv.gov>
Sent: Thursday, July 10, 2025 12:25 PM
To: Scott Kisner <skisner@greerindustries.com>
Subject: Re: R30-07100001-2025 renewal questions

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Scott,

I came across another issue that needs to be addressed. In 40 CFR 63.7100(d) it states that a written Operations, Maintenance, and Monitoring Plan be submitted as part of the Title V application for review and approval.

I recently came across this language for another facility in a different MACT where this issue came up in public comments and in discussions with EPA region 3 we determined that since it didn't specify the initial Title V in the

regulation that the OMM Plan needs to be submitted with every Title V application including renewals and modifications that would cause the OMM plan to be amended.

The last 40 CFR 63 AAAAA OMM plan I have for Greer lime is from 2007; can you review the OMM plan to make sure it contains everything specified in 40 CFR 63.7100(d); I'm not sure if this has changed since the last OMM plan was approved. Once you have done that can you submit an amendment to the Title V Renewal Application to include the OMM plan. I'll then review and approve it as part of the review process for the renewal.

Thanks,
Robert Mullins

On Fri, Jun 13, 2025 at 1:22 PM Scott Kisner <skisner@greerindustries.com> wrote:

Robert,

I've reviewed Table 1 to Subpart AAAAA of Part 63 as it appears in the updated rule published in the Federal Register on July 16, 2024.

The following sections apply to both of our lime kilns at Greer Lime from Table 1:

#1, All existing lime kilns and lime coolers without a scrubber installed prior to 1/5/04: PM emissions must not exceed 0.12 lb/tsf.

#10, All preheater rotary lime kilns and lime coolers producing high calcium quicklime: HCl emissions must not exceed 0.096 lb/ton of lime produced.

#14, All existing lime kilns and lime coolers: Hg emissions must not exceed 34 lb/MMton of lime produced.

#15, All existing lime kilns and lime coolers: Total organic HAP emissions must not exceed 2.6 ppmvd @ 7% O₂.

#16, All existing lime kilns and lime coolers: D/F emissions must not exceed 0.037 ng/dscm (TEQ) @ 7% O₂.

#19, Fugitive emissions from all PSH operations: Emissions must not exceed 10% opacity.

Please let me know if you need any additional information.

Scott Kisner

Greer Industries, Inc.

Environmental Compliance Manager

304-276-5263

From: Mullins, Robert A <robert.a.mullins@wv.gov>
Sent: Friday, June 6, 2025 1:05 PM
To: Scott Kisner <skisner@greerindustries.com>
Cc: Bob Gwynne <gwynne@greerindustries.com>
Subject: Re: R30-07100001-2025 renewal questions

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Scott,

As part of the Title V Renewal I need to include the applicable requirements at the time of issuance. I plan to send this Renewal out to Notice later this month after an internal review and allowing you to review the changes.

I will most likely be proceeding with the renewal process before the R13-1685B permit is modified; so submit a joint R13/Title V modification Application in case it needs to be modified after the Title V renewal is out to Notice or Issued.

If the regulation is rescinded or reconsidered after the issuance of the renewal it will need to be modified to account for that. From my review the main significant change is the inclusion of the new limits in Table 1 of Subpart AAAAA and most of the other changes seemed minor like the renumbering of Tables in Subpart AAAAA and the inclusion of the CEDRI language.

If you become a synthetic minor after the issuance of the Title V renewal that would also involve a modification of the Title V permit.

I'll remove Item 6 from the table of emission limits I am including in the permit. Though on a related note, does any of Equipment fall under Table 1 to Subpart AAAAA of Part 63—Emission Limits Item 10. (All preheater rotary lime kilns and their associated coolers producing high-calcium quick lime) or are there any other Items from Table 1 to Subpart AAAAA that I should have included that I didn't?

Thanks,

Robert Mullins

On Fri, Jun 6, 2025 at 11:55 AM Scott Kisner <skisner@greerindustries.com> wrote:

Robert,

1. Yes, I will request that R13-1685B be modified to remove the trommel screen via a Class I written request for permanent removal.

2. Both kilns are preheater rotary and we only produce high calcium lime. In the table below, #8 applies to both and #6 applies to neither kiln. To complicate matters, this rule is now very much in flux as it was one of the rules targeted by the new administration for either being rescinded or reconsidered. EPA is currently looking to make substantial changes to the new rule and these are expected to be in the Federal Register in less than a year. Additionally, we have recently conducted HCl stack testing using our DSI control system and have proven that we can greatly reduce our HAP potential to emit to less than 10 tpy single HAP and less than 25 tpy aggregated HAPs. We intend to apply this year for a synthetic minor application to remove lime manufacturing MACT applicability. Given this information, how do you want to handle the MACT requirements at this time for the renewal?

Scott Kisner
Greer Industries, Inc.
Environmental Compliance Manager
304-276-5263

From: Mullins, Robert A <robert.a.mullins@wv.gov>
Sent: Wednesday, June 4, 2025 9:06 AM
To: Scott Kisner <skisner@greerindustries.com>; Bob Gwynne <gwynne@greerindustries.com>
Subject: R30-07100001-2025 renewal questions

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I'm working on the Title V permit renewal for Greer Industries, Inc.'s Riverton Facility and have a few questions.

1. In the Summary of Title V Changes change #2 has a note that the Trommel Screen (TS1) was permanently removed in 2023 and requested that this unit be removed from the Title V Permit. This Emission Unit was added as part of R13-1685B so it and its associated permit requirements will need to be removed from R13-1685B before it can be removed from the Title V Permit. Do you intend to modify R13-1685B to Remove the trommel screen?

2. 40 C.F.R. 63 Subpart AAAAAA was recently amended which you noted in the renewal application along with the fact the facility would be subject to new HAP emission limits with compliance by June 28, 2027 (40 CFR 63.7083(d) states July 16, 2027). I am trying to incorporate these new limits along with their compliance date so that the permit will not need to be updated in 2027 to include them. Can you let me know which sections Table 1 to Subpart AAAAAA of Part 63—Emission Limits that the facility will be subject to and which units are subject to each Item # of the Table. I've included the Table 1 Items I think the facility is subject to below but I am unsure about Item 6 and 8 a since search of the existing permit and renewal application don't mention Dolomitic Lime or High-Calcium Lime. I am also unsure if the 6 Bay LPD Pre-Heater (4-PH-1) and 8 Bay LPD Pre-Heater (4-PH-2) would be classified as "preheater rotary lime kilns".

Table 1 to Subpart AAAAAA of Part 63—Emission Limits	
For...	You must meet the following emission limit
1. All existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004. (1E and 500-115)	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).

6. Existing straight rotary lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 2.3 lb/ton of lime produced.
8. Existing straight rotary lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.52 lb/ton of lime produced.
14. All existing lime kilns and their associated coolers (1E and 500-115)	Mercury emissions must not exceed 34 lb/MMton of lime produced.
15. All lime kilns and their associated coolers (1E and 500-115)	Total Organic HAP emissions must not exceed 2.6 ppmvd @7% O ₂ .
16. All lime kilns and their associated coolers (1E and 500-115)	D/F emissions must not exceed 0.037 ng/dscm (TEQ) ¹ @7% O ₂ .
19. Fugitive emissions from all process stone handling (PSH) operations at a new or existing affected source, except as provided by item 8 of this table 1. (4-BC1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, 4-STB-2)	Emissions must not exceed 10 percent opacity.

Please review my questions and respond.

—

Robert Mullins

WV Department of Environmental Protection

Division of Air Quality

601 57th Street, SE

Charleston, WV 25304

Phone: (304)926-0499 ext. 41286

Mullins, Robert A <robert.a.mullins@wv.gov>

Re: R30-07100001-2025 renewal questions

1 message

Scott Kisner <skisner@greerindustries.com>
To: "Mullins, Robert A" <robert.a.mullins@wv.gov>

Thu, Jul 10, 2025 at 2:26 PM

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Table 1 to Subpart AAAAA of Part 63—Emission Limits

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1. All existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004. (1E and 500-115)	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).
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19. Fugitive emissions from all process stone handling (PSH) operations at a new or existing affected source, except as provided by item 8 of this table 1. (4-BC1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, 4-STB-2)	Emissions must not exceed 10 percent opacity.

Please review my questions and respond.

--

Robert Mullins

WV Department of Environmental Protection

Division of Air Quality

[601 57th Street, SE](#)

[Charleston, WV 25304](#)

Phone: (304)926-0499 ext. 41286



Lime MACT - Greer Lime OMM Plan Rev. 2 01-2021.pdf
607K

40 CFR Part 63, Subpart AAAAAA – Lime Manufacturing MACT

Operations, Maintenance, & Monitoring Plan

Startup, Shutdown, & Malfunction Plan



Greer Lime Company
Riverton, West Virginia

Revision No. 2
January 2021

Table of Contents

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1. Introduction

1.1 Background

Greer Lime Company (Greer) operates a lime manufacturing plant near Riverton, Pendleton County, West Virginia. Emissions testing of the rotary lime kilns, conducted during October 2004, indicate that hydrochloric acid (HCl) emissions are greater than 10 tons/year, classifying the facility as a major source of hazardous air pollutants (HAP). As a major source of HAP, Greer is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Lime Manufacturing Plants, detailed in Title 40, Part 63, Subpart AAAAAA of the Code of Federal Regulations (40 CFR 63 Subpart AAAAAA). Typically, NESHAP regulations are also referred to as Maximum Achievable Control Technology (MACT) standards.

Both rotary lime kiln systems (4-RK-1 and 4-RK-2) are considered “existing sources” under the regulations. The compliance date for the equipment associated with these systems is January 5, 2007. Affected equipment subject to the Lime MACT rule is required to have in place an Operations, Maintenance, and Monitoring Plan (OM&MP) and a Startup, Shutdown, and Malfunction Plan (SSMP).

This document contains the OM&MP and the SSMP for the rotary lime kilns and processed stone handling equipment. As defined within the rule, the processed stone handling equipment at Greer consists of tunnel belt 4-BC-1, reclaim belt 4-BC-2, stone bin feed belt 4-BC-4, stone bin feed belt 4-BC-5, stone bin 4-STB-1, and stone bin 4-STB-2.

This document was revised during January 2021 to reflect changes made to the Rule following a Risk and Technology Review (RTR) conducted under the Clean Air Act. On June 4, 2020, the US EPA finalized amendments to the 2004 NESHAP for Lime Manufacturing Plants. The changes become effective on January 20, 2021. Specifically, the US EPA changed the following:

- Revised requirements for startup, shutdown and malfunction (SSM) to be consistent with recent court decisions; and
- Require electronic reporting of performance test results and compliance reports.

1.2 Action Items & Responsible Personnel

The following table address the critical action items and responsible personnel associated with the OM&M Plan and the SSMP provisions.

Action Item	Responsible Personnel	Discussion
Maintain the written OM&M Plan.	Environmental Manager	Will maintain the written plan and will update as necessary.
Submit the OM&M Plan to WVDAQ for review and approval.	Environmental Manager	Will submit to WVDAQ upon finalization with the updated Title V application. Changes to OM&M Plan must also be submitted to WVDAQ for review and approval.
Maintain the written startup, shutdown, and malfunction procedures.	Environmental Manager	Will maintain the written startup, shutdown, and malfunction procedures and update as necessary.
Keep records on each startup, shutdown, and malfunction.	Kiln Control Operator	Will keep records on each startup, shutdown, and malfunction event.
Submit a Compliance Report	Environmental Manager	Semiannually according to the requirements in §63.7131(b)
Submit a Performance Test Report	Environmental Manager	As required according to the requirements of §63.7131.

2. Operations, Maintenance, and Monitoring Plan

The OM&M plan requirements of 40 CFR §63.7100(d) are discussed in detail below. The actual regulatory language appears in *italic font*. Greer's response to each requirement appears in plain text.

- (d) *You must prepare and implement for each LMP, a written operations, maintenance, and monitoring (OM&M) plan. You must submit the plan to the applicable permitting authority for review and approval as part of the application for a 40 CFR part 70 or 40 CFR part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, you must comply with the provisions of the submitted plan. Each plan must contain the following information:*
- (1) *Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable for each emission unit.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	The opacity from the fabric filter dust collectors serving each lime kiln system is continuously monitored with a continuous opacity monitoring system (COMS). A computerized data acquisition system records all opacities in electronic form. The opacity limit is 15% per startup period block average per Item 1 in Table 2, Startup and Shutdown Emission Limits, and 15% per 6-minute block average all other times per Item 1 of Table 3, Operating Limits, but the actual opacity is typically less during startup, shutdown and operation. Measured opacity for compliance purposes will be taken from the data acquisition system.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The opacity limit for processed stone handling (PSH) equipment is 10% per Item 7 in Table 1, Emission Limits, and Item 4 in Table 4, Initial Compliance, of the Lime MACT rule. Dust emissions from the affected equipment are minimized through full enclosures and water sprays.

(2) *A monitoring schedule for each emission unit.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The opacity from each fabric filter dust collector serving its respective lime kiln is continuously monitored with a COMS. Data is stored electronically.
Rotary Lime Kiln – 500 TPD 4-RK-2	
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The Title V permit (R30-07100001-2020) the Lime MACT Rule, specifically, Item 1 in Table 7, Periodic Monitoring for Compliance with Opacity and Visible Emissions Limits, requires monthly visible emission observations for these sources. Data is stored in a written or electronic log and maintained on-site.

(3) *Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1, 2 and 3 to this subpart, respectively. Your OM&M plan must address periods of startup and shutdown.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The dust collectors are operated in conjunction with the lime kilns due to the system's physical design and process control interlocks. The induced draft fan is the first item in sequence of process equipment to be started on kiln startup and the last item to shut down after lime kiln shutdown. This must occur to control preheat and cool down of the kilns to prevent damage to internal refractory. Computer system interlocks are used to assure proper startup and shutdown. The condition of the fabric filter bags is monitored continuously by the COMS.
Rotary Lime Kiln – 500 TPD 4-RK-2	
	Each dust collector is equipped with a Bag Leak Detection System (BLDS) for operational purposes only. The BLDS is able to detect excess particulate matter exiting the dust collector in very small quantities, often prior to causing a significant increase in opacity on the COMS. The BLDS is able to determine the specific module (there are four in each dust collector) and row of bags causing the particulate matter detection. That

Emission Unit	Discussion
	information, combined with regular tracking of stack opacity through the COMS, allows Greer to determine when bag(s) may need replaced. Kilns are shutdown for scheduled, preventative maintenance approximately every six months. During this time, kiln systems, including the induced draft fan and dust collector are inspected, with work conducted as needed. Preventative maintenance is performed by Greer's on-site maintenance crew or contractors as needed.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The PSH equipment has an opacity limit of 10%. Full enclosures and water sprays are used to minimize dust generation from the affected equipment. The Title V permit and Lime MACT Rule requires monthly visible emission observations and fugitive dust control system inspections for these sources. Any issues identified during VE observations will be corrected using Greer's on-site maintenance crew or contractors as needed.

- (4) *Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:*
- (i) *Calibration and certification of accuracy of each monitoring device;*
 - (ii) *Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;*
 - (iii) *Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (3), and (4)(ii); and*
 - (iv) *Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d).*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	The opacity of exhaust gas released via the stack through the dust collectors is continuously monitored with a COMS. Data is maintained in electronic format by the plant's data acquisition system. The COMS are installed, maintained, calibrated, and operated in accordance with PS-1 of 40 CFR Part 60, Appendix B (specification in effect at the time the monitor was installed).

Tunnel Belt: 4-BC-1	There are no monitoring devices on these fugitive emissions sources. The Title V permit and Lime MACT Rule requires monthly visible emission observations.
Reclaim Belt: 4-BC-2	
4-STB-1 Feed Belt: 4-BC-4	
4-STB-2 Feed Belt: 4-BC-5	
Stone Bin: 4-STB-1	
Stone Bin: 4-STB-2	

(5) *Procedures for monitoring process and control device parameters.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The kilns utilize an Optimizing Control System (OCS) to supplement traditional PLC controls. The OCS continuously determines and implements optimized set points to maintain a required product quality. The system assists the kiln operator in determining the necessary balance of fuel, air, and stone input that results in consistent operation. Over 70 parameters on each kiln are continuously monitored, recorded, and displayed on the kiln operator's computer screens with other remote access terminals available within the plant. Opacity from the dust collectors serving the lime kilns is continuously monitored with a COMS. The measurements are continuously recorded from the monitor and displayed to the kiln operator's computer screens and other remote access plant terminals as with the process parameters. The measurements are viewable as an instantaneous opacity and 6-minute average. Exceedances of the 6-minute block average are recorded and maintained for compliance determination. The kiln operator is in nearly continuous attendance to monitor system alarms and is trained to take any necessary corrective action. Fault conditions occurring with the COMS are also recorded in order to determine if data collected is valid. Total fault condition time will be used to determine if the 95% data availability standard is being met. Startup block averages will be calculated based upon time at coal start to time at production of on spec lime. The opacity average during that period will be compared to the kiln startup emission limit standard.
Rotary Lime Kiln – 500 TPD 4-RK-2	

Tunnel Belt: 4-BC-1	The Title V permit and Lime MACT Rule requires monthly visible emission observations. The results of these observations are recorded in a log that is maintained on site.
Reclaim Belt: 4-BC-2	
4-STB-1 Feed Belt: 4-BC-4	
4-STB-2 Feed Belt: 4-BC-5	
Stone Bin: 4-STB-1	
Stone Bin: 4-STB-2	

- (6) *Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in Table 3 to this subpart, including:*
- (i) *Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and*
 - (ii) *Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1	The opacity limit is 15% per startup period block average per Item 1 in Table 2, Startup and Shutdown Emission Limits, and 15% per 6-minute block average all other times per Item 1 of Table 3, Operating Limits. The COMS will be used to determine if a deviation of the operating limit has occurred. If a deviation occurs, the kiln system and dust collector will be inspected as soon as practicable to determine the cause and necessary corrective action. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. Information on each deviation will be collected and used to record the cause, duration and corrective action taken.
Rotary Lime Kiln – 500 TPD 4-RK-2	

Emission Unit	Discussion
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	These are fugitive emissions sources. The only requirement for these sources is to follow this OM&M plan per Item 5 in Table 3, Operating Limits, and Item 1 of Table 7, Periodic Monitoring for Compliance with Opacity and Visible Emissions Limits.

- (7) *A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.*

Emission Unit	Discussion
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	The opacity monitor provides an indication of the performance condition of the respective dust collector in conjunction with other constantly measured parameters such as temperature and pressure drop. The opacity monitor thereby may be used as a predictive tool. Maintenance functions, bag usage, inventory, and parts purchase orders are tracked and recorded. Maintenance history is used to determine semi-annual outage needs. Kilns are shutdown for scheduled, preventative maintenance approximately every six months. Preventative maintenance is performed by Greer's on-site maintenance crew with assistance from outside contractors as needed. Additionally, in accordance with 40 CFR §63.7113(f), an annual inspection of the ductwork leading to the fabric filter dust collector will be conducted. The results of this annual inspection will be recorded in a log that is maintained on site.

Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	Potential fugitive emissions are minimized by full enclosures. The Title V permit and Lime MACT Rule requires monthly fugitive dust control system inspections.

3. Startup, Shutdown, and Malfunction Plan

A startup, shutdown, and malfunction plan (SSMP) is required by 40 CFR §63.7100(e). The requirements of the SSMP are contained in 40 CFR §63.6(e)(3).

3.1 SSMP Requirements Checklist

The critical elements of the SSMP are shown in the following table.

Item	Summary	Discussion
§63.6(e)(3)(i)	Develop and implement written SSMP.	Ensure emissions are minimized at all times, correct malfunctions as soon as practicable and reduce the reporting burden associated with SSM.
§63.6(e)(3)(iii)	Keep records of SSM events where consistent with the SSMP.	Keep records of SSM events where actions are consistent with the SSMP, but the event may cause an exceedance to an applicable emissions standard. Report these in the semiannual Compliance Report.
§63.6(e)(3)(iv)	Keep records of SSM events where not consistent with the SSMP and immediate reporting obligations.	Keep records of SSM events where actions are NOT consistent with the SSMP, and the event causes an exceedance to an applicable emissions standard. Report actions inconsistent with the SSMP within working 2 days, followed by a letter within 7 working days after the end of the event.
§63.6(e)(3)(v)	Maintain current and previous versions of SSMP.	Current and previous versions of the SSMP are maintained at the affected source and will be made available upon request.
§63.6(e)(3)(vi)	May use other documents to satisfy SSMP requirements.	A formal SSMP has been developed (this document). Other documents and records maintained by the affected facility may be used for recordkeeping.
§63.6(e)(3)(vii)	Administrator may require changes in SSMP.	Revision may be required by the Administrator if the SSMP is inadequate.

§63.6(e)(3)(viii)	Owner may periodically revise SSMP as necessary.	Revision of the SSMP may be made by the owner as necessary to satisfy requirements. Revision must be reported in the semiannual compliance report required by §63.10(d)(5).
§63.6(e)(3)(ix)	Title V permit must address requirement for SSMP.	This requirement will be addressed in the Title V application update to be submitted to WVDAQ as required by the Lime MACT rule.

3.2 Startup and Shutdown Procedures

Emission Unit	Startup and Shutdown Procedures
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	<u>Startup:</u> Before starting a kiln, ensure that the respective fabric filter dust collector and continuous opacity monitoring system (COMS) is operating properly. This is accomplished by the fabric filter dust collector being control interlocked with the lime kiln. COMS operation will be verified visually through the kiln control program by the Kiln Control Operator. If the dust collector and COMS were operating properly prior to shutdown, it is satisfactorily assumed that this equipment will operate properly prior to startup. For purposes of startup, proper operation is defined as no 6-minute block average of 15% or greater for the previous 24-hour period of operation, unless the kiln system was shutdown to correct opacity compliance issues. <u>Shutdown:</u> Before intentionally taking the fabric filter dust collector and COMS out of operation, ensure that the kiln is out of operation which is defined as no longer firing on coal.
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	The full enclosures are in place to minimize fugitive dust regardless if equipment is operating or not.

3.3 Malfunction Events

Emission Unit	Malfunction Events
Rotary Lime Kiln – 400 TPD 4-RK-1 Rotary Lime Kiln – 500 TPD 4-RK-2	<u>Fabric filter dust collector malfunction:</u> If a fabric filter dust collector system is malfunctioning in a manner that consistently causes the opacity limit (>15% in a 6-minute block average) to be exceeded, then the dust collector will be inspected by Greer’s maintenance crew and repaired as soon as safely practicable. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. The cause of the malfunction, malfunction start and end times, and corrective action taken will be recorded. <u>COMS malfunction:</u> If the continuous opacity monitoring system (COMS) is malfunctioning, repairs will be made as soon as practicable. COMS malfunctions are identified by a fault alarm. Fault alarms are recorded by the data acquisition system. Fault alarms will be investigated in a timely manner to determine if the underlying fault condition is harming the validity of COMS data. Most faults can be cleared in-house by performing the manufacturer’s prescribed routine maintenance followed by an on-stack calibration. If this does not correct the fault condition, then the COMS manufacturer will be contacted to secure their technical services. There are some fault alarms that do not negatively impact the validity of the COMS data, but instead are used to notify the operator of an undesirable condition that needs addressed. If the fault alarm is not related to a condition causing invalid data, then those fault times will not be counted as a malfunction. A COMS malfunction is a condition causing invalid data. During a COMS outage caused by a malfunction lasting longer than 24-hours, visible emissions observations by a Method 9 certified observer will be conducted at least once per day during daylight hours. The results will be maintained in a written log and made available for review upon request.

Emission Unit	Malfunction Events
Tunnel Belt: 4-BC-1 Reclaim Belt: 4-BC-2 4-STB-1 Feed Belt: 4-BC-4 4-STB-2 Feed Belt: 4-BC-5 Stone Bin: 4-STB-1 Stone Bin: 4-STB-2	If dust emissions are evident and the 10% opacity limit is in jeopardy of being violated, the full enclosures and/or water sprays will be inspected for defects and corrected as necessary.

Section 4

40 CFR Part 63, Subpart AAAAAA (Lime MACT Rule)



Federal Register

**Monday,
January 5, 2004**

Part II

Environmental Protection Agency

40 CFR Part 63

**National Emission Standards for
Hazardous Air Pollutants for Lime
Manufacturing Plants; Final Rule**

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 63**

[Docket ID No. OAR-2002-0052; FRL-7551-7]

RIN 2060-AG72

National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for the lime manufacturing source category. The lime manufacturing emission units regulated will include lime kilns, lime coolers, and various types of processed stone handling (PSH) operations. The EPA has identified the lime manufacturing industry as a major source of hazardous air pollutant (HAP) emissions including, but not limited to, hydrogen chloride (HCl), antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, mercury, nickel, and selenium. Exposure to these substances has been demonstrated to cause adverse health effects such as cancer; irritation of the lung, skin, and mucus membranes; effects on the central nervous system; and kidney damage. The final NESHAP will require all major sources subject to the rule to meet HAP emission standards reflecting the application of maximum achievable control technology (MACT). Implementation of the final NESHAP will reduce non-volatile and semi-volatile metal HAP emissions from the lime manufacturing industry source category by approximately 6.5 tons per year (tpy) and will reduce emissions of particulate matter (PM) by 5,900 tpy.

EFFECTIVE DATE: January 5, 2004.

ADDRESSES: *Docket.* The EPA has established an official public docket for this action including both Docket ID No. OAR-2002-0052 and Docket ID No. A-95-41. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. All items may not be listed under both docket numbers, so interested parties

should inspect both docket numbers to ensure that they have received all materials relevant to the final rule. The official public docket is available for public viewing at the EPA Docket Center (Air Docket), EPA West, Room B-102, 1301 Constitution Avenue, NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For further information concerning applicability and rule determinations, contact the appropriate State or local agency representative. For information concerning analyses performed in developing the final NESHAP, contact Keith Barnett, U.S. EPA, Emission Standards Division, Minerals and Inorganic Chemicals Group, C504-05, Research Triangle Park, North Carolina 27711, (919) 541-5605, barnett.keith@epa.gov.

SUPPLEMENTARY INFORMATION: *Docket.* The EPA has established an official public docket for this action including both Docket ID No. OAR-2002-0052 and Docket ID No. A-95-41. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. All items may not be listed under both docket numbers, so interested parties should inspect both docket numbers to ensure that they have received all materials relevant to the final rule. Although a part of the official public docket, the public docket does not include Confidential Business Information or other information whose disclosure is restricted by statute. The docket is a dynamic file because information is added throughout the rulemaking process. The docketing system is intended to allow members of the public and industries involved to easily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated standards and their preambles, the contents of the docket, excluding interagency review materials, will serve as the record in the case of judicial review. (See section 307(d)(7)(A) of the Clean Air Act

(CAA).) The regulatory text and other materials related to this rulemaking are available for review in the docket, or copies may be mailed from the Air Docket on request by calling (202) 566-1742. A reasonable fee may be charged for copying docket materials. *Electronic Access.* You may access this **Federal Register** document electronically through the EPA Internet under the "Federal Register" listings at <http://www.epa.gov/fedrgstr/>. An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at <http://www.epa.gov/edocket/> to access the index of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the appropriate docket identification number.

Certain types of information will not be placed in the EPA dockets. Information claimed as confidential business information (CBI) and other information whose disclosure is restricted by statute, which is not included in the official public docket, will not be available for public viewing in EPA's electronic public docket. The EPA's policy is that copyrighted material will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified in this document.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of today's final NESHAP will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of this action will be posted on the TTN's policy and guidance page for final rules at <http://www.epa.gov/ttn/oarpg>. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541-5384.

Regulated Entities. Categories and entities potentially regulated by this action include:

Category	NAICS	Examples of regulated entities
	32741	Commercial lime manufacturing plants.
	33111	Captive lime manufacturing plants at iron and steel mills.
	3314	Captive lime manufacturing plants at nonferrous metal production facilities.

Category	NAICS	Examples of regulated entities
	327125	Producers of dead-burned dolomite (Non-clay refractory manufacturing).

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the applicability criteria in § 63.7081 of the final NESHAP. If you have any questions regarding the applicability of this action to a particular entity, consult the technical contact person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Judicial Review. The NESHAP for Lime Manufacturing were proposed in December 20, 2002 (67 FR 78046). This action announces EPA's final decisions on the NESHAP. Under section 307(b)(1) of the CAA, judicial review of the final NESHAP is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by March 5, 2004. Under section 307(d)(7)(B) of the CAA, only an objection to a rule or procedure raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by the final NESHAP may not be challenged separately in any civil or criminal proceeding brought to enforce these requirements.

Outline. The information presented in this preamble is organized as follows:

I. Introduction

- A. What Is the Purpose of the Final NESHAP?
- B. What Is the Source of Authority for Development of NESHAP?
- C. What Criteria Are Used in the Development of NESHAP?
- D. How Was the Final NESHAP Developed?
- E. What Are the Health Effects of the HAP Emitted From the Lime Manufacturing Industry?
- F. What Are Some Lime Manufacturing Industry Characteristics?
- G. What Are the Processes and Their Emissions at a Lime Manufacturing Plant?

II. Summary of the Final NESHAP

- A. What Lime Manufacturing Plants Are Subject to the Final NESHAP?
- B. How Do We Define the Affected Source and What Emissions Units Are Included?
- C. What Pollutants Are Regulated by the Final NESHAP?
- D. What Are the Emission Limits and Operating Limits?
- E. When Must I Comply With the Final NESHAP?
- F. How Do I Demonstrate Initial Compliance With the Final NESHAP?

- G. How Do I Continuously or Periodically Demonstrate Compliance With the Final NESHAP?
- H. How Do I Determine if My Lime Manufacturing Plant Is a Major Source and Thus Subject to the Final NESHAP?
- III. Summary of Changes Since Proposal
- IV. Summary of Environmental, Energy and Economic Impacts
 - A. How Many Facilities Are Subject to the Final NESHAP?
 - B. What Are the Air Quality Impacts?
 - C. What Are the Water Impacts?
 - D. What Are the Solid Waste Impacts?
 - E. What Are the Energy Impacts?
 - F. What Are the Cost Impacts?
 - G. What Are the Economic Impacts?
- V. Responses To Major Comments
- VI. Statutory and Executive Order Reviews
 - A. Executive Order 12866, Regulatory Planning and Review
 - B. Paperwork Reduction Act
 - C. Regulatory Flexibility Analysis
 - D. Unfunded Mandates Reform Act
 - E. Executive Order 13132, Federalism
 - F. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
 - G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks
 - H. Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use
 - I. National Technology Transfer and Advancement Act
 - J. Congressional Review Act

I. Introduction

A. What Is the Purpose of the Final NESHAP?

The purpose of the final NESHAP is to protect the public health by reducing emissions of HAP from lime manufacturing plants.

B. What Is the Source of Authority for Development of NESHAP?

Section 112(c) of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. We listed Lime Manufacturing in the category of major sources on July 16, 1992 (57 FR 31576). Major sources of HAP are those that have the potential to emit, considering controls, 10 tpy or more of any one HAP or 25 tpy or more of any combination of HAP.

C. What Criteria Are Used in the Development of NESHAP?

Section 112(d) of the CAA requires that we establish NESHAP for the control of HAP from both new and

existing major sources. The CAA requires NESHAP to reflect the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator of EPA determines has been adequately demonstrated. This level of control is commonly referred to as MACT.

The CAA further provides that MACT standards must attain at least a minimum level of stringency, known as the MACT floor. The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing 5 sources for categories or subcategories with fewer than 30 sources) for which the Agency has emissions information.

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of cost of achieving the emissions reductions, any health and environmental impacts, and energy requirements.

D. How Was the Final NESHAP Developed?

We used several resources to develop the final NESHAP, including questionnaire responses from industry, emissions test data, site surveys of lime manufacturing facilities, operating and new source review permits, permit applications, and comments on the proposed rule. We researched the relevant technical literature and existing State and Federal regulations and

consulted and met with representatives of the lime manufacturing industry, State and local representatives of air pollution agencies, Federal agency representatives (e.g., United States Geological Survey) and emission control and emissions measurement device vendors in developing the final NESHAP. We also conducted an extensive emissions test program. Industry representatives provided emissions test data, arranged site surveys of lime manufacturing plants, participated in the emissions test program, reviewed draft questionnaires, provided information about their manufacturing processes and air pollution control technologies, and identified technical and regulatory issues. State representatives provided existing emissions test data, copies of permits and other information.

E. What Are the Health Effects of the HAP Emitted From the Lime Manufacturing Industry?

The HAP emitted by lime manufacturing facilities include, but are not limited to, HCl, antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, mercury, nickel, and selenium. Exposure to these compounds has been demonstrated to cause adverse health effects when present in concentrations higher than those typically found in ambient air.

We have detailed data on each of the currently operating facilities for emissions of HCl. Human exposures to ambient levels of HCl resulting from lime manufacturing facilities' emissions were estimated by industry as part of the risk assessment they conducted for purposes of demonstrating, pursuant to section 112(d)(4) of the CAA, that HCl emissions from lime kilns are below the threshold level of adverse effects, within an ample margin of safety.

We do not have the type of current detailed data on each of the facilities that will be covered by the final NESHAP, and the people living around the facilities, that will be necessary to conduct an analysis to determine the actual population exposures to the metals HAP emitted from these facilities and the potential for resultant health effects. Therefore, we do not know the extent to which the adverse health effects described below occur in the populations surrounding these facilities. However, to the extent the adverse effects do occur, the final NESHAP will reduce emissions and subsequent exposures.

The HAP that will be controlled with the final NESHAP are associated with a variety of adverse health effects, including chronic health disorders (e.g.,

irritation of the lung, skin, and mucus membranes; effects on the central nervous system; cancer; and damage to the kidneys), and acute health disorders (e.g., lung irritation and congestion, alimentary effects such as nausea and vomiting, and effects on the kidney and central nervous system). We have classified three of the HAP—arsenic, chromium, and nickel—as human carcinogens and three others—beryllium, cadmium, and lead—as probable human carcinogens.

F. What Are Some Lime Manufacturing Industry Characteristics?

There are approximately 70 commercial and 40 captive lime manufacturing plants in the U.S., not including captive lime manufacturing operations at pulp and paper production facilities. About 30 of the captive plants in the U.S. produce lime that is used in the beet sugar manufacturing process, but captive lime manufacturing plants are also found at steel, other metals, and magnesia production facilities. Lime is produced in about 35 States and Puerto Rico by about 47 companies, which include commercial and captive producers (except for lime manufacturing plants at pulp and paper production facilities), and those plants which produce lime hydrate only.

G. What Are the Processes and Their Emissions at a Lime Manufacturing Plant?

There are many synonyms for lime, the main ones being quicklime and its chemical name, calcium oxide. High calcium lime consists primarily of calcium oxide, and dolomitic lime consists of both calcium and magnesium oxides. Lime is produced via the calcination of high calcium limestone (calcium carbonate) or other highly calcareous materials such as aragonite, chalk, coral, marble, and shell; or via the calcination of dolomitic limestone. Calcination occurs in a high temperature furnace called a kiln, where lime is produced by heating the limestone to about 2000° F, driving off carbon dioxide in the process. Dead-burned dolomite is a type of dolomitic lime produced to obtain refractory characteristics in the lime.

The kiln is the heart of the lime manufacturing plant, where various fossil fuels (such as coal, petroleum coke, natural gas, and fuel oil) are combusted to produce the heat needed for calcination. There are five different types of kilns: rotary, vertical, double-shaft vertical, rotary hearth, and fluidized bed. The most popular is the rotary kiln, but the double-shaft vertical kiln is an emerging new kiln technology

gaining in acceptance because of its energy efficiency. Rotary kilns may also have preheaters associated with them to improve energy efficiency. As discussed further in this preamble, additional energy efficiency is obtained by routing exhaust from the lime cooler to the kiln, a common practice. Emissions from lime kilns include, but are not limited to, metallic HAP, HCl, PM, sulfur dioxide, nitrogen oxides, and carbon dioxide. These emissions predominately originate from compounds in the limestone feed material and fuels (e.g., metals, sulfur, chlorine) and are formed from the combustion of fuels and the heating of feed material in the kiln.

All types of kilns use external equipment to cool the lime product, except vertical (including double-shaft) kilns, where the cooling zone is part of the kiln. Ambient air is most often used to cool the lime (although a few use water as the heat transfer medium), and typically all of the heated air stream exiting the cooler goes to the kiln to be used as combustion air for the kiln. The exception to this is the grate cooler, where more airflow is generated than is needed for kiln combustion, and consequently a portion (about 40 percent) of the grate cooler exhaust is vented to the atmosphere. We estimate that there are about five to ten kilns in the U.S. that use grate coolers. The emissions from grate coolers include the lime dust (PM) and the trace metallic HAP found in the lime dust.

Lime manufacturing plants may also produce hydrated lime (also called calcium hydroxide) from some of the calcium oxide (or dolomitic lime) produced. Hydrated lime is produced in a hydrator via the chemical reaction of calcium oxide (or magnesium oxide) and water. The hydration process is exothermic, and part of the water in the reaction chamber is converted to steam. A wet scrubber is integrated with the hydrator to capture the lime (calcium oxide and calcium hydroxide) particles carried in the gas steam, with the scrubber water recycled back to the hydration chamber. The emissions from the hydrator are the PM comprised of lime and hydrated lime.

Operations that prepare the feed materials and fuels for the kiln and process the lime product for shipment or further on-site use are found throughout a lime manufacturing plant. The equipment includes grinding mills, crushers, storage bins, conveying systems (such as bucket elevator, belt conveyors), bagging systems, bulk loading or unloading systems, and screening operations. The emissions from these operations include limestone

and lime dust (PM) and the trace metallic HAP found in the dust.

II. Summary of the Final NESHAP

A. What Lime Manufacturing Plants Are Subject to the Final NESHAP?

The final NESHAP will regulate HAP emissions from all new and existing lime manufacturing plants that are major sources, co-located with major sources, or are part of major sources. However, lime manufacturing plants located at pulp and paper mills or at beet sugar factories are not subject to the final NESHAP. Other captive lime manufacturing plants, such as (but not limited to) those at steel mills and magnesia production facilities, will be subject to the final NESHAP. See 67 FR 78053 explaining the basis for these determinations. We define a lime manufacturing plant as any plant which uses a lime kiln to produce lime product from limestone or other calcareous material by calcination. However, we specifically exclude lime kilns that use only calcium carbonate waste sludge from water softening processes as the feedstock. Lime product means the product of the lime kiln calcination process including calcitic lime, dolomitic lime, and dead-burned dolomite.

B. How Do We Define the Affected Source and What Emissions Units Are Included?

The final NESHAP defines the affected source as follows: each lime kiln and its associated cooler, each individual PSH system. The individual types of emission units in a PSH system are conveying system transfer points, bulk loading or unloading systems, screening operations, bucket elevators, and belt conveyors—if they follow the processed stone storage bin or storage pile in the sequence of PSH operations. The materials processing operations (MPO) associated with lime products (such as quicklime and hydrated lime), lime kiln dust handling, quarry or mining operations, limestone sizing operations, and fuels are not subject to today's final NESHAP. Processed stone handling operations are further distinguished in the final NESHAP as follows: (1) Whether their emissions are vented through a stack, (2) whether their emissions are fugitive emissions, (3) whether their emissions are vented through a stack with some fugitive emissions from the partial enclosure, and/or (4) whether the source is enclosed in a building. Finally, lime hydrators and cooler nuisance dust collectors are not included under the

definition of affected source under the final NESHAP.

C. What Pollutants Are Regulated by the Final NESHAP?

The final NESHAP establishes PM emission limits for lime kilns, coolers, and PSH operations with stacks. Particulate matter will be measured solely as a surrogate for the non-volatile and semi-volatile metal HAP. (Particulate matter of course is not itself a HAP, but is a typical and permissible surrogate for HAP metals. See *National Lime Ass'n v. EPA*, 233 F. 3d 625, 637–40 (D.C. Cir., 2000). The final NESHAP also regulate opacity or visible emissions from most of the PSH operations, with opacity also serving as a surrogate for non-volatile and semi-volatile HAP metals.

D. What Are the Emission Limits and Operating Limits?

Emission Limits

The PM emission limit for the existing kilns and coolers is 0.12 pounds PM per ton of stone feed (lb/tsf) for kilns using dry air pollution control systems prior to January 5, 2004. Existing kilns that have installed and operating wet scrubbers prior to January 5, 2004 must meet an emission limit of 0.60 lb/tsf. Kilns which meet the criteria for the 0.60 lb/tsf emission limit must continue to use a wet scrubber for PM emission control in order to be eligible to meet the 0.60 lb/tsf limit. If at any time such a kiln switches to a dry control, they would become subject to the 0.12 lb/tsf PM emission limit, regardless of the type of control device used in the future. The PM emission limit for all new kilns and lime coolers is 0.10 lb/tsf. As a compliance option, these emission limits (except for the 0.60 lb/tsf limit) may be applied to the combined emissions of all the kilns and coolers (assuming the cooler(s) has a separate exhaust vent to the atmosphere) at the lime manufacturing plant. In other words, the sum of the PM emissions from all of the kilns and coolers at the lime manufacturing plant, divided by the sum of the production rates of the kilns at the existing lime manufacturing plant, will be used to determine compliance with the appropriate emission limit for kilns and coolers. If the lime manufacturing plant has both new and existing kilns and coolers, then the emission limit will be an average of the existing and new kiln PM emissions limits, weighted by the annual actual production rates of the individual kilns, except that no new kiln may exceed the PM emission level of 0.10 lb/tsf. Kilns that are required to

meet a 0.60 lb/tsf PM emission limit must meet that limit individually, and may not be included in any averaging calculations.

Emissions from PSH operations that are vented through a stack will be subject to a limit of 0.05 grams PM per dry standard cubic meter (g/dscm) PM and 7 percent opacity. Stack emissions from PSH operations that are controlled by wet scrubbers are subject to the 0.05 g/dscm but not subject to the opacity limit. Fugitive emissions from PSH operations are subject to a 10 percent opacity limit.

For each building enclosing any PSH operation, each of the affected PSH operations in the building must comply individually with the applicable PM and opacity emission limitations discussed above. Otherwise, there must be no visible emissions from the building, except from a vent, and the building's vent emissions must not exceed 0.05 g/dscm and 7 percent opacity. For each fabric filter (FF) that controls emissions from only an individual, enclosed processed stone storage bin, the opacity must not exceed 7 percent. For each set of multiple processed stone storage bins with combined stack emissions, emissions must not exceed 0.05 g/dscm and 7 percent opacity. Because the opacity requirement for PSH operations is used as an indicator that a control device is functioning properly, it is not appropriate, or meaningful, to average the opacity readings from multiple PSH operations. The final rule does not allow averaging of PSH operations.

We are not regulating HCl emissions from lime kilns in the final NESHAP. Under the authority of section 112(d)(4) of the CAA, we have determined that no further control is necessary because HCl is a "health threshold pollutant," and HCl levels emitted from lime kilns are below the threshold value within an ample margin of safety. See generally, 67 FR 78054–057. As explained there, the risk analysis sought to assure that emissions from every source in the category result in exposures less than the threshold level even for an individual exposed at the upper end of the exposure distribution. The upper end of the exposure distribution is calculated using the "high end exposure estimate," defined as a plausible estimate of individual exposure for those persons at the upper end of the exposure distribution, conceptually above the 90th percentile, but not higher than the individual in the population who has the highest exposure. We believe that assuring protection to persons at the upper end of the exposure distribution is consistent with

the "ample margin of safety" requirement in section 112(d)(4).

In the proposed rule, we published the results of the risk analysis on which we based this decision. More information on the risk analysis may be found in the published proposed rule (67 FR 78054–78057) and in the docket. We received only one comment on our risk analysis.

We also are not establishing a limit for mercury emissions from lime kilns. The only control technique would reflect control of the raw materials and/or fossil fuels. This control is not duplicable or replicable. We also determined that an emission limit for mercury based on a beyond-the-MACT-floor option is not justified after consideration of the cost, energy, and non-air environmental impacts. See 67 FR 78057 for additional discussion. We received no adverse comments on this aspect of the rule as proposed.

Operating Limits

For lime kilns that use a wet scrubber PM control device, you are required to maintain the 3-hour block average gas stream pressure drop across the scrubber and the 3-hour block average scrubber liquid flow rate equal to or above the levels for the parameters that were established during the PM performance test.

For kilns using a FF or electrostatic precipitator (ESP) PM control device, you must monitor opacity (as an operating limit) with a continuous opacity monitoring system (COMS). You are required to install and operate the COMS in accordance with Performance Specification 1 (PS-1), 40 CFR part 60, Appendix B, and maintain the opacity level of the lime kiln exhaust at or below 15 percent for each 6-minute block period. Facilities that installed COMS on or before February 6, 2001, should continue to meet the requirements in effect in 40 CFR part 60, Appendix B, at the time of COMS installation unless specifically required to re-certify the COMS by their permitting authority.

As an alternative to a COMS, lime kilns that use ESP or FF PM controls can elect to monitor PM levels with a PM detector that meets the requirements in § 63.7113(e) of the final rule. You must maintain and operate the ESP or FF such that the PM detector alarm is not activated, and the alarm condition does not exist for more than 5 percent of the operating time in each 6-month period.

For lime kilns that use a FF PM control device, you may install, maintain and operate a bag leak detection system (BLDS) as an

alternative to a COMS or PM detector. The FF must be operated and maintained so that the BLDS alarm is not activated, and an alarm condition does not exist for more than 5 percent of the operating time in each 6-month period. The BLDS must 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.

For PSH operation emission points subject to a PM emission limit and controlled by a wet scrubber, you are required to collect and record the exhaust gas stream pressure drop across the scrubber and the scrubber liquid flow rate during the PM performance test. You are required to continuously maintain the 3-hour average gas stream pressure drop across the scrubber and the 3-hour average scrubber liquid flow rate equal to or above the levels for the parameters that were established during the PM performance test.

You are required to prepare a written operations, maintenance, and monitoring (OM&M) plan to cover all affected emission units. The plan must include procedures for proper operation and maintenance of each emission unit and its air pollution control device(s); procedures for monitoring and proper operation of monitoring systems in order to meet the emission limits and operating limits; standard procedures for the use of a BLDS and PM detector; and corrective actions to be taken when there is either a deviation from operating limits, or when PM detector or BLDS alarms indicate corrective action is necessary.

E. When Must I Comply With the Final NESHAP?

The compliance date for existing affected sources is January 5, 2004. (Three years may be needed to install new, or retrofit existing, air pollution control equipment.) A new affected source (*i.e.*, a kiln or PSH system for which construction or reconstruction commenced after December 20, 2002) must be in compliance upon initial startup or January 5, 2007, whichever is later.

F. How Do I Demonstrate Initial Compliance With the Final NESHAP?

Kiln and Coolers

For the kiln and cooler PM emission limit, you must conduct a PM emissions test on the exhaust of each kiln at the lime manufacturing plant and measure the stone feed rate to each kiln during the test. Each individual kiln must meet their applicable PM emission limit

(0.10, 0.12, or 0.60 lb/tsf). Alternately, kilns subject to the 0.10 (new kilns) or 0.12 (existing kilns) lb/tsf PM emission limits are in compliance if the sum of the emissions from these kilns at the lime manufacturing plant, divided by the sum of the stone feed rates entering each of these kilns, do not exceed the applicable PM emission limit, or if the facility has both new and existing kilns, it must not exceed an average of the 0.12 and 0.10 lb/tsf PM emission limits weighted by individual kiln throughput. Kilns subject to the 0.60 lb/tsf PM emission limit can not be included in any averaging scheme. If you have a lime cooler(s) that has a separate exhaust to the atmosphere, you must conduct a PM test on the cooler's exhaust concurrently with the kiln PM test, and add the cooler emissions to the appropriate kiln emissions. For kilns with a wet scrubber, you must collect and record the applicable operating parameters during the PM performance test and then establish the operating limits based on those data.

Processed Stone Handling Operations

For PSH operations with stacks that are subject to PM emission limits, you are required to conduct a PM emissions test on each stack exhaust, and the stack emissions must not exceed the emission limit of 0.05 g/dscm. For PSH operations with stack opacity limits, you are required to conduct a 3-hour test on the exhaust in accordance with Method 9 in Appendix B of 40 CFR part 60, and each of the 30 consecutive, 6-minute opacity averages must not exceed 7 percent. The PSH operations controlled using wet scrubbers do not have an opacity limit, but you are required to collect and record the wet scrubber operating parameters during the PM performance test and then establish the applicable operating limits based on those data.

For PSH operations with fugitive emissions, you are required to conduct a Method 9 test, and each of the consecutive 6-minute opacity averages must not exceed the applicable opacity limit. These Method 9 tests are for 3 hours, but the test duration may be reduced to 1 hour if certain criteria are met. Lastly, Method 9 tests or visible emissions checks may be performed on PSH operations inside of buildings, but additional lighting, improved access to equipment, and temporary installation of contrasting backgrounds may be needed. For additional guidance, see page 116 of the "Regulatory and Inspection Manual for Nonmetallic Minerals Processing Plants," EPA report 305-B-97-008, November 1997.

G. How Do I Continuously or Periodically Demonstrate Compliance With the Final NESHAP?

General

You are required to install, operate, and maintain each required continuous parameter monitoring system (CPMS) such that the CPMS completes a minimum of one cycle of operation for each successive 15-minute period. The CPMS will be required to have valid data from at least three equally spaced data values for that hour during periods that it is not out of control according to your OM&M plan. To calculate the block average for each 3-hour averaging period, you must have at least two of three of the hourly averages for that period using only hourly average values that are based on valid data (*i.e.*, not from out-of-control periods). When required, the 3-hour block average value for each operating parameter must be calculated as the average of each set of three successive 1-hour average values.

You are required to develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the general provisions in 40 CFR 63.6(e)(3).

Kilns and Coolers

For kilns controlled by a wet scrubber, you are required to maintain the 3-hour block average of the exhaust gas stream pressure drop across the wet scrubber greater than, or equal to, the pressure drop operating limit established during the most recent PM performance test. You are also required to maintain the 3-hour block average of the scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the most recent performance test.

Sources opting to monitor PM emissions from an ESP with a PM detector in lieu of monitoring opacity are required to maintain and operate the ESP such that the PM detector alarm is not activated, and alarm condition does not exist for more than 5 percent of the operating time in a 6-month period. Each time the alarm sounds and the owner or operator initiates corrective actions (per the OM&M plan) within 1 hour of the alarm, 1 hour of alarm time will be counted. If inspection of the ESP demonstrates that no corrective actions are necessary, no alarm time will be counted. The sensor on the PM detection system must provide an output of relative PM emissions. The PM detection system must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level. The PM detection systems are

required to be installed, operated, adjusted, and maintained according to the manufacturer's written specifications and recommendations.

Sources opting to monitor PM emissions from a FF with a BLDS or PM detector in lieu of monitoring opacity are required to maintain and operate the FF such that the BLDS or PM detector alarm is not activated, and alarm condition does not exist for more than 5 percent of the operating time in a 6-month period. Each time the alarm sounds and the owner or operator initiates corrective actions (per the OM&M plan) within 1 hour of the alarm, 1 hour of alarm time will be counted. If inspection of the FF demonstrates that no corrective actions are necessary, no alarm time will be counted. The sensor on the BLDS is required to provide an output of relative PM emissions. The BLDS is required to have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level. The BLDS is required to be installed, operated, adjusted, and maintained in accordance with the manufacturer's written specifications and recommendations.

Standard operating procedures for the BLDS and PM detection systems must be incorporated into the OM&M plan. We recommend that for electrodynamic (or other similar technology) BLDS, the standard operating procedures include concepts from EPA's "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). This document may be found on the world wide web at www.epa.gov/ttn/emc.

For kilns and lime coolers monitored with a COMS, you are required to maintain each 6-minute block average opacity level at or below 15 percent opacity. For COMS installed after February 6, 2001, the COMS must be installed and operated in accordance with PS-1, 40 CFR part 60, Appendix B. Facilities that installed COMS on or before February 6, 2001, should continue to meet the requirements in effect in 40 CFR part 60, Appendix B, at the time of COMS installation unless specifically required to re-certify the COMS by their permitting authority.

Processed Stone Handling Operations

For stack emissions from PSH operations which are controlled by a wet scrubber, you are required to maintain the 3-hour average exhaust gas stream pressure drop across the wet scrubber greater than, or equal to, the pressure drop operating limit established during the most recent PM performance test. You are required to also maintain the 3-hour average

scrubbing liquid flow rate greater than, or equal to, the flow rate operating limit established during the most recent PM performance test.

For PSH operations subject to opacity limitations that do not use a wet scrubber control device, you are required to periodically demonstrate compliance as follows. You must conduct a monthly 1-minute visible emissions check of each emissions unit in the affected source. If no visible emissions are observed in six consecutive monthly tests for any emission unit, you may decrease the frequency of testing from monthly to semiannually for that emissions unit. If visible emissions are observed during any semiannual test, you must resume testing of that emissions unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests. If no visible emissions are observed during the semiannual test for any emissions unit, you may decrease the frequency of testing from semiannually to annually for that emissions unit. If visible emissions are observed during any annual test, you must resume visible emissions testing of that emissions unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

If visible emissions are observed during any visible emissions check, you must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test is required to begin within 1 hour of any observation of visible emissions, and the 6-minute opacity reading must not exceed the applicable opacity limit.

H. How Do I Determine if My Lime Manufacturing Plant Is a Major Source and Thus Subject to the Final NESHAP?

The final NESHAP apply to lime manufacturing plants that are major sources, co-located with major sources, or are part of major sources. Each lime facility owner/operator must determine whether their plant is a major or area source since this determines whether the lime manufacturing plant is an affected source under the final NESHAP. Section 112 of the CAA defines a major source as a "stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons/yr or more of any HAP or 25 tons/yr or more of any combination of HAP." This definition requires evaluation of the facility's potential to emit all HAP from

all emission sources in making a determination of whether the source is major or area. However, based on our data analysis, HCl is most likely the HAP that will account for the largest quantity of HAP emissions from a lime manufacturing plant. Although lime manufacturing plants emit HAP metals from most of the emission units at the plant site and organic HAP from the kiln, our analysis indicates that most likely the metal and organic HAP emissions will each be well below the 10 tpy criteria.

We are requiring that all lime manufacturing facilities potentially subject to the final NESHAP demonstrate, with an emissions test, that they emit less than 10 tpy of HCl if they wish to claim area source status. We are allowing three HCl test methods to be used. These are EPA Method 320 or 321 in Appendix A to 40 CFR part 63, or ASTM Method D 6735-01. If ASTM Method D 6735-01 is used, we require that the paired-train option in section 11.2.6 and the post-test analyte spike option in section 11.2.7 be used.

III. Summary of Changes Since Proposal

We proposed a PM standard (as a surrogate for non-mercury HAP metals) of 0.12 lb/tsf reflecting the performance of dry pollution control systems (baghouses). We also solicited comment on having a separate PM standard of 0.60 lb/tsf for kilns controlled with wet scrubbers. In the final rule, we have decided to adopt these two different standards for PM emissions from existing lime kilns. We are also indicating that existing kilns subject to the 0.60 lb/tsf PM emission limit are not to be included in any averaging scheme for demonstrating compliance with a PM standard.

In the proposed NESHAP, we required facilities using wet scrubbers to monitor scrubber pressure drop and liquid flow rate. We have written the final NESHAP to explicitly state that alternative monitoring procedures are allowed under the procedures described in 40 CFR 63.8(f). However, we do not delegate that authority.

The proposed NESHAP stated that you must install, operate, and maintain COMS as required by 40 CFR part 63, subpart A, General Provisions, and according to PS-1 in Appendix B to 40 CFR part 60. We have stated in the rule that COMS installed, relocated, or substantially refurbished after February 6, 2001, must meet the requirements of PS-1 as revised on August 10, 2000. Any COMS installed on or before February 6, 2001, should continue to meet the requirements in effect at the

time of installation unless specifically required by the local regulatory agency to re-certify the COMS in question.

In the proposed NESHAP, we required you to monitor the performance of FF with either a COMS or a PM detector. In the final NESHAP, we are allowing existing facilities to monitor FF performance using daily EPA Method 9, in Appendix A to 40 CFR part 60, visible emission readings if the facility has a positive pressure FF with multiple stacks, or if it is infeasible to install a COMS in accordance with PS-1 in Appendix B to 40 CFR part 60.

In the proposed NESHAP, we allowed three alternatives for monitoring ESP performance. These were a COMS, a PM detector, or monitoring ESP voltage and current. In the final NESHAP, we are allowing only two alternatives, a COMS or a PM detector. There are no requirements to establish ESP voltage and current operating limits.

In the proposed NESHAP, we specified that EPA Method 9 in Appendix A to 40 CFR part 60 should be used to determine opacity from fugitive emissions. We have retained this requirement in the final NESHAP, but we have added additional requirements on how EPA method 9 in Appendix A to 40 CFR part 60 should be implemented to determine fugitive visible emissions. This language was taken directly from 40 CFR 60.675(c)(1).

In the proposed NESHAP, § 63.7120(b) could be interpreted to imply that PSH operations must be continuously monitored. In the final NESHAP, PSH operations are subject to monthly (not continuous) visible emission testing.

In the proposed NESHAP, we required that lime kiln emission testing be conducted at the highest production level reasonably expected to occur. In the final NESHAP, we require that lime kilns be tested under representative operating conditions.

In the proposed NESHAP, we required reporting of deviations from operating, visible emissions, and opacity limits, including those deviations that occur during periods of startup, shutdown, or malfunction. In the final NESHAP, we require that reports are to be made in accordance with 40 CFR 63.10(d).

In the proposed NESHAP, we required testing of all kilns in order to claim area source status. In the final NESHAP, we have included a provision that allows the permitting authority to determine if idled kilns must be tested, and also to determine whether all kilns that use identical feed materials, fuels, and emission controls must still all be tested.

In the proposed NESHAP, the raw material storage bin was the first emission unit in the sequence of lime manufacturing that was part of the affected source. Materials processing operations between the storage bin and the kiln were also covered. In the final NESHAP, material stockpiles prior to the processed stone storage bin are not covered, open processed stone piles are not covered, storage bins are defined as manmade enclosures, and use the term processed stone handling operations instead of materials processing operations.

In the proposed NESHAP, we included as an affected source lime kilns that produced lime product from any calcareous substance. In the final NESHAP, we have excluded lime kilns that produce lime from water softening sludge that contain calcium carbonate.

In the proposed NESHAP, we excluded materials handling operations associated with lime product. In the final NESHAP, we have specifically stated that nuisance dust collectors are part of lime product handling systems and, therefore, are not part of the affected source.

In the proposed NESHAP, we required that facilities use rolling 3-hour averages to show compliance with wet scrubber operating limits. We noted that in the proposed rule, we did not clearly state how to calculate the rolling average. Based on compliance requirements of other NESHAP, we determined that a rolling average was not necessary to ensure compliance, but did increase the complexity of the average calculation and recordkeeping process. Therefore, in the final NESHAP, we require block 3-hour averages instead of rolling 3-hour averages, which is consistent with the requirement to use block averaging required for ESP that choose to monitor using COM.

In the proposed NESHAP, we allowed averaging among all lime kilns and coolers at existing sources, and all new lime kilns and coolers at new sources, but did not allow averaging of existing and new lime kilns and coolers together. In addition, the averaging provisions and equations applied whether or not the facility desired to average. We have written the final NESHAP to state that each individual new lime kiln and its associated cooler must meet a 0.10 lb/tsf PM emission limit, and each individual existing lime kilns and its associated cooler must meet a 0.12 lb/tsf PM emission limit. Averaging is optional, so that if each individual kiln meets its emission limit, averaging is not required. The exception to this is for existing kilns which are subject to the

0.60 lb/tsf PM emission limit. These kilns are not eligible for averaging.

If the lime manufacturing plant has multiple kilns and wants to average kilns together to meet the PM emission limit, this is allowed (with one limitation discussed below, and the exception for kilns subject to the 0.60 lb/tsf PM emission limit noted above) and the averaging equations in the final rule must be used. However, in no case may a new kiln exceed a 0.10 lb/tsf emission limit. Where there are both new and existing lime kilns at a facility, then the PM emission limit will be an average of the existing and new kiln PM emissions limits, weighted by the annual actual production rates of the individual kilns. We believe that allowing averaging is appropriate here because of the identity of the units (kilns and coolers in all cases), and the emissions (same HAP in same type of emissions, since all emissions result from kilns and coolers). Averaged emissions under these circumstances would, thus, still reflect MACT for the affected source. The averaging provisions are included in the final NESHAP as a result of the recommendations of the Small Business Advocacy Panel convened as required by section 609(b) of the Regulatory Flexibility Act (RFA) and improves the compliance flexibility options for small businesses, which is the intent of the RFA.

The only limitation we are requiring on averaging is that any new kiln, when considered alone, must meet the 0.10 lb/tsf emission limit. We do not consider this to be a significant limitation because the most likely averaging scenario involving new and existing kilns will be a facility that erects a new kiln that is designed to meet a level below the 0.10 lb/tsf emission limit. It is also appropriate to prevent a situation where a new kiln could be erected that did not perform at the same level as the best controlled facility.

We are not allowing kilns equipped with wet scrubbers for PM emissions control to be eligible for averaging. As explained more fully below, we are establishing a separate PM emissions standard for kilns equipped with wet scrubbers to avoid potentially forcing

wet scrubbers to be replaced with dry systems, which could lead to less control of SO₂ emissions and atmospheric formation of sulfate PM (a type of PM_{2.5}). These considerations, however, do not justify allowing averaging between kilns with such large differences in PM emission limits. Our intent in allowing averaging was to avoid the situation where some kilns at a facility were slightly above the 0.12 lb/tsf emission limit would have to completely replace existing PM controls for only a slight reduction on overall PM emissions. If we were to allow averaging where some of the kilns only have to meet a 0.60 lb/tsf emission limit, it could result in some kilns being allowed to emit PM at levels significantly above the levels that have been determined to be best control.

We are not allowing averaging for other emission sources. Processed stone handling operations that exhaust through stacks have an emission limit of 0.50 g/dscm. We did not see an advantage to allowing averaging for these operations because they are small compared to the PM emissions for the lime kilns. The other emission limits in the final rule are for PSH operations, and the limits are expressed as opacity. As stated previously, averaging opacity limits is not appropriate. No commenter requested averaging for PSH operations.

In the proposed rule, we defined the affected source as the collection of all of the lime kilns, lime coolers and materials processing operations. We noted that this language could be misinterpreted to imply that a new lime kiln erected at an existing lime manufacturing plant would be considered existing, not new. In the final NESHAP, we have written the language in 40 CFR 63.7082 to make our intent clear. New lime kilns, whether or not they are built at an existing lime manufacturing plant, must meet the PM emission limits for new sources.

IV. Summary of Environmental, Energy and Economic Impacts

We considered water, solid waste, and energy impacts as part of our so-called beyond-the-floor analysis pursuant to section 112(d)(2) of the CAA, which requires consideration of "non-air

quality health and environmental impacts and energy requirements," as well as "the cost of achieving such emissions reduction," in deciding whether or not to adopt standards more stringent than the MACT floor. The following section summarize portions of these analyses.

A. How Many Facilities Are Subject to the Final NESHAP?

There are approximately 110 lime manufacturing plants in the U.S., not including lime production facilities at pulp and paper mills. About 30 of these 110 plants are located at beet sugar manufacturing facilities which are not subject to the final rule. We estimate that 70 percent of the remaining 80 lime manufacturing plants will be major sources co-located with major sources, or part of major sources, and, thus, about 56 lime manufacturing plants will be subject to the final rule. The other 24 facilities will incur a small, one-time cost for HCl testing to demonstrate that they are area sources.

B. What Are the Air Quality Impacts?

We estimate that all sources (not including lime manufacturing plants at beet sugar factories) in the lime manufacturing source category collectively emit approximately 10,720 tpy of HAP. These HAP estimates include emissions of HCl and HAP metals from existing sources and projected new sources over the next 5 years. We estimate that the final NESHAP will reduce HAP metals emissions from the lime manufacturing source category by about 3.6 tpy, and will reduce HCl emissions by about 235 tpy. In addition, we estimate that the final NESHAP will reduce PM emissions by about 3,880 tpy from a baseline level of 16,730 tpy, and the final NESHAP will reduce SO₂ emissions by about 6,150 tpy from a baseline of 34,650 tpy. The roughly 14 percent decrease in HCl and SO₂ emissions is the projected result of uncontrolled sources installing baghouses to comply with the final PM standards.

Table 1 to this preamble summarizes the baseline emissions and emissions reductions.

TABLE 1.—TOTAL NATIONAL BASELINE EMISSIONS AND EMISSIONS REDUCTIONS FOR BOTH NEW AND EXISTING LIME MANUFACTURING PLANTS

Emissions	PM (tpy)	HAP metals (tpy)	HCl (tpy)	SO ₂ (tpy)
Baseline emissions—existing sources	13,588	13.5	8,541	30,783
Baseline emissions—new sources	3,140	2.8	2,161	3,868

TABLE 1.—TOTAL NATIONAL BASELINE EMISSIONS AND EMISSIONS REDUCTIONS FOR BOTH NEW AND EXISTING LIME MANUFACTURING PLANTS—Continued

Emissions	PM (tpy)	HAP metals (tpy)	HCl (tpy)	SO ₂ (tpy)
Total baseline emissions	16,728	16.3	10,702	34,651
Emissions reductions—existing sources	3,786	3.4	235	6,147
Emissions reductions—new sources	96	0.2	0	0
Total emissions reductions	3,882	3.6	235	6,147

The final NESHAP will also result in some offsetting emissions increases. These increases are due to additional emissions that will occur at electricity generating facilities as a result of the need to generate the electricity required to operate the control equipment, and power the fans necessary to overcome control device pressure drop. We estimate these emission increases to be 0.3 tpy for PM, 12.4 tpy for sulfur dioxide (SO₂), and 6.1 tpy for nitrogen oxides (NO_x). It should be noted that these emissions increases are insignificant when compared to the emissions decreases that result from the final NESHAP.

C. What Are the Water Impacts?

We expect overall water consumption for existing sources to increase by about 1,250 million gallons per year from current levels as a result of the final rule. This estimate is based on the assumption that sources will upgrade or replace about 30 percent of the existing wet scrubbers to comply with the PM standards, and these new or upgraded scrubbers will require a higher water flow rate than the scrubbers currently installed. For new sources, we expect no additional water consumption, as we do not expect new sources to install wet scrubbers for PM control.

D. What Are the Solid Waste Impacts?

As a result of the final rule, solid waste will be generated as additional PM is collected in complying with the PM standards. We estimate that about 3,880 tpy of additional solid waste will be generated as a result of today's final rule. This estimate does not include consideration that some of this will most likely be recycled directly to the lime kiln as feedstock or sold as byproduct material (agricultural lime).

E. What Are the Energy Impacts?

We expect electricity demand from existing sources to increase by about 4.0 million kilowatt-hours/yr (kWh/yr) as a result of the final rule. This estimate is based on the assumption that sources will replace existing wet scrubbers with

new, more efficient venturi wet scrubbers (that require more electricity). For new sources, we expect an increase in electricity usage of about 0.1 million kWh/yr as a result of the final rule. This electricity demand is associated with complying with the PM standards for new sources.

F. What Are the Cost Impacts?

The estimated total national capital cost of today's final rule is \$28.2 million. This capital cost applies to projected new and existing sources and includes the cost to purchase and install emissions control equipment (e.g., existing PM control equipment upgrades); monitoring equipment; the costs of initial performance tests; and emissions tests to measure HCl to determine whether a source is a major source, and, hence subject to the final standards.

The estimated annualized costs of the final NESHAP are \$18.0 million. The annualized costs account for the annualized capital costs of the control and monitoring equipment, operation and maintenance costs, periodic monitoring of materials handling operations, and annualized costs of the initial emissions testing.

G. What Are the Economic Impacts?

It should be noted that the economic impacts and social costs described below slightly overestimate the impacts for today's action, for they reflect the higher cost estimates (\$22.4 million annualized costs) associated with the proposed rule.

The results of our economic impact analysis indicate the average price per ton for lime will increase by 2.1 percent (or \$1.17 per metric ton) as a result of the final standards for lime manufacturers. Overall lime production is projected to decrease by 1.8 percent as a result of the final standards. Because of the uncertainty of control cost information for large firms, we accounted for these firms as a single aggregate firm in the economic model, so it is not plausible to estimate closures for large firms. However, among the 19

small firms in this industry, we project that two firms are at risk for closure.

Based on the market analysis, we project the annual social costs of the final rule to be \$20.2 million. As a result of higher prices and lower consumption levels, we project the consumers of lime (both domestic and foreign) will lose \$19.7 million annually, while domestic producer surplus will decline by \$0.8 million. Foreign producers will gain as a result of the final rule with profit increasing by \$0.2 million. For more information regarding the economic impacts, consult the economic impact analysis in the docket for the final rule.

V. Responses to Major Comments

This section presents a summary of responses to major comments. A summary of all comments received and our responses to those comments may be found in Docket ID No. OAR 2002–0052.

Comment: In the preamble to the proposed rule, EPA requested comment on establishing a subcategory for existing kilns equipped with wet scrubbers, if it could be demonstrated factually that there will otherwise be significant environmentally counterproductive effects due to increased emissions of acid gases, increased energy use, or increased water use. Several commenters asked that a subcategory for scrubber-equipped kilns be established since wet scrubbers cannot meet the proposed PM emission limit of 0.12 lb/tsf for existing affected kilns and, therefore, existing kilns with scrubbers will have to replace them with baghouses. They also asserted that in most cases, wet scrubbers have higher annualized costs than baghouses. Therefore, even if a wet scrubber could meet a PM emission limit of 0.12 lb/tsf, facilities will opt to use baghouses due to cost considerations. This will result in an increase in emissions of HCl (a HAP) and SO₂ (a non-HAP criteria pollutant) for a nominal decrease in HAP metal emissions. In later discussions, this same commenter (the industry trade association) pointed out that SO₂ can undergo chemical reactions

in the atmosphere to form sulfate PM, which is a type of PM which is less than 2.5 micrometers in diameter (fine PM). In support of this request, one commenter provided estimates that not establishing the requested wet scrubber subcategory will result in a HAP metals emissions decrease of 3 tpy nationwide, but will result in increased emissions of 2,220 tpy for HCl and 2,475 tpy for SO₂. They also provided data indicating that 46 percent of the increased SO₂ emissions would react to form fine PM in the form of sulfates. They estimate that this would result in an increase of 1,645 tpy of fine PM emissions. Other commenters provided site-specific examples they claimed demonstrated the same effect. One commenter also claimed that the higher operating temperatures of dry systems cause metals to vaporize and pass through a particulate collector, resulting in a lower metal concentration in the captured particulate. As a result, they claimed that even though dry control equipment may reduce HAP metals emissions, the reduction will be minimal, while the release of HCl and SO₂ emissions will increase significantly. The commenter provided data which they claimed show the only conventional pollutant that will be reduced with the installation of a dry control system will be PM and, "fugitive dust emissions from a dry system could more than offset the improved particulate collection on the kiln exhausts."

Response: Standards implementing section 112(d) of the CAA must, of course, be of a minimum level of stringency, usually referred to as the MACT floor. For existing sources, this floor level of control cannot be less stringent than "the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information)." In the final rule, EPA is establishing section 112(d) standards to control emissions of HAP metals, for which PM is a surrogate. None of the commenters challenged that the level of PM emissions reflecting the average of the 12 percent of the best performing sources (for HAP metals reduction) is 0.12 lb/tsf. Notwithstanding, the commenters contended that EPA should subcategorize on the basis of the type of air pollution control device used and then separately determine the floor for each subcategory.

Although the CAA contemplates that EPA may establish subcategories when promulgating MACT standards, subcategorization typically reflects "differences in manufacturing process,

emission characteristics, or technical feasibility" (67 FR 78058). A classic example, provided in the legislative history to CAA section 112(d), is of a different process leading to different emissions and different types of control strategies, the specific example being Soderberg and prebaked anode primary aluminum processes (see *A Legislative History of the Clean Air Act Amendments of 1990*, vol. 1 at 1138–39 (floor debates on Conference Report)).

Normally, it is legally impermissible to subcategorize based on the type of air pollution control device. See *Chemicals Manufacturers Association v. EPA*, 870 F. 2d 177, 218–19 (5th Cir. 1989) modified on different grounds on rehearing 884 F. 2d 253 (5th Cir. 1989) (rejecting subcategorization based on type of control device for purposes of the technology-based standards under the Clean Water Act, which are analogous to the CAA section 112 standards). The problem with subcategorizing on the basis of pollution control device, quite simply, is that it leads to situations where floors are established based on performance of sources that are not the best performing. For example, suppose a source category consists of 100 sources using the same process and having the same emission characteristics, but that 50 sources use control device A to control HAP emissions, and 50 use control device B which is two orders of magnitude less efficient. If one subcategorized based on the type of pollution control device, the MACT floor for the 50 sources with control device B would reflect worst, rather than best performance. Although the disparity in levels of emission control between the best-performing sources here, and the best-performing sources using wet scrubbers is not this dramatic, the difference is nonetheless evident.

Commenters provided no technical data that would justify subcategorizing. Nor are we aware of any. The commenters maintain instead that the best performing sources with respect to HAP metal reduction should not be considered "best performing" because that performance (achieved by use of FF) comes at an environmental cost, namely increased emissions of HCl and SO₂ compared to what lime kilns equipped with wet scrubbers will emit. There is some support for the idea that if an ostensibly best-performing pollution control device creates potentially significant and counterproductive environmental effects, its performance need no longer be considered best due to the counterproductive effects and could justify differentiation in the form of

separate standards. Commenters suggested that the increased emissions of HCl and SO₂ will inevitably result (they maintain) if the owners of lime kilns replace wet scrubbers with baghouses. (The commenters did not suggest, however, that kilns with FF should replace them with a different type of control system to avoid these impacts; they sought the result of separate standards for FF-equipped kilns and wet system-equipped kilns.)

Although it is not clear that the commenters' starting premise, that baghouses are either needed or will be used to achieve the PM standard, is invariably correct (see Response to Comment Document where EPA responds to comments regarding the performance capabilities of venturi wet scrubber systems), EPA estimated at proposal and continues to estimate that at least in some cases, kilns would replace wet scrubbers with dry systems (for example, where it is more economical to do so).

The commenters provided no data to refute that a PM emission limit of a 0.12 lb/tsf represents best control of HAP emissions if we do not create any kiln subcategories. (We note that as part of their comments, they claimed that the higher temperatures of dry PM controls result in metals vaporizing and passing through the PM control. However, the data provided in their comment do not substantiate that claim, and studies done for the Hazardous Waste Combustor NESHAP indicate that all but a few percent of the metals in question exit the kilns as solid particulate.) However, our analysis indicates that the extent to which SO₂ and HCl emissions actually increase may have been overstated by the commenter. The EPA estimates that if all facilities currently using wet scrubbers switched to dry controls, HCl emissions would increase by approximately 1,310 tpy (vs. 1,800 tpy estimated by the commenter), and SO₂ emissions would increase by about 1,830 tpy (vs 2,900 tpy estimated by the commenter). (See the memorandum "Environmental Impacts of Decision on Best Control for Wet Scrubber-Controlled Kilns" in the docket for the final rule.) We do not regard either level of increased HCl emissions as significant. We modeled this emission increase as part of our determination (pursuant to CAA section 112(d)(4)) that emissions of HCl from lime kilns are below an HCl risk threshold within an ample margin of safety. See 67 FR 78054–78057 and the risk analysis in the docket for the final rule. Given this determination, we cannot view these HCl increases as being so significant as

to raise a question whether the best-performing sources with respect to HAP metal reductions are in fact best performing.

The commenters also cited projected increases in the criteria pollutant SO₂. They did not initially address the reductions in PM emissions resulting from the decision not to subcategorize by control device. The EPA estimates that nearly 1,080 tpy of additional PM is removed if all existing kilns were to meet a standard of 0.12 lb/tsf, of which approximately 1.6 tpy are metal HAP. Although EPA may not promulgate standards for non-HAP under CAA section 112(d), Congress expected reductions in emissions of criteria pollutants such as PM to be a benefit of the MACT program. In comparison to estimates of increased emissions of SO₂ and HCl by either the commenter or EPA, the decrease in captured PM emissions (and the attendant decrease in capture of non-mercury metal HAP) is significant.

There is a further consideration, however. Based on the available size distribution data from Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources, 73 percent of the PM emitted directly by lime kilns is coarse PM (PM in the size range of 10 to 2.5 micrometers). Some of the SO₂ emitted to the atmosphere undergoes chemical reactions to form fine PM. (See generally the respective Criteria Documents for PM (EPA/600/P-95/001aF-cF. 3v, 1996) and SO₂ (EPA/600/8-82-029aF-cF. 3v., 1982 and addenda)). Thus, in assessing whether some potential factor might justify a decision that kilns with dry systems are not best performing, some comparison of coarse v. fine PM emissions here is needed.

If we retain a single PM emission limit of 0.12 lb/tsf for all existing kilns, total PM emissions would be reduced (compared to separate standards for kilns with wet scrubbers and dry controls) by an additional 1,080 tpy. Of that number, 630 tpy is fine PM and 450 is coarse PM. The potential amount of increased SO₂ emissions is 1,830. A portion of this 1,830 tpy of SO₂ will be converted in the atmosphere to produce 1,270 tpy of fine PM. Therefore, the incremental impact of a single PM standard of 0.12 lb/tsf for both wet scrubbers and dry controls would be an increase of 640 (1,270-630) tpy in fine PM emissions, and a decrease of 450 tpy in coarse PM emissions. This assumes that all facilities that currently have wet scrubbers switch to dry controls, and that 46 percent of the SO₂ converts to fine PM. The 46 percent conversion estimate used by the commenter is

consistent with information in the respective Criteria Documents for PM and SO₂ discussed above.

As recently summarized by EPA (68 FR 28339, May 23, 2003), scientific studies show ambient PM (both fine and coarse) is associated with a series of adverse health effects. Fine PM is associated with increases in daily mortality. Coarse PM is more strongly linked to morbidity (e.g. hospital admissions). See generally the respective Criteria Documents for PM (EPA/600/P-95/001aF-cF. 3v, 1996) and SO₂ (EPA/600/8-82-029aF-cF. 3v., 1982 and addenda). Therefore, it is difficult to make comparisons between the relative benefits of reducing emissions of fine and coarse PM.

The EPA views this situation as equivocal: It is unclear which of these types of performance is best since on the one hand there is reduced emissions of HAP metals and coarse PM but foregone control of SO₂ and sulfate (fine) PM, and, for kilns controlled with wet systems, the converse. In this situation, and based on these facts, which, with current analytic tools seem to us to be largely in equipoise, we are not prepared to view either wet or dry systems as best performing and instead are promulgating a separate PM standard for each.

The EPA emphasizes that considerations of risk and relative environmental benefits are normally irrelevant to MACT floor determinations (unless expressly authorized by statute, as in CAA section 112(d)(4) as applied in the final rule), since floor standards must reflect the performance of the specified number of designated sources. See *National Lime Ass'n v. EPA*, 233 F. 3d at 640 (considerations of cost and *de minimis* risk cannot be considered in making MACT floor determinations). We are considering these factors in the final rule solely for the purpose of evaluating the commenters' claim that sources using wet and dry control systems should be evaluated separately for MACT floor purposes due to environmental benefits and disbenefits associated with dry and dry control systems.

Comment: One commenter stated that wet scrubbers cannot meet the proposed PM emission limit of 0.12 lb/tsf. They claimed that a wet scrubber manufacturer will only guarantee this limit if less than 1 percent of the particles to be removed are less than 1 micrometer in diameter. The commenter stated that EPA assumes that the average mass diameter of particles in lime kiln gas effluent is 2 micrometers, and that this assumption is based on a single reference, and that reference was

actually fugitive lime dust, not lime kiln particulate. They further claimed that volatilization and homogenous nucleation of potassium chloride particles in the gas stream generates particles in the 0.1 to 0.5 micrometers size range. "As particle size decreases below 1 micrometer, inertial compaction becomes decreasingly effective. Above 0.1 micrometers, Brownian displacement is ineffective. In the range between 0.1 and 0.5 micrometers, neither of these two main particle capture mechanisms relied upon in wet scrubber design is very effective." The commenter presented data from a recent scrubber installation to demonstrate the point.

A second commenter claimed that a scrubber performance efficiency of 99.9 percent will be required to meet the 0.0072 grain/dry standard cubic foot (gr/dscf) particulate concentration which they claimed corresponds to the proposed PM emission limit of 0.12 lb/tsf. The commenter's environmental consultant advised that it is unlikely a wet scrubber with a 35-inch pressure drop could achieve this level of performance with the facility's current inlet exhaust particulate loading.

Response: We have serious technical disagreements with this comment, as set out in the Response to Comment Background Document. However, because EPA feels that some kilns with wet systems would replace them with dry systems to comply with a PM emission limit of 0.12 lb/tsf, the potential tradeoff between coarse PM/HAP metals and fine PM/SO₂ reductions likely will still occur.

Comment: One commenter contended that EPA asserts incorrectly that lime plants will choose high-efficiency venturi scrubbers to replace their current wet scrubbers because high-efficiency venturi scrubbers have lower capital costs and sometimes lower annual costs than FF. They further stated that five of the six model kilns the Agency examined had much higher annualized costs for high-efficiency venturi scrubbers than for FF. This commenter submitted a manufacturer's cost proposal that shows a scrubber with a 35-inch pressure drop costs substantially more than EPA estimates. They conclude from this that lime kilns will be forced to use FF, with attendant increases in HCl and SO₂ emissions. Another commenter stated that the cost for the installation of a FF will be higher than EPA estimated due to the location of existing equipment in the area where the collector should be located, construction of the duct collector in a congested area with plant operations,

and accessibility to existing lime kiln dust handling systems.

Response: Regarding modeled high costs for scrubbers compared to FF, individual models may show this characteristic. However, the distribution of kiln sizes in the lime industry and the allocation of model plants to those kilns shows that estimated nationwide total annual costs for replacing existing wet scrubbers with high-efficiency venturi scrubbers is \$6.6 million. The total annual cost if the existing wet scrubbers are replaced with FF is \$7.0 million. So there is essentially no cost difference on a nationwide basis.

For both types of control system, costs for any specific plant may be more or less than the value shown by the model used to estimate nationwide cost. The plant is expected to buy whatever system its management believes is in the best business interests of the owners, but in the aggregate, estimated annual cost for control systems is about the same whether all plants replace existing equipment with venturi scrubbers or with FF. It is for this reason that EPA is finding that at least some kilns would replace wet systems with dry if required to meet a uniform PM limit of 0.12 lb/tsf.

There were two comments where specific facilities claimed that their costs will be higher than EPA estimated in our model plant analysis. One was a vendor's actual cost proposal for a scrubber with 35-inch w.g. pressure drop, and one was for installation of a FF. Our costs are based on model plants developed from industry responses to questionnaires. Given that we do not have site specific information on every facility, this is a reasonable approach to calculating costs. It is always possible that there are site specific factors that will result in any one facility having higher or lower costs than costs estimated using model plants. Our methodology is based on estimates of basic equipment costs, and factors to calculate direct and indirect capital costs that constitute total capital investment. Unit costs are applied to labor, utilities, waste disposal, and other operating and maintenance costs to obtain direct annual costs. Indirect annualized costs based on capital recovery and other service charges are also estimated and added to direct annual costs to obtain total annual cost. Costing based on a model plant gives an estimate that can be included in an aggregate estimation of costs across all model plants weighted by their representation in the nationwide population. This approach necessarily will not address each specific case found in industry. Therefore, one

facility's reported costs not corresponding to our model plant costs does not indicate that our costs are underestimated. We also note that, except for a comment on flue gas flow which we previously addressed, the commenters did not take exception to the basic equipment costs, energy costs, or cost factors used by us in our model plant assessment of the rule's cost analysis as proposed.

One commenter also mentioned the cost resulting from the location of existing equipment and plant congestion. We have accounted for these costs by including factors for demolition and salvage of existing equipment that will have to be replaced by the new control system. A retrofit factor is also included to account for difficulties in replacing existing equipment with new equipment in an existing plant (see "Costing Algorithm for Venturi Scrubber on Lime Kilns with Existing Scrubbers").

Comment: Several commenters claimed that not establishing a subcategory for scrubber-equipped kilns will adversely affect small businesses. They stated that the annualized cost of upgrading all scrubbers is \$9.45 million, based on EPA's estimate of total annualized costs. According to the commenter, EPA predicts that upgrading these kilns will reduce HAP metals by 3.1 tpy, resulting in a cost effectiveness of \$3.0 million/ton of metal HAP. The commenter stated that EPA's assumption that 30 percent of lime plants are area sources and won't be affected by the final rule reduces the removal of metal HAP attributed to upgrading scrubber-equipped kilns to 2.2 tpy (although the commenter stated that EPA has provided no support for the assumption that 30 percent of lime plants are area sources).

Another commenter noted that EPA's estimated annualized cost for the commenter to install FF is \$2,236,000, which equates to \$9.3 million per ton of particulate HAP control.

Response: Section 112 of the CAA precludes us from considering cost when calculating MACT floors. Therefore, none of the cost issues discussed above are sufficient to support a separate subcategory for existing kilns with wet scrubbers, or otherwise support a different standard.

Though costs cannot be a consideration here, our estimate shows a cost of \$6.6 million to upgrade all scrubbers to meet the rule as proposed, versus the \$9.45 million figure provided by the commenter. Our estimate assumed 70 percent of kilns are located at major sources, and 90 percent of scrubbers would require an upgrade.

This was probable an overly conservative way to estimate costs. In reality, it is reasonable to assume that, on average, the existing scrubbers have only 50 percent of their useful life remaining. Because we allocated all of the capital cost of a new scrubber to the rule, our costs are conservative.

However, we have written the final rule to allow separate PM emission limits for kilns with wet versus dry controls. Therefore, the premise of the comment, that not subcategorizing by control device will adversely affect small business, is now moot. In the final costs, we estimate that only 30 percent of existing wet scrubbers will require upgrade or replacement. As noted previously, because we are allocating all the capital replacement cost to the final rule, our costs are still conservative.

Comment: One commenter objected to EPA's rationale of using PM as a surrogate for controlling toxic metals emissions. The commenter stated that if EPA has sufficient data to indicate that toxic emissions from lime kilns are an ambient air problem, then the regulation should focus on reducing gaseous emissions such as HCl.

Response: By limiting emissions of PM, the final rule will reduce emissions of non-volatile and semi-volatile metal HAP, which are a subset of PM, and are necessarily removed when PM is removed by air pollution control equipment. As stated in the preamble to the proposed rule, air pollution controls for HAP metals are the same as the PM controls used by the lime manufacturing industry, i.e., FF, ESP, and wet scrubbers. These controls capture non-volatile and semi-volatile metal HAP non-preferentially along with other PM, thus making PM an acceptable indicator of these HAP metals. Particulate matter control technology, thus, indiscriminately captures HAP metals along with other particulate. Consequently, it is an appropriate indicator when the technical basis of the standard is performance of back-end particulate control technology.

Another reason for using a surrogate is the lower cost of emissions testing and monitoring for PM as compared to the cost of emissions testing and monitoring for multiple metal HAP that will be required to demonstrate compliance. Because PM control devices control metal HAP to the same efficiency and because of the associated cost savings associated with emissions testing and monitoring, the Agency has promulgated several other NESHAP where PM is a surrogate for non-volatile and semi-volatile metal HAP.

Regarding the commenter's second point concerning regulating emission of

HCl, the preamble to the proposed rule explained in detail the Agency's decision not to regulate HCl emissions from lime kilns. To summarize that discussion, the EPA determined that, under the authority of section 112(d)(4) of the CAA, no further control was necessary because HCl is a threshold pollutant, and HCl levels emitted from lime kilns are below the threshold value within an ample margin of safety to humans and to the environment, and considering the possibility that facilities that currently have wet scrubbers for PM emissions control may switch to dry PM controls. (The CAA section 112(d)(4) analysis also considered the potential for environmental harm posed by HCl emissions from these sources.)

Comment: One commenter stated that the PM emission limit for new lime kilns should be 0.12 lb/tsf, the same as the emission limit for existing kilns. The commenter noted that the proposed limit is based on two 3-hour test runs at one plant. According to the commenter, EPA recognized in the proposal preamble that 3-hour test results are just a snapshot in time and should not be used as the basis for establishing an enforceable standard, and that EPA expressly rejected such an approach when establishing the MACT floor for existing kilns. The commenter stated that data in the docket shows that 0.10 lb/tsf is not continuously achievable by lime kilns, and EPA should not establish a separate PM limit for new lime kilns.

Another commenter stated 0.10 lbs PM/ton stone feed for a new kiln is too restrictive, and EPA does not have adequate data to determine that a FF or scrubber-equipped kiln could achieve this low level of emissions on a sustained basis.

Response: The approach to which the commenter refers whereby EPA rejected the use of the "average or mean" in establishing the MACT floor for existing sources did not refer to the average of individual test runs as implied by the comment. Rather, it refers to EPA's decision to use the median (instead of a simple mean) of the top-performing 12 percent to set the MACT floor. Furthermore, as an indication of the achievability of the technology over the long term, EPA chose to rely on State-imposed permit limits (in conjunction with emissions test data showing that those permit limits are representative of actual performance) in arriving at the MACT floor emission limit.

In test data cited by the commenter, the three-run averages for two sets of emissions tests for the kiln used to set the MACT new PM limit are below (0.079 and 0.091 lb/tsf) the proposed

PM limit of 0.1 lb/tsf for new lime kilns. The commenter noted that one of the test runs was at the proposed 0.1 lb/tsf PM limit and that the proposed 0.1 lb/tsf limit was, therefore, inappropriate.

It is reasonable for EPA to establish a standard based on the same methodology that will be used for complying with that standard. See, e.g., *Chemical Waste Management v. EPA*, 976 F. 2d 2, 34 (D.C. Cir. 1992). We note that compliance with emission limits is normally based on a three-run average which can accommodate occasional elevated results as long as the average is at or below the established limit. Furthermore, the emission test results for five of the six top performing kilns were 0.0091, 0.013, 0.026, 0.027, and 0.091 lb/tsf. These results adequately account for operating variability and indicate that any new kiln using well designed and operated control devices can meet the 0.1 lb/tsf limit. Based on this, we see no basis to state that a 0.10 lb/tsf PM emission limit is not achievable or appropriate.

Comment: One commenter claimed that the proposed NESHAP will require the replacement of their two wet scrubbers with baghouses. They claim there is no space for FF retrofit, and that converting to baghouses will trigger prevention of significant deterioration (PSD) nonattainment review due to increased SO₂ emissions.

Response: While we recognize that a facility may (or may not) have site-specific space restrictions, we have, on average, adequately accounted for these factors by incorporating cost analysis factors to account for retrofit and equipment demolition. We have also allowed a facility 3 years to comply with the final NESHAP. This should allow sufficient time for facilities to replace or upgrade existing equipment during scheduled outages. The averaging provisions in the final NESHAP also provide facilities with additional flexibility concerning replacement or upgrade of existing equipment.

Requiring an existing facility with a wet scrubber to upgrade their PM controls to meet 0.12 lb/tsf will not necessarily trigger new source review (NSR). First, as previously discussed, the facility can choose to replace or upgrade their existing scrubbers, which means there will be no SO₂ (or other collateral pollutant) emissions increase to trigger NSR requirements. Second, if they choose to use a baghouse, they may be able to avoid NSR by qualifying for a pollution control project exclusion (67 FR 80186).

Comment: One commenter stated the particulate matter emission limits

proposed for lime manufacturing kilns and coolers do not represent the maximum achievable control technology and are much less stringent than the limits actually required by the CAA. The commenter noted that the proposed rule discredits performance test data which demonstrate that particulate emissions of less than half the proposed standard for existing plants are routinely achieved by claiming they may not be consistently achievable, but EPA has provided no statistics. The commenter claimed that EPA has chosen instead to base the standards on permit limits, but has selectively eliminated from consideration those permits calling for stringent controls which are currently in place. The commenter gives the examples of Continental Lime which is in compliance with a best available control technology (BACT) limit for PM emissions of 0.05 lb/ton limestone, and Western Lime which is in compliance with a permit limit for PM emissions of 0.06 lb/ton limestone.

The commenter noted that if performance data do not represent achievable emission limits, EPA should consider design standards based on air-to-cloth ratios. The commenter also stated the proposed particulate emission limits for grinders, conveyors, and bins are also based on data which overstate emissions (in nearly all cases) and do not represent MACT. The commenter stated EPA should examine actual performance test data test or actual permit limitations.

Response: The EPA reviewed data on the kilns referred to in the comment. The permit limits cited by the commenter were apparently reported on the EPA Technology Transfer Network (TTN) website. The EPA contacted the Montana Department of Environment and found that the limit for one of these kilns is actually 0.5 lb/tsf and not 0.05 lb/tsf as reported on the TTN website. Also, the complete permit for the other kiln mentioned was located on the Wisconsin Department of Natural Resources website, which showed the permit limit for the kiln in question as being 0.12 lb/tsf rather than the 0.058 lb/tsf as reported on the TTN website. Based on the correct PM permit limits for these two lime sources, EPA's conclusions regarding MACT PM limits for existing and new sources are still appropriate. As the response to the previous question shows, these permit limits are also representative of actual performance.

The floor for grinders, conveyors, and bins is based on the existing new source performance standards (NSPS). We have no data to support a different floor.

Comment: One commenter stated that opacity does not correlate to PM mass emissions. The commenter noted the EPA has stated on several occasions that a COMS can determine opacity, but a COMS cannot determine PM emissions. And if particle density changes but the particle size remains the same, opacity will not change while the mass emission rate will change in proportion to the density change. The commenter agreed that PM is a technically sound surrogate for HAP metals, but disagreed that opacity serves as a surrogate for HAP metals as stated in the proposal preamble.

The commenter stated that a COMS can not be used to evaluate the continuous compliance status of kilns, coolers, or PSH operations that have a mass emission limit. The commenter was not aware of any data that show a definitive link between opacity and mass emissions except in very limited and controlled situations. In addition, the commenter did not understand how a 15 percent 6-minute average opacity limit can be correlated to a 3-hour rolling average PM emission limit of lb/ton of stone feed.

The commenter stated a better alternative is to use a PM continuous emissions monitor system (CEMS) that measures PM mass emissions in units that are directly related to the mass emission limit. The commenter noted that EPA's stated reluctance to use a PM CEMS in the absence of performance specifications is inconsistent with the remainder of the standard, since the use of BLDS and a PM detector are proposed without performance specifications. The commenter also noted that an extractive type PM CEMS designed to operate in wet exhaust streams can provide a direct indication of compliance for wet scrubbers.

Response: We agree that a COMS cannot directly measure PM emissions. However, a properly calibrated and maintained COMS is sufficient to demonstrate long term PM control device performance. The purpose of the monitor is to demonstrate with reasonable certainty that the PM control device is operating as well as it did during the PM emission test used to demonstrate compliance.

We also note that PM CEMS are significantly more expensive to purchase and maintain than a COMS or PM detector. Also, PM CEMS measure concentration, while the basis of the standard is mass per unit of feed input. Because the standard is not based on PM concentration, and no PM CEMS are currently installed and operating on the best controlled kilns, we have no data

to develop a PM standard based on the use of PM CEMS.

Comment: Several commenters stated EPA Method 9 in Appendix A to 40 CFR part 60 should be allowed for a positive pressure baghouse. According to one commenter, the bag leak detector guidance document recognizes that requiring BLDS will be very costly, and stated that the document does not apply to this type of baghouse (EPA's "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997, pg 2). This commenter gave the example of a small business that will be required to have a bag leak detector for each of the eight compartments in its baghouse under the final rule, and whose title V permit allows Method 9 monitoring for the baghouse. According to one commenter, the associated costs of installing a separate bag leak detector or PM CEM sensor on each discharge or new common stack could easily exceed \$1,000,000. The commenter noted that, "baghouse pressure differential readings, together with fan amperage and daily visible emission notations will provide the necessary performance assurance with ample and timely indication of baghouse failures or malfunctions."

Response: We acknowledge that there are precedents for the use of alternatives to COMS, BLDS, and PM detectors on positive pressure baghouses that have multiple stacks. The NESHAP for portland cement, an industry that has similarities to the lime manufacturing industry, allows the use of opacity monitoring using Method 9 in Appendix A of 40 CFR part 60 for kilns having control devices with multiple stacks. Based on this analogous situation, we have decided that existing lime kilns controlled by control devices having multiple stacks will have the option of using Method 9 in Appendix A of 40 CFR part 60 for daily opacity monitoring.

Comment: One commenter stated that a single excursion from operating parameters recorded during a 3-hour compliance test should not constitute a violation. The commenter stated that, "the new source performance standard (NSPS) kilns are the lime industry's top performers, and their monitoring regime should be the benchmark against which monitoring under the MACT rule is prescribed." Since a violation under the NSPS does not occur unless the parameter is greater than 30 percent below the rates established during the performance test, the commenter recommends a 30 percent "buffer" between the permit limit and the 3-hour average recorded during the compliance test. Or, "alternatively, like the Pulp and

Paper MACT, the rule should specify that a violation of the standard does not occur unless 6 or more 3-hour average parameter values are recorded outside the established range within the 6 month reporting period."

The commenter noted that EPA's compliance assurance monitoring (CAM) guidance document states, "Use of only 3 hours of parameter data may not be sufficient to fully characterize parameter values during normal operation." The commenter also noted that language in the proposal preamble cautions against developing enforceable emission standards based on 3-hour compliance tests. The commenter also noted that none of the CAM plans for scrubbers base a permit limit on the 3-hour average reading that occurred during a compliance test, and two of the plans allow a 15 percent buffer to account for variability.

The commenter provided gas pressure drop readings and concurrent PM test data for three kilns, and noted that for each of them, gas pressure drop during one or more 1-hour runs was below the proposed 3-hour average. The commenter stated that under the proposed rules, these readings below the 3-hour average would constitute a violation.

The commenter also stated the final rule should provide an exemption from the PM emission limit during performance testing. The commenter stated, "plant operators may need to conduct a series of performance tests to determine the minimum pressure drop and liquid flow rate levels that will assure compliance for each set of operating conditions used for a particular kiln. Results for these tests are not available until post-test laboratory analyses are completed."

Response: Each owner/operator is required to define the compliance parameters to be monitored in their OM&M plan. Then, during the initial performance tests, they are required to monitor and establish the value or range of the parameters. The 30 percent buffers referred to by the commenters refer to NSPS, which, in general, predate NESHAP. In developing various NESHAP, we determined that the 30 percent buffers were not necessary. For this reason, most NESHAP specify that exceeding an operating parameter over the specified averaging period is a deviation. The commenters also mentioned the Pulp and Paper MACT. However, the Pulp and Paper MACT would appear to be unusual in regards to the allowance for exceedances. The commenters did not provide any rationale why we should add provisions similar to the Pulp and Paper MACT

when other MACT standards do not allow exceedances.

The commenters also referred to a statement in the CAM proposal and guidance document. The CAM rule only applies to emission limitations or standards proposed by the Administration on or before November 15, 1990. Monitoring and control technology have progressed significantly since the technology available when these older rules were developed. Also, facilities have 3 years to install control equipment and learn their processes' operating parameters and set up compliance test conditions that result in operating limits that both result in compliance with the PM emission limit and can be met on a continuous basis. For these reasons, we do not agree that the CAM applies here.

Most operating parameters are required to be calculated as 3-hour averages. This is generally consistent with performance test times. Thus, a 1-hour period of insufficient gas pressure drop will not, by itself, be considered an excursion.

Facilities must complete their performance tests prior to the compliance date. Therefore, they are not required to be in compliance with the emission limits during testing, and there is no reason to provide an exemption.

Comment: In response to EPA's request for comments on the appropriate opacity limit (EPA was considering an opacity limit of 10 to 15 percent), several commenters stated that the opacity standard for lime kilns should be 15 percent, as proposed. One commenter provided additional data in the form of opacity data from four kilns. According to this commenter, the opacity data for selected kilns are not reliable for establishing an opacity standard because they are from visible emission data collected for brief periods of time under poor viewing conditions.

Response: Based on information considered prior to proposal as well as additional information supplied by commenters, EPA is retaining the 15 percent opacity limit for sources controlled using FF and ESP. Information considered by EPA in proposing the opacity limit suggested that the average opacity permit limit of the top performing lime kilns was 15 percent. Information provided by the commenters supporting the proposed opacity limit indicated that opacity levels may vary between 10 and 15 percent even for well operated and maintained kilns. No information was provided supporting a more stringent, or more lenient opacity limit than the one proposed. Therefore, EPA is retaining

the proposed 15 percent opacity limit in the final NESHAP.

Comment: Several commenters requested that the final rule specify a time period during which opacity readings greater than 15 percent are not considered a violation. One commenter requested that a minimum that the final rule state that opacity readings greater than 15 percent for less than 1 percent of the reporting period are not considered to be a violation.

Another commenter noted that they operate two of the top six performers in the industry, and it is impossible not to have occasional readings that would be violations if there were no allowances for them. The commenter's State permits allow 1 percent of operating time per quarter to exceed the opacity limit.

Another commenter suggested other time frames for allowable exceedances. Two commenters referred to the Pulp and Paper MACT as an example of an existing rule with such an exemption.

Response: We find no justification to support allowing excursions above the 15 percent opacity limit. Well operated and maintained control devices will typically operate at opacity levels much lower than 15 percent. Other NESHAP, including the portland cement NESHAP, contain opacity limits for which no exceedances are allowed. Data from limes kilns, cited below, support this. Because we have industry specific data, the Pulp and Paper MACT example is not applicable.

In response to the commenters' concerns about occasional excursions above the opacity limit, there are times when opacity levels above 15 percent are not considered to be a violation of the final rule. These include periods when a control device malfunctions, or is in a period startup or shutdown (as long as the facility follows its SSMP). If opacity levels exceed 15 percent as a result of a control device startup, shutdown, or malfunction, it will not be considered a violation of the opacity limit (see § 63.7121(b) of the final rule). The same is true during periods when a monitoring system malfunctions or is being calibrated (see § 63.7120(b) of the final rule).

Information supplied by one commenter showed opacity readings for several kilns over several days. Nearly all of the readings were well below the 15 percent limit with just a few exceptions for each kiln. The commenter who supplied the opacity readings was asked to supply additional information regarding the opacity excursions above 15 percent. In each instance, the high opacity reading was explained by a startup, shutdown, or

malfunction of the control device or by a malfunctioning monitor or a monitoring system that was undergoing calibration, none of which will be considered a violation of the opacity limit as long as the facility follows its SSMP. Well run and maintained control devices can meet the opacity limit and the occasional excursion above the limit due to control device or monitoring system malfunction will not be a violation of the operating limit.

Comment: One commenter claimed that the economic impacts analysis (EIA) neglected to include some significant costs of implementing the rule, including the cost of dismantling existing equipment, lost sales during downtime, and the cost of re-hiring personnel after plant modifications if scrubbers must be replaced. The commenter also noted that maintenance and supervisory personnel currently do not work evening and weekend shifts, but will likely be required in the event of failure of the recommended monitoring equipment.

A second commenter stated EPA's estimated \$1.17 per ton of lime cost estimate for control costs is low, and the cost to a typical lime producer will be significantly higher. In particular, the commenter noted that the additional power required for high pressure drop scrubbers alone would be approximately \$1.30 per ton of produced lime. In addition, EPA's estimated equipment costs appear to be low.

Response: As discussed in the response to comments regarding a separate subcategory for scrubbers, estimated implementation costs used for the EPA model plants include costs for demolition of existing equipment and credits for salvage value. Because plants have a 3-year period in which to comply with the final NESHAP, it is expected that scheduled downtime will be used for disconnecting an existing scrubber and connecting a new scrubber. As a general practice, building a new scrubber while the existing scrubber remains in operation is preferable to taking the associated kiln out of service for an extended period of time and losing production from the kiln. The plant is expected to use its labor force in the manner normally found for planned downtime. Such labor costs (or savings) would not be attributable to compliance with the final NESHAP.

Power costs for new scrubbers are calculated incrementally, i.e., costs are estimated for the difference between 35-inch w.g. (new scrubbers) and 14 inch w.g. (existing scrubbers). For individual model kilns, summing the power costs and dividing by the model's production rate gives estimated incremental power

costs ranging from \$0.82 to \$1.47/ton of lime. On a nationwide basis, aggregating the model kiln costs apportioned among the affected kiln population provides average costs as estimated by EPA.

Comment: One commenter claimed that the EIA is seriously flawed because it assumes lime producers can pass control costs through to consumers. The commenter maintained that lime producers cannot raise prices. The reasons cited included a highly competitive market due to overcapacity, competition from unregulated sources, the existence of competitive substitutes for most key markets, and significant market resistance. The commenter also claimed that recent history proves that prices cannot be increased. Finally, the commenter stated that because the price increase assumed by EPA is erroneous, EPA's prediction that only two lime plants will close seriously understates the impact. One other commenter also stated that they could not increase prices.

Response: We conducted an economic analysis primarily as part of the Executive Order 12866 analysis and partly to ascertain impacts on small businesses for purposes of compliance with the Small Business Regulatory and Enforcement Fairness Act (SBREFA). The analysis is also used to determine economic impacts of any beyond-the-floor considerations under section 112(d)(2) of the CAA. However, as provided by section 112(d)(3), and confirmed by the D.C. Circuit in the *National Lime* case, considerations of costs are simply irrelevant to determinations of MACT floors. Thus, EPA did not consider any of the economic analysis as part of its floor determinations, and that context should be understood in all of the responses to comments relating to the Agency's economic impact analysis.

The fact that many lime plants are currently operating at less than full capacity implies that their supply curves should be relatively elastic (flat) at current production levels because lime producers can fairly easily change output without running into capacity constraints.

Assuming that the lime industry is very competitive (as stated by the commenter) and has substantial overcapacity implies that the industry marginal cost curve (and the market supply curve) should be relatively flat at current production levels. To the extent that the costs of the lime manufacturing MACT standards increase the marginal costs of lime production, having a very elastic (flat) supply curve is a textbook case where the majority of the costs are passed on to consumers. A highly

competitive market implies, by definition, that individual producers cannot unilaterally increase their prices without losing most, if not all, of their customers. It does not imply that the market price will not increase in response to a general increase in the cost of lime production due to environmental regulations.

It is certainly true that foreign lime suppliers (including suppliers located in Mexico) gain because the final rule applies only to domestic lime producers. However, imports of lime account for an extremely tiny share of the lime market prior to the final rule (about 1 percent nationally), and even a fairly large percentage increase in imports shows up as a very small change in absolute terms. High transportation costs are expected to prevent significant replacement of domestic lime with imported lime.

To examine the historical supply responsiveness in the lime market, we estimated the supply elasticity for lime using data from 1983–2001. These estimates capture the overall change in the quantity of lime supplied in response to a change in the real (inflation-adjusted) price of lime, including any entry or exit of captive suppliers from the market. Based on estimates obtained from the econometric model, the domestic lime supply elasticity was 1.24 at the average price and quantity for the period and 0.98 using the lime price and quantity for 1997, the baseline year for the EIA. The value for the baseline year implies that a 1 percent increase in price would lead lime producers to increase their lime production by 0.98 percent, other things being equal.

For the lime price to remain constant due to entry into the commercial market by captive suppliers, that entry would need to be sufficient that it led to the market supply curve being perfectly elastic. There is no evidence for a perfectly elastic market supply curve due to large-scale entry based on historical estimates of the responsiveness of lime supply to changes in real price.

There are substitutes for lime in many of the markets in which it competes, such as crushed limestone, caustic soda, soda ash, and other products. However, unless the alternatives are perfect substitutes, this does not imply that the price of lime will not increase in response to an increase in production costs.

The fact that lime prices have not increased in recent years despite plant closures and increases in real prices in no way implies that those events do not exert upward pressure on prices. The

relevant comparison is the price with and without those events, not before and after they occur. It is expected that prices would have been even lower if there had not been closures and increases in input prices.

As outlined in the responses to these comments, there is no evidence to support the claim that the assumption that lime price will increase is erroneous, and that the estimated economic impact of the final rule is understated.

Comment: One commenter stated that the EPA economic model for the lime market assumes a nationally perfectly competitive market, but lime prices are primarily dictated by large producers who sell capacity regardless of price.

Response: This comment suggests that large lime producers have market power and, therefore, face a downward sloping demand curve and have some ability to set prices. If large lime producers do possess market power, then profit-maximizing behavior would imply that they would restrict output below the levels expected under perfect competition in order to increase market price to the point that their marginal revenue is equal to their marginal cost. The large producers may have lower marginal costs such that the resulting price makes it difficult for the small producers that take the market price as given to remain in business. However, the presence of market power in the lime industry would tend to increase prices relative to the perfectly competitive case, not decrease them.

Comment: One commenter was concerned over EPA's use of the Acute Exposure Guideline Level (AEGL) in assessing the health risk associated with HCl. While not directly objecting to the conclusions reached by EPA, the commenter noted that the intended use of the AEGL, according to the National Research Council, is in conjunction with "once in a lifetime" exposures for emergency exposures ranging from 10 minutes to 8 hours. Because the AEGL values are intended to be used in conjunction with a single lifetime exposure, they can be higher than short term limits recommended for populations with repeated exposures. It is not clear in the description of the industry analysis, if in their use of AEGL they were contemplating a once in a lifetime exposure or whether exposures would be occurring repeatedly. The commenter stated that EPA should explicitly state how they believe AEGL values should be used in their risk assessment process and what are the possible exposure levels to the public. The commenter was also troubled by the use in the rationale of

both the reference concentration (estimated daily exposure that over a lifetime is not likely to result in significant noncancer effect in humans) and the AEGL (once in a lifetime exposure).

The commenter asked that EPA clarify their position on the use of AEGL values for environmental risk assessments, and whether its use represents a "reasonable methodology" and "consistent with EPA methodology" as claimed in the preamble.

Response: In order to evaluate short-term exposure to hydrochloric acid, EPA reviewed the available acute dose-response values for this compound. Among these, the Calliope reference exposure level (REL) and AEGL-1 values (2.1 and 2.7 mg/M³, respectively) were found to be the most health protective. Since these benchmarks were effectively the same, and AEGL values are products of a Federal effort in which EPA participates, we gave priority to the AEGL. Therefore, the AEGL-1 selected for analysis represented the most appropriate value.

Comment: Several commenters stated the final rule should not require HCl testing of all kilns. The commenters note that in recent years, many lime plants have been forced to idle or infrequently operate kilns at operating plants due to increased fuel cost, reduced customer demand, *etc.*, and start up of every kiln for the purpose of conducting HCl testing will require significant expenditures. This will also result in PM and other emissions that otherwise would not be generated. As a result, it was requested the final rule be written to provide state agencies with the discretion to determine whether testing of all kilns at a lime plant is necessary in order to demonstrate that a plant is an area source.

Response: In the final NESHAP, we have included language allowing the permitting authority discretion concerning whether idle kilns must be tested.

Comment: Several commenters stated that performance testing should be conducted under "representative" conditions rather than under the "highest production level reasonably expected to occur." One commenter noted inconsistencies between what is proposed in Table 4 in the proposed rule and what is required under the General Provisions at 40 CFR 63.7(e)(1). The EPA has recently amended the Cement MACT to fix similar inconsistencies, and the commenter suggested the lime MACT be similarly revised.

Response: We have written the requirement in the final rule to require

testing under representative conditions, which is in agreement with the language in the General Provisions.

Comment: Two commenters stated the final rule should provide a risk-based exemption from the entire rule (not just from HCl standards) for plants at which modeled risks are below health based thresholds. One commenter noted that EPA recently solicited comment on providing risk-based exemptions in proposed MACT standards for several source categories. This commenter strongly supported the view that such exemptions should be provided in MACT standards that impose substantial costs while achieving negligible reductions in risks to public health and stated the lime MACT fits this description.

Response: Other than the decision to not regulate emissions of HCl from lime manufacturing, EPA did not consider and did not request comments on providing risk-based exemptions for lime manufacturing facilities. Although EPA is aware that risk-based exemptions were being discussed in other proposed rules, no decisions have been made by the Agency regarding risk-based exemptions and application to industry groups or individual plants. Due to the uncertainty of how these exemptions would be structured, it would not be appropriate to include these site specific risk-based exemptions in the final rule. Including such a substantive statement change in the final rule without allowing the general public an opportunity to comment would be a violation of the notice and comment requirements found in section 307(d) of the CAA, especially in light of the fact that their inclusion in other proposed rules have generated significant negative public comment.

Comment: One commenter stated the benefits analysis is based on inaccurate assumptions, and presented conclusions regarding reductions in metal HAP that are greatly overstated.

The commenter also claimed that the emission factor for existing uncontrolled stone handling operations is also overstated; it was derived using AP-42 emission factors with "E" ratings. The commenter stated that it presented to the SBREFA Panel a more reliable emission factor for these units that is rated "C" and was revised in 1995.

In addition, the commenter claimed that EPA overstated the amount of new capacity and the emissions from new rotary kilns. The commenter stated, "EPA should either reflect (our) estimates in the preamble to the final rule, or provide a reasoned response to our comments that EPA's estimates are overstated" * * * we believe the best

estimate of metal HAP reductions is 3.5 tons (7,000 pounds) per year. Based on the 56 lime plants predicted to be subject to the MACT rule, this translates into an annual reduction in metal HAP per lime plant of 124 pounds.

Response: We reviewed the new information on PM emissions presented by the commenter, as well as their calculations of baseline emissions and emission reductions resulting from the final rule. In the case of baseline emissions from kilns and coolers, the information provided by the commenter is a more reasonable estimate than the emission factors we used at proposal. Therefore, we revised our baseline PM emissions estimates to incorporate this new information. In the case of emissions from PSH operations, we based our emission estimates on a mass balance approach. This method is reasonably accurate, and we did not revise baseline emission estimates for PSH operations. This resulted in our estimate of metal HAP emission reductions to be changed to 14.4 tpy, compared to an estimate of 23 tpy.

V. Statutory and Executive Order Reviews

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), we are required to determine whether the regulatory action is "significant" and, therefore, subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, OMB notified EPA at proposal that it considered this rulemaking a "significant regulatory action" within the meaning of the Executive Order. The EPA submitted the

proposed rule to OMB for review. Changes made in response to OMB suggestions or recommendations are documented and included in the public record. The OMB has informed EPA that it considers this final action nonsignificant. Therefore, it is not subject to further OMB review. The OMB was briefed on the responses to major comments, and was provided a copy of the regulation and preamble prior to publication. However, they did not request any changes in the final rule.

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to the Office of Management and Budget under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* We have prepared an Information Collection Request (ICR) document (2072.01), and a copy may be obtained from Susan Auby by mail at U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822T), 1200 Pennsylvania Avenue, NW., Washington DC 20460, by e-mail at auby.susan@epa.gov, or by calling (202) 566-1672. You may also download a copy off the Internet at <http://www.epa.gov/icr>. The information requirements are not effective until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emission standards. These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies set forth in 40 CFR part 2, subpart B.

The final rule will require development and implementation of an OM&M plan, which will include inspections of the control devices but will not require any notifications or reports beyond those required by the NESHAP General Provisions (40 CFR part 63, subpart A). The recordkeeping requirements require only the specific information needed to determine compliance.

The annual monitoring, reporting, and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the rule) is estimated to be 7,800 labor hours per year, at a total annual cost of \$621,600. This estimate

includes notifications that facilities are subject to the rule; notifications of performance tests; notifications of compliance status, including the results of performance tests and other initial compliance demonstrations that do not include performance tests; startup, shutdown, and malfunction reports; semiannual compliance reports; and recordkeeping. Total capital/startup costs associated with the testing, monitoring, reporting, and recordkeeping requirements over the 3-year period of the ICR are estimated to be \$1,000,000, with annualized costs of \$377,900.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to: Review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for our regulations are listed in 40 CFR part 9 and 48 CFR chapter 15. When the OMB approves the information collection requirements of the final rule, the EPA will amend the table in 40 CFR part 9 of currently approved ICR control numbers issued by OMB for various regulations.

C. Regulatory Flexibility Analysis

The EPA has prepared a final regulatory flexibility analysis (FRFA) in connection with the final rule. For purposes of assessing the impacts of today's final rule on small entities, a small entity is defined as (1) a small business as a lime manufacturing company with less than 500 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small

entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. Despite the determination that the final rule will have no significant impact on a substantial number of small entities, EPA prepared a Small Business Flexibility Analysis that has all the components of a FRFA. An FRFA examines the impact of the final rule on small entities. The Small Business Flexibility Analysis (which is included in the economic impact analysis) is available for review in the docket, and is summarized below.

It should be noted that the small business impacts described below slightly overestimate the impacts for today's action, for they reflect the higher cost estimates (\$22.4 million) associated with the proposed rule.

Based on SBA's size definitions for the affected industries and reported sales and employment data, EPA identified 19 of the 45 companies owning potentially affected facilities as small businesses. Eight of these 45 companies manufacture beet sugar (which will not be subject to the final NESHAP), three of which are small firms. Further, an additional 3 of the 19 small companies will not be subject to the final NESHAP because they do not manufacture lime in a kiln (e.g., they are only depot or hydration facilities), and/or we do not expect them to be major sources. It is, therefore, expected that 13 small businesses will be subject to the final NESHAP. Although small businesses represent 40 percent of the companies within the source category, they are expected to incur 30 percent of the total industry annual compliance costs of \$18.0 million.

The economic impact analysis we prepared for the final NESHAP includes an estimate of the changes in product price and production quantities for the firms that the final NESHAP would affect. The analysis shows that of the facilities owned by potentially affected small firms, two may shut down rather than incur the cost of compliance with the final rule. Because of the nature of their production processes and existing controls, we expect these two firms will incur significantly higher compliance costs than the other small firms.

Although any facility closure is cause for concern, it should be noted that in general, the burden on most small firms is low when compared to that of large firms. The average annual compliance costs for all small firms is \$358,000, compared to \$592,000 per year for large firms. If the two small firms expected to incur significantly higher control costs are excluded, the average annual compliance cost for the remaining firms

will be \$205,000, which is much less than the average control costs for large firms.

The EPA's efforts to minimize small business impacts have materially improved today's final rule. Economic analysis of provisions under earlier consideration prior to the rule's proposal indicated greater impacts on small businesses than those in today's final rule. For the small companies expected to incur compliance costs, the average total annual compliance cost would have been roughly \$567,000 per small company (compared with \$358,000 in today's final rule). About 85 percent (11 firms) of those small businesses expected to incur compliance costs would have experienced an impact greater than 1 percent of sales (compared with 69 percent of those small businesses in today's final rule). And, 77 percent (10 firms) of those small businesses expected to incur compliance costs would have experienced impacts greater than 3 percent of sales (compared with 31 percent of those small businesses in today's final rule).

Before concluding that the Agency could properly certify today's final rule under the terms of the RFA, EPA conducted outreach to small entities and convened a Panel as required by section 609(b) of the RFA to obtain the advice and recommendations from representatives of the small entities that potentially would be subject to the proposed rule requirements. The Panel convened on January 22, 2002, and was comprised of representatives from OMB, the SBA Office of Advocacy, the EPA Small Business Advocacy Chair, and the Emission Standards Division of the Office of Air Quality Planning and Standards of EPA. The Panel solicited advice from eight small entity representatives (SER), including the National Lime Association (NLA) and member companies and non-member companies of the NLA. On January 30, 2002, the Panel distributed a package of descriptive and technical materials explaining the rule-in-progress to the SER. On February 19, 2002, the Panel met with the SER to hear their comments on preliminary options for regulatory flexibility and related information. The Panel also received written comments from the SER in response to both the outreach materials and the discussions at the meeting.

Consistent with RFA/SBREFA requirements, the Panel evaluated the assembled materials and small-entity comments on issues related to the elements of the initial RFA. A copy of the Panel report is included in the docket for the final rule.

The Panel considered numerous regulatory flexibility options in response to concerns raised by the SER. The major concerns included the affordability and technical feasibility of add-on controls.

These are the Panel recommendations and EPA's responses:

- Recommend that the proposed rule should not include the HCl work practice standard, invoking section 112(d)(4) of CAA.

Response: The proposed rule did not include an emission standard for HCl. The final rule also contains no emission standard for HCl.

- Recommend that in the proposed rule, the MPO in the quarry should not be considered as emission units under the definition of affected source.

Response: The MPO in the quarry were excluded from the definition of affected source in the proposed rule. They are also excluded in the final rule.

- Recommend that the proposed rule allow for the "bubbling" of PM emissions from all of the lime kilns and coolers at a lime plant, such that the sum of all kilns' and coolers' PM emissions at a lime plant would be subject to the PM emission limit, rather than each individual kiln and cooler.

Response: The proposed rule defined the affected source as including all kilns and coolers (among other listed emission units) at the lime manufacturing plant. This would allow the source to average emissions from the kilns and coolers for compliance determination. In the final rule we have retained averaging provisions with the following modifications. New kilns and existing kilns may be averaged together, new kilns must individually meet the 0.10 lb/tsf PM emission limit, and existing kilns subject to the 0.60 lb/tsf PM emission limit may not be included in any averaging scheme. Due to other changes in the rule, the changes in the averaging provisions do not increase the stringency of the final rule compared to the proposed rule.

- Recommend that we request comment on establishing a subcategory for existing kilns that currently have wet scrubbers for PM control because of the potential increase in SO₂ and HCl emissions that may result in complying with the PM standard in the proposed rule.

Response: We requested comment on this issue in the proposed rule. Based on the comments received, we determined that a separate subcategory for scrubber equipped kilns was not appropriate. However, we have included in the final rule separate standards for kilns with dry PM emissions control systems, and wet scrubbers. This change addresses

the underlying concern of the original comment.

- Recommend that we undertake an analysis of the costs and emissions impacts of replacing scrubbers with dry APCD and present the results of that analysis in the preamble; and that we request comment on any operational, process, product, or other technical and/or spatial constraints that would preclude installation of a dry APCD.

Response: We requested comment on these issues in the proposed rule and presented said analysis. We responded to all comments on these issues in the final rule.

- Recommend that the proposed rule allow a source to use the ASTM HCl manual method for the measurement of HCl for area source determinations.

Response: The proposed rule included this provision. This provision has been retained in the final rule.

- Recommend that we clarify in the preamble to the proposed rule that we are not specifically requiring sources to test for all HAP to make a determination of whether the lime plant is a major or area source, and that we solicit public comment on related issues.

Response: The preamble of the proposed rule contained this language. In the final rule, we do not specify that testing for all HAP is required. However, we do not specifically say it is precluded because these determinations are better made on a case-by-case basis by the permitting authority.

- Recommend that we solicit comment on providing the option of using COMS in place of BLDS; recommend that we solicit comment on various approaches to using COMS; and recommend soliciting comment on what an appropriate opacity limit would be.

Response: The preamble of the proposed rule solicited comment on these issues.

- Recommend that EPA take comment on other monitoring options or approaches, including the following: using longer averaging time periods (or greater frequencies of occurrence) for demonstrating compliance with parameter limits; demonstrating compliance with operating parameter limits using a two-tier approach; and the suitability of other PM control device operating parameters that can be monitored to demonstrate compliance with the PM emission limits, in lieu of or in addition to the parameters currently required in the draft rule.

Response: The preamble of the proposed rule solicited comment on these issues.

- Recommend that the incorporation by reference of Chapters 3 and 5 of the American Conference of Governmental

Industrial Hygienists (ACGIH) Industrial Ventilation manual be removed from the proposed rule.

Response: The proposed rule did not include this requirement. This requirement is also not present in today's final rule.

- Recommend that EPA reevaluate the assumptions used in modeling the economic impacts of the standards and conduct a sensitivity analysis using different price and supply elasticities reflective of the industry's claims that there is little ability to pass on control costs to their customers, and there is considerable opportunity for product substitution in a number of the lime industry's markets.

Response: The EIA does include the aforementioned considerations and analyses at proposal. In addition, we have performed additional economic sensitivity analyses for the final rule.

In summary, to better understand the implications of the proposed rule from the industries' perspective, we engaged with the lime manufacturing companies in an exchange of information, including small entities, during the overall rule development. Prior to convening the Panel, we had worked aggressively to minimize the impact of the proposed rule on small entities, consistent with our obligations under the CAA. These efforts are summarized below.

- Lime manufacturing operations at beet sugar plants, of which three are small businesses, will not be affected sources.

- Lime manufacturing plants that produce hydrated lime only will not be affected sources as well.

- We proposed PM emission limits which allow the affected source, including small entities, flexibility in choosing how they will meet the emission limit. And in general, the emission limitations selected are all based on the MACT floor, as opposed to more costly beyond-the-MACT-floor options that we considered. An emission limit for mercury was rejected since it would have been based on a beyond-the-MACT-floor control option.

- We proposed that compliance demonstrations for PSH operations be conducted monthly rather than on a daily basis. This reduced the amount of records needed to demonstrate compliance with the rule when implemented. Furthermore, we proposed the minimum performance testing frequency (every 5 years), monitoring, recordkeeping, and reporting requirements specified in the General Provisions (40 CFR part 63, subpart A).

- Finally, many lime manufacturing plants owned by small businesses will not be subject to the proposed standards because they are area sources.

We received several comments on the economic analysis for the proposed rule. The majority of these comments related to the analysis in general, rather than the initial regulatory flexibility analysis. Two comments that specifically addressed small business concerns follow.

Comment: One commenter claimed that EPA did not perform a sufficient sensitivity analysis of different price and supply elasticities in the EIA as recommended in the Panel's final report.

Response: We estimated the market supply and demand elasticities for lime. The values from the preferred model for 1997 are very close to the primary elasticities used in the main text of the EIA for the proposed rule and are well within the range of elasticities used in the sensitivity analysis in Appendix B of the EIA for the proposed rule. In addition to the preferred model, numerous alternative models were estimated. As with any modeling exercise, there were some differences in results across different model specifications. However, the results were generally similar across specifications and there were no cases in which the estimated supply or demand elasticity fell outside the ranges currently used in the Appendix B sensitivity analysis included in the EIA. Thus, the current analysis adequately responds to SBREFA panel recommendations that a reasonable sensitivity analysis be employed and the empirical evidence is supportive of the current scenario presented in the main text.

Comment: One commenter claimed that although EPA has indicated its rule will have larger impacts on small businesses than large ones, the disparity is even greater than EPA estimates. The reductions in pre-tax earnings presented in the EIA understate losses for small firms because the costs of implementation will be higher than EPA estimates and the price of lime will not increase. They also state that even if only 2 to 3 of the 14 small lime firms close, that would still be closure of 14 percent to 21 percent of the small lime firms in the domestic industry. This seems to be such a significant economic impact that it should encourage the EPA to seriously consider additional ways to minimize the impact on small businesses.

Response: It is unclear what the basis for the first part of this comment is (it seems the same claims they are making

for small firms would also apply to large firms). As far as the second part, to the extent that actual costs differ from EPA estimates, it is possible that the actual losses experienced by firms will be higher or lower than presented in the EIA. However, the costs of implementation currently used for analysis reflect EPA's best estimate of actual costs. The assertion that lime prices cannot increase in response to an increase in production costs is not credible.

We also disagree that the number of small firms at risk of closure, 2 to 3, can be considered a significant number in the context of SBREFA. In any case, EPA has seriously considered ways to minimize the impact on small businesses based on comments from industry and has substantially reduced the costs of the rule relative to the draft of the rule we were considering prior to the small business advocacy review panel. As previously discussed, EPA, along with the SBA and the OMB, convened a panel under the authority of SBREFA to talk with small business representatives on how to mitigate potential impacts to small businesses associated with the lime manufacturing NESHAP. This panel yielded a report that included many recommendations on how potential impacts to small businesses from the proposal could be mitigated. All of these recommendations are reflected in the final rule.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, we generally would be required to prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures by State, local, and tribal governments, in aggregate, or by the private sector, of \$100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least-costly, most cost-effective, or least-burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least-costly, most cost-effective, or least-burdensome alternative if the

Administrator publishes with the final rule an explanation why that alternative was not adopted. Before we establish any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, we would be required to have developed under section 203 of the UMRA a small government agency plan. The plan will be required to provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of our regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

We have determined that the final rule does not contain a Federal mandate that may result in expenditures of \$100 million or more by State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The total cost to the private sector is approximately \$22.4 million per year. The final rule contains no mandates affecting State, local, or tribal governments. Thus, today's final rule is not subject to the requirements of sections 202 and 205 of the UMRA.

We have determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them.

E. Executive Order 13132, Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) requires us to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under Section 6 of Executive Order 13132, we may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or we consult with State and local officials early in the process of developing the proposed regulation. We also may not issue a

regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

If we comply by consulting, Executive Order 13132 requires us to provide to OMB, in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS would be required to include a description of the extent of our prior consultation with State and local officials, a summary of the nature of their concerns and the agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when we transmit a draft final NESHAP with federalism implications to OMB for review pursuant to Executive Order 12866, we would be required to include a certification from the Agency's Federalism Official stating that we have met the requirements of Executive Order 13132 in a meaningful and timely manner.

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The final rule will not impose directly enforceable requirements on States, nor will it preempt them from adopting their own more stringent programs to control emissions from lime manufacturing facilities. Moreover, States are not required under the CAA to take delegation of Federal NESHAP and bear their implementation costs, although States are encouraged and often choose to do so. Thus, Executive Order 13132 does not apply to the final rule.

F. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." The final rule does not have tribal implications, as specified in Executive Order 13175. There are no lime manufacturing plants located on tribal land. Thus, Executive Order 13175 does not apply to the final rule.

G. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that we have reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, we would be required to evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by us.

We interpret Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is based on technology performance and not on health or safety risks.

H. Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

The final rule is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Although compliance with the final rule could possibly lead to increased electricity consumption as sources may replace existing wet scrubbers with venturi wet scrubbers that require more electricity, the final rule will not require that venturi scrubbers be installed, and in fact, there are some alternatives that may decrease electrical demand. Further, the final rule will have no effect on the supply or distribution of energy. Although we considered certain fuels as potential bases for MACT, none of our MACT determinations are based on fuels. Finally, we acknowledge that an interpretation limiting fuel use to the top 6 percent of 'clean HAP' fuels (if they existed) could potentially have adverse implications on energy supply.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. No. 104-113; 15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in their regulatory and procurement

activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through annual reports to the OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

The final rule involves technical standards. The EPA cites the following standards in the final rule: EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 5, 5D, 9, 17, 18, 22, 320, 321. Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. No applicable voluntary consensus standards were identified for EPA Methods 1A, 2A, 2D, 2F, 2G, 5D, 9, 22, and 321. The search and review results have been documented and are placed in the docket (OAR-2002-0052) for the final rule.

The three voluntary consensus standards described below were identified as acceptable alternatives to EPA test methods for the purposes of the final rule.

The voluntary consensus standard ASME PTC 19-10-1981-Part 10, "Flue and Exhaust Gas Analyses," is cited in the final rule for its manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas. This part of ASME PTC 19-10-1981-Part 10 is an acceptable alternative to Method 3B.

The voluntary consensus standard ASTM D6420-99, "Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (GC/MS)," is appropriate in the cases described below for inclusion in the final rule in addition to EPA Method 18 codified at 40 CFR part 60, appendix A, for the measurement of organic HAP from lime kilns.

Similar to EPA's performance-based Method 18, ASTM D6420-99 is also a performance-based method for measurement of gaseous organic compounds. However, ASTM D6420-99 was written to support the specific use of highly portable and automated GC/MS. While offering advantages over the traditional Method 18, the ASTM method does allow some less stringent criteria for accepting GC/MS results than required by Method 18. Therefore, ASTM D6420-99 is a suitable alternative to Method 18 only where the

target compound(s) are those listed in Section 1.1 of ASTM D6420-99, and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.

For target compound(s) not listed in Section 1.1 of ASTM D6420-99, but potentially detected by mass spectrometry, the final rule specifies that the additional system continuing calibration check after each run, as detailed in Section 10.5.3 of the ASTM method, must be followed, met, documented, and submitted with the data report even if there is no moisture condenser used or the compound is not considered water soluble. For target compound(s) not listed in Section 1.1 of ASTM D6420-99, and not amenable to detection by mass spectrometry, ASTM D6420-99 does not apply.

As a result, EPA will cite ASTM D6420-99 in the final rule. The EPA will also cite Method 18 as a GC option in addition to ASTM D6420-99. This will allow the continued use of GC configurations other than GC/MS.

The voluntary consensus standard ASTM D6735-01, "Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method," is an acceptable alternative to EPA Method 320 for the purposes of the final rule provided that the additional requirements described in Section 63.7142 of the final rule are also addressed in the methodology.

In addition to the voluntary consensus standards EPA uses in the final rule, the search for emissions measurement procedures identified 15 other voluntary consensus standards. The EPA determined that 12 of these 15 standards identified for measuring emissions of the HAP or surrogates subject to emission standards in the final rule were impractical alternatives to EPA test methods for the purposes of this rule. Therefore, EPA does not intend to adopt these standards for this purpose. The reasons for this determination can be found in the docket for the final rule.

Three of the 15 voluntary consensus standards identified in this search were not available at the time the review was conducted for the purposes of the final rule because they are under development by a voluntary consensus body: ASME/BSR MFC 13M, "Flow Measurement by Velocity Traverse," for EPA Method 2 (and possibly 1); ASME/BSR MFC 12M, "Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters," for EPA Method 2; and ASTM D6348-98, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier

Transform (FTIR) Spectroscopy," for EPA Method 320.

The standard ASTM D6348-98, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy" has been reviewed by the EPA and comments were sent to ASTM. Currently, the ASTM Subcommittee D22-03 is undertaking a revision of ASTM D6348-98. Upon successful ASTM balloting and demonstration of technical equivalency with the EPA FTIR methods, the revised ASTM standard could be incorporated by reference for EPA regulatory applicability.

Section 63.7112 and Table 4 to subpart A of 40 CFR part 63 list the EPA testing methods included in the final rule. Under §§ 63.7(f) and 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any of the EPA testing methods, performance specifications, or procedures.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the SBREFA, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). The final rule will be effective on January 5, 2004.

List of Subjects in 40 CFR Part 63

Administrative practice and procedure, Air pollution control, Environmental protection, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: August 25, 2003.

Marianne Lamont Horinko,
Acting Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of the Federal Regulations is to be amended as follows:

PART 63—[AMENDED]

■ 1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

Subpart A—[Amended]

■ 2. Part 63 is amended by adding subpart AAAAA to read as follows:

Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

Sec.

What This Subpart Covers

- 63.7080 What is the purpose of this subpart?
 63.7081 Am I subject to this subpart?
 63.7082 What parts of my plant does this subpart cover?
 63.7083 When do I have to comply with this subpart?

Emission Limitations

- 63.7090 What emission limitations must I meet?

General Compliance Requirements

- 63.7100 What are my general requirements for complying with this subpart?

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- 63.7110 By what date must I conduct performance tests and other initial compliance demonstrations?
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 63.7113 What are my monitoring installation, operation, and maintenance requirements?
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- 63.7120 How do I monitor and collect data to demonstrate continuous compliance?
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Notifications, Reports, and Records

- 63.7130 What notifications must I submit and when?
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Other Requirements and Information

- 63.7140 What parts of the General Provisions apply to me?
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- Table 1 to Subpart AAAAA of Part 63—Emission Limits
 Table 2 to Subpart AAAAA of Part 63—Operating Limits
 Table 3 to Subpart AAAAA of Part 63—Initial Compliance with Emission Limits
 Table 4 to Subpart AAAAA of Part 63—Requirements for Performance Tests
 Table 5 to Subpart AAAAA of Part 63—Continuous Compliance with Operating Limits
 Table 6 to Subpart AAAAA of Part 63—Periodic Monitoring for Compliance with Opacity and Visible Emissions Limits
 Table 7 to Subpart AAAAA of Part 63—Requirements for Reports
 Table 8 to Subpart AAAAA of Part 63—Applicability of General Provisions to Subpart AAAAA

What This Subpart Covers**§ 63.7080 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for lime manufacturing plants. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.7081 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a lime manufacturing plant (LMP) that is a major source, or that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions, unless the LMP is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, beet sugar manufacturing plant, or only processes sludge containing calcium carbonate from water softening processes.

(1) An LMP is an establishment engaged in the manufacture of lime product (calcium oxide, calcium oxide with magnesium oxide, or dead burned dolomite) by calcination of limestone, dolomite, shells or other calcareous substances.

(2) A major source of HAP is a plant site that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year from all emission sources at the plant site.

(b) [Reserved]

§ 63.7082 What parts of my plant does this subpart cover?

(a) This subpart applies to each existing or new lime kiln(s) and their associated cooler(s), and processed stone handling (PSH) operations system(s) located at an LMP that is a major source.

(b) A new lime kiln is a lime kiln, and (if applicable) its associated lime cooler,

for which construction or reconstruction began after December 20, 2002, if you met the applicability criteria in § 63.7081 at the time you began construction or reconstruction.

(c) A new PSH operations system is the equipment in paragraph (g) of this section, for which construction or reconstruction began after December 20, 2002, if you met the applicability criteria in § 63.7081 at the time you began construction or reconstruction.

(d) A lime kiln or PSH operations system is reconstructed if it meets the criteria for reconstruction defined in § 63.2.

(e) An existing lime kiln is any lime kiln, and (if applicable) its associated lime cooler, that does not meet the definition of a new kiln of paragraph (b) of this section.

(f) An existing PSH operations system is any PSH operations system that does not meet the definition of a new PSH operations system in paragraph (c) of this section.

(g) A PSH operations system includes all equipment associated with PSH operations beginning at the processed stone storage bin(s) or open storage pile(s) and ending where the processed stone is fed into the kiln. It includes man-made processed stone storage bins (but not open processed stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors. No other materials processing operations are subject to this subpart.

(h) Nuisance dust collectors on lime coolers are part of the lime materials processing operations and are not covered by this subpart.

(i) Lime hydrators are not subject to this subpart.

(j) Open material storage piles are not subject to this subpart.

§ 63.7083 When do I have to comply with this subpart?

(a) If you have a new affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section.

(1) If you start up your affected source before January 5, 2004, you must comply with the emission limitations no later than January 5, 2004, and you must have completed all applicable performance tests no later than July 5, 2004.

(2) If you start up your affected source after January 5, 2004, then you must comply with the emission limitations for new affected sources upon startup of your affected source and you must have completed all applicable performance tests no later than 180 days after startup.

(b) If you have an existing affected source, you must comply with the applicable emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than January 5, 2007.

(c) If you have an LMP that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the deadlines specified in paragraphs (c)(1) and (2) of this section apply.

(1) New affected sources at your LMP you must be in compliance with this subpart upon startup.

(2) Existing affected sources at your LMP must be in compliance with this subpart within 3 years after your source becomes a major source of HAP.

(d) You must meet the notification requirements in § 63.7130 according to the schedule in § 63.7130 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limitations in this subpart.

Emission Limitations

§ 63.7090 What emission limitations must I meet?

(a) You must meet each emission limit in Table 1 to this subpart that applies to you.

(b) You must meet each operating limit in Table 2 to this subpart that applies to you.

General Compliance Requirements

§ 63.7100 What are my general requirements for complying with this subpart?

(a) After your initial compliance date, you must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction.

(b) You must be in compliance with the opacity and visible emission (VE) limits in this subpart during the times specified in § 63.6(h)(1).

(c) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).

(d) You must prepare and implement for each LMP, a written operations, maintenance, and monitoring (OM&M) plan. You must submit the plan to the applicable permitting authority for review and approval as part of the application for a 40 CFR part 70 or 40 CFR part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending

approval by the applicable permitting authority of an initial or amended plan, you must comply with the provisions of the submitted plan. Each plan must contain the following information:

(1) Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable, for each emission unit.

(2) A monitoring schedule for each emission unit.

(3) Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1 and 2 to this subpart, respectively.

(4) Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:

(i) Calibration and certification of accuracy of each monitoring device;

(ii) Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;

(iii) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1), (3), and (4)(ii); and

(iv) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d).

(5) Procedures for monitoring process and control device parameters.

(6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in Table 2 to this subpart, including:

(i) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and

(ii) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.

(7) A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

(e) You must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in § 63.6(e)(3).

Testing and Initial Compliance Requirements

§ 63.7110 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) If you have an existing affected source, you must complete all applicable performance tests within January 5, 2007, according to the provisions in §§ 63.7(a)(2) and 63.7114.

(b) If you have a new affected source, and commenced construction or reconstruction between December 20, 2002, and January 5, 2004, you must demonstrate initial compliance with either the proposed emission limitation or the promulgated emission limitation no later than 180 calendar days after January 5, 2004 or within 180 calendar days after startup of the source, whichever is later, according to §§ 63.7(a)(2)(ix) and 63.7114.

(c) If you commenced construction or reconstruction between December 20, 2002, and January 5, 2004, and you chose to comply with the proposed emission limitation when demonstrating initial compliance, you must conduct a demonstration of compliance with the promulgated emission limitation within January 5, 2007 or after startup of the source, whichever is later, according to §§ 63.7(a)(2)(ix) and 63.7114.

(d) For each initial compliance requirement in Table 3 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within existing affected sources at LMP begins at 12:01 a.m. on the compliance date for existing affected sources, that is, the day following completion of the initial compliance demonstration, and ends at 3:01 a.m. on the same day.

(e) For each initial compliance requirement in Table 3 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within new or reconstructed affected sources at LMP begins at 12:01 a.m. on the day following completion of the initial compliance demonstration, as required in paragraphs (b) and (c) of this section, and ends at 3:01 a.m. on the same day.

§ 63.7111 When must I conduct subsequent performance tests?

You must conduct a performance test within 5 years following the initial performance test and within 5 years following each subsequent performance test thereafter.

§ 63.7112 What performance tests, design evaluations, and other procedures must I use?

(a) You must conduct each performance test in Table 4 to this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements in § 63.7(e)(1) and under the specific conditions specified in Table 4 to this subpart.

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1).

(d) Except for opacity and VE observations, you must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour.

(e) The emission rate of particulate matter (PM) from each lime kiln (and each lime cooler if there is a separate exhaust to the atmosphere from the lime cooler) must be computed for each run using Equation 1 of this section:

$$E = (C_k Q_k + C_c Q_c) / PK \quad (\text{Eq. 1})$$

Where:

E = Emission rate of PM, pounds per ton (lb/ton) of stone feed.

C_k = Concentration of PM in the kiln effluent, grain/dry standard cubic feet (gr/dscf).

Q_k = Volumetric flow rate of kiln effluent gas, dry standard cubic feet per hour (dscf/hr).

C_c = Concentration of PM in the cooler effluent, grain/dscf. This value is zero if there is not a separate cooler exhaust to the atmosphere.

Q_c = Volumetric flow rate of cooler effluent gas, dscf/hr. This value is zero if there is not a separate cooler exhaust to the atmosphere.

P = Stone feed rate, tons per hour (ton/hr).

K = Conversion factor, 7000 grains per pound (grains/lb).

(f)(1) If you choose to meet a weighted average emission limit as specified in item 4 of Table 1 to this subpart, you must calculate a combined particulate emission rate from all kilns and coolers within your LMP using Equation 2 of this section:

$$E_T = \sum_{i=1}^n E_i P_i / \sum_{i=1}^n P_i \quad (\text{Eq. 2})$$

Where:

E_T = Emission rate of PM from all kilns and coolers, lb/ton of stone feed.

E_i = Emission rate of PM from kiln i, or from kiln/cooler combination i, lb/ton of stone feed.

P_i = Stone feed rate to kiln i, ton/hr.

n = Number of kilns you wish to include in averaging.

(2) You do not have to include every kiln in this calculation, only include kilns you wish to average. Kilns that have a PM emission limit of 0.60 lb/tsf are ineligible for any averaging.

(g) The weighted average PM emission limit from all kilns and coolers for which you are averaging must be calculated using Equation 3 of this section:

$$E_{TN} = \sum_{j=1}^m E_j P_j / \sum_{j=1}^m P_j \quad (\text{Eq. 3})$$

Where:

E_{TN} = Weighted average PM emission limit for all kilns and coolers being included in averaging at the LMP, lb/ton of stone feed.

E_j = PM emission limit (0.10 or 0.12) for kiln j, or for kiln/cooler combination j, lb/ton of stone feed.

P_j = Stone feed rate to kiln j, ton/hr.

m = Number of kilns and kiln/cooler combinations you are averaging at your LMP. You must include the same kilns in the calculation of E_T and E_{TN} . Kilns that have a PM emission limit of 0.60 lb/tsf are ineligible for any averaging.

(h) Performance test results must be documented in complete test reports that contain the information required by paragraphs (h)(1) through (10) of this section, as well as all other relevant information. The plan to be followed during testing must be made available to the Administrator at least 60 days prior to testing.

(1) A brief description of the process and the air pollution control system;

(2) Sampling location description(s);

(3) A description of sampling and analytical procedures and any modifications to standard procedures;

(4) Test results, including opacity;

(5) Quality assurance procedures and results;

(6) Records of operating conditions during the test, preparation of standards, and calibration procedures;

(7) Raw data sheets for field sampling and field and laboratory analyses;

(8) Documentation of calculations;

(9) All data recorded and used to establish operating limits; and

(10) Any other information required by the test method.

(i) [Reserved]

(j) You must establish any applicable 3-hour block average operating limit indicated in Table 2 to this subpart according to the applicable requirements in Table 3 to this subpart and paragraphs (j)(1) through (4) of this section.

(1) Continuously record the parameter during the PM performance test and include the parameter record(s) in the performance test report.

(2) Determine the average parameter value for each 15-minute period of each test run.

(3) Calculate the test run average for the parameter by taking the average of all the 15-minute parameter values for the run.

(4) Calculate the 3-hour operating limit by taking the average of the three test run averages.

(k) For each building enclosing any PSH operations that is subject to a VE limit, you must conduct a VE check according to item 18 in Table 4 to this subpart, and in accordance with paragraphs (k)(1) through (3) of this section.

(1) Conduct visual inspections that consist of a visual survey of the building over the test period to identify if there are VE, other than condensed water vapor.

(2) Select a position at least 15 but not more 1,320 feet from each side of the building with the sun or other light source generally at your back.

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A to part 60 of this chapter, but must meet the training requirements as described in EPA Method 22 in appendix A to part 60 of this chapter.

(l) When determining compliance with the opacity standards for fugitive emissions from PSH operations in item 7 of Table 1 to this subpart, you must conduct EPA Method 9 in appendix A to part 60 of this chapter according to item 17 in Table 4 to this subpart, and in accordance with paragraphs (l)(1) through (3) of this section.

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun must be followed.

(3) If you use wet dust suppression to control PM from PSH operations, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered VE. When a water mist of this nature is present, you must observe emissions at a point in the plume where the mist is no longer visible.

§ 63.7113 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to your OM&M plan required by § 63.7100(d) and paragraphs (a)(1) through (5) of this section, and you must install, operate, and maintain each continuous opacity monitoring system (COMS) as required by paragraph (g) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period.

(2) To calculate a valid hourly value, you must have at least four equally spaced data values (or at least two, if that condition is included to allow for periodic calibration checks) for that hour from a CPMS that is not out of control according your OM&M plan, and use all valid data.

(3) To calculate the average for each 3-hour block averaging period, you must use all valid data, and you must have at least 66 percent of the hourly averages for that period using only hourly average values that are based on valid data (*i.e.*, not from out-of-control periods).

(4) You must conduct a performance evaluation of each CPMS in accordance with your OM&M plan.

(5) You must continuously operate and maintain the CPMS according to the OM&M plan, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(b) For each flow measurement device, you must meet the requirements in paragraphs (a)(1) through (5) and (b)(1) through (4) of this section.

(1) Use a flow sensor with a minimum tolerance of 2 percent of the flow rate.

(2) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(3) Conduct a flow sensor calibration check at least semiannually.

(4) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(c) For each pressure measurement device, you must meet the requirements in paragraphs (a)(1) through (5) and (c)(1) through (7) of this section.

(1) Locate the pressure sensor(s) in or as close to as possible a position that provides a representative measurement of the pressure.

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a gauge with a minimum tolerance of 0.5 inch of water or a

transducer with a minimum tolerance of 1 percent of the pressure range.

(4) Check pressure tap pluggage daily.

(5) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

(6) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(7) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(d) For each bag leak detection system (BLDS), you must meet any applicable requirements in paragraphs (a)(1) through (5) and (d)(1) through (8) of this section.

(1) The BLDS must 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.

(2) The sensor on the BLDS must provide output of relative PM emissions.

(3) The BLDS must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level.

(4) The alarm must be located in an area where appropriate plant personnel will be able to hear it.

(5) For a positive-pressure fabric filter (FF), each compartment or cell must have a bag leak detector (BLD). For a negative-pressure or induced-air FF, the BLD must be installed downstream of the FF. If multiple BLD are required (for either type of FF), the detectors may share the system instrumentation and alarm.

(6) Bag leak detection systems must be installed, operated, adjusted, and maintained according to the manufacturer's written specifications and recommendations. Standard operating procedures must be incorporated into the OM&M plan.

(7) At a minimum, initial adjustment of the system must consist of establishing the baseline output in both of the following ways:

(i) Adjust the range and the averaging period of the device.

(ii) Establish the alarm set points and the alarm delay time.

(8) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the OM&M plan required by § 63.7100(d). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless a responsible official, as defined

in § 63.2, certifies in writing to the Administrator that the FF has been inspected and found to be in good operating condition.

(e) For each PM detector, you must meet any applicable requirements in paragraphs (a)(1) through (5) and (e)(1) through (8) of this section.

(1) The PM detector must 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.

(2) The sensor on the PM detector must provide output of relative PM emissions.

(3) The PM detector must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level.

(4) The alarm must be located in an area where appropriate plant personnel will be able to hear it.

(5) For a positive-pressure electrostatic precipitator (ESP), each compartment must have a PM detector. For a negative-pressure or induced-air ESP, the PM detector must be installed downstream of the ESP. If multiple PM detectors are required (for either type of ESP), the detectors may share the system instrumentation and alarm.

(6) Particulate matter detectors must be installed, operated, adjusted, and maintained according to the manufacturer's written specifications and recommendations. Standard operating procedures must be incorporated into the OM&M plan.

(7) At a minimum, initial adjustment of the system must consist of establishing the baseline output in both of the following ways:

(i) Adjust the range and the averaging period of the device.

(ii) Establish the alarm set points and the alarm delay time.

(8) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the OM&M plan required by § 63.7100(d). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless a responsible official as defined in § 63.2 certifies in writing to the Administrator that the ESP has been inspected and found to be in good operating condition.

(f) For each emission unit equipped with an add-on air pollution control device, you must inspect each capture/ collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating

requirements in item 6 of Table 2 to this subpart and record the results of each inspection.

(g) For each COMS used to monitor an add-on air pollution control device, you must meet the requirements in paragraphs (g)(1) and (2) of this section.

(1) Install the COMS at the outlet of the control device.

(2) Install, maintain, calibrate, and operate the COMS as required by 40 CFR part 63, subpart A, General Provisions and according to Performance Specification (PS)–1 of appendix B to part 60 of this chapter. Facilities that operate COMS installed on or before February 6, 2001, may continue to meet the requirements in effect at the time of COMS installation unless specifically required to re-certify the COMS by their permitting authority.

§ 63.7114 How do I demonstrate initial compliance with the emission limitations standard?

(a) You must demonstrate initial compliance with each emission limit in Table 1 to this subpart that applies to you, according to Table 3 to this subpart. For existing lime kilns and their associated coolers, you may perform VE measurements in accordance with EPA Method 9 of appendix A to part 60 in lieu of installing a COMS or PM detector if any of the conditions in paragraphs (a)(1) through (3) of this section exist:

(1) You use a FF for PM control, and the FF is under positive pressure and has multiple stacks; or

(2) The control device exhausts through a monovent; or

(3) The installation of a COMS in accordance with PS–1 of appendix B to part 60 is infeasible.

(b) You must establish each site-specific operating limit in Table 2 to this subpart that applies to you according to the requirements in § 63.7112(j) and Table 4 to this subpart. Alternative parameters may be monitored if approval is obtained according to the procedures in § 63.8(f).

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7130(e).

Continuous Compliance Requirements

§ 63.7120 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required quality assurance or control activities (including, as applicable, calibration

checks and required zero adjustments), and except for PSH operations subject to monthly VE testing, you must monitor continuously (or collect data at all required intervals) at all times that the emission unit is operating.

(c) Data recorded during the conditions described in paragraphs (c)(1) through (3) of this section may not be used either in data averages or calculations of emission or operating limits; or in fulfilling a minimum data availability requirement. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(1) Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;

(2) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and

(3) Start-ups, shutdowns, and malfunctions.

§ 63.7121 How do I demonstrate continuous compliance with the emission limitations standard?

(a) You must demonstrate continuous compliance with each emission limitation in Tables 1 and 2 to this subpart that applies to you according to the methods specified in Tables 5 and 6 to this subpart.

(b) You must report each instance in which you did not meet each operating limit, opacity limit, and VE limit in Tables 2 and 6 to this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. These instances are deviations from the emission limitations in this subpart. These deviations must be reported according to the requirements in § 63.7131.

(c) You must operate in accordance with the SSMP during periods of startup, shutdown, and malfunction.

(d) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the SSMP. The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

(e) For each PSH operation subject to an opacity limit as specified in Table 1 to this subpart, and any vents from buildings subject to an opacity limit, you must conduct a VE check according

to item 1 in Table 6 to this subpart, and as follows:

(1) Conduct visual inspections that consist of a visual survey of each stack or process emission point over the test period to identify if there are VE, other than condensed water vapor.

(2) Select a position at least 15 but not more 1,320 feet from the affected emission point with the sun or other light source generally at your back.

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A to part 60 of this chapter, but must meet the training requirements as described in EPA Method 22 of appendix A to part 60 of this chapter.

(f) For existing lime kilns and their associated coolers, you may perform VE measurements in accordance with EPA Method 9 of appendix A to part 60 in lieu of installing a COMS or PM detector if any of the conditions in paragraphs (f)(1) or (3) of this section exist:

(1) You use a FF for PM control, and the FF is under positive pressure and has multiple stacks; or

(2) The control device exhausts through a monovent; or

(3) The installation of a COMS in accordance with PS–1 of appendix B to part 60 is infeasible.

Notification, Reports, and Records

§ 63.7130 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.6(h)(4) and (5); 63.7(b) and (c); 63.8(e); (f)(4) and (6); and 63.9 (a) through (j) that apply to you, by the dates specified.

(b) As specified in § 63.9(b)(2), if you start up your affected source before January 5, 2004, you must submit an initial notification not later than 120 calendar days after January 5, 2004.

(c) If you startup your new or reconstructed affected source on or after January 5, 2004, you must submit an initial notification not later than 120 calendar days after you start up your affected source.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, as required in § 63.7(b)(1).

(e) If you are required to conduct a performance test, design evaluation, opacity observation, VE observation, or other initial compliance demonstration as specified in Table 3 or 4 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 3 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(2) For each compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 4 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to § 63.10(d)(2).

§ 63.7131 What reports must I submit and when?

(a) You must submit each report listed in Table 7 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date specified in Table 7 to this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section:

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.7083 and ending on June 30 or December 31, whichever date is the first date following the end of the first half calendar year after the compliance date that is specified for your source in § 63.7083.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first half calendar year after the compliance date that is specified for your affected source in § 63.7083.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, if the permitting authority has established dates for submitting semiannual reports pursuant to

§§ 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter, you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates specified in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information specified in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that apply to you, the compliance report must include a statement that there were no deviations from the emission limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring systems (CMS) were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS were out-of-control during the reporting period.

(d) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information specified in paragraphs (c)(1) through (4) and (d)(1) and (2) of this section. The deviations must be reported in accordance with the requirements in § 63.10(d).

(1) The total operating time of each emission unit during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) occurring at an affected source where you are using a CMS to comply with the emission limitation in this subpart, you must include the information specified in paragraphs

(c)(1) through (4) and (e)(1) through (11) of this section. This includes periods of startup, shutdown, and malfunction.

(1) The date and time that each malfunction started and stopped.

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(5) A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total affected source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total emission unit operating time during that reporting period.

(8) A brief description of the process units.

(9) A brief description of the CMS.

(10) The date of the latest CMS certification or audit.

(11) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each facility that has obtained a title V operating permit pursuant to part 70 or part 71 of this chapter must report all deviations as defined in this subpart in the semiannual monitoring report required by §§ 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter. If you submit a compliance report specified in Table 7 to this subpart along with, or as part of, the semiannual monitoring report required by §§ 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter, and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation you may have to report deviations from permit requirements to the permit authority.

§ 63.7132 What records must I keep?

(a) You must keep the records specified in paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity and VE observations as required in § 63.10(b)(2)(viii).

(b) You must keep the records in § 63.6(h)(6) for VE observations.

(c) You must keep the records required by Tables 5 and 6 to this subpart to show continuous compliance with each emission limitation that applies to you.

(d) You must keep the records which document the basis for the initial applicability determination as required under § 63.7081.

§ 63.7133 In what form and for how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record,

according to § 63.10(b)(1). You may keep the records offsite for the remaining 3 years.

Other Requirements and Information**§ 63.7140 What parts of the General Provisions apply to me?**

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. When there is overlap between subpart A and subpart AAAAA, as indicated in the "Explanations" column in Table 8, subpart AAAAA takes precedence.

§ 63.7141 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. EPA, or by a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (6) of this section.

(1) Approval of alternatives to the non-opacity emission limitations in § 63.7090(a).

(2) Approval of alternative opacity emission limitations in § 63.7090(a).

(3) Approval of alternatives to the operating limits in § 63.7090(b).

(4) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(5) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(6) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

§ 63.7142 What are the requirements for claiming area source status?

(a) If you wish to claim that your LMP is an area source, you must measure the emissions of hydrogen chloride from all lime kilns, except as provided in paragraph (c) of this section, at your plant using either:

(1) EPA Method 320 of appendix A to this part,

(2) EPA Method 321 of appendix A to this part, or

(3) ASTM Method D6735–01, Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method, provided that the provisions in paragraphs (a)(3)(i) through (vi) of this section are followed.

(i) A test must include three or more runs in which a pair of samples is obtained simultaneously for each run according to section 11.2.6 of ASTM Method D6735–01.

(ii) You must calculate the test run standard deviation of each set of paired samples to quantify data precision, according to Equation 1 of this section:

$$RSD_a = (100) \text{ Absolute Value} \left[\frac{C_{1a} - C_{2a}}{C_{1a} + C_{2a}} \right] \quad (\text{Eq. 1})$$

Where:

RSD_a = The test run relative standard deviation of sample pair a, percent.

C_{1a} and C_{2a} = The HCl concentrations, milligram/dry standard cubic meter (mg/dscm), from the paired samples.

(iii) You must calculate the test average relative standard deviation according to Equation 2 of this section:

$$RSD_{TA} = \frac{\sum_{a=1}^p RSD_a}{p} \quad (\text{Eq. 2})$$

Where:

RSD_{TA} = The test average relative standard deviation, percent.

RSD_a = The test run relative standard deviation for sample pair a.

p = The number of test runs, ≥ 3 .

(iv) If RSD_{TA} is greater than 20 percent, the data are invalid and the test must be repeated.

(v) The post-test analyte spike procedure of section 11.2.7 of ASTM Method D6735–01 is conducted, and the percent recovery is calculated according to section 12.6 of ASTM Method D6735–01.

(vi) If the percent recovery is between 70 percent and 130 percent, inclusive,

the test is valid. If the percent recovery is outside of this range, the data are considered invalid, and the test must be repeated.

(b) If you conduct tests to determine the rates of emission of specific organic HAP from lime kilns at LMP for use in applicability determinations under § 63.7081, you may use either:

(1) Method 320 of appendix A to this part, or

(2) Method 18 of appendix A to part 60 of this chapter, or

(3) ASTM D6420–99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass

Spectrometry (GC/MS), provided that the provisions of paragraphs (b)(3)(i) through (iv) of this section are followed:

(i) The target compound(s) are those listed in section 1.1 of ASTM D6420-99;

(ii) The target concentration is between 150 parts per billion by volume and 100 parts per million by volume;

(iii) For target compound(s) not listed in Table 1.1 of ASTM D6420-99, but potentially detected by mass spectrometry, the additional system continuing calibration check after each run, as detailed in section 10.5.3 of ASTM D6420-99, is conducted, met, documented, and submitted with the data report, even if there is no moisture condenser used or the compound is not considered water soluble; and

(iv) For target compound(s) not listed in Table 1.1 of ASTM D6420-99, and not amenable to detection by mass spectrometry, ASTM D6420-99 may not be used.

(c) It is left to the discretion of the permitting authority whether or not idled kilns must be tested for (HCl) to claim area source status. If the facility has kilns that use common feed materials and fuel, are essentially identical in design, and use essentially identical emission controls, the permitting authority may also determine if one kiln can be tested, and the HCl emissions for the other essentially identical kilns be estimated from that test.

§ 63.7143 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section as follows:

Bag leak detector system (BLDS) is a type of PM detector used on FF to identify an increase in PM emissions resulting from a broken filter bag or other malfunction and sound an alarm.

Belt conveyor means a conveying device that transports *processed stone* from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a *processed stone* conveying device consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport PM to a control device.

Control device means the air pollution control equipment used to reduce PM emissions released to the atmosphere

from one or more process operations at an LMP.

Conveying system means a device for transporting *processed stone* from one piece of equipment or location to another location within a plant.

Conveying systems include but are not limited to feeders, belt conveyors, bucket elevators and pneumatic systems.

Deviation means any instance in which an affected source, subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation (including any operating limit);

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation (including any operating limit) in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is allowed by this subpart.

Emission limitation means any emission limit, opacity limit, operating limit, or VE limit.

Emission unit means a lime kiln, lime cooler, storage bin, conveying system transfer point, bulk loading or unloading operation, bucket elevator or belt conveyor at an LMP.

Fugitive emission means PM that is not collected by a capture system.

Hydrator means the device used to produce hydrated lime or calcium hydroxide via the chemical reaction of the lime product with water.

Lime cooler means the device external to the lime kiln (or part of the lime kiln itself) used to reduce the temperature of the lime produced by the kiln.

Lime kiln means the device, including any associated preheater, used to produce a lime product from stone feed by calcination. Kiln types include, but are not limited to, rotary kiln, vertical kiln, rotary hearth kiln, double-shaft vertical kiln, and fluidized bed kiln.

Lime manufacturing plant (LMP) means any plant which uses a lime kiln to produce lime product from limestone or other calcareous material by calcination.

Lime product means the product of the lime kiln calcination process including, calcitic lime, dolomitic lime, and dead-burned dolomite.

Limestone means the material comprised primarily of calcium carbonate (referred to sometimes as

calcitic or high calcium limestone), magnesium carbonate, and/or the double carbonate of both calcium and magnesium (referred to sometimes as dolomitic limestone or dolomite).

Monovent means an exhaust configuration of a building or emission control device (e.g., positive pressure FF) 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.

Particulate matter (PM) detector means a system that is continuously capable of monitoring PM loading in the exhaust of FF or ESP in order to detect bag leaks, upset conditions, or control device malfunctions and sounds an alarm at a preset level. A PM detector system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other effects to continuously monitor relative particulate loadings. A BLDS is a type of PM detector.

Positive pressure FF or ESP means a FF or ESP with the fan(s) on the upstream side of the control device.

Process stone handling operations means the equipment and transfer points between the equipment used to transport *processed stone*, and includes, storage bins, conveying system transfer points, bulk loading or unloading systems, screening operations, bucket elevators, and belt conveyors.

Processed stone means limestone or other calcareous material that has been processed to a size suitable for feeding into a lime kiln.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series and retaining oversize material on the mesh surfaces (screens).

Stack emissions means the PM that is released to the atmosphere from a capture system or control device.

Storage bin means a manmade enclosure for storage (including surge bins) of *processed stone* prior to the lime kiln.

Transfer point means a point in a conveying operation where the material is transferred to or from a belt conveyor.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying PM emissions from one or more emission units.

Tables to Subpart AAAAA of Part 63

TABLE 1 TO SUBPART AAAAA OF PART 63.—EMISSION LIMITS

[As required in § 63.7090(a), you must meet each emission limit in the following table that applies to you.]

For . . .	You must meet the following emission limit
1. Existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004.	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).
2. Existing lime kilns and their associated lime coolers that have a wet scrubber, where the scrubber itself was installed and operating prior to January 5, 2004.	PM emissions must not exceed 0.60 lb/tsf. If at any time after January 5, 2004 the kiln changes to a dry control system, then the PM emission limit in item 1 of this Table 1 applies, and the kiln is hereafter ineligible for the PM emission limit in item 2 of this Table 1 regardless of the method of PM control.
3. New lime kilns and their associated lime coolers	PM emissions must not exceed 0.10 lb/tsf.
4. All existing and new lime kilns and their associated coolers at your LMP, and you choose to average PM emissions, except that any kiln that is allowed to meet the 0.60 lb/tsf PM emission limit is ineligible for averaging.	Weighted average PM emissions calculated according to Eq. 2 in § 63.7112 must not exceed 0.12 lb/tsf (if you are averaging only existing kilns) or 0.10 lb/tsf (if you are averaging only new kilns). If you are averaging existing and new kilns, your weighted average PM emissions must not exceed the weighted average emission limit calculated according to Eq. 3 in § 63.7112, except that no new kiln and its associated cooler considered alone may exceed an average PM emissions limit of 0.10 lb/tsf.
5. Stack emissions from all PSH operations at a new or existing affected source.	PM emissions must not exceed 0.05 grams per dry standard cubic meter (g/dscm).
6. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device.	Emissions must not exceed 7 percent opacity.
7. Fugitive emissions from all PSH operations at a new or existing affected source, except as provided by item 8 of this Table 1.	Emissions must not exceed 10 percent opacity.
8. All PSH operations at a new or existing affected source enclosed in a building.	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations in items 5 through 7 of this Table 1, or the building must comply with the following: There must be no VE from the building, except from a vent; and vent emissions must not exceed the stack emissions limitations in items 5 and 6 of this Table 1.
9. Each FF that controls emissions from only an individual, enclosed storage bin.	Emissions must not exceed 7 percent opacity.
10. Each set of multiple storage bins at a new or existing affected source, with combined stack emissions.	You must comply with the emission limits in items 5 and 6 of this Table 1.

TABLE 2 TO SUBPART AAAAA OF PART 63.—OPERATING LIMITS

[As required in § 63.7090(b), you must meet each operating limit in the following table that applies to you.]

For . . .	You must . . .
1. Each lime kiln and each lime cooler (if there is a separate exhaust to the atmosphere from the associated lime cooler) equipped with an FF.	Maintain and operate the FF such that the BLDS or PM detector alarm condition does not exist for more than 5 percent of the total operating time in a 6-month period; and comply with the requirements in § 63.7113(d) through (f) and Table 5 to this subpart. In lieu of a BLDS or PM detector maintain the FF such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent; and comply with the requirements in § 63.7113(f) and (g) and Table 5 to this subpart.
2. Each lime kiln equipped with a wet scrubber	Maintain the 3-hour block exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the most recent PM performance test; and maintain the 3-hour block scrubbing liquid flow rate greater than the flow rate operating limit established during the most recent performance test.
3. Each lime kiln equipped with an electrostatic precipitator	Install a PM detector and maintain and operate the ESP such that the PM 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 period, and comply with § 63.7113(e); or, maintain the ESP such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent, and comply with the requirements in § 63.7113(g); and comply with the requirements in § 63.7113(f) and Table 5 to this subpart.
4. Each PSH operation subject to a PM limit which uses a wet scrubber.	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.

TABLE 2 TO SUBPART AAAAA OF PART 63.—OPERATING LIMITS—Continued

[As required in § 63.7090(b), you must meet each operating limit in the following table that applies to you.]

For . . .	You must . . .
5. All affected sources	Prepare a written OM&M plan; the plan must include the items listed in § 63.7100(d) and the corrective actions to be taken when required in Table 5 to this subpart.
6. Each emission unit equipped with an add-on air pollution control device.	a. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to an FF; and b. Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

TABLE 3 TO SUBPART AAAAA OF PART 63.—INITIAL COMPLIANCE WITH EMISSION LIMITS

[As required in § 63.7114, you must demonstrate initial compliance with each emission limitation that applies to you, according to the following table.]

For . . .	For the following emission limit . . .	You have demonstrated initial compliance, if after following the requirements in § 63.7112 . . .
1. All new or existing lime kilns and their associated lime coolers (kilns/coolers).	PM emissions must not exceed 0.12 lb/tsf for all existing kilns/coolers with dry controls, 0.60 lb/tsf for existing kilns/coolers with wet scrubbers, 0.10 lb/tsf for all new kilns/coolers, or a weighted average calculated according to Eq. 3 in § 63.7112.	The kiln outlet PM emissions (and if applicable, summed with the separate cooler PM emissions), based on the PM emissions measured using Method 5 in appendix A to part 60 of this chapter and the stone feed rate measurement over the period of initial performance test, do not exceed the emission limit; if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions with a BLDS or PM detector, you have installed and are operating the monitoring device according to the requirements in § 63.7113(d) or (e), respectively; and if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions using a COMS, you have installed and are operating the COMS according to the requirements in § 63.7113(g).
2. Stack emissions from all PHS operations at a new or existing affected source.	PM emissions must not exceed 0.05 g/dscm ..	The outlet PM emissions, based on Method 5 or Method 17 in appendix A to part 60 of this chapter, over the period of the initial performance test do not exceed 0.05 g/dscm; and if the emission unit is controlled with a wet scrubber, you have a record of the scrubber's pressure drop and liquid flow rate operating parameters over the 3-hour performance test during which emissions did not exceed the emissions limitation.
3. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device.	Emissions must not exceed 7 percent opacity	Each of the thirty 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit. At least thirty 6-minute averages must be obtained.
4. Fugitive emissions from all PSH operations at a new or existing affected source.	Emissions must not exceed 10 percent opacity.	Each of the 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 10 percent opacity limit.
5. All PSH operations at a new or existing affected source, enclosed in building.	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations for items 2 through 4 of this Table 3, or the building must comply with the following: There must be no VE from the building, except from a vent, and vent emissions must not exceed the emission limitations in items 2 and 3 of this Table 3.	All the PSH operations enclosed in the building have demonstrated initial compliance according to the applicable requirements for items 2 through 4 of this Table 3; or if you are complying with the building emission limitations, there are no VE from the building according to item 18 of Table 4 to this subpart and § 63.7112(k), and you demonstrate initial compliance with applicable building vent emissions limitations according to the requirements in items 2 and 3 of this Table 3.

TABLE 3 TO SUBPART AAAAA OF PART 63.—INITIAL COMPLIANCE WITH EMISSION LIMITS—Continued

[As required in § 63.7114, you must demonstrate initial compliance with each emission limitation that applies to you, according to the following table.]

For . . .	For the following emission limit . . .	You have demonstrated initial compliance, if after following the requirements in § 63.7112 . . .
6. Each FF that controls emissions from only an individual storage bin.	Emissions must not exceed 7 percent opacity	Each of the ten 6-minute averages during the 1-hour initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit.
7. Each set of multiple storage bins with combined stack emissions.	You must comply with emission limitations in items 2 and 3 of this Table 3.	You demonstrate initial compliance according to the requirements in items 2 and 3 of this Table 3.

TABLE 4 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS

[As required in § 63.7112, you must conduct each performance test in the following table that applies to you.]

For . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Select the location of the sampling port and the number of traverse ports.	Method 1 or 1A of appendix A to part 60 of this chapter; and § 63.6(d)(1)(i).	Sampling sites must be located at the outlet of the control device(s) and prior to any releases to the atmosphere.
2. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Determine velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter.	Not applicable.
3. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Conduct gas molecular weight analysis.	Method 3, 3A, or 3B in appendix A to part 60 of this chapter.	Not applicable.
4. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Measure moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.	Not applicable.
5. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a negative pressure PM control device.	Measure PM emissions	Method 5 in appendix A to part 60 of this chapter.	Conduct the test(s) when the source is operating at representative operating conditions in accordance with § 63.7(e); the minimum sampling volume must be 0.85 dry standard cubic meter (dscm) (30 dry standard cubic foot (dscf)); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the cooler exhaust concurrently with the kiln exhaust test.
6. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a positive pressure FF or ESP.	Measure PM emissions	Method 5D in appendix A to part 60 of this chapter.	Conduct the test(s) when the source is operating at representative operating conditions in accordance with § 63.7(e); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the separate cooler exhaust concurrently with the kiln exhaust test.
7. Each lime kiln	Determine the mass rate of stone feed to the kiln during the kiln PM emissions test.	Any suitable device	Calibrate and maintain the device according to manufacturer's instructions; the measuring device used must be accurate to within ± 5 percent of the mass rate of stone feed over its operating range.

TABLE 4 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

[As required in § 63.7112, you must conduct each performance test in the following table that applies to you.]

For . . .	You must . . .	Using . . .	According to the following requirements . . .
8. Each lime kiln equipped with a wet scrubber.	Establish the operating limit for the average gas stream pressure drop across the wet scrubber.	Data for the gas stream pressure drop measurement device during the kiln PM performance test.	The continuous pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to § 63.7112(j).
9. Each lime kiln equipped with a wet scrubber.	Establish the operating limit for the average liquid flow rate to the scrubber.	Data from the liquid flow rate measurement device during the kiln PM performance test.	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to § 63.7112(j).
10. Each lime kiln equipped with a FF or ESP that is monitored with a PM detector.	Have installed and have operating the BLDS or PM detector prior to the performance test.	Standard operating procedures incorporated into the OM&M plan.	According to the requirements in § 63.7113(d) or (e), respectively.
11. Each lime kiln equipped with a FF or ESP that is monitored with a COMS.	Have installed and have operating the COMS prior to the performance test.	Standard operating procedures incorporated into the OM&M plan and as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2).	According to the requirements in § 63.7113(g).
12. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to a PM emission limit.	Measure PM emissions	Method 5 or Method 17 in appendix A to part 60 of this chapter.	The sample volume must be at least 1.70 dscm (60 dscf); for Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters; and if the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter (Method 17 may be used only with exhaust gas temperatures of not more than 250 °F).
13. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to an opacity limit.	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 3 hours and you must obtain at least thirty, 6-minute averages.
14. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber.	Establish the average gas stream pressure drop across the wet scrubber.	Data for the gas stream pressure drop measurement device during the PSH operation stack PM performance test.	The pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to § 63.7112(j).
15. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber.	Establish the operating limit for the average liquid flow rate to the scrubber.	Data from the liquid flow rate measurement device during the PSH operation stack PM performance test.	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to § 63.7112(j).

TABLE 4 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

[As required in § 63.7112, you must conduct each performance test in the following table that applies to you.]

For . . .	You must . . .	Using . . .	According to the following requirements . . .
16. Each FF that controls emissions from only an individual, enclosed, new or existing storage bin.	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 1 hour and you must obtain ten 6-minute averages.
17. Fugitive emissions from any PSH operation subject to an opacity limit.	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 3 hours, but the 3-hour test may be reduced to 1 hour if, during the first 1-hour period, there are no individual readings greater than 10 percent opacity and there are no more than three readings of 10 percent during the first 1-hour period.
18. Each building enclosing any PSH operation, that is subject to a VE limit.	Conduct VE check	The specifications in § 63.7112(k)	The performance test must be conducted while all affected PSH operations within the building are operating; the performance test for each affected building must be at least 75 minutes, with each side of the building and roof being observed for at least 15 minutes.

TABLE 5 TO SUBPART AAAAA OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS

[As required in § 63.7121, you must demonstrate continuous compliance with each operating limit that applies to you, according to the following table.]

For . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
1. Each lime kiln controlled by a wet scrubber	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.	Collecting the wet scrubber operating data according to all applicable requirements in § 63.7113 and reducing the data according to § 63.7113(a); maintaining the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintaining the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test (the continuous scrubbing liquid flow rate measuring device must be accurate within $\pm 1\%$ and the continuous pressure drop measurement device must be accurate within $\pm 1\%$).
2. Each lime kiln or lime cooler equipped with a FF and using a BLDS, and each lime kiln equipped with an ESP or FF using a PM detector.	a. Maintain and operate the FF or ESP such that the bag leak or PM detector alarm, is not activated and alarm condition does not exist for more than 5 percent of the total operating time in each 6-month period.	(i) Operating the FF or ESP so that the alarm on the bag leak or PM detection system is not activated and an alarm condition does not exist for more than 5 percent of the total operating time in each 6-month reporting period; and continuously recording the output from the BLD or PM detection system; and (ii) Each time the alarm sounds and the owner or operator initiates corrective actions within 1 hour of the alarm, 1 hour of alarm time will be counted (if the owner or operator takes longer than 1 hour to initiate corrective actions, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions); if inspection of the FF or ESP system demonstrates that no corrective actions are necessary, no alarm time will be counted.

TABLE 5 TO SUBPART AAAAA OF PART 63.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS—Continued

[As required in § 63.7121, you must demonstrate continuous compliance with each operating limit that applies to you, according to the following table.]

For . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
3. Each stack emissions source from a PSH operation subject to an opacity limit, which is controlled by a wet scrubber.	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.	Collecting the wet scrubber operating data according to all applicable requirements in § 63.7113 and reducing the data according to § 63.7113(a); maintaining the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintaining the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test (the continuous scrubbing liquid flow rate measuring device must be accurate within $\pm 1\%$ and the continuous pressure drop measurement device must be accurate within $\pm 1\%$).
4. For each lime kiln or lime cooler equipped with a FF or an ESP that uses a COMS as the monitoring device.	a. Maintain and operate the FF or ESP such that the average opacity for any 6-minute block period does not exceed 15 percent.	i. Installing, maintaining, calibrating and operating a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2); and ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.

TABLE 6 TO SUBPART AAAAA OF PART 63.—PERIODIC MONITORING FOR COMPLIANCE WITH OPACITY AND VISIBLE EMISSIONS LIMITS

[As required in § 63.7121 you must periodically demonstrate compliance with each opacity and VE limit that applies to you, according to the following table]

For . . .	For the following emission limitation . . .	You must demonstrate ongoing compliance . . .
1. Each PSH operation subject to an opacity limitation as required in Table 1 to this subpart, or any vents from buildings subject to an opacity limitation.	a. 7–10 percent opacity, depending on the PSH operation, as required in Table 1 to this subpart.	(i) Conducting a monthly 1-minute VE check of each emission unit in accordance with § 63.7121(e); the check must be conducted while the affected source is in operation; (ii) If no VE are observed in 6 consecutive monthly checks for any emission unit, you may decrease the frequency of VE checking from monthly to semi-annually for that emission unit; if VE are observed during any semiannual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; (iii) If no VE are observed during the semi-annual check for any emission unit, you may decrease the frequency of VE checking from semi-annually to annually for that emission unit; if VE are observed during any annual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and

TABLE 6 TO SUBPART AAAAA OF PART 63.—PERIODIC MONITORING FOR COMPLIANCE WITH OPACITY AND VISIBLE EMISSIONS LIMITS—Continued

[As required in § 63.7121 you must periodically demonstrate compliance with each opacity and VE limit that applies to you, according to the following table]

For . . .	For the following emission limitation . . .	You must demonstrate ongoing compliance . . .
2. Any building subject to a VE limit, according to item 8 of Table 1 to this subpart.	a. No VE	(iv) If VE are observed during any VE check, you must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter; you must begin the Method 9 test within 1 hour of any observation of VE and the 6-minute opacity reading must not exceed the applicable opacity limit. (i) Conducting a monthly VE check of the building, in accordance with the specifications in § 63.7112(k); the check must be conducted while all the enclosed PSH operations are operating; (ii) The check for each affected building must be at least 5 minutes, with each side of the building and roof being observed for at least 1 minute; (iii) If no VE are observed in 6 consecutive monthly checks of the building, you may decrease the frequency of checking from monthly to semi-annually for that affected source; if VE are observed during any semi-annual check, you must resume checking on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and (iv) If no VE are observed during the semi-annual check, you may decrease the frequency of checking from semi-annually to annually for that affected source; and if VE are observed during any annual check, you must resume checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks (the source is in compliance if no VE are observed during any of these checks).

TABLE 7 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR REPORTS

[As required in § 63.7131, you must submit each report in this table that applies to you.]

You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that applies to you, a statement that there were no deviations from the emission limitations during the reporting period; b. If there were no periods during which the CMS, including any operating parameter monitoring system, was out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period; c. If you have a deviation from any emission limitation (emission limit, operating limit, opacity limit, and VE limit) during the reporting period, the report must contain the information in § 63.7131(d); d. If there were periods during which the CMS, including any operating parameter monitoring system, was out-of-control, as specified in § 63.8(c)(7), the report must contain the information in § 63.7131(e); and	Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b).

TABLE 7 TO SUBPART AAAAA OF PART 63.—REQUIREMENTS FOR REPORTS—Continued

[As required in § 63.7131, you must submit each report in this table that applies to you.]

You must submit a . . .	The report must contain . . .	You must submit the report . . .
	e. If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).	Semiannually according to the requirements in § 63.7131(b).
2. An immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	Actions taken for the event	By fax or telephone within 2 working days after starting actions inconsistent with the SSMP.
3. An immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	The information in § 63.10(d)(5)(ii)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. See § 63.10(d)(5)(ii).

TABLE 8 TO SUBPART AAAAA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA

[As required in § 63.7140, you must comply with the applicable General Provisions requirements according to the following table.]

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.1(a)(1)–(4)	Applicability	Yes.	§§ 63.7081 and 63.7142 specify additional applicability determination requirements.
§ 63.1(a)(5)	Applicability	No.	
§ 63.1(a)(6)	Applicability	Yes.	
§ 63.1(a)(7)–(a)(9)	Applicability	No.	
§ 63.1(a)(10)–(a)(14)	Applicability	Yes.	
§ 63.1(b)(1)	Initial Applicability Determination	Yes	Area sources not subject to subpart AAAAA, except all sources must make initial applicability determination.
§ 63.1(b)(2)	Initial Applicability Determination	No.	
§ 63.1(b)(3)	Initial Applicability Determination	Yes.	
§ 63.1(c)(1)	Applicability After Standard Established.	Yes.	
§ 63.1(c)(2)	Permit Requirements	No	
§ 63.1(c)(3)	Extensions, Notifications	No.	Additional definitions in § 63.7143.
§ 63.1(c)(4)–(5)	Extensions, Notifications	Yes.	
§ 63.1(d)	Applicability of Permit Program	No.	
§ 63.1(e)	Definitions	Yes.	
§ 63.2	Units and Abbreviations	Yes.	
§ 63.3(a)–(c)	Prohibited Activities	Yes.	See § 63.7100 for OM&M requirements.
§ 63.4(a)(1)–(a)(2)	Circumvention, Severability	No.	
§ 3.4(a)(3)–(a)(5)	Construction/Reconstruction	Yes.	
§ 63.4(b)–(c)	Compliance Dates	Yes.	
§ 63.5(a)(1)–(2)	Construction Approval, Applicability ...	No.	
§ 63.5(b)(1)	Construction Approval, Applicability ...	Yes.	
§ 63.5(b)(2)	Applicability	No.	
§ 63.5(b)(3)–(4)	Applicability	Yes.	
§ 63.5(b)(5)	Approval of Construction/Reconstruction.	No.	
§ 63.5(b)(6)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(c)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(d)(1)–(4)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(f)(1)–(2)	Approval of Construction/Reconstruction.	Yes.	
§ 63.6(a)	Compliance for Standards and Maintenance.	Yes.	
§ 63.6(b)(1)–(5)	Compliance Dates	Yes.	
§ 63.6(b)(6)	Compliance Dates	No.	
§ 63.6(b)(7)	Compliance Dates	Yes.	
§ 63.6(c)(1)–(2)	Compliance Dates	Yes.	
§ 63.6(c)(3)–(c)(4)	Compliance Dates	No.	
§ 63.6(c)(5)	Compliance Dates	Yes.	
§ 63.6(d)	Operation & Maintenance	No.	
§ 63.6(e)(1)	Operation & Maintenance	Yes	
§ 63.6(e)(2)	Operation & Maintenance	No.	

TABLE 8 TO SUBPART AAAAA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued
[As required in § 63.7140, you must comply with the applicable General Provisions requirements according to the following table.]

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.6(e)(3)	Startup, Shutdown Malfunction Plan ..	Yes.	This requirement only applies to opacity and VE performance checks required in Table 4 to subpart AAAAA.
§ 63.6(f)(1)–(3)	Compliance with Emission Standards	Yes.	
§ 63.6(g)(1)–(g)(3)	Alternative Standard	Yes.	
§ 63.6(h)(1)–(2)	Opacity/VE Standards	Yes.	
§ 63.6(h)(3)	Opacity/VE Standards	No.	
§ 63.6(h)(4)–(h)(5)(i)	Opacity/VE Standards	Yes	Test durations are specified in subpart AAAAA; subpart AAAAA takes precedence.
§ 63.6(h)(5) (ii)–(iii)	Opacity/VE Standards	No	
§ 63.6(h)(5)(iv)	Opacity/VE Standards	No.	
§ 63.6(h)(5)(v)	Opacity/VE Standards	Yes.	
§ 63.6(h)(6)	Opacity/VE Standards	Yes.	
§ 63.6(h)(7)	COM Use	Yes.	§ 63.7110 specifies deadlines; § 63.7112 has additional specific requirements.
§ 63.6(h)(8)	Compliance with Opacity and VE	Yes.	
§ 63.6(h)(9)	Adjustment of Opacity Limit	Yes.	
§ 63.6(i)(1)–(i)(14)	Extension of Compliance	Yes.	
§ 63.6(i)(15)	Extension of Compliance	No.	
§ 63.6(i)(16)	Extension of Compliance	Yes.	
§ 63.6(j)	Exemption from Compliance	Yes.	
§ 63.7(a)(1)–(a)(3)	Performance Testing Requirements ..	Yes	
§ 63.7(b)	Notification	Yes.	
§ 63.7(c)	Quality Assurance/Test Plan	Yes.	
§ 63.7(d)	Testing Facilities	Yes.	See § 63.7113.
§ 63.7(e)(1)–(4)	Conduct of Tests	Yes.	
§ 63.7(f)	Alternative Test Method	Yes.	
§ 63.7(g)	Data Analysis	Yes.	
§ 63.7(h)	Waiver of Tests	Yes.	
§ 63.8(a)(1)	Monitoring Requirements	Yes	Flares not applicable.
§ 63.8(a)(2)	Monitoring	Yes.	
§ 63.8(a)(3)	Monitoring	No.	
§ 63.8(a)(4)	Monitoring	No	
§ 63.8(b)(1)–(3)	Conduct of Monitoring	Yes.	
§ 63.8(c)(1)–(3)	CMS Operation/Maintenance	Yes.	See § 63.7121.
§ 63.8(c)(4)	CMS Requirements	No	
§ 63.8(c)(4)(i)–(ii)	Cycle Time for COM and CEMS	Yes	
§ 63.8(c)(5)	Minimum COM procedures	Yes	
§ 63.8(c)(6)	CMS Requirements	No	
§ 63.8(c)(7)–(8)	CMS Requirements	Yes.	See § 63.7113.
§ 63.8(d)	Quality Control	No	
§ 63.8(e)	Performance Evaluation for CMS	No.	
§ 63.8(f)(1)–(f)(5)	Alternative Monitoring Method	Yes.	
§ 63.8(f)(6)	Alternative to Relative Accuracy test ..	No.	
§ 63.8(g)(1)–(g)(5)	Data Reduction; Data That Cannot Be Used.	No	See data reduction requirements in §§ 63.7120 and 63.7121. See § 63.7130.
§ 63.9(a)	Notification Requirements	Yes	
§ 63.9(b)	Initial Notifications	Yes.	
§ 63.9(c)	Request for Compliance Extension	Yes.	
§ 63.9(d)	New Source Notification for Special Compliance Requirements.	Yes.	
§ 63.9(e)	Notification of Performance Test	Yes.	This requirement only applies to opacity and VE performance tests required in Table 4 to subpart AAAAA. Notification not required for VE/opacity test under Table 6 to subpart AAAAA.
§ 63.9(f)	Notification of VE/Opacity Test	Yes	
§ 63.9(g)	Additional CMS Notifications	No	
§ 63.9(h)(1)–(h)(3)	Notification of Compliance Status	Yes.	
§ 63.9(h)(4)	Notification of Compliance Status	No.	
§ 63.9(h)(5)–(h)(6)	Notification of Compliance Status	Yes.	Not required for operating parameter monitoring.
§ 63.9(i)	Adjustment of Deadlines	Yes.	
§ 63.9(j)	Change in Previous Information	Yes.	

TABLE 8 TO SUBPART AAAAA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued
[As required in § 63.7140, you must comply with the applicable General Provisions requirements according to the following table.]

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.10(a)	Recordkeeping/Reporting General Requirements.	Yes	See §§ 63.7131 through 63.7133.
§ 63.10(b)(1)–(b)(2)(xii)	Records	Yes.	
§ 63.10(b)(2)(xiii)	Records for Relative Accuracy Test ..	No.	
§ 63.10(b)(2)(xiv)	Records for Notification	Yes.	
§ 63.10(b)(3)	Applicability Determinations	Yes.	
§ 63.10(c)	Additional CMS Recordkeeping	No	See § 63.7132.
§ 63.10(d)(1)	General Reporting Requirements	Yes.	
§ 63.10(d)(2)	Performance Test Results	Yes.	
§ 63.10(d)(3)	Opacity or VE Observations	Yes	For the periodic monitoring requirements in Table 6 to subpart AAAAA, report according to § 63.10(d)(3) only if VE observed and subsequent visual opacity test is required.
§ 63.10(d)(4)	Progress Reports	Yes.	
§ 63.10(d)(5)	Startup, Shutdown, Malfunction Reports.	Yes.	
§ 63.10(e)	Additional CMS Reports	No	See specific requirements in subpart AAAAA, see § 63.7131.
§ 63.10(f)	Waiver for Recordkeeping/Reporting ..	Yes.	
§ 63.11(a)–(b)	Control Device Requirements	No	Flares not applicable.
§ 63.12(a)–(c)	State Authority and Delegations	Yes.	
§ 63.13(a)–(c)	State/Regional Addresses	Yes.	
§ 63.14(a)–(b)	Incorporation by Reference	No.	
§ 63.15(a)–(b)	Availability of Information	Yes.	

* * * * *

[FR Doc. 03–23057 Filed 12–31–03; 8:45 am]

BILLING CODE 6560–50–P

Environmental Protection Agency**40 CFR Part 63****[EPA-HQ-OAR-2017-0015; FRL-10009-60-OAR]****RIN 2060-AT08****National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants Residual Risk and Technology Review****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

SUMMARY: This action finalizes the residual risk and technology review (RTR) conducted for the Lime Manufacturing source category regulated under national emission standards for hazardous air pollutants (NESHAP). In addition, we are taking final action addressing periods of startup, shutdown, and malfunction (SSM). These final amendments include new provisions requiring electronic reporting. We are finalizing our proposed determination that the risks are acceptable and that the current NESHAP provides an ample margin of safety to protect public health. We determined that there are no developments in practices, processes, or control technologies that necessitate revisions to the standards.

DATES: This final rule is effective on July 24, 2020. The incorporation by reference (IBR) of certain publications listed in the rule is approved by the Director of the Federal Register as of July 24, 2020.

ADDRESSES: The U.S. Environmental Protection Agency (EPA) has established a docket for this action under Docket ID No. EPA-HQ-OAR-2017-0015. All documents in the docket are listed on the <https://www.regulations.gov/> website. Although listed, some information is not publicly available, e.g., Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through <https://www.regulations.gov/>. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room was closed to public visitors on March 31, 2020, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. There is a temporary suspension of mail delivery

to the EPA, and no hand deliveries are currently accepted. For further information and updates on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: For questions about this final action, contact Jim Eddinger, Sector Policies and Programs Division (D243-01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5426; and email address: eddinger.jim@epa.gov. For specific information regarding the risk modeling methodology, contact James Hirtz, Health and Environmental Impacts Division (C539-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0881; and email address: hirtz.james@epa.gov. For information about the applicability of the NESHAP to a particular entity, contact Sara Ayres, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, U.S. EPA Region 5 (Mail Code E-19), 77 West Jackson Boulevard, Chicago, Illinois 60604; telephone number: (312) 353-6266; and email address: ayres.sara@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

ACI activated carbon injection
 AEGL acute exposure guideline level
 ASME American Society of Mechanical Engineers
 ASTM American Society for Testing and Materials
 CAA Clean Air Act
 CDX Central Data Exchange
 CEDRI Compliance and Emissions Data Reporting Interface
 CEMS continuous emission monitoring system
 CFR Code of Federal Regulations
 CRA Congressional Review Act
 D/F dioxins and furans
 EPA Environmental Protection Agency
 ERPG emergency response planning guideline
 ESP electrostatic precipitator
 FF fabric filter
 FTIR Fourier-transform infrared spectroscopy
 HAP hazardous air pollutants(s)
 HCl hydrochloric acid
 HF hydrofluoric acid
 HI hazard index
 HQ hazard quotient
 IBR incorporation by reference

ICR Information Collection Request
 km kilometer
 MACT maximum achievable control technology
 MIR maximum individual risk
 NAAQS National Ambient Air Quality Standards
 NESHAP national emission standards for hazardous air pollutants
 NTTAA National Technology Transfer and Advancement Act
 OMB Office of Management and Budget
 OM&M operations, maintenance, and monitoring
 PB-HAP hazardous air pollutants known to be persistent and bio-accumulative in the environment
 PM particulate matter
 POM polycyclic organic matter
 PRA Paperwork Reduction Act
 PS Performance Specification
 PSH processed stone handling
 REL recommended exposure limit
 RFA Regulatory Flexibility Act
 RIN Regulatory Information Number
 RTR Risk and Technology Review
 SSM startup, shutdown, and malfunction
 the Court United States Court of Appeals for the District of Columbia Circuit
 TOSHI target organ-specific hazard index
 tpy tons per year
 UMRA Unfunded Mandates Reform Act
 VCS voluntary consensus standard

Background information. On September 16, 2019, the EPA proposed revisions to the Lime Manufacturing Plants NESHAP based on our RTR. In this action, we are finalizing decisions and revisions for the rule. We summarize some of the more significant comments we timely received regarding the proposed rule and provide our responses in this preamble. A summary of all other public comments on the proposal and the EPA's responses to those comments is available in *Summary of Public Comments and Responses for the Lime Manufacturing Plants Residual Risk and Technology Review*, Docket ID No. EPA-HQ-OAR-2017-0015. A "track changes" version of the regulatory language that incorporates the changes in this action is available in the docket.

Organization of this document. The information in this preamble is organized as follows:

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- J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR part 51
- K. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- L. Congressional Review Act (CRA)

I. General Information

A. Does this action apply to me?

Regulated entities. Categories and entities potentially regulated by this action are shown in Table 1 of this preamble.

TABLE 1—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS FINAL ACTION

NESHAP and source category	NAICS ¹ code
Lime Manufacturing Plants	32741, 33111, 3314, 327125

¹ North American Industry Classification System.

Table 1 of this preamble is not intended to be exhaustive, but rather to provide a guide for readers regarding entities likely to be affected by the final action for the source category listed. To determine whether your facility is affected, you should examine the applicability criteria in the appropriate NESHAP. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this final action will also be available on the internet. Following signature by the EPA Administrator, the EPA will post a copy of this final action at: <https://www.epa.gov/lime-manufacturing-plants-national-emission-standards-hazardous-air>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version and key technical documents at this same website.

Additional information is available on the RTR website at <https://www.epa.gov/stationary-sources-air-pollution/risk-and-technology-review->

national-emissions-standards-hazardous. This information includes an overview of the RTR program and links to project websites for the RTR source categories.

C. Judicial Review and Administrative Reconsideration

Under Clean Air Act (CAA) section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit (the Court) by September 22, 2020. Under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

Section 307(d)(7)(B) of the CAA further provides that only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also provides a mechanism for the EPA to reconsider the rule if the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time

specified for judicial review) and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave. NW, Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave. NW, Washington, DC 20460.

II. Background

A. What is the statutory authority for this action?

Section 112 of the CAA establishes a two-stage regulatory process to address emissions of hazardous air pollutants (HAP) from stationary sources. In the first stage, we must identify categories of sources emitting one or more of the HAP listed in CAA section 112(b) and then promulgate technology-based NESHAP for those sources. "Major sources" are those that emit, or have the potential to emit, any single HAP at a rate of 10 tons per year (tpy) or more, or 25 tpy or more of any combination of

HAP. For major sources, these standards are commonly referred to as maximum achievable control technology (MACT) standards and must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). In developing MACT standards, CAA section 112(d)(2) directs the EPA to consider the application of measures, processes, methods, systems, or techniques, including, but not limited to, those that reduce the volume of or eliminate HAP emissions through process changes, substitution of materials, or other modifications; enclose systems or processes to eliminate emissions; collect, capture, or treat HAP when released from a process, stack, storage, or fugitive emissions point; are design, equipment, work practice, or operational standards; or any combination of the above.

For these MACT standards, the statute specifies certain minimum stringency requirements, which are referred to as MACT floor requirements, and which may not be based on cost considerations. See CAA section 112(d)(3). For new sources, the MACT floor cannot be less stringent than the emission control achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than floors for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). In developing MACT standards, we must also consider control options that are more stringent than the floor under CAA section 112(d)(2). We may establish standards more stringent than the floor, based on the consideration of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.

In the second stage of the regulatory process, the CAA requires the EPA to undertake two different analyses, which we refer to as the technology review and the residual risk review. Under the technology review, we must review the technology-based standards and revise them “as necessary (taking into account developments in practices, processes, and control technologies)” no less frequently than every 8 years, pursuant to CAA section 112(d)(6). Under the residual risk review, we must evaluate the risk to public health remaining after application of the technology-based

standards and revise the standards, if necessary, to provide an ample margin of safety to protect public health or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. The residual risk review is required within 8 years after promulgation of the technology-based standards, pursuant to CAA section 112(f).¹ In conducting the residual risk review, if the EPA determines that the current standards provide an ample margin of safety to protect public health, it is not necessary to revise the MACT standards pursuant to CAA section 112(f).¹ For more information on the statutory authority for this rule, see 84 FR 48708, September 16, 2019.

B. What is the Lime Manufacturing source category and how does the NESHAP regulate HAP emissions from the source category?

The EPA promulgated the Lime Manufacturing Plants NESHAP on January 5, 2004 (69 FR 394). The standards are codified at 40 CFR part 63, subpart AAAAA. The lime manufacturing industry consists of facilities that use a lime kiln to produce lime product from limestone by calcination. The source category covered by this MACT standard currently includes 35 facilities.

As promulgated in 2004, the NESHAP regulates HAP emissions from all new and existing lime manufacturing plants that are major sources, co-located with major sources, or are part of major sources. However, lime manufacturing plants located at pulp and paper mills or at beet sugar factories are not subject to the NESHAP. Other captive lime manufacturing plants, such as (but not limited to) those at steel mills and magnesia production facilities, are subject to the NESHAP. See 67 FR 78053 explaining the basis for these determinations. A lime manufacturing plant is defined as any plant which uses a lime kiln to produce lime product from limestone or other calcareous material by calcination. However, the NESHAP specifically excludes lime kilns that use only calcium carbonate waste sludge from water softening processes as the feedstock.

The NESHAP defines the affected source as follows: Each lime kiln and its associated cooler and each individual processed stone handling (PSH)

operations system. The PSH operations system includes all equipment associated with PSH operations beginning at the process stone storage bin(s) or open storage pile(s) and ending where the process stone is fed into the kiln. It includes man-made process stone storage bins (but not open process stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors. The materials processing operations associated with lime products, lime kiln dust handling, quarry or mining operations, limestone sizing operations, and fuels are not subject to the NESHAP. Finally, lime hydrators and cooler nuisance dust collectors are not included under the definition of affected source under the NESHAP.

The NESHAP established particulate matter (PM) emission limits for lime kilns, coolers, and PSH operations with stacks. The NESHAP also established opacity limits for PSH operations without stacks and for kilns equipped with electrostatic precipitators (ESP) and fabric filters (FF). For kilns equipped with wet scrubbers, the NESHAP established scrubbing liquid flow rate and exhaust gas stream pressure drop limits. PM serves as a surrogate for the non-volatile and semi-volatile metal HAP. The NESHAP also regulates opacity or visible emissions from most of the PSH operations, with opacity also serving as a surrogate for non-volatile and semivolatile HAP metals. Refer to section II.B of the proposal preamble (84 FR 48711, September 16, 2019) for additional information on the HAP emissions regulated by the NESHAP.

C. What changes did we propose for the Lime Manufacturing source category in our September 16, 2019, proposal?

On September 16, 2019, the EPA published a proposed rule in the **Federal Register** for the Lime Manufacturing Plants NESHAP, 40 CFR part 63, subpart AAAAA, that took into consideration the RTR analyses. In the proposed rule, we proposed:

- No revisions to the numerical emission limits based on the RTR;
- revisions to the SSM provisions of the NESHAP in order to ensure that they are consistent with the Court decision in *Sierra Club v. EPA*, 551 F. 3d 1019 (D.C. Cir. 2008), which vacated two provisions that exempted source owners and operators from the requirement to comply with otherwise applicable CAA section 112(d) emission standards during periods of SSM;

¹ The Court has affirmed this approach of implementing CAA section 112(f)(2)(A): *NRDC v. EPA*, 529 F.3d 1077, 1083 (D.C. Cir. 2008) (“If EPA determines that the existing technology-based standards provide an ‘ample margin of safety,’ then the Agency is free to readopt those standards during the residual risk rulemaking.”).

- a requirement for electronic submittal of notifications, semi-annual reports, and compliance reports (which includes performance test reports); and
- IBR of alternative test methods and references.

III. What is included in this final rule?

This action finalizes the EPA's determinations pursuant to the RTR provisions of CAA section 112 for the Lime Manufacturing source category. This action also finalizes other changes to the NESHAP, including revising the SSM provisions of the NESHAP; a requirement for electronic submittal of notifications, semi-annual reports, compliance reports, and performance test reports; adding an alternative test method to EPA Method 320; and IBR of alternative test methods and references to updated alternative test methods. This action also reflects several changes to the September 2019 proposal in consideration of comments received during the public comment period described in section IV of this preamble.

A. What are the final rule amendments based on the risk review for the Lime Manufacturing source category?

The EPA proposed no changes to 40 CFR part 63, subpart AAAAA NESHAP based on the risk review conducted pursuant to CAA section 112(f). In this action, we are finalizing our proposed determination that risks from the source category are acceptable, the standards provide an ample margin of safety to protect public health, and more stringent standards are not necessary to prevent an adverse environmental effect. The EPA received no new data or other information during the public comment period that causes us to change that proposed determination. Therefore, we are not making any revisions to the existing standards under CAA section 112(f), and we are readopting the existing standards.

B. What are the final rule amendments based on the technology review for the Lime Manufacturing source category?

We determined that there are no developments in practices, processes, and control technologies that necessitate revisions to the MACT standards for this source category. Therefore, we are not finalizing revisions to the MACT standards under CAA section 112(d)(6).

C. What are the final rule amendments addressing emissions during periods of SSM?

The EPA is finalizing, with some revisions, the proposed amendments to the Lime Manufacturing Plants NESHAP to remove and revise provisions related

to SSM. In its 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the Court vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and (h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemption violates the CAA's requirement that there must always be a CAA section 112 standard that applies. We are finalizing our proposal to eliminate the SSM exemption in this rule. As detailed in section IV.D of the proposal preamble (84 FR 48727, September 16, 2019), we proposed to require that the emission limitations apply at all times (see 40 CFR 63.7100(a)), consistent with the Court decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008).

We have also revised Table 8 to subpart AAAAA of part 63 (the General Provisions applicability table) in several respects, as is explained in more detail below in section IV.C. For example, we have eliminated the incorporation of the General Provisions' requirement that the source develops an SSM plan. We have also eliminated and revised certain recordkeeping and reporting that is related to the SSM exemption as described in detail in the proposal and summarized below in section IV.C. As discussed in the proposal preamble, these revisions are consistent with the requirement in 40 CFR 63.7100(a) that the standards apply at all times. Refer to section IV.C of this preamble for a detailed discussion of these amendments.

The EPA is finalizing standards for startup and shutdown that differ in some respects from the startup and shutdown standards that were proposed. Changes from the proposal to the standards for periods of startup and shutdown being finalized reflect the EPA's re-evaluation of appropriate startup and shutdown standards in light of public comments. The EPA's rationale for those changes is discussed in section IV.C. below.

The proposed definition of "Startup" has been revised by changing the wording from "lime product" to "on-specification lime product" and adding an alternate ending to startup. Commenters stated that the term "lime product" is not specific enough and that off-specification product is discharged almost simultaneously upon startup. In addition, the EPA is not finalizing the proposed work practices for periods of startup. For periods of startup, the EPA

has instead established opacity emission limits for kilns equipped with FFs or ESPs. The EPA is not establishing different standards for kilns equipped with wet scrubbers during periods of startup and such kilns must comply with the same standard that apply at all other times. Also, during shutdown, kilns equipped with FFs, ESPs, or wet scrubbers must comply with the same standards that apply during normal operation. (See Table 2 of 40 CFR part 63, subpart AAAAA—Startup and Shutdown Emission Limits).

Further, the EPA is not finalizing different standards for malfunctions and sources must meet applicable standards during periods of malfunction. As discussed in the September 16, 2018, proposal preamble, the EPA interprets CAA section 112 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 112 standards, although the EPA has the discretion to set standards for malfunctions where feasible. Refer to section IV.D of the proposal preamble for further discussion of the EPA's rationale for the decision not to set standards for malfunctions.

D. What other changes have been made to the NESHAP?

Consistent with the proposal, the EPA is finalizing the electronic reporting requirements, specifically that owners or operators of lime manufacturing plants submit electronic copies of required performance test reports, performance evaluation reports, and semiannual compliance reports through the EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI).

We are finalizing an alternative test method to EPA Method 320 and incorporating several test methods by reference, as discussed further in section IV.E of this preamble. We are also finalizing additional changes that address technical and editorial corrections, as proposed and as described in section IV.F of this preamble.

E. What are the effective and compliance dates of the standards?

The revisions to the MACT standards being promulgated in this action are effective on July 24, 2020. The compliance date for the revised requirements for affected sources that commenced construction or reconstruction on or before September 16, 2019, is January 20, 2021, with the exception of the vacated SSM exemptions contained in 40 CFR 63.6(f)(1) and (h)(1). We are revising

Table 9 of 40 CFR part 63, subpart AAAAA to clarify that for all affected sources, these exemptions do not apply given the court vacatur in *Sierra Club v. EPA*, 551 F. 3d 1019 (D.C. Cir. 2008). The compliance date for the revised requirements for affected sources that commence construction or reconstruction after September 16, 2019, is July 24, 2020 or upon initial startup, whichever is later. We are finalizing changes, as proposed, that would impact ongoing compliance requirements for 40 CFR part 63, subpart AAAAA. As discussed elsewhere in this preamble, we are finalizing the requirement that performance test results, performance evaluation reports, and the semiannual reports using the new template be submitted electronically. We are also finalizing changes to the requirements for SSM. For example, we are removing the exemption from the requirements to meet the standard during SSM periods and removing the requirement to develop and implement an SSM plan, as proposed. Our experience with similar industries that have been required to convert reporting mechanisms, install necessary hardware, install necessary software, become familiar with the process of submitting performance test results electronically through the EPA's CEDRI, test these new electronic submission capabilities, reliably employ electronic reporting, and convert logistics of reporting processes to different time-reporting parameters,

shows that a time period of a minimum of 90 days, and more typically, 180 days, is generally necessary to successfully complete these changes. Our experience with similar industries further shows that this sort of regulated facility generally requires a time period of 180 days to read and understand the amended rule requirements; evaluate their operations to ensure that they can meet the required standards during periods of startup and shutdown as defined in the rule and make any necessary adjustments; adjust parameter monitoring and recording systems to accommodate revisions; and update their operations to reflect the revised requirements. The EPA recognizes the confusion that multiple different compliance dates for individual requirements would create and the additional burden such an assortment of dates would impose. From our assessment of the timeframe needed for compliance with the entirety of the revised requirements, the EPA considers a period of 180 days to be the most expeditious compliance period practicable, and, thus, is finalizing the requirement that existing affected sources be in compliance with all of this regulation's revised requirements within 180 days of the regulation's effective date.

IV. What is the rationale for our final decisions and amendments for the Lime Manufacturing source category?

For each issue, this section provides a description of what we proposed and

what we are finalizing for the issue, the EPA's rationale for the final decisions and amendments, and a summary of key comments and responses. For all comments not discussed in this preamble, comment summaries and the EPA's responses can be found in the comment summary and response document available in the docket.

A. Residual Risk Review for the Lime Manufacturing Source Category

1. What did we propose pursuant to CAA section 112(f) for the Lime Manufacturing source category?

Pursuant to CAA section 112(f), the EPA conducted a risk review and presented the results for the review, along with our proposed decisions regarding risk acceptability and ample margin of safety, in the September 16, 2019, proposed rule for the Lime Manufacturing source category (84 FR 48708). The results of the risk assessment are presented briefly in Table 1 of this preamble and in the risk report titled *Residual Risk Assessment for the Lime Manufacturing Plants Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, and sections III and IV of the proposal preamble (84 FR 48708, September 16, 2019) available in the docket for this action.

TABLE 1—INHALATION RISK ASSESSMENT SUMMARY FOR LIME MANUFACTURING¹ SOURCE CATEGORY

Number of facilities ²	Maximum individual cancer risk (in 1 million) ³ based on . . .		Population at increased risk of cancer ≥ 1-in-1 million based on . . .		Annual cancer incidence (cases per year) based on . . .		Maximum chronic noncancer TOSHI ⁴ based on . . .		Maximum screening acute noncancer HQ ⁵ based on actual emissions level
	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	Actual emissions level	Allowable emissions level	
35	1	2	12	450	0.001	0.003	0.04	0.05	0.6 (REL)

¹ Based on actual and allowable emissions.
² Number of facilities evaluated in the risk assessment. Includes 35 operating facilities subject to 40 CFR part 63, subpart AAAAA.
³ Maximum individual excess lifetime cancer risk due to HAP emissions from the source category.
⁴ Maximum target organ-specific hazard index (TOSHI). The target organ with the highest TOSHI for the Lime Manufacturing source category is the respiratory system.
⁵ The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of hazard quotient (HQ) values. The acute HQ shown was based upon the lowest acute 1-hour dose-response value, the recommended exposure limit (REL) for elemental mercury. When an HQ exceeds 1, we also show the HQ using the next lowest available acute dose-response value.

The results of the chronic inhalation cancer risk assessment, based on actual emissions, show the estimated maximum individual cancer risk (MIR) posed by the 35 facilities is 1-in-1 million, with metals, aldehydes, and organic HAP emissions from the lime kiln and cooler exhaust as the major contributors to the risk. The total

estimated cancer incidence based on actual emission levels is 0.001 excess cancer cases per year, or one excess case every 1,000 years. About 12 people are estimated to have cancer risks greater than or equal to 1-in-1 million based on actual emissions from HAP emitted from the 35 facilities in this source category. The maximum chronic

noncancer hazard index (HI) for the source category is estimated to be less than 1 (0.04) based on actual emissions of hydrochloric acid (HCl), nickel compounds, and acrolein emitted from lime kiln and cooler exhaust. No one is estimated to have a TOSHI greater than 1 based on actual emissions.

The EPA also evaluated the cancer risk at the maximum emissions allowed by the MACT standard, or “MACT-allowable emissions.” Risk results from the inhalation risk assessment using the MACT-allowable emissions indicate that the cancer MIR is 2-in-1 million with metals, aldehydes, and organic HAP emissions from lime kiln and cooler exhaust driving the risks, and that the maximum chronic noncancer TOSHI value is 0.05 with HCl, nickel compounds, and acrolein emissions from lime kiln and cooler exhaust driving the TOSHI. The total cancer incidence estimated based on allowable emissions from this source category is 0.003 excess cancer cases per year or one excess case every 333 years. Based on MACT-allowable emission rates, approximately 450 people are estimated to have cancer risks above 1-in-1 million. No people are estimated to have a noncancer HI above 1 based on allowable emissions.

For the Lime Manufacturing source category, the maximum acute HQ is 0.6 based on the REL, driven by actual emissions of elemental mercury. By definition, the acute REL represents a health-protective level of exposure, with effects not anticipated below those levels, even for repeated exposures.

We also conducted a multipathway screening assessment for the source category, and the results of the screening assessment are presented in the risk report titled *Residual Risk Assessment for the Lime Manufacturing Plants Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, and section IV of the proposal preamble (84 FR 48708, September 16, 2019) available in the docket for this action. A screening value is not an estimate of the cancer risk or a noncancer HQ (or HI). Rather, a screening value represents a high-end estimate of what the risk or HQ may be. For this source category the highest screening values were from mercury emissions, with a Tier 2 screening value of 5 and a Tier 3 screening value of 2 for this noncarcinogen. We are confident that if a refined multipathway risk assessment was conducted, the HQ for mercury would be lower than 2. Further details on the Tier 3 screening assessment can be found in Appendix 11 of *Residual Risk Assessment for the Lime Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*. Dioxin and arsenic emissions resulted in a Tier 2 cancer screening value of 20, which means that we are confident that the multipathway cancer risk is lower than 20-in-1 million.

The EPA has determined that it is not necessary to go beyond the Tier 3 assessment for mercury (to a site-specific assessment) or beyond the Tier 2 cancer screening assessment. As explained above, the mercury screening value of 2 is a high-end estimate of what the risk or hazard may be and can be interpreted to mean that we are confident that the HQ would be lower than 2. Similarly, we are confident that the excess cancer risk is less than 20-in-1 million, and evaluation under Tier 3 or a site-specific assessment would further reduce the estimated risk. Further, risk results from four site-specific mercury assessments the EPA has conducted for four RTR source categories resulted in noncancer HQs that range from 50 times to 800 times lower than the respective Tier 2 mercury screening value for those facilities (refer to Docket ID No. EPA-HQ-OAR-2017-0015 for a copy of these reports).² Based on our review of these analyses, we expect if we were to perform a site-specific assessment for the Lime Manufacturing source category, the mercury HQ would be at least a one order of magnitude less than the Tier 2 non-cancer screening value for mercury. Thus, the EPA is confident that the mercury HQ would be less than 1, if further refined to incorporate enhanced site-specific analyses such as improved model boundary identification with improved soil/water run-off calculations and AERMOD deposition outputs used in the TRIM.FaTE model.

In evaluating the potential for multipathway effects from emissions of lead, the EPA compared modeled annual lead concentrations to the secondary National Ambient Air Quality Standards (NAAQS) level for lead (0.15 milligram per cubic meter (mg/m³), arithmetic mean concentration over a 3-month period). The highest annual average lead concentration, 0.0007 mg/m³, is far below the NAAQS level for lead, indicating a low potential for multipathway impacts.

The EPA also conducted an environmental risk screening assessment for the Lime Manufacturing

source category for the following pollutants: Arsenic, cadmium, dioxins and furans (D/F), HCl, hydrogen fluoride (HF), lead, mercury (methyl mercury and mercuric chloride), and polycyclic organic matter (POM). In the Tier 1 screening analysis for HAP known to be persistent and bio-accumulative in the environment (PB-HAP) (other than lead, which was evaluated differently), arsenic, cadmium, and POM emissions had no exceedances of any of the ecological benchmarks evaluated. D/F emissions had a Tier 1 exceedance at 31 facilities for a surface soil benchmark by a maximum screening value of 30. Divalent mercury emissions had Tier 1 exceedances for the following benchmarks: Sediment threshold level (one facility), surface soil threshold level—plant communities (25 facilities), and surface soil threshold level—invertebrate communities (32 facilities) by a maximum screening value of 20. Methyl mercury emissions had Tier 1 exceedances for the following benchmarks: Fish (avian/piscivores) NOAEL—Merganser (one facility), surface soil no-observed-adverse-effect-level (NOAEL) for mammalian insectivores—shrew (13 facilities), and surface soil NOAEL for avian ground insectivores—woodcock (33 facilities) by a maximum screening value of 40. A Tier 2 screening analysis was performed for D/F, divalent mercury, and methyl mercury emissions. In the Tier 2 screening analysis, there were no exceedances of any of the ecological benchmarks evaluated for any of the pollutants. For lead, we did not estimate any exceedances of the secondary lead NAAQS. For HCl and HF, the average modeled concentration around each facility (*i.e.*, the average concentration of all off-site data points in the modeling domain) did not exceed any ecological benchmark. In addition, each individual modeled concentration of HCl and HF (*i.e.*, each off-site data point in the modeling domain) was below the ecological benchmarks for all facilities. Based on the results of the environmental risk screening analysis, we do not expect an adverse environmental effect as a result of HAP emissions from this source category.

An assessment of risk from facility-wide actual emissions was performed to provide context for the source category risks. The maximum lifetime individual cancer risk posed by the 35 facilities, based on facility-wide emissions, is 1-in-1 million (estimated for three facilities), with arsenic, chromium (VI) compounds, and nickel emissions from fugitive PSH operations driving the risk.

² EPA Docket records: Appendix 11 of the *Residual Risk Assessment for the Taconite Manufacturing Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*; Appendix 11 of the *Residual Risk Assessment for the Integrated Iron and Steel Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*; Appendix 11 of the *Residual Risk Assessment for the Portland Cement Manufacturing Source Category in Support of the 2018 Risk and Technology Review Final Rule*; and Appendix 11 of the *Residual Risk Assessment for the Coal and Oil-Fired EGU Source Category in Support of the 2018 Risk and Technology Review Proposed Rule*.

The total estimated cancer incidence from facility-wide emissions is 0.004 excess cancer cases per year, or one case in every 250 years. Approximately 30 people are estimated to have cancer risk equal to 1-in-1 million from facility-wide emissions. The maximum facility-wide chronic noncancer TOSHI is estimated to be less than 1 (0.4), mainly driven by emissions of HCl from a facility-wide fugitive area source.

To examine the potential for any environmental justice issues that might be associated with the source category, the EPA performed a demographic analysis, which is an assessment of risk to individual demographic groups of the populations living within 5 kilometers (km) and within 50 km of the facilities. The results of the Lime Manufacturing source category demographic analysis indicated that emissions from the source category expose approximately 12 people to a cancer risk at or above 1-in-1 million and no people to a chronic noncancer TOSHI greater than 1. The percentages of the at-risk population indicated that three of the 10 demographic groups (White, African American and people below the poverty level) that are living within 50 km of facilities in the source category exceeded the corresponding national percentage for the same demographic groups. The methodology and the results of the demographic analysis are presented in a technical report, *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Lime Manufacturing Source Category Operations*, available in the docket for this action.

The EPA weighed all health risk factors in our risk acceptability determination, and we proposed that the residual risks from this source category are acceptable. We then considered whether the NESHAP provides an ample margin of safety to protect public health, and whether more stringent standards were necessary to prevent an adverse environmental effect, by taking into consideration costs, energy, safety, and other relevant factors. In determining whether the standards provide an ample margin of safety to protect public health, we examined the same risk factors that we investigated for our acceptability determination and also considered the costs, technological feasibility, and other relevant factors related to emissions control options that might reduce risk associated with emissions from the source category. We proposed that the 2004 Lime Manufacturing Plants NESHAP requirements provide an ample margin of safety to protect public health. Based on the results of

our environmental risk screening assessment, we also proposed that more stringent standards are not necessary to prevent an adverse environmental effect.

2. How did the risk review change for the Lime Manufacturing source category?

Since proposal, neither the risk assessment nor our determinations regarding risk acceptability, ample margin of safety, or adverse environmental effects have changed.

3. What key comments did we receive on the risk review, and what are our responses?

Additional comments and our specific responses can be found in the comment summary and response document titled *Summary of Public Comments and Responses for Lime Manufacturing Plants Residual Risk and Technology Review*, which is available in the docket for this action. The EPA received comments in support of and opposed to the proposed risk review and our determination that no revisions were warranted under CAA section 112(f)(2). Key comments and responses are discussed below.

Comment: One commenter stated that there are substantial health threats from the lime manufacturing industry. The commenter stated that it is unlawful, arbitrary and capricious for the EPA to do nothing to reduce any of these emissions or resulting health threats from lime manufacturing. The commenter stated that the EPA may not lawfully or rationally find health risks to be “acceptable” under CAA section 112(f)(2) when the record shows the opposite, and the EPA has ignored significant health impacts. The commenter stated that the EPA’s proposal is incomplete and based on analyses that underestimate and ignore the health risks from the toxic pollution that lime manufacturing facilities emit into communities.

Response: The EPA disagrees with the comment. Results of the EPA’s risk assessment for the Lime Manufacturing source category indicate that both the actual and allowable inhalation cancer risks to the individual most exposed are less than or equal to 2-in-1 million, well below the presumptive limit of acceptability of 100-in-1 million. The actual and allowable inhalation noncancer risks to the individual most exposed are below a HQ of 1. Based on the conservative nature of the multipathway screens, we find the Tier 2 screening values (D/F and arsenic) for cancer and Tier 3 noncancer screening values (cadmium and mercury)

acceptable for the Lime Manufacturing source category. This determination is based upon the upper-bound cancer screening values of 20 being significantly below an excess cancer risk of 100-in-1 million and on results from facility-specific assessments for mercury performed for other source categories. Based upon this experience, we conclude that if we were to conduct a site-specific risk assessment for the Lime Manufacturing source category, the risk would result in a HQ value of 1 or lower. For this reason and considering the conservative nature of the multipathway exposure screening scenario, no further analysis was performed. In our ample margin of safety analysis, we investigated available emissions control options that might reduce the risk from the source category. We considered this information along with all of the health risks and other health information considered in our determination of risk acceptability. As part of the proposed ample margin of safety analysis, we considered activated carbon injection (ACI) systems, which have not been used or demonstrated on lime kilns, for controlling D/F and mercury emissions. In both cases, considering the potential negligible reductions in emissions and the results of our risk analysis, we concluded that the use of ACI would have little effect on the source category risks. Due to the already low risk, along with the substantial costs associated with more stringent standards, we determined that additional emissions controls for this source category were not required to provide an ample margin of safety to protect public health. We have retained this determination in the final rule. We note that the commenter did not provide detail or supporting documentation for their comment.

Comment: A commenter urged the EPA to set stronger standards to bring further protection to communities from lime manufacturing facilities. The commenter requested that the EPA consider the people exposed to these facilities’ emissions and affected by its proposed decision not to strengthen the emission limits. The commenter urged the EPA to exercise its legal authority to end unacceptable risk for exposed communities and set the “ample margin of safety to protect public health” and prevent an adverse environmental effect, instead of attempting to avoid the science and the health threats shown in the record.

Response: The risk assessment demonstrated that health risks due to air emissions from lime manufacturing sources are acceptable and after considering available control options

and all available risk information, the EPA concluded that the current standards provide an ample margin of safety to protect public health. These conclusions support the EPA's decision to not revise the existing emission limits. However, we have amended the final rule to make corrections to certain provisions and have amended provisions to clarify their intent and these revisions will result in improved monitoring and compliance with and implementation of the rule. In addition, the elimination of the SSM exemption may result in lower HAP emissions.

Comment: A commenter stated that the EPA underestimated the health threats to children and from early-life exposure by ignoring increased risk in childhood and from prenatal exposure.

Response: The EPA disagrees with the comment that the risk assessment for this source category does not consider the groups that may be most at-risk (e.g., children). When the EPA derives exposure reference concentrations and unit risk estimates for metal HAP, it also considers the most sensitive populations identified in the available literature and, importantly, these are the values used in our risk assessments.

We acknowledge that population subgroups, including children, may have a potential for risk that is greater than the general population due to greater relative exposure and/or greater susceptibility to the toxicant. The assessments we undertake to estimate risk account for this potential vulnerability, for example; the EPA includes exposure from D/F through ingestion of breast-milk for infants less than 1 year of age. The EPA also estimates age-specific risks to account for the higher sensitivity of developing children to mutagens. With respect to inhalation exposure, the risk assessments we perform implicitly account for this greater potential for exposure by assuming lifetime exposure, in which populations are conservatively presumed to be exposed to airborne concentrations at their residence continuously, 24 hours per day for a full lifetime, including childhood. With regard to children's potentially greater susceptibility to noncancer toxicants, the assessments rely on the EPA's (or comparable) hazard identification and dose-response values that have been developed to be protective for all subgroups of the general population, including children.

For example, a review of the chronic reference value process concluded that the EPA's reference concentration (RfC) derivation processes adequately considered potential susceptibility of different subgroups with specific

consideration of children, such that the resultant RfC values pertain to the full human population, "including sensitive subgroups," a phrase which is inclusive of childhood.³ With respect to cancer, the EPA uses the age-dependent adjustment factor approach referred to by the commenter but limits the use of those factors only to carcinogenic pollutants that are known to act via mutagenic mode of action (MOA), in contrast to the California Office of Environmental Health Hazard Assessment approach, which uses them across the board for all carcinogens regardless of MOA. In lieu of chemical-specific data on which age or life-stage specific risk estimates or potencies can be determined, default age dependent adjustment factors can be applied when assessing cancer risk for early-life exposures to chemicals that cause cancer through a mutagenic MOA. With regard to other carcinogenic pollutants for which early-life susceptibility data are lacking, it is the EPA's long-standing science policy position that use of the linear low-dose extrapolation approach (without further adjustment) provides adequate public health conservatism in the absence of chemical-specific data indicating differential early-life susceptibility or when the mode of action is not mutagenicity. The basis for this methodology is provided in the 2005 Supplemental Guidance.⁴

The estimated risks must be considered in the context of the full set of assumptions used for this risk assessment. Our unit risk estimates for HAP are considered a plausible upper-bound estimate with an appropriate age dependent adjustment; actual potency is likely to be lower and could be as low as zero. Our chronic noncancer reference values have been derived considering the potential susceptibility of different subgroups, with specific consideration of children.

Comment: One commenter stated that the EPA underestimated health threats to communities exposed to multiple sources by neglecting to add factors to account for the increased risks caused by such exposure. The commenter stated that the EPA underestimated the cancer, chronic noncancer, and acute health risks by using modeling assumptions that ignore real-world exposures, underestimating risk from

chemicals such as benzene and lead due to the EPA's refusal to follow the best available science, and neglecting to aggregate cumulative risks.

Response: The EPA's chronic risk assessment modeling accounts for cumulative cancer risks from emitted carcinogens and for pollutants that have similar modes of action or (where this information is absent) that affect the same target organ, we aggregated the HQs. This process creates, for each target organ, a TOSHI, defined as the sum of HQs for individual HAP that affect the same organ or organ system.

The modeling conducted also includes the effects of multiple facilities that may be in close proximity when estimating concentration and risk impacts at each block centroid. When evaluating the risks associated with a particular source category, we combined the impacts of all facilities within the same source category and assessed chronic exposure and risk for all census blocks with at least one resident (i.e., locations where people may reasonably be assumed to reside rather than receptor points at the fence line of a facility). The MIR considers the combined impacts of all sources in the category that may be in close proximity. This approach is similar for those facilities within the source category that have an associated or cumulative impact on neighboring lakes as it relates to assessing multi-pathway impacts for each of the PB-HAP. Background risks or contributions to risk from sources outside the source category under review could be one of the relevant factors considered in the ample margin of safety determination, along with cost and economic factors, technological feasibility, and other factors. Background risks and contributions to risk from sources outside the facilities under review were not considered in the ample margin of safety determination for this source category, mainly because of the significant uncertainties associated with emissions estimates for such sources. Our approach here is consistent with the approach we took regarding this issue in the Hazardous Organic NESHAP (HON) RTR (71 FR 76603, December 21, 2006), which the Court upheld in the face of claims that the EPA had not adequately considered background (*NRDC v. EPA*, 529 F.3d 1077 (D.C. Cir. 2008)).

Comment: A commenter stated that the EPA has ignored all multipathway cancer and noncancer chronic health risks that result when persistent or bioaccumulative pollutants emitted by lime manufacturing facilities fall into the Great Lakes, bays, rivers, and other large waterbodies. The commenter

³ USEPA, 1994. Methods for derivation of inhalation reference concentrations and application of inhalation dosimetry. EPA/600/8-90/066F; https://www.epa.gov/sites/production/files/2014-11/documents/rfc_methodology.pdf.

⁴ USEPA, 2005b. Supplemental guidance for assessing early-life exposure to carcinogens. EPA/630/R-03003F. https://www3.epa.gov/ttn/atw/childrens_supplement_final.pdf.

stated that by excluding all impacts from deposition in these waterbodies, the EPA ignored both health threats and ecological threats, and violated its legal obligation to assess health and environmental risk and reduce these hazards as the statute directs.

Response: Very large lakes and bays (*i.e.*, those larger than 100,000 acres) are not considered because their large volumes significantly dilute air deposition from point sources. Such large lakes, including the Great Lakes, the Great Salt Lake, Lake Okeechobee, Lake Pontchartrain, Lake Champlain, Green Bay, and Galveston Bay also dilute contaminants in the vast biomass of fish in the large aquatic food webs. Contaminants derived from emissions to air by a point source would be distributed among populations of millions of fish resulting in negligible increases in fish tissue concentrations attributable to the point source. Also, very large lakes are rare (only 35 such lakes exist in the conterminous United States). Moreover, for facilities near large lakes, there usually are other, smaller lakes that the EPA does consider for which contaminant dilution would be lower, and, therefore, for which human health and ecological risks would be higher. Thus, the EPA does model exposure via fish consumption for populations that are near large lakes in a manner that generally will be more health protective than modeling the very large lake. The EPA also does not model lakes adjacent or connected to a river or saltwater body (estuaries and rivers) or bays; these waterbodies are likely to have high outflow with limited chemical retention. Less retention time for these types of waterbodies result in significantly lower media concentrations when compared to lakes.

4. What is the rationale for our final approach and final decisions for the risk review?

The EPA evaluated all of the comments on the EPA's risk review and determined that no changes to the review are needed. In the proposed rule, we proposed that the risks from the Lime Manufacturing source category are acceptable, the current standards provide an ample margin of safety to protect public health, and more stringent standards are not necessary to prevent an adverse environmental effect. For the reasons explained in the proposal and in our responses to public comments and pursuant to CAA section 112(f)(2), we are finalizing our risk review as proposed.

B. Technology Review for the Lime Manufacturing Source Category

1. What did we propose pursuant to CAA section 112(d)(6) for the Lime Manufacturing source category?

Pursuant to CAA section 112(d)(6), the EPA conducted a technology review, which focused on identifying and evaluating developments in practices, processes, and control technologies that would necessitate revision to the existing emission standards for the Lime Manufacturing source category. No cost-effective developments in practices, processes, or control technologies were identified in our technology review to necessitate revisions to the PM or opacity standards, which are both used as a surrogate for HAP metals, standards. More information concerning our technology review is in the memorandum titled *Technology Review for the Lime Manufacturing Source Category*, which is in the docket for this action, and in the preamble to the proposed rule (84 FR 48726).

2. How did the technology review change for the Lime Manufacturing source category?

The technology review has not changed since proposal.

3. What key comments did we receive on the technology review, and what are our responses?

The EPA received comments in support of the proposed determination from the technology review that no revisions were necessary under CAA section 112(d)(6). We also received comments asserting that the technology review was inadequate for a variety of reasons, primarily because of failure to consider control technologies for unregulated HAP emissions.

Comment: A commenter stated the EPA does not discuss or perform any review under CAA section 112(d)(6) for all emitted HAP. The commenter noted that the EPA failed to complete a technology review for HCl, mercury, D/F, and organic HAP. The commenter stated that the EPA cannot determine whether developments in pollution control make it "necessary" to revise the emission standards without determining what developments have occurred for these HAP. The commenter stated that the fact that these HAP are emitted from the source category requires the EPA to evaluate them pursuant the technology review.

Response: Section 112(d)(6) of the CAA requires the EPA to "review and revise, as necessary (taking into account developments in practices, processes, and control technologies), emission

standards promulgated under this section" The EPA reads CAA section 112(d)(6) as a limited provision requiring the Agency to review the original emission standards already promulgated and to revise those standards as necessary, taking into account developments in practices, processes, and control technologies. Under this reading, section 112(d)(6) of the CAA does not impose upon the Agency any obligation to promulgate new emission standards or expand the scope of an existing regulation.⁵ Accordingly, we disagree with the commenter that CAA section 112(d)(6) requires a technology review for HCl, mercury, D/F, and organic HAP. The EPA notes that we have completed our statutory requirements under CAA section 112(d)(6) in reference to the promulgated standards.

Any new MACT standards would not be established pursuant to CAA section 112(d)(6), but instead would be established under CAA sections 112(d)(2) and (3) or CAA section 112(h). Establishing emissions standards under CAA sections 112(d)(2) and (3) or 112(h) involves a different analytical approach than reviewing emissions standards under CAA section 112(d)(6).

Comment: One commenter stated that there are multiple HAP emitted from the Lime Manufacturing source category that have no numeric emission standards, including HCl, organic HAP (*e.g.*, formaldehyde, styrene), mercury, and D/F. The commenter stated that CAA section 112(d) requires limits for each HAP that a source category emits and that CAA section 112(d)(6) requires the EPA to review and revise its existing emission standards "as necessary." The commenter stated that when the EPA reviewed the Lime Manufacturing source category and found that they lack emission limits for emitted HAP, it is necessary under CAA section 112(d)(6) to revise the standard (*i.e.*, set limits for these HAP). The commenter noted that the EPA's failure to set emission limits for these HAP causes public suffering from uncontrolled exposure to these HAP.

The commenter cited prior court rulings that found that the Agency has a "clear statutory obligation to set emission standards for each listed HAP." [*National Lime Ass'n*, 233 F.3d

⁵ On April 21, 2020, as the Agency was preparing the final rule for signature, a decision was issued in *LEAN v. EPA*, 955 F.3d 1088 (D.C. Cir. 2020) in which the Court held that the EPA has an obligation to set standards for unregulated pollutants as part of technology reviews under CAA section 112(d)(6). At the time of signature, the mandate in that case had not been issued and the EPA is continuing to evaluate the decision.

625, 634 (D.C. Cir. 2000) and *Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C. Cir. 2007)] The commenter cited prior rulemakings where the EPA has acknowledged this issue and has subsequently set emission limits for pollutants without standards.

The commenter noted that the Lime Manufacturing Plants RTR clearly demonstrates that these pollutants are emitted from the source category, but that the EPA has not acknowledged its obligation to set limits on these uncontrolled HAP and has not explained why it is not “necessary” to revise the existing standards to set limits for these HAP. The commenter stated that the EPA has emissions data from at least some sources, and it must complete its obligation to set a limit for these HAP.

The commenter stated that it is unlawful and arbitrary for the EPA not to set limits for these HAP in this rulemaking. The commenter stated that if the EPA does not do this, it will fail to complete the review and revision rulemaking as CAA section 112(d)(6) requires, will violate the Court’s order in *California Communities Against Toxics v. Pruitt*, 241 F. Supp. 3d 199 (D.C. 2017), and will also issue a final rule that is unlawful and inadequate.

Response: CAA section 112(d)(6) requires the EPA to review and revise, as necessary (taking into account developments in practices, processes, and control technologies), emission standards promulgated under this section. We do not read section CAA section 112(d)(6) as supporting the commenter’s assertion that the EPA must establish new standards for unregulated emission points or pollutants as part of a technology review of the existing standards (but see footnote 5). The EPA reads CAA section 112(d)(6) as a limited provision requiring the Agency to, at least every 8 years, review the emission standards already promulgated in the NESHAP and to revise those standards as necessary taking into account developments in practices, processes, and control technologies. The EPA does not read CAA section 112(d)(6) as directing the Agency, as part of or in conjunction with the mandatory 8-year technology review, to develop new emission standards to address HAP or emission points for which standards were not previously promulgated.

When the EPA established standards for previously unregulated emissions, we did not establish those initial standards pursuant to CAA section 112(d)(6) but instead established the standards under one of the provisions that govern initial standard setting—

CAA sections 112(d)(2) and (3) or, if the prerequisites are met, CAA sections 112(d)(4) or 112(h). Establishing emissions standards under these provisions of the CAA involves a different analytical approach from reviewing emissions standards under CAA section 112(d)(6).

Additional comments and our specific responses can be found in the comment summary and response document titled *Summary of Public Comments and Responses for Lime Manufacturing Plants Residual Risk and Technology Review*, which is available in the docket for this action.

4. What is the rationale for our final approach for the technology review?

The EPA evaluated all of the comments on the EPA’s technology review and determined that no changes to the review are needed. For the reasons explained in the proposed rule, we determined that no cost-effective developments in practices, processes, or control technologies were identified in our technology review to necessitate revisions to the standards. More information concerning our technology review can be found in the memorandum titled *Technology Review for the Lime Manufacturing Source Category*, which is in the docket for this action. Therefore, pursuant to CAA section 112(d)(6), we are finalizing our technology review as proposed.

C. SSM for the Lime Manufacturing Source Category

1. What did we propose for the Lime Manufacturing source category?

The EPA proposed amendments to the Lime Manufacturing Plants NESHAP to remove and revise provisions related to SSM that are not consistent with the requirement that the standards apply at all times or that are unnecessary or redundant in the absence of an SSM exemption. More information concerning the elimination of SSM provisions is in the preamble to the proposed rule (84 FR 48708, September 16, 2019).

2. How did the SSM provisions change from proposal for the Lime Manufacturing source category?

The EPA is finalizing the SSM provisions with the following changes from the proposal:

- Replacing the proposed startup work practice standards for kilns and coolers equipped with a FF or ESP with opacity emission standards.
- Replacing the proposed startup work practice standards for kilns and coolers equipped with a wet scrubber

with a requirement to meet standards applicable during normal operation.

- Revising the definition of “Startup” to add “on-specification” prior to “lime product” and to add an alternate ending to startup.

- Adding testing requirements for determining when lime product is deemed on-specification.

With respect to the revisions to the proposed startup standards, the EPA is finalizing standards for startup that differ from what we proposed based on a re-evaluation of the need for work practice standards. The EPA proposed work practice standards for kilns equipped with wet scrubbers, FFs, and ESPs. However, the final rule requires kilns and coolers that are equipped with ESPs or FFs to meet numerical opacity limits and kilns and coolers equipped with wet scrubbers to meet the scrubbing liquid flow rate requirements that apply during normal operations. The EPA’s determination in the proposed rule (84 FR 48727) that work practice standards were appropriate was based on a finding that the application of measurement methodology for PM emissions was impracticable because the test methods required for compliance are to be conducted under steady-state conditions which are difficult to achieve during startup. In addition to the reference test method (EPA Method 5), we considered PM emission monitors, which also requires steady-state conditions. However, based on comments claiming that the EPA has not shown a lack of practicable measurement methodology for startup periods, we reconsidered the issue. The 2004 final NESHAP rule established opacity as an emission standard limiting PM emissions. We are not aware of factors that would prevent the monitoring of opacity during startup periods.

For kilns equipped with FFs or ESPs, 40 CFR part 63, subpart AAAAA allows compliance with opacity standards to ensure PM is controlled between stack tests.⁶ In this rule, for periods of startup, the EPA is requiring kilns equipped with FFs or ESPs to meet the 15-percent opacity limit that applies during normal operation averaged over the period of startup. The EPA has determined that a longer averaging time is appropriate for startup periods since we are aware that emissions during startup can be variable in light of the sequence of events that

⁶ The EPA notes that under 40 CFR part 63, subpart AAAAA stack testing is not permitted during startup and shutdown. As proposed, this rule replaces the reference in Table 9 to 40 CFR 63.7(e)(1) (which prohibits performance testing during periods of startup and shutdown) with identical language at 40 CFR 63.7112(c)).

occur during startup of a kiln. Thus, the longer averaging time being finalized is to account for this variability that could result in spikes in opacity during the startup period. During startup, even the best performing units are constantly making adjustments in terms of fuel flow and combustion air flow rate. Every increase in fuel rate or feed rate requires the source to adjust air flow to the proper level. Each adjustment can lead to a spike in opacity. Accounting for such variability in setting emission standards is consistent with the CAA case law. See, *United States Sugar Corp. v. EPA*, 830 F.3d 579, 632 (D.C. Cir. 2016) (“We have held, see *Mossville Env’tl. Action Now v. EPA*, 370 F.3d 1232, 1242 (D.C. Cir. 2004), and recently reaffirmed, see *NACWA*, 734 F.3d at 1133–34, that the EPA can consider this variability when setting MACT floors.”). As proposed, the EPA is not establishing different shutdown standards for kilns equipped with FFs or wet scrubbers and, thus, such kilns must meet otherwise applicable limits during shutdown.

3. What key comments did we receive on the SSM provisions, and what are our responses?

The EPA received 16 comments related to our proposed revisions to the SSM provisions. Commenters generally supported the proposed removal of the SSM exemptions but disagreed with either the proposing of work practice standards for the startup period or certain aspects of the proposed work practice standards. We evaluated the comments and determined that changes to the proposed SSM provisions are warranted. A summary of these comments and our responses are located in the memorandum titled *Summary of Public Comments and Responses for Lime Manufacturing Plants Residual Risk and Technology Review*, which is in the docket for this action.

Comment: Commenters stated that the EPA’s work practice standard requiring all kilns to start and operate on “clean fuels” until the kiln reaches a temperature of 1200 degrees Fahrenheit is unnecessary, not based on information in the administrative record, inconsistent with processes required to safely and properly commence kiln operation, and, for some kilns, is impractical based on the realities of operating kilns in the lime industry.

The commenters stated that for operational and safety reasons, electrostatic precipitators (ESP) cannot be started immediately to effectively remove PM upon startup of the kiln. Therefore, the clean fuel work practice for startup makes sense for ESP-

equipped kilns. The commenters confirmed that the limited number of ESP-equipped kilns in the lime industry can be started on natural gas or other listed clean fuels.

The commenters stated that for baghouse and scrubber-equipped kilns, clean fuel startup is not needed because the air pollution control device is operating at the beginning of startup and begins removing PM immediately. The commenters stated that since stone feed rates are low during startup, total PM emissions exiting the kiln will be less than during normal operation, and the operating air pollution control devices will ensure that PM will be removed. The commenters also noted that clean fuels are not available at all lime manufacturing locations (for example, natural gas is not readily available in areas far from gas pipelines).

The commenters stated that the proposed requirement to meet the opacity and scrubber liquid flow rate operating limits is sufficient to show that emissions are not excessive for baghouse and scrubber-equipped kilns. The commenters recommended that the EPA delete the requirement for baghouse and scrubber-equipped kilns to start on clean fuels but add a requirement that the air pollution control devices for such kilns be in operation at the beginning of startup.

Response: The EPA agrees that the requirement to start and operate on “clean fuels” is unnecessary for kilns equipped with FFs or wet scrubbers because the control devices can be operational at the time of startup. Therefore, we are not finalizing the work practice requirement to startup on clean fuel for kilns equipped for FFs or wet scrubbers. As explained above in section C.2, we are instead requiring kilns equipped with FFs, ESPs or wet scrubbers to comply with standards as described in section C.2 above and in Table 2 during startup and shutdown.

Comment: The proposed definition of the end of startup was “Startup ends 60 minutes after the lime kiln generates lime product.” Commenters stated that the term “lime product” is not specific enough to provide certainty to regulated sources. The commenters highlighted that a kiln will start to discharge off-spec product almost simultaneously with the lighting of the primary fuel. The commenters stated that it can take up to 12 hours to produce quality grade lime following first discharge from a rotary kiln, and even longer for a vertical kiln.

The commenters recommended that the end of startup should be related to levels of stone feed, because the applicable PM emissions limits are

based on tons of stone feed. The commenters recommended that the definition of the end of startup should be revised to read “Startup ends 60 minutes after stone feed reaches planned production quantities.”

Response: The EPA appreciates the commenters feedback regarding the definition of the end of startup. Commenters provided further information (Docket ID Item No. EPA–HQ–OAR–2017–0015–0015, *SSM Letter from Industry (1/31/2019)*) regarding what constitutes on-specification lime product and the time when on-specification lime product is produced. Commenters note that on-specification lime is produced when steady-state conditions are achieved. The EPA determined that the definition of the end of startup is the time when steady-state conditions are achieved such that PM testing could be conducted with the reference test method. We have determined that these steady-state conditions are achieved either when first producing on-specification lime product or 12 hours following first discharge from the kiln, whichever is earlier.

We are finalizing the definition of the end of startup to provide more clarity, as follows: “*Startup ends when the lime kiln generates on-specification lime product or 12 hours following first discharge from the lime kiln, whichever is earlier.*” We are also finalizing a new definition for on-specification lime product, as follows: “*On-specification lime product means lime product that has been sufficiently calcined to meet end use requirements.*”

Finally, we are finalizing a requirement for facilities to test hourly during startup to determine when lime product meets the definition of on-specification, to maintain records of the time the kiln first began producing on-specification lime product, and the time of first discharge from the lime kiln.

Comment: Commenters stated that the best way to address malfunction events would be for plants to develop site-specific protocols for malfunctions that would be embodied in a rule required plan, and that compliance with those protocols would constitute compliance with an applicable work practice standard. The commenters suggested retaining the requirement for a SSM plan that would contain these protocols, or requiring them in the plant’s operations, maintenance, and monitoring (OM&M) plan.

The commenters stated that this would allow work practices for malfunctions to be tailored to the specific equipment and operating conditions present at each plant, and

the presence of the protocols in a required plan would allow for the EPA review and enforcement. The commenters stated that the EPA's consideration of work practice standards for specified malfunctions (84 FR 48728) would be better than not setting separate standards at all, but that this approach would omit some malfunctions, and will not have the same degree of "fit" as tailored OM&M protocols would have.

The commenters stated that adopting work practice standards for specified malfunctions (as opposed to tailored OM&M protocols) could also cause confusion as to what malfunctions are covered by the regulation. The commenters summarized the definition of malfunction in 40 CFR 63.2. The commenters noted that not all operational malfunctions of kilns and their associated air pollution control and monitoring equipment constitute "malfunctions" under the definition in section 63.2, because some problems do not have the potential to cause emissions limitations to be exceeded.

The commenters stated that local engineering expertise may be required to determine whether particular operational malfunctions are "malfunctions" under the statute and rule and that this is a reason why tailored procedures in OM&M plans would be preferable to work practice standards for specified malfunctions.

Response: The EPA does not agree with the commenter that malfunctions should be addressed through source-specific enforceable "plans" that would contain these protocols for malfunctions. Establishing source-specific protocols for malfunctions that met MACT stringency requirements would be difficult, if not impossible, given the myriad different types of malfunctions that can occur. *See, U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 608 (2016) ("Any possible standard is likely to be hopelessly generic to govern such a wide array of circumstances.")

The EPA is also not finalizing specific work practice standards for specific malfunction events, although we may do so if available information supports separate MACT-compliant standards in the future. In this case, we received comment and information on potential work practice standards during periods of malfunction, however we do not have information to support that the suggested standards met the MACT stringency requirements. The EPA also agrees that finalizing specific work practice standards for malfunctions has the potential to omit certain malfunction events and cause confusion regarding what malfunctions are

covered by the regulation, as it would be difficult to capture all malfunction events.

Comment: A commenter stated support for the EPA's proposed removal of the existing exemption of emissions during SSM periods. The commenter stated that the CAA requires that standards are continuous and applicable at all times and referenced various court rulings upholding this determination.

The commenter stated that the EPA may not finalize the new SSM exemptions it has proposed. The commenter stated that the EPA has not cited and can cite no statutory language granting it authority or "discretion" to set such standards, because it has none. The commenter stated that the EPA has only the discretion provided by the Act and delegated by Congress. [*Clean Air Council v. Pruitt*, 862 F.3d 1, 9 (DC Cir. 2017)] The commenter stated that relevant statutory language denies, rather than gives, the EPA authority to set malfunction-based standards or exemptions. See 42 U.S.C. 7412(d), (h), and 7602(k).

Response: The EPA disagrees that it has proposed new SSM exemptions or that the EPA does not have authority to establish different standards for periods of startup, shutdown or malfunction. In fact, the EPA proposed to (1) eliminate the SSM exemption, (2) require compliance with the existing standard for periods of malfunction and (3) require compliance with standards during periods of startup and shutdown. The commenter does not explain and cannot support the general claim that the statutory language denies the EPA authority to set different standards for startup or shutdown. The 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (DC Cir. 2008) ("2008 Sierra Club decision"), held that emissions standards or limitations must be continuous in nature and that "some" section 112 standards apply continuously. The DC Circuit reiterated this principle in *Sierra Club v. EPA*, 884 F.3d 1185, 1203 (DC Cir. 2018) ("2018 Sierra Club decision") explaining that the 2014 Sierra Club decision "held that, whenever HAP sources are in operation, including during startup and shutdown, the EPA must continuously subject them to either numeric limits or Section 112(h)-compliant work practice standards." Consistent with the 2008 Sierra Club decision, and taking into account startup and shutdown periods, the EPA proposed work practice standards for these periods based on a determination under CAA section 112(h) that for kilns and coolers it was not feasible to prescribe or enforce a numeric standard during these periods

of startup and shutdown. See 84 FR 48727. As discussed in the preamble to the final rule, based on public comments, we have made changes from the proposal to the standards for periods of startup and shutdown.

Comment: One commenter stated that the EPA does not have statutory authority to create work practice requirements for startups. The commenter summarized the requirements and applicable definitions of CAA sections 7412(h)(1) and (h)(2) and stated that the EPA has not satisfied either of the statute's definitions of "not feasible to prescribe or enforce and emission standard." The commenter stated that promulgating work practice requirements instead of numeric emission limitations for periods of startup would violate the statute. The commenter stated that CAA section 112(h)(2)(B) covers situations where "the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations." The commenter stated that startup and shutdown are "events," not a "particular class of source." The commenter stated that section 112(h)(2)(B) cannot be used as justification for work practice standards in lieu of numeric emission limits.

Response: As discussed above, based on public comments, we have made changes from the proposal to the standards for periods of startup and shutdown. The EPA's final rule does not establish work practice standards for period of startup and shutdown, so the comment is no longer relevant. However, the EPA notes that it does not agree with the commenter that section 112(h)(2)(B) can be invoked to justify a work practice standard only for categories or subcategories of sources under section 112(h)(2)(B), not for periods of operation. Section 112(h) provides that the EPA may "promulgate a design, equipment, work practice, or operational standard, or combination thereof" in lieu of a numeric emission standard if the Administrator determines that it is not feasible, in his/her judgment, to prescribe or enforce a numeric standard. More specifically, section 112(h)(2) states it is infeasible to prescribe or enforce an emission standard if the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations. Nothing in this section limits the Agency's discretion to establish work practice standards to particular sources, subcategories of sources, or source categories, or to certain periods of operations if, in the

Administrator's judgment, it is not feasible to prescribe or enforce a numeric emission standard during those periods. The reference to "a particular class of sources" in section 112(h)(2) does not limit the EPA's authority to determine, for a category or subcategory of sources, that it is infeasible to prescribe or enforce an emission standard for those sources during certain identifiable time periods, such as startup and shutdown.

Comment: A commenter stated that the EPA has proposed to excuse sources from using their ESPs during startup. The commenter stated that the EPA argues that industry stakeholders have claimed it may be unsafe to run ESPs during these times. The commenter stated that CAA section 112(h)(2)(B) does not authorize the EPA to set work practice requirements based on the Agency's views about the safety implications of running a particular control device.

The commenter stated that nothing in the CAA or existing rule requires lime kilns to control their PM emissions with ESPs. The commenter stated that if lime kiln owners and operators believe it is unsafe to run ESPs during startup and shutdown, the appropriate solution is for them to deploy other control devices (e.g., FFs), not to excuse them from meeting numeric emission limits during these events.

Response: As discussed above, based on public comments, we have made changes from the proposal to the standards for periods of startup and shutdown. The EPA's final rule does not establish work practice standards for period of startup and shutdown so the comment is no longer relevant.

4. What is the rationale for our final approach for the SSM provisions?

We evaluated all comments on the EPA's proposed amendments to the SSM provisions. For the reasons explained in the proposed rule, we determined that it is appropriate to remove and revise provisions related to SSM that are not consistent with the requirement that the standards apply at all times or that are unnecessary or redundant in the absence of an SSM exemption. Therefore, we are finalizing our approach for the SSM provisions as proposed with changes as detailed in section IV.C.2 of this preamble. More information concerning the amendments we are finalizing for SSM is discussed above and in the preamble to the proposed rule (84 FR 48727–48730, September 16, 2019).

D. Electronic Reporting Requirements for the Lime Manufacturing Source Category

1. What did we propose for the Lime Manufacturing source category?

The EPA proposed that owners or operators of lime manufacturing plants submit electronic copies of required performance test reports, performance evaluation reports, and semiannual compliance reports through the EPA's CDX using the CEDRI. More information concerning our proposal on electronic reporting requirements can be found in the proposed rule (84 FR 48708).

2. How did the electronic reporting provisions change for the Lime Manufacturing source category?

Since proposal, the electronic reporting provisions have not changed.

3. What key comments did we receive on the electronic reporting provisions, and what are our responses?

The EPA received comments related to the proposed electronic reporting provisions. The commenters generally supported the proposed provisions but disagreed with certain aspects of the provisions.

Comment: Commenters provided feedback on the electronic semiannual compliance report (spreadsheet template), per the EPA's request (84 FR 48730). The commenters noted the following:

- In tab "CMS Deviation Summary," column D (Total Source Operating Time (hours)), and column F (Total Duration of CMS Downtime as a percentage of Total Emissions Unit Operating Time) are both protected so it is not possible for an operator to input this data. This should be corrected.
- The example source operating time is shown as 6,240 hours. For semi-annual reporting, the maximum possible hours are 4,380.

The commenters stated that the EPA should compare the final template reporting form to the final rule to ensure each reporting element is required in the rule and that the template reporting form instructions are accurate and detailed enough to ensure consistent reporting across the industry.

Response: The EPA will check the final reporting template to be sure each reporting requirement marked as a required element is required by the final rule and will also provide adequate instructions for filling out the reporting template. The EPA will also check to be sure columns D (operating time) and F are unprotected in order that manual inputs can be entered by the user. The example operating time for semi-annual

reporting will be updated to 4,380 hours.

Comment: One commenter stated that the EPA may not create an unlawful exemption or extension for compliance reporting as it proposes to do for web outages or so-called "*force majeure* events," as this violates the requirement for standards to be continuous and would allow unreported exceedances to go unchecked, indefinitely.

Response: The commenter asserts that the brief case-by-case extension of report submittal deadlines is an unlawful exemption from compliance with the emissions standards. This is not the case. The EPA notes that there is no exemption to reporting, much less an exemption from compliance with the emission standards, only a method for requesting an extension of the reporting deadline. Reporters are required to justify their request and identify a reporting date. While no new fixed duration deadline is set, the regulation does require that the report be submitted electronically as soon as possible after the CEDRI outage is resolved or after the *force majeure* event occurs. The Administrator may even request that the report be sent in hardcopy until electronic reporting can be resumed.

The Administrator has full discretion to accept or reject the claim of a CEDRI system outage or *force majeure*. As such, an extension is not automatic and is agreed to on an individual basis by the Administrator. If the Administrator determines that a facility has not acted in good faith to reasonably report in a timely manner, the Administrator can reject the claim and find that the failure to report timely is a deviation from the regulation.

The EPA also disagrees that the ability to request a reporting extension violates the requirement for emissions standards to be continuous. While reporting is an important mechanism for the EPA and air agencies to assess whether owners or operators are in compliance with emissions standards, reporting obligations are separate from (*i.e.*, in addition to) requirements that an owner or operator be in compliance with an emissions standard. The EPA has discretion to establish reporting schedules, and also discretion to allow a mechanism for extension of those schedules on a case-by-case basis.

Additional comments and our specific responses can be found in the comment summary and response document titled *Summary of Public Comments and Responses for Lime Manufacturing Plants Residual Risk and Technology Review*, which is available in the docket for this action.

4. What is the rational for our final approach for the electronic reporting provisions?

The EPA evaluated all of the comments on the EPA's proposed amendments to the electronic reporting provisions. For the reasons explained in the proposed rule (84 FR 48708), we have determined the electronic submittal of the reports addressed in this final rulemaking will:

- Increase the usefulness of the data contained in those reports;
- be consistent with current trends in data availability and transparency;
- further assist in the protection of public health and the environment;
- improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements;
- facilitate the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance; and
- ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA.

Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public. Moreover, electronic reporting is consistent with the EPA's plan ⁷ to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy ⁸ developed in response to the White House's Digital Government Strategy.⁹ For more information on the benefits of electronic reporting, see the memorandum titled *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in Docket ID No. EPA-HQ-OAR-2017-0015.

E. IBR

In accordance with the requirements of 1 CFR 51.5, the EPA will incorporate by reference the following documents

described in the amendments to 40 CFR 63.14:

- ANSI/ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981, IBR approved for table 5 to subpart AAAAAA. This method is approved as an alternative to EPA Method 3B of appendix A to part 60.

- ASTM D6348-03 (Reapproved 2010), Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, including Annexes A1 through A8, Approved October 1, 2010, IBR approved for 40 CFR 63.7142(a) and 63.7142(b). This method is approved as an alternative to EPA Method 320 of appendix A to part 63.

- ASTM D6348-12e1, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for 40 CFR 63.7142(a) and 40 CFR 63.7142(b). This method is approved as an alternative to EPA Method 320 of appendix A to part 63.

- ASTM D6735-01 (Reapproved 2009), Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method, IBR approved for 40 CFR 63.7142(a). This method is approved as an alternative to EPA Method 321 of appendix A to part 63.

- ASTM D6420-99 (Reapproved 2010), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, Approved October 1, 2010, IBR approved for 40 CFR 63.7142(b). This method is approved as an alternative to EPA Method 18 of appendix A to part 60.

- EPA-454/R-98-015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997, IBR approved for 40 CFR 63.7113(d). This method was added in accordance with final revisions to the bag leak detection requirements under 40 CFR 63.7113(d).

The ANSI/ASME document is available from the American Society of Mechanical Engineers (ASME) at <http://www.asme.org>; by mail at Two Park Avenue, New York, NY 10016-5990; or by telephone at (800) 843-2763. The ASTM documents are available from the American Society for Testing and Materials (ASTM) at <https://www.astm.org>; by mail at 100 Barr Harbor Drive, P.O. Box C700, West

Conshohocken, PA 19428-2959; or by telephone at (610) 832-9500. The EPA has made, and will continue to make, the EPA document generally available electronically through <https://www.regulations.gov/> and at the EPA Docket Center (see the **ADDRESSES** section of this preamble for more information).

F. Technical and Editorial Changes for the Lime Manufacturing Source Category

1. What did we propose for the Lime Manufacturing source category?

The EPA proposed the following technical and editorial changes:

- Revising the monitoring requirements in 40 CFR 63.7113 to the provision that triboelectric bag leak detection system must be installed, calibrated, operated, and maintained according to EPA-454/R-98-015, *Fabric Filter Bag Leak Detection Guidance*;
- revising 40 CFR 63.7142 to add an alternative test method to EPA Method 320;
- revising 40 CFR.7142 to add the latest version of ASTM Method D6735-01;
- revising 40 CFR.7142 to add the latest version of ASTM Method D6420-99; and
- revising Table 4 to 40 CFR part 63, subpart AAAAAA, to add alternative compliance option.

2. How did the technical and editorial changes change for the Lime Manufacturing source category?

Since proposal, the technical and editorial changes have not changed.

3. What key comments did we received on the technical and editorial changes, and what are our responses?

No comments were received on the technical and editorial changes detailed above.

4. What is the rationale for our final approach for the technical and editorial changes?

Because no comments were received on the technical and editorial changes that the EPA proposed, we determined that these changes should be finalized as proposed.

V. Summary of Cost, Environmental, and Economic Impacts and Additional Analyses Conducted

A. What are the affected facilities?

There are currently 35 lime manufacturing facilities operating in the United States that are subject to the Lime Manufacturing Plants NESHAP. The 40 CFR part 63, subpart AAAAAA,

⁷ The EPA's Final Plan for Periodic Retrospective Reviews, August 2011. Available at: <https://www.regulations.gov/documentD=EPA-HQ-OA-2011-0156-0154>.

⁸ E-Reporting Policy Statement for EPA Regulations, September 2013. Available at: <https://www.epa.gov/sites/production/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf>.

⁹ Digital Government: Building a 21st Century Platform to Better Serve the American People, May 2012. Available at: <https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digitalgovernment.html>.

affected source is the lime kiln and its associated cooler, and the PSH operation system located at a major source of HAP emissions. A new or reconstructed affected source is a source that commenced construction after December 20, 2002, or meets the definition of reconstruction and commenced reconstruction after December 20, 2002.

B. What are the air quality impacts?

At the current level of control, emissions of total HAP are estimated to be approximately 2,320 tpy. This represents a reduction in HAP emissions of about 240 tpy due to the current (2004) Lime Manufacturing Plants NESHAP. The final amendments will require all affected sources subject to the emission standards in the Lime Manufacturing Plants NESHAP to operate without the SSM exemption. We were unable to quantify the specific emissions reduction associated with eliminating the SSM exemption. However, eliminating the SSM exemption will reduce emissions by requiring facilities to meet emissions standards during SSM periods.

Indirect or secondary air emissions impacts are impacts that would result from the increased electricity usage associated with the operation of control devices (*i.e.*, increased secondary emissions of criteria pollutants from power plants). Energy impacts consist of the electricity and steam needed to operate control devices and other equipment that would be required under this proposed rule. The EPA expects no secondary air emissions impacts or energy impacts from this rulemaking.

C. What are the cost impacts?

The 35 lime manufacturing plants that would be subject to the final amendments would incur minimal net costs to meet revised recordkeeping and reporting requirements and the standards for periods of startup and shutdown. Nationwide costs associated with the final requirements are estimated to be \$15,271. The EPA believes that the lime manufacturing plants which are subject to the NESHAP can meet the final requirements with minimal additional capital or operational costs. Each facility will experience costs to read and understand the rule amendments. Costs associated with the elimination of the SSM exemption were estimated as part of the reporting and recordkeeping costs and include time for re-evaluating previously developed SSM record systems. Costs associated with the requirement to electronically submit

notifications and semi-annual compliance reports using CEDRI were estimated as part of the reporting and recordkeeping costs and include time for becoming familiar with CEDRI and the reporting template for semi-annual compliance reports.

D. What are the economic impacts?

Economic impact analyses focus on changes in market prices and output levels. If changes in market prices and output levels in the primary markets are significant enough, impacts on other markets may also be examined. Both the magnitude of costs needed to comply with a final rule and the distribution of these costs among affected facilities can have a role in determining how the market will change in response to a final rule. The total costs associated with reviewing the final rule, meeting the revised recordkeeping and reporting requirements, and complying with the revised final standards are estimated to be \$15,271. This is an estimated cost of \$266 to \$2,925 per facility, depending on the number of lime kilns operated and the type of controls installed. These costs are not expected to result in a significant market impact, regardless of whether they are passed on to the purchaser or absorbed by the firms. Based on the costs associated with the elimination of the SSM exemption and the costs associated with the requirement to electronically submit compliance reports, we do not anticipate any significant economic impacts from these final amendments.

E. What are the benefits?

Although the EPA is unable to quantify reductions in HAP emissions as a result of the final amendments, we believe that the action improves the rule. Specifically, the final amendments remove SSM exemptions such that standards apply at all times. Additionally, the final amendments requiring electronic submittal of initial notifications, initial startup reports, annual compliance certifications, deviation reports, and performance test results will increase the usefulness of the data, is in keeping with current trends of data availability, will further assist in the protection of public health and the environment, and will ultimately result in less burden on the regulated community.

F. What analysis of environmental justice did we conduct?

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous

peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained in the *Risk and Technology Review Analysis of Demographic Factors for Populations Living Near Lime Manufacturing Source Category Operations*, which is available in the docket for this action. The results of the Lime Manufacturing source category demographic analysis indicated that emissions from the source category expose approximately 12 people to a cancer risk at or above 1-in-1 million and no people to a chronic noncancer TOSHI greater than 1. The percentages of the at-risk population indicate that three of the 10 demographic groups (White, African American and people below the poverty level) that are living within 50 km of facilities in the source category exceed the corresponding national percentage for the same demographic groups.

G. What analysis of children's environmental health did we conduct?

The EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are contained in the *Residual Risk Assessment for the Lime Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <https://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Orders 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was, therefore, not submitted to the Office of Management and Budget (OMB) for review.

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is not an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

The information collection activities in this final rule have been submitted for approval to OMB under the PRA. The Information Collection Request (ICR) document that the EPA prepared

has been assigned EPA ICR number 2072.09. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

We are finalizing changes to the reporting and recordkeeping requirements for the Lime Manufacturing Plants NESHAP in the form of eliminating the SSM reporting and SSM plan requirements and requiring electronic submittal of all compliance reports (including performance test reports). Any information submitted to the Agency for which a claim of confidentiality is made will be safeguarded according to the Agency policies set forth in title 40, chapter 1, part 2, subpart B—Confidentiality of Business Information (see 40 CFR part 2; 41 FR 36902, September 1, 1976; amended by 43 FR 40000, September 8, 1978; 43 FR 42251, September 20, 1978; 44 FR 17674, March 23, 1979).

Respondents/affected entities:

Owners or operators of lime manufacturing plants that are major sources, or that are located at, or are part of, major sources of HAP emissions, unless the lime manufacturing plant is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, sugar beet manufacturing plant, or only processes sludge containing calcium carbonate from water softening processes.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart AAAAA).

Estimated number of respondents: On average over the next 3 years, approximately 36 existing major sources will be subject to these standards. It is also estimated that one additional respondent will become subject to the emission standards over the 3-year period.

Frequency of response: The frequency of responses varies depending on the burden item.

Total estimated burden: The average annual burden to industry over the next 3 years from these recordkeeping and reporting requirements is estimated to be 9,690 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: The annual recordkeeping and reporting cost for all facilities to comply with all of the requirements in the NESHAP is estimated to be \$1,810,000 (per year), of which \$15,271 (first year) is for this rule, and the rest is for other costs related to continued compliance with the NESHAP including \$684,000 in annualized capital and operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. This action only eliminates the SSM exemption, revises other SSM related requirements, and adds electronic reporting. None of the changes will impact the small entities. The rule removes the SSM exemption and establishes emission standard for startup and shutdown. Based on the controls used at the small entities, they will not be impacted by the alternate emission standards. Thus, this action will not impose any requirements on small entities.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. While this action creates an enforceable duty on the private sector, the cost does not exceed \$100 million or more.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. The EPA does not know of any lime manufacturing facilities owned or operated by Indian tribal governments. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are contained in sections III and IV of the proposal preamble (84 FR 48708, September 16, 2019) and further documented in the risk report titled *Residual Risk Assessment for the Lime Manufacturing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action involves technical standards. The EPA has decided to use ANSI/ASME PTC 19.10–1981 Part 10 (2010), “Flue and Exhaust Gas Analyses,” as an acceptable alternative to EPA Method 3B manual portion only and not the instrumental portion. This method determines quantitatively the gaseous constituents of exhausts resulting from stationary combustion sources. This standard may be obtained from <https://www.asme.org> or from the American Society of Mechanical Engineers (ASME) at Three Park Avenue, New York, New York 10016–5990.

The EPA has decided to use ASTM D6348–03(2010) and ASTM D6348–12e1, “Determination of Gaseous Compounds by Executive Direct Interface Fourier Transform (FTIR) Spectroscopy,” as alternatives to using EPA Method 320 under certain conditions and incorporate these alternatives by reference. ASTM D6348–03(2010) was previously determined equivalent to EPA Method 320 with caveats. ASTM D6348–12e1 is a revised version of ASTM D6348–03(2010) and includes a new section on accepting the results from direct measurement of a certified spike gas cylinder, but still lacks the caveats we placed on the ASTM D6348–03(2010) version. The

voluntary consensus standard (VCS), ASTM D6348–12e1, “Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy,” is an acceptable alternative to EPA Method 320 at this time with caveats requiring inclusion of selected annexes to the standard as mandatory. When using ASTM D6348–12e1, the conditions that must be met are defined in 40 CFR 63.7142(a)(2). This field test method employs an extractive sampling system to direct stationary source effluent to an FTIR spectrometer for the identification and quantification of gaseous compounds. The ASTM D6348–03(2010) and ASTM D6348–12e1 standards were developed and adopted by the American Society for Testing and Materials (ASTM).

The EPA has also decided to use ASTM D6735–01 (Reapproved 2009), “Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources Impinger Method,” as an alternative to EPA Method 321 provided that the provisions in 40 CFR 63.7142(a)(4) are followed. The EPA used ASTM D6735–01 for the determination of HCl in EPA Methods 26, 26A, and 321 from mineral calcining exhaust sources. This method will measure the gaseous HCl and other gaseous chlorides and fluorides that pass through a PM filter. The ASTM D6735–01 standard was developed and adopted by the ASTM.

The EPA has decided to use VCS ASTM D6420–99 (Reapproved 2010), “Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry” as an alternative to EPA Method 18 only when the target compounds are all known, and the target compounds are all listed in ASTM D6420 as measurable. ASTM D6420 should not be used for methane and ethane because atomic mass is less than 35. ASTM D6420 should never be specified as a total volatile organic compound method. This field method determines the mass concentration of volatile organic HAP.

The ASTM standards may be obtained from <http://www.astm.org> or from the ASTM at 100 Barr Harbor Drive, Post Office C700, West Conshohocken, Pennsylvania 19428–2959.

The EPA has decided to use EPA–454/R–98–015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997 as guidance for how a triboelectric bag leak detection system must be installed, calibrated, operated, and maintained. This document includes FF and

monitoring system descriptions; guidance on monitor selection, installation, set up, adjustment, and operation; and quality assurance procedures. This document may be obtained from <http://www.epa.gov> or from the EPA, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

While the EPA has identified another 10 VCS as being potentially applicable to this proposed rule, we have decided not to use these VCS in this rulemaking. The use of these VCS would not be practical due to lack of equivalency, documentation, validation date, and other import technical and policy considerations. See the memorandum titled *Voluntary Consensus Standard Results for NESHAPE: Lime Manufacturing Residual Risk and Technology Review*, in the docket for this proposed rule for the reasons for these determinations.

Under 40 CFR 63.7(f) and 40 CFR 63.8(f) of subpart A of the General Provisions, a source may apply to the EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule or any amendments.

K. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained in section IV.B of the proposal preamble and the technical report, *Risk and Technology Review Analysis of Demographic Factors for Populations Living Near Lime Manufacturing Source Category Operations*, which is available in the docket for this action.

L. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Lime manufacturing, Intergovernmental

relations, Reporting and recordkeeping requirements.

Andrew Wheeler,
Administrator.

For the reasons set forth in the preamble, the EPA amends 40 CFR part 63 as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

■ 1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart A—General Provisions

■ 2. Section 63.14 is amended by revising paragraphs (e)(1), (h)(85), (86), (93), (100), and (n)(3) to read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(e) * * *

(1) ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981, IBR approved for §§ 63.309(k), 63.457(k), 63.772(e) and (h), 63.865(b), 63.997(e), 63.1282(d) and (g), 63.1625(b), table 5 to subpart EEEE, 63.3166(a), 63.3360(e), 63.3545(a), 63.3555(a), 63.4166(a), 63.4362(a), 63.4766(a), 63.4965(a), 63.5160(d), table 4 to subpart UUUU, table 3 to subpart YYYY, 63.7822(b), 63.7824(e), 63.7825(b), 63.9307(c), 63.9323(a), 63.11148(e), 63.11155(e), 63.11162(f), 63.11163(g), 63.11410(j), 63.11551(a), 63.11646(a), and 63.11945, table 5 to subpart AAAAA, table 5 to subpart DDDDD, table 4 to subpart JJJJJ, table 4 to subpart KKKKK, tables 4 and 5 of subpart UUUUU, table 1 to subpart ZZZZZ, and table 4 to subpart JJJJJ.

* * * * *

(h) * * *

(85) ASTM D6348–03 (Reapproved 2010), Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, including Annexes A1 through A8, Approved October 1, 2010, IBR approved for §§ 63.1571(a), 63.4751(i), 63.4752(e), 63.4766(b), 63.7142(a) and (b), tables 4 and 5 to subpart JJJJJ, tables 4 and 6 to subpart KKKKK, tables 1, 2, and 5 to subpart UUUUU and appendix B to subpart UUUUU.

(86) ASTM D6348–12e1, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for

§§ 63.997(e), 63.1571(a), 63.2354(b), table 5 to subpart EEEE, table 4 to subpart UUUU, and 63.7142(a) and (b).

* * * * *

(93) ASTM D6420–99 (Reapproved 2010), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, Approved October 1, 2010, IBR approved for §§ 63.670(j), Table 4 to subpart UUUU, 63.7142(b), and appendix A to this part: Method 325B.

* * * * *

(100) ASTM D6735–01 (Reapproved 2009), Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method, IBR approved for § 63.7142(b), tables 4 and 5 to subpart JJJJ, and tables 4 and 6 to subpart KKKK.

* * * * *

(n) * * *

(3) EPA–454/R–98–015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997, IBR approved for §§ 63.548(e), 63.864(e), 63.7113(d), 63.7525(j), 63.7831(f), 63.8450(e), 63.8600(e), and 63.11224(f).

* * * * *

Subpart AAAAA—[Amended]

■ 3. Section 63.7083 is amended by revising paragraphs (a)(1), (2), and (b) and by adding paragraph (e) to read as follows:

§ 63.7083 When do I have to comply with this subpart?

(a) * * *

(1) If you start up your affected source before January 5, 2004, you must comply with the emission limitations no later than January 5, 2004, and you must have completed all applicable performance tests no later than July 5, 2004, except as noted in paragraphs (e)(1) and (2) of this section.

(2) If you start up your affected source after January 5, 2004, then you must comply with the emission limitations for new affected sources upon startup of your affected source and you must have completed all applicable performance tests no later than 180 days after startup, except as noted in paragraphs (e)(1) and (2) of this section.

(b) If you have an existing affected source, you must comply with the applicable emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than January 5, 2007, except as noted in paragraphs (e)(1) and (2) of this section.

* * * * *

(e)(1) If your affected source commenced construction or reconstruction on or before September 16, 2019, then the compliance date for the revised requirements promulgated at §§ 63.7090, 63.7100, 63.7112, 63.7113, 63.7121, 63.7130, 63.7131, 63.7132, 63.7140, 63.7141, 63.7142, and 63.7143 and Tables 2, 3, 4, 5, 7, 8 and 9 (except changes to the cross references to 63.6(f)(1) and (h)(1)) of 40 CFR 63, subpart AAAAA, published on July 24, 2020 is January 20, 2021.

(2) If your affected source commenced construction or reconstruction after September 16, 2019, then the compliance date for the revised requirements promulgated at §§ 63.7090, 63.7100, 63.7112, 63.7113, 63.7121, 63.7130, 63.7131, 63.7132, 63.7140, 63.7141, 63.7142, and 63.7143 and Tables 2, 3, 4, 5, 7, 8 and 9 to this subpart, published on July 24, 2020 is July 24, 2020 or the date of initial startup, whichever is later.

■ 4. Section 63.7090 is amended by revising paragraph (b) and adding paragraph (c) to read as follows:

§ 63.7090 What emission limitations must I meet?

* * * * *

(b) You must meet each operating limit in Table 3 to this subpart that applies to you.

(c) On or after the relevant compliance date for your source as specified in §§ 63.7083(e), you must meet each startup and shutdown period emission limit in Table 2 to this subpart that applies to you.

■ 5. Section 63.7100 is amended by revising paragraphs (a), (b), (c), (d)(3), (d)(4)(iii), (d)(6) introductory text, and (e) to read as follows:

§ 63.7100 What are my general requirements for complying with this subpart?

(a) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction. On and after the relevant compliance date for your source as specified in § 63.7083(e), you must be in compliance with the applicable emission limitations (including operating limits) at all times.

(b) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you must be in compliance with the opacity and visible emission (VE) limits in this subpart at all times, except during periods of startup, shutdown, and malfunction. On and after the relevant compliance date for

your source as specified in § 63.7083(e), you must be in compliance with the applicable opacity and VE limits at all times.

(c) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i). On and after the relevant compliance date for your source as specified in § 63.7083(e), you must always 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. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator 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.

(d) * * *

(3) Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1, 2 and 3 to this subpart, respectively. On and after the relevant compliance date for your source as specified in § 63.7083(e), your OM&M plan must address periods of startup and shutdown.

(4) * * *

(iii) Prior to the relevant compliance date for your source as specified in § 63.7083(e), ongoing operation and maintenance procedures in accordance with the general requirements of §§ 63.8(c)(1)(i) and (ii), (3), and (4)(ii). On and after the relevant compliance date for your source as specified in § 63.7083(e), ongoing operation and maintenance procedures in accordance with the general requirements of paragraph (c) of this section and §§ 63.8(c)(1)(ii), (3), and (4)(ii); and

* * * * *

(6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits

specified in Table 3 to this subpart, including:

* * * * *

(e) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in § 63.6(e)(3).

■ 6. Section 63.7110 is amended by revising paragraphs (d) and (e) to read as follows:

§ 63.7110 By what date must I conduct performance tests and other initial compliance demonstrations?

* * * * *

(d) For each initial compliance requirement in Table 4 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within existing affected sources at LMP begins at 12:01 a.m. on the compliance date for existing affected sources, that is, the day following completion of the initial compliance demonstration, and ends at 3:01 a.m. on the same day.

(e) For each initial compliance requirement in Table 4 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within new or reconstructed affected sources at LMP begins at 12:01 a.m. on the day following completion of the initial compliance demonstration, as required in paragraphs (b) and (c) of this section, and ends at 3:01 a.m. on the same day.

■ 7. Section 63.7112 is amended by revising paragraphs (a), (b), (c), (j) introductory text, (k) introductory text, (k)(3), and (l) introductory text, and adding paragraph (m) to read as follows:

§ 63.7112 What performance tests, design evaluations, and other procedures must I use?

(a) You must conduct each performance test in Table 5 to this subpart that applies to you.

(b) Prior to the relevant compliance date for your source as specified in § 63.7083(e), each performance test must be conducted according to the requirements in § 63.7(e)(1) and under the specific conditions specified in Table 5 to this subpart. On and after the relevant compliance date for your source as specified in § 63.7083(e), each performance test must be conducted based on representative performance (i.e., performance based on normal operating conditions) of the affected source and under the specific

conditions in Table 5 to this subpart. Representative conditions exclude periods of startup and shutdown. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(c) Prior to the relevant compliance date for your source as specified in § 63.7083(e), you may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1). On and after the relevant compliance date for your source as specified in § 63.7083(e), you may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in paragraph (b) of this section.

* * * * *

(j) You must establish any applicable 3-hour block average operating limit indicated in Table 3 to this subpart according to the applicable requirements in Table 4 to this subpart and paragraphs (j)(1) through (4) of this section.

* * * * *

(k) For each building enclosing any PSH operations that is subject to a VE limit, you must conduct a VE check according to item 18 in Table 5 to this subpart, and in accordance with paragraphs (k)(1) through (3) of this section.

* * * * *

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A-4 to part 60 of this chapter. However, the observer must meet the training requirements as described in EPA Method 22 in appendix A-7 to part 60 of this chapter.

(l) When determining compliance with the opacity standards for fugitive emissions from PSH operations in item 8 of Table 1 to this subpart, you must conduct EPA Method 9 in appendix A-4 to part 60 of this chapter according to item 17 in Table 5 to this subpart, and in accordance with paragraphs (l)(1) through (3) of this section.

* * * * *

(m) On and after the relevant compliance date for your source as specified in § 63.7083(e), during startup, kilns must be tested hourly to determine

when lime product meets the definition of on-specification lime product.

■ 8. Section 63.7113 is amended by revising paragraphs (d) and (f) to read as follows:

§ 63.7113 What are my monitoring installation, operation, and maintenance requirements?

* * * * *

(d) For each bag leak detection system (BLDS), you must meet any applicable requirements in paragraphs (a)(1) through (5) and (d)(1) through (10) of this section.

(1) The BLDS must 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.

(2) The sensor on the BLDS must provide output of relative PM emissions.

(3) The BLDS must be equipped with a device to continuously record the output signal from the sensor.

(4) The BLDS must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level.

(5) The alarm must be located in an area where appropriate plant personnel will be able to hear it.

(6) For a positive-pressure fabric filter (FF), each compartment or cell must have a bag leak detector (BLD). For a negative-pressure or induced-air FF, the BLD must be installed downstream of the FF. If multiple BLD are required (for either type of FF), the detectors may share the system instrumentation and alarm.

(7) Each triboelectric BLDS must be installed, calibrated, operated, and maintained according to EPA-454/R-98-015, "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see § 63.14). Other types of bag leak detection systems must be installed, operated, calibrated, and maintained according to the manufacturer's written specifications and recommendations. Standard operating procedures must be incorporated into the OM&M plan.

(8) At a minimum, initial adjustment of the system must consist of establishing the baseline output in both of the following ways, according to section 5.0 of the EPA-454/R-98-015, "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see § 63.14):

(i) Adjust the range and the averaging period of the device.

(ii) Establish the alarm set points and the alarm delay time.

(9) After initial adjustment, the sensitivity or range, averaging period,

alarm set points, or alarm delay time may not be adjusted except as specified in the OM&M plan required by § 63.7100(d). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless such adjustment follows a complete FF inspection that demonstrates that the FF is in good operating condition, as defined in section 5.2 of the "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see § 63.14). Record each adjustment.

(10) Record the results of each inspection, calibration, and validation check.

* * * * *

(f) For each emission unit equipped with an add-on air pollution control device, you must inspect each capture/ collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in item 6 of Table 3 to this subpart and record the results of each inspection.

* * * * *

■ 9. Section 63.7114 is amended by revising paragraphs (a) introductory text and (b) to read as follows:

§ 63.7114 How do I demonstrate initial compliance with the emission limitations standard?

(a) You must demonstrate initial compliance with each emission limit in Table 1 to this subpart that applies to you, according to Table 4 to this subpart. For existing lime kilns and their associated coolers, you may perform VE measurements in accordance with EPA Method 9 of appendix A to part 60 in lieu of installing a COMS or PM detector if any of the conditions in paragraphs (a)(1) through (3) of this section exist:

* * * * *

(b) You must establish each site-specific operating limit in Table 3 to this subpart that applies to you according to the requirements in § 63.7112(j) and Table 5 to this subpart. Alternative parameters may be monitored if approval is obtained according to the procedures in § 63.8(f).

* * * * *

■ 10. Section 63.7120 is amended by revising paragraph (c) introductory text to read as follows and removing paragraph (c)(3).

§ 63.7120 How do I monitor and collect data to demonstrate continuous compliance?

* * * * *

(c) Data recorded during the conditions described in paragraphs

(c)(1) and (2) of this section may not be used either in data averages or calculations of emission or operating limits; or in fulfilling a minimum data availability requirement. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

* * * * *

■ 11. Section 63.7121 is amended by revising paragraphs (a), (b), (d), (e) introductory text, and (e)(3) to read as follows:

§ 63.7121 How do I demonstrate continuous compliance with the emission limitations standard?

(a) You must demonstrate continuous compliance with each emission limitation in Tables 1 and 3 to this subpart that applies to you according to the methods specified in Tables 6 and 7 to this subpart.

(b) You must report each instance in which you did not meet each operating limit, opacity limit, and VE limit in Tables 2, 3 and 7 to this subpart that applies to you. These deviations must be reported according to the requirements in § 63.7131.

* * * * *

(d) Prior to the relevant compliance date for your source as specified in § 63.7083(e), consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with § 63.6(e)(1). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

(e) For each PSH operation subject to an opacity limit as specified in Table 1 to this subpart, and any vents from buildings subject to an opacity limit, you must conduct a VE check according to item 1 in Table 7 to this subpart, and as follows:

* * * * *

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A–4 to part 60 of this chapter but must meet the training requirements as described in EPA Method 22 of appendix A–7 to part 60 of this chapter.

* * * * *

■ 12. Section 63.7130 is amended by revising paragraph (e) to read as follows:

§ 63.7130 What notifications must I submit and when?

* * * * *

(e) If you are required to conduct a performance test, design evaluation, opacity observation, VE observation, or other initial compliance demonstration as specified in Table 4 or 5 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). Beginning on the relevant compliance date for your source as specified in § 63.7083(e), submit all subsequent Notification of Compliance Status following the procedure specified in § 63.7131(h).

(1) For each initial compliance demonstration required in Table 4 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(2) For each compliance demonstration required in Table 6 to this subpart that includes a performance test conducted according to the requirements in Table 5 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to § 63.10(d)(2).

■ 13. Section 63.7131 is amended by:

- a. Revising paragraphs (a) and paragraph (b) introductory text;
- b. Adding paragraph (b)(6);
- c. Revising paragraphs (c)(4), paragraphs (d), (e) introductory text, and (e)(2);
- d. Adding paragraph (e)(12);
- e. Revising paragraph (f); and
- f. Adding paragraphs (g) through (j).

The revisions and additions read as follows:

§ 63.7131 What reports must I submit and when?

(a) You must submit each report listed in Table 8 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date specified in Table 8 to this subpart and according to the requirements in paragraphs (b)(1) through (6) of this section:

* * * * *

(6) Beginning on the relevant compliance date for your source as specified in § 63.7083(e), submit all subsequent compliance reports following the procedure specified in paragraph (h) of this section.

(c) * * *

(4) Prior to the relevant compliance date for your source as specified in

§ 63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).

* * * * *

(d) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information specified in paragraphs (c)(1) through (4) and (d)(1) and (2) of this section. The deviations must be reported in accordance with the requirements in § 63.10(d) prior to the relevant compliance date for your source as specified in § 63.7083(e) and the requirements in § 63.10(d)(1)–(4) beginning on the relevant compliance date for your source as specified in § 63.7083(e).

(1) The total operating time of each emission unit during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), and the corrective action taken.

(3) An estimate of the quantity of each regulated pollutant emitted over a particulate matter emission limit, and a description of the method used to estimate the emissions.

(e) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) occurring at an affected source where you are using a CMS to comply with the emission limitation in this subpart, you must include the information specified in paragraphs (c)(1) through (4) and (e)(1) through (11) of this section, except that beginning on the relevant compliance date for your source as specified in § 63.7083(e), the semiannual compliance report must also include the information included in paragraph (e)(12) of this section. This includes periods of startup, shutdown, and malfunction.

* * * * *

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

* * * * *

(12) An estimate of the quantity of each regulated pollutant emitted over a particulate matter emission limit, and a description of the method used to estimate the emissions.

(f) Each facility that has obtained a title V operating permit pursuant to part 70 or part 71 of this chapter must report

all deviations as defined in this subpart in the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter. If you submit a compliance report specified in Table 8 to this subpart along with, or as part of, the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter, and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation you may have to report deviations from permit requirements to the permit authority.

(g) If you are required to submit reports following the procedure specified in this paragraph, you must submit reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is confidential business information (CBI), submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate form on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(h) Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) *Data collected using test methods supported by the EPA's Electronic*

Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test. Submit the results of the performance test to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) *Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test.* The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) *Confidential business information (CBI).* If you claim some of the information submitted under paragraph (i) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (i) of this section.

(i) If you are required to electronically submit a report or notification through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (i)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(j) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (j)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

■ 14. Section 63.7132 is amended by revising paragraphs (a)(2) and (c) to read as follows:

§ 63.7132 What records must I keep?

(a) * * *

(2) Prior to the relevant compliance date for your source as specified in § 63.7083(e), the records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. On and after the relevant compliance date for your source as specified in § 63.7083(e), the records in paragraphs (a)(2)(i) and (ii) of this section.

(i) You must keep records for each startup period of the date, the time startup began, the time began producing on-specification lime product, and the time discharge from the kiln began for any affected source that is subject to a standard during startup that differs from the standard applicable at other times.

(ii) You must keep records of the date, time, cause and duration of each malfunction (as defined in 40 CFR 63.2) that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time, cause, and duration of the monitoring malfunction; the record must list the affected source or equipment; if there was a failure to meet a particulate matter emissions limit, an estimate of the volume of each regulated pollutant emitted over the limit, and a description of the method used to estimate the emissions.

* * * * *

(c) You must keep the records required by Tables 6 and 7 to this subpart to show continuous compliance with each emission limitation that applies to you.

* * * * *

■ 15. Section 63.7133 is amended by adding paragraph (d) to read as follows:

§ 63.7133 In what form and for how long must I keep my records?

* * * * *

(d) Any records required to be maintained by this part that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

■ 16. Section 63.7140 is amended to read as follows:

§ 63.7140 What parts of the General Provisions apply to me?

Table 9 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.16 apply to you. When there is overlap between subpart A and subpart AAAAA, as indicated in the "Explanations" column in Table 8, subpart AAAAA takes precedence.

■ 17. Section 63.7141 is amended by revising paragraph (c) to read as follows:

§ 63.7141 Who implements and enforces this subpart?

* * * * *

(c) The authorities that will not be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (7) of this section.

(1) Approval of alternatives to the non-opacity emission limitations in § 63.7090(a).

(2) Approval of alternative opacity emission limitations in § 63.7090(a) and (c).

(3) Approval of alternatives to the operating limits in § 63.7090(b).

(4) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(5) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(6) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

(7) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

■ 18. Section 63.7142 is amended by:

■ a. Revising paragraph (a)(1);

■ b. Redesignating paragraphs (a)(2) and (a)(3) as paragraphs (a)(3) and (a)(4);

■ c. Adding new paragraph (a)(2);

■ d. Revising newly designated paragraph (a)(4) introductory text, and paragraphs (a)(4)(i), and (a)(4)(v);

■ e. Redesignating paragraphs (b)(2) and (b)(3) as paragraphs (b)(3) and (b)(4);

■ f. Adding new paragraph (b)(2); and

■ g. Revising newly designated paragraphs (b)(3) and (b)(4).

The revisions and additions read as follows:

§ 63.7142 What are the requirements for claiming area source status?

(a) * * *

(1) EPA Method 320 of appendix A to this part, or

(2) As an alternative to Method 320 of Appendix A, ASTM D6348–03 (Reapproved 2010) including Annexes A1 through A8 (incorporated by reference—see § 63.14). ASTM D6348–12e1 (incorporated by reference—see § 63.14) is an acceptable alternative to EPA Method 320 of appendix A, provided that the provisions of paragraphs (a)(2)(i) and (ii) of this section are followed:

(i) The test plan preparation and implementation in the Annexes to ASTM D6348–03 (Reapproved 2010), Sections A1 through A8 are mandatory.

(ii) In ASTM D6348–03 (Reapproved 2010) Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack))/(%R) × 100; or

* * * * *

(4) As an alternative to EPA Method 321, ASTM Method D6735–01 (Reapproved 2009), (incorporated by reference—see § 63.14), provided that the provisions in paragraphs (a)(3)(i) through (vi) of this section are followed.

(i) A test must include three or more runs in which a pair of samples is obtained simultaneously for each run according to section 11.2.6 of ASTM Method D6735–01 (Reapproved 2009).

* * * * *

(v) The post-test analyte spike procedure of section 11.2.7 of ASTM Method D6735–01 (Reapproved 2009) is conducted, and the percent recovery is calculated according to section 12.6 of

ASTM Method D6735–01 (Reapproved 2009).

* * * * *

(b) * * *

(2) As an alternative to Method 320 of Appendix A, ASTM D6348–03 (Reapproved 2010) including Annexes A1 through A8 (incorporated by reference—see § 63.14). ASTM D6348–12e1 (incorporated by reference—see § 63.14) is an acceptable alternative to EPA Method 320 of appendix A, provided that the provisions of paragraphs (b)(2)(i) and (ii) of this section are followed:

(i) The test plan preparation and implementation in the Annexes to ASTM D6348–03 (Reapproved 2010), Sections A1 through A8 are mandatory.

(ii) In ASTM D6348–03 (Reapproved 2010) Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack))/(%R) × 100; or

(3) Method 18 of appendix A–6 to part 60 of this chapter; or

(4) As an alternative to Method 18, ASTM D6420–99 (Reapproved 2010), (incorporated by reference—see § 63.14), provided that the provisions of paragraphs (b)(3)(i) through (iv) of this section are followed:

(i) The target compound(s) are those listed in section 1.1 of ASTM D6420–99 (Reapproved 2010) as measurable;

(ii) This ASTM should not be used for methane and ethane because their atomic mass is less than 35 and

(iii) ASTM D6420–99 (Reapproved 2010) should never be specified as a total VOC method.

* * * * *

■ 19. Section 63.7143 is amended by:

■ a. Revising paragraph (3) under the definition of “Deviation.”

■ b. Adding in alphabetical order definitions for “On-specification lime product,” “Shutdown” and “Startup.”

The revisions read as follows:

§ 63.7143 What definitions apply to this subpart?

* * * * *

Deviation * * *

(3) Prior to the relevant compliance date for your source as specified in § 63.7083(e), fails to meet any emission limitation (including any operating limit) in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is allowed by this subpart.

* * * * *

On-specification Lime Product means lime product that has been sufficiently calcined to meet end use requirements.

* * * * *

Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is reduced below planned production quantities and ends when stone feed is halted and fuel combustion from the main burner ceases.

* * * * *

Startup means the beginning of kiln operation. Startup begins when a shutdown kiln begins firing fuel in the main burner. Startup ends when the lime kiln first generates on-specification lime product or 12 hours following first discharge from the kiln, whichever is earlier.

* * * * *

■ 20. Table 1 to subpart AAAAA is amended by revising the introductory text to read as follows:

Table 1 to Subpart AAAAA of Part 63—Emission Limits

As required in § 63.7090(a), you must meet each emission limit in the following table that applies to you, except for kilns and coolers during startup and shutdown (See Table 2 for emission limits for kilns and coolers during startup and shutdown).

* * * * *

■ 21. Redesignate tables 2 through 8 to subpart AAAAA as tables 3 through 9 to subpart AAAAA.

■ 22. Add new Table 2 to subpart AAAAA to read as follows:

As required in § 63.7090(b), on and after the relevant compliance date for your source as specified in § 63.7083(e), you must meet each emission limit in the following table that applies to you.

TABLE 2 TO SUBPART AAAAA OF PART 63—STARTUP AND SHUTDOWN EMISSION LIMITS FOR KILNS AND COOLERS

For . . .	You must meet the following emission limit	You have demonstrated compliance, if after following the requirements in § 63.7112 . . .
1. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during each startup.	Emissions must not exceed 15 percent opacity (based on startup period block average).	i. Installed, maintained, calibrated and operated a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2); ii. Collected the COMS data at a frequency of at least once every 15 seconds, determining block averages for each startup period and demonstrating for each startup block period the average opacity does not exceed 15 percent.
2. All existing lime kilns and their associated coolers that have a wet scrubber during each startup.	See item 2.b of Table 3 of subpart AAAAA for emission limit.	See item 1 of Table 6 of subpart AAAAA for requirements for demonstrating compliance.
3. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during shutdown.	Emissions must not exceed 15 percent opacity (based on 6-minute average opacity for any 6-minute block period does not exceed 15 percent).	i. Installed, maintained, calibrated and operated a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2); ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.
4. All existing lime kilns and their associated coolers that have a wet scrubber during shutdown.	See item 2.b of Table 3 of subpart AAAAA for emission limit.	See item 1 of Table 6 of subpart AAAAA for requirements for demonstrating compliance.

■ 23. Revise newly redesignated Table 3 to subpart AAAAA to read as follows:
As required in § 63.7090(b), you must meet each operating limit in the

following table that applies to you, except for kilns and coolers during startup and shutdown (See Table 2 for

operating limits during startup and shutdown).

TABLE 3 TO SUBPART AAAAA OF PART 63—OPERATING LIMITS

For . . .	You must . . .
1. Each lime kiln and each lime cooler (if there is a separate exhaust to the atmosphere from the associated lime cooler) equipped with an FF.	Maintain and operate the FF such that the BLDS or PM detector alarm condition does not exist for more than 5 percent of the total operating time in a 6-month period; and comply with the requirements in § 63.7113(d) through (f) and Table 6 to this subpart. In lieu of a BLDS or PM detector maintain the FF such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent; and comply with the requirements in § 63.7113(f) and (g) and Table 6 to this subpart.
2. Each lime kiln equipped with a wet scrubber.	a. Maintain the 3-hour block exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the most recent PM performance test; and b. Maintain the 3-hour block scrubbing liquid flow rate greater than the flow rate operating limit established during the most recent performance test.
3. Each lime kiln equipped with an electrostatic precipitator.	Install a PM detector and maintain and operate the ESP such that the PM 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 period, and comply with § 63.7113(e); or, maintain the ESP such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent, and comply with the requirements in § 63.7113(g); and comply with the requirements in § 63.7113(f) and Table 6 to this subpart.
4. Each PSH operation subject to a PM limit which uses a wet scrubber.	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.
5. All affected sources	Prepare a written OM&M plan; the plan must include the items listed in § 63.7100(d) and the corrective actions to be taken when required in Table 6 to this subpart.
6. Each emission unit equipped with an add-on air pollution control device.	a. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to an FF; and b. Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

■ 24. Revise newly redesignated Table 4 to subpart AAAAA to read as follows:

As required in § 63.7114, you must demonstrate initial compliance with

each emission limitation that applies to you, according to the following table.

TABLE 4 TO SUBPART AAAAA OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITS

For . . .	For the following emission limit . . .	You have demonstrated initial compliance, if after following the requirements in § 63.7112 . . .
1. All new or existing lime kilns and their associated lime coolers (kilns/coolers).	PM emissions must not exceed 0.12 lb/tsf for all existing kilns/coolers with dry controls, 0.60 lb/tsf for existing kilns/coolers with wet scrubbers, 0.10 lb/tsf for all new kilns/coolers, or a weighted average calculated according to Eq. 3 in § 63.7112.	The kiln outlet PM emissions (and if applicable, summed with the separate cooler PM emissions), based on the PM emissions measured using Method 5 in appendix A to part 60 of this chapter and the stone feed rate measurement over the period of initial performance test, do not exceed the emission limit; if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions with a BLDS or PM detector, you have installed and are operating the monitoring device according to the requirements in § 63.7113(d) or (e), respectively; and if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions using a COMS, you have installed and are operating the COMS according to the requirements in § 63.7113(g).
2. Stack emissions from all PHS operations at a new or existing affected source.	PM emissions must not exceed 0.05 g/dscm	The outlet PM emissions, based on Method 5 or Method 17 in appendix A to part 60 of this chapter, over the period of the initial performance test do not exceed 0.05 g/dscm; and if the emission unit is controlled with a wet scrubber, you have a record of the scrubber's pressure drop and liquid flow rate operating parameters over the 3-hour performance test during which emissions did not exceed the emissions limitation.
3. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device.	Emissions must not exceed 7 percent opacity	Each of the thirty 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit. At least thirty 6-minute averages must be obtained.
4. Fugitive emissions from all PSH operations at a new or existing affected source.	Emissions must not exceed 10 percent opacity	Each of the 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 10 percent opacity limit.
5. All PSH operations at a new or existing affected source, enclosed in building.	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations for items 2 through 4 of this Table 4, or the building must comply with the following: There must be no VE from the building, except from a vent, and vent emissions must not exceed the emission limitations in items 2 and 3 of this Table 4.	All the PSH operations enclosed in the building have demonstrated initial compliance according to the applicable requirements for items 2 through 4 of this Table 4; or if you are complying with the building emission limitations, there are no VE from the building according to item 18 of Table 5 to this subpart and § 63.7112(k), and you demonstrate initial compliance with applicable building vent emissions limitations according to the requirements in items 2 and 3 of this Table 4.
6. Each FF that controls emissions from only an individual storage bin.	Emissions must not exceed 7 percent opacity	Each of the ten 6-minute averages during the 1-hour initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit.
7. Each set of multiple storage bins with combined stack emissions.	You must comply with emission limitations in items 2 and 3 of this Table 4.	You demonstrate initial compliance according to the requirements in items 2 and 3 of this Table 4.

■ 25. Revise newly redesignated Table 5 to subpart AAAAA to read as follows: As required in § 63.7112, you must conduct each performance test in the following table that applies to you.

TABLE 5 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS

For . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Select the location of the sampling port and the number of traverse ports.	Method 1 or 1A of appendix A to part 60 of this chapter; and § 63.6(d)(1)(i).	Sampling sites must be located at the outlet of the control device(s) and prior to any releases to the atmosphere.

TABLE 5 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

For . . .	You must . . .	Using . . .	According to the following requirements . . .
2. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Determine velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter.	Not applicable.
3. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Conduct gas molecular weight analysis.	Method 3, 3A, or 3B in appendix A to part 60 of this chapter.	You may use ASME PTC 19.10–1981—Part 10 (available for purchase from Three Park Avenue, New York, NY 10016–5990) as an alternative to using the manual procedures (but not instrumental procedures) in Method 3B.
4. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler.	Measure moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.	Not applicable.
5. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a negative pressure PM control device.	Measure PM emissions.	Method 5 in appendix A to part 60 of this chapter.	Conduct the test(s) when the source is operating at representative operating conditions in accordance with § 63.7(e) before the relevant compliance date for your source as specified in § 63.7083(e) and § 63.7112(b) on and after the relevant compliance date for your source as specified in § 63.7083(e); the minimum sampling volume must be 0.85 dry standard cubic meter (dscm) (30 dry standard cubic foot (dscf)); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the cooler exhaust concurrently with the kiln exhaust test.
6. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a positive pressure FF or ESP.	Measure PM emissions.	Method 5D in appendix A to part 60 of this chapter.	Conduct the test(s) when the source is operating at representative operating conditions in accordance with § 63.7(e) before the relevant compliance date for your source as specified in § 63.7083(e) and § 63.7112(b) on and after the relevant compliance date for your source as specified in § 63.7083(e); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the separate cooler exhaust concurrently with the kiln exhaust test.
7. Each lime kiln	Determine the mass rate of stone feed to the kiln during the kiln PM emissions test.	Any suitable device	Calibrate and maintain the device according to manufacturer's instructions; the measuring device used must be accurate to within ± 5 percent of the mass rate of stone feed over its operating range.
8. Each lime kiln equipped with a wet scrubber.	Establish the operating limit for the average gas stream pressure drop across the wet scrubber.	Data for the gas stream pressure drop measurement device during the kiln PM performance test.	The continuous pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to § 63.7112(j).
9. Each lime kiln equipped with a wet scrubber.	Establish the operating limit for the average liquid flow rate to the scrubber.	Data from the liquid flow rate measurement device during the kiln PM performance test.	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to § 63.7112(j).
10. Each lime kiln equipped with a FF or ESP that is monitored with a PM detector.	Have installed and have operating the BLDS or PM detector prior to the performance test.	Standard operating procedures incorporated into the OM&M plan.	According to the requirements in § 63.7113(d) or (e), respectively.

TABLE 5 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

For . . .	You must . . .	Using . . .	According to the following requirements . . .
11. Each lime kiln equipped with a FF or ESP that is monitored with a COMS.	Have installed and have operating the COMS prior to the performance test.	Standard operating procedures incorporated into the OM&M plan and as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in § 63.7113(g)(2).	According to the requirements in § 63.7113(g).
12. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to a PM emission limit.	Measure PM emissions.	Method 5 or Method 17 in appendix A to part 60 of this chapter.	The sample volume must be at least 1.70 dscm (60 dscf); for Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters; and if the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter (Method 17 may be used only with exhaust gas temperatures of not more than 250 °F).
13. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to an opacity limit.	Conduct opacity observations.	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 3 hours and you must obtain at least thirty, 6-minute averages.
14. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber.	Establish the average gas stream pressure drop across the wet scrubber.	Data for the gas stream pressure drop measurement device during the PSH operation stack PM performance test.	The pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to § 63.7112(j).
15. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber.	Establish the operating limit for the average liquid flow rate to the scrubber.	Data from the liquid flow rate measurement device during the PSH operation stack PM performance test.	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to § 63.7112(j).
16. Each FF that controls emissions from only an individual, enclosed, new or existing storage bin.	Conduct opacity observations.	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 1 hour and you must obtain ten 6-minute averages.
17. Fugitive emissions from any PSH operation subject to an opacity limit.	Conduct opacity observations.	Method 9 in appendix A to part 60 of this chapter.	The test duration must be for at least 3 hours, but the 3-hour test may be reduced to 1 hour if, during the first 1-hour period, there are no individual readings greater than 10 percent opacity and there are no more than three readings of 10 percent during the first 1-hour period.
18. Each building enclosing any PSH operation, that is subject to a VE limit.	Conduct VE check	The specifications in § 63.7112(k)	The performance test must be conducted while all affected PSH operations within the building are operating; the performance test for each affected building must be at least 75 minutes, with each side of the building and roof being observed for at least 15 minutes.

■ 26. Amend newly redesignated Table 6 to subpart AAAAA by revising the introductory text to read as follows:

As required in § 63.7121, you must demonstrate continuous compliance with each operating limit listed in Table

3 to subpart AAAAA that applies to you, according to the following table:

Table 6 to Subpart AAAAA of Part 63—Continuous Compliance With Operating Limits

* * * * *

■ 27. Revise newly redesignated Table 7 to subpart AAAAA to read as follows:

As required in § 63.7121 you must periodically demonstrate compliance with each opacity and VE limit that applies to you, according to the following table:

TABLE 7 TO SUBPART AAAAA OF PART 63—PERIODIC MONITORING FOR COMPLIANCE WITH OPACITY AND VISIBLE EMISSIONS LIMITS

For . . .	For the following emission limitation . . .	You must demonstrate ongoing compliance . . .
1. Each PSH operation subject to an opacity limitation as required in Table 1 to this subpart, or any vents from buildings subject to an opacity limitation.	a. 7–10 percent opacity, depending on the PSH operation, as required in Table 1 to this subpart.	(i) Conducting a monthly 1-minute VE check of each emission unit in accordance with § 63.7121(e); the check must be conducted while the affected source is in operation; (ii) If no VE are observed in 6 consecutive monthly checks for any emission unit, you may decrease the frequency of VE checking from monthly to semi-annually for that emission unit; if VE are observed during any semiannual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; (iii) If no VE are observed during the semiannual check for any emission unit, you may decrease the frequency of VE checking from semi-annually to annually for that emission unit; if VE are observed during any annual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and (iv) If VE are observed during any VE check, you must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter; you must begin the Method 9 test within 1 hour of any observation of VE and the 6-minute opacity reading must not exceed the applicable opacity limit.
2. Any building subject to a VE limit, according to item 8 of Table 1 to this subpart.	a. No VE	(i) Conducting a monthly VE check of the building, in accordance with the specifications in § 63.7112(k); the check must be conducted while all the enclosed PSH operations are operating; (ii) The check for each affected building must be at least 5 minutes, with each side of the building and roof being observed for at least 1 minute; (iii) If no VE are observed in 6 consecutive monthly checks of the building, you may decrease the frequency of checking from monthly to semi-annually for that affected source; if VE are observed during any semi-annual check, you must resume checking on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and (iv) If no VE are observed during the semi-annual check, you may decrease the frequency of checking from semi-annually to annually for that affected source; and if VE are observed during any annual check, you must resume checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks (the source is in compliance if no VE are observed during any of these checks).

- 28. Revise newly redesignated Table 8 to subpart AAAAA to read as follows:
- As required in § 63.7131, you must submit each report in this table that applies to you.

TABLE 8 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR REPORTS

You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that applies to you, a statement that there were no deviations from the emission limitations during the reporting period; b. If there were no periods during which the CMS, including any operating parameter monitoring system, was out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period; c. If you have a deviation from any emission limitation (emission limit, operating limit, opacity limit, and VE limit) during the reporting period, the report must contain the information in § 63.7131(d);	Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b). Semiannually according to the requirements in § 63.7131(b).

TABLE 8 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR REPORTS—Continued

You must submit a . . .	The report must contain . . .	You must submit the report . . .
	d. If there were periods during which the CMS, including any operating parameter monitoring system, was out-of-control, as specified in § 63.8(c)(7), the report must contain the information in § 63.7131(e); and e. Before the relevant compliance date for your source as specified in § 63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i). On and after the relevant compliance date for your source as specified in § 63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you failed to meet an applicable standard, the compliance report must include the information in § 63.7131(c)(3).	Semiannually according to the requirements in § 63.7131(b).
2. Before the relevant compliance date for your source as specified in § 63.7083(e), an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	Actions taken for the event	Semiannually according to the requirements in § 63.7131(b).
3. Before the relevant compliance date for your source as specified in § 63.7083(e), an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	The information in § 63.10(d)(5)(ii)	By fax or telephone within 2 working days after starting actions inconsistent with the SSMP.
(4) Performance Test Report	The information required in § 63.7(g)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. See § 63.10(d)(5)(ii).
		According to the requirements of § 63.7131.

■ 29. Revise newly redesignated Table 9 to subpart AAAAA to read as follows:

As required in § 63.7140, you must comply with the applicable General

Provisions requirements according to the following table:

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.1(a)(1)–(4)	Applicability	Yes.	§§ 63.7081 and 63.7142 specify additional applicability determination requirements.
§ 63.1(a)(5)	Applicability	No.	
§ 63.1(a)(6)	Applicability	Yes.	
§ 63.1(a)(7)–(a)(9)	Applicability	No.	
§ 63.1(a)(10)–(a)(14)	Applicability	Yes.	
§ 63.1(b)(1)	Initial Applicability Determination ..	Yes	Area sources not subject to subpart AAAAA, except all sources must make initial applicability determination.
§ 63.1(b)(2)	Initial Applicability Determination ..	No.	
§ 63.1(b)(3)	Applicability After Standard Established.	Yes.	
§ 63.1(c)(1)	Permit Requirements	Yes.	
§ 63.1(c)(2)	Permit Requirements	No	
§ 63.1(c)(3)–(4)	Area Source Becomes Major	No.	Additional definitions in § 63.7143.
§ 63.1(c)(5)	Area Source Becomes Major	Yes.	
§ 63.1(d)	Applicability of Permit Program	No.	
§ 63.1(e)	Definitions	Yes.	
§ 63.2	Units and Abbreviations	Yes	
§ 63.3(a)–(c)	Prohibited Activities	Yes.	
§ 63.4(a)(1)–(a)(2)	Prohibited Activities	Yes.	
§ 63.4(a)(3)–(a)(5)	Prohibited Activities	No.	

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.4(b)–(c)	Circumvention, Severability	Yes.	
§ 63.5(a)(1)–(2)	Construction/Reconstruction	Yes.	
§ 63.5(b)(1)	Compliance Dates	Yes.	
§ 63.5(b)(2) .....	.....	No.	
§ 63.5(b)(3)–(4)	Construction Approval, Applicability.	Yes.	
§ 63.5(b)(5) .....	.....	No.	
§ 63.5(b)(6)	Applicability	Yes.	
§ 63.5(c) .....	.....	No.	
§ 63.5(d)(1)–(4)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(e)	Approval of Construction/Reconstruction.	Yes.	
§ 63.5(f)(1)–(2)	Approval of Construction/Reconstruction.	Yes.	
§ 63.6(a)	Compliance for Standards and Maintenance.	Yes.	
§ 63.6(b)(1)–(5)	Compliance Dates	Yes.	
§ 63.6(b)(6) .....	.....	No.	
§ 63.6(b)(7)	Compliance Dates	Yes.	
§ 63.6(c)(1)–(2)	Compliance Dates	Yes.	
§ 63.6(c)(3)–(c)(4) .....	.....	No.	
§ 63.6(c)(5)	Compliance Dates	Yes.	
§ 63.6(d) .....	.....	No.	
§ 63.6(e)(1)(i)	General Duty to Minimize Emissions.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7100 for general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to Correct Malfunctions ASAP.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.6(e)(1)(iii)	Operation and Maintenance Requirements.	Yes.	
§ 63.6(e)(2) .....	.....	No	[Reserved].
§ 63.6(e)(3)	Startup, Shutdown Malfunction Plan.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	On and after the relevant compliance date for your source as specified in § 63.7083(e), the OM&M plan must address periods of startup and shutdown. See § 63.7100(d).
§ 63.6(f)(1)	SSM exemption	No	See § 63.7100. For periods of startup and shutdown, see § 63.7090(c).
§ 63.6(f)(2)–(3)	Methods for Determining Compliance.	Yes.	
§ 63.6(g)(1)–(g)(3)	Alternative Standard	Yes.	
§ 63.6(h)(1)	SSM exemption	No	See § 63.7100. For periods of startup and shutdown, see § 63.7090(c).
§ 63.6(h)(2)	Methods for Determining Compliance.	Yes.	
§ 63.6(h)(3) .....	.....	No.	
§ 63.6(h)(4)–(h)(5)(i)	Opacity/VE Standards	Yes	This requirement only applies to opacity and VE performance checks required in Table 4 to subpart AAAAA.
§ 63.6(h)(5) (ii)–(iii)	Opacity/VE Standards	No	Test durations are specified in subpart AAAAA; subpart AAAAA takes precedence.
§ 63.6(h)(5)(iv)	Opacity/VE Standards	No.	
§ 63.6(h)(5)(v)	Opacity/VE Standards	Yes.	
§ 63.6(h)(6)	Opacity/VE Standards	Yes.	
§ 63.6(h)(7)	COM Use	Yes.	
§ 63.6(h)(8)	Compliance with Opacity and VE	Yes.	
§ 63.6(h)(9)	Adjustment of Opacity Limit	Yes.	
§ 63.6(i)(1)–(i)(14)	Extension of Compliance	Yes.	
§ 63.6(i)(15) .....	.....	No.	

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.6(i)(16)	Extension of Compliance	Yes.	§ 63.7110 specifies deadlines; § 63.7112 has additional specific requirements.
§ 63.6(j)	Exemption from Compliance	Yes.	
§ 63.7(a)(1)–(a)(3)	Performance Testing Requirements.	Yes	
§ 63.7(b)	Notification	Yes.	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7112(b).
§ 63.7(c)	Quality Assurance/Test Plan	Yes.	
§ 63.7(d)	Testing Facilities	Yes.	
§ 63.7(e)(1)	Conduct of Tests	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.7(e)(2)–(4)	Conduct of Tests	Yes.	
§ 63.7(f)	Alternative Test Method	Yes.	See § 63.7113.
§ 63.7(g)	Data Analysis	Yes.	
§ 63.7(h)	Waiver of Tests	Yes.	
§ 63.8(a)(1)	Monitoring Requirements	Yes	Flares not applicable.
§ 63.8(a)(2)	Monitoring	Yes.	
§ 63.8(a)(3)	Monitoring	No.	
§ 63.8(a)(4)	Monitoring	No	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7100 for OM&M requirements.
§ 63.8(b)(1)–(3)	Conduct of Monitoring	Yes.	
§ 63.8(c)(1)(i)	CMS Operation/Maintenance	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.8(c)(1)(ii)	CMS Spare Parts	Yes.	On and after the relevant compliance date for your source as specified in § 63.7083(e), no longer required.
§ 63.8(c)(1)(iii)	Requirement to Develop SSM Plan for CMS.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.8(c)(2)–(3)	CMS Operation/Maintenance	Yes.	
§ 63.8(c)(4)	CMS Requirements	No	See § 63.7121. No CEMS are required under subpart AAAAA; see § 63.7113 for CPMS requirements. COM not required. See § 63.7113.
§ 63.8(c)(4)(i)–(ii)	Cycle Time for COM and CEMS ..	Yes	
§ 63.8(c)(5)	Minimum COM procedures	Yes	
§ 63.8(c)(6)	CMS Requirements	No	See also § 63.7113.
§ 63.8(c)(7)–(8)	CMS Requirements	Yes.	
§ 63.8(d)(1)–(2)	Quality Control	Yes	
§ 63.8(d)(3)	Quality Control	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	See also § 63.7113.
§ 63.8(e)	Performance Evaluation for CMS	Yes	
§ 63.8(f)(1)–(f)(5)	Alternative Monitoring Method	Yes.	
§ 63.8(f)(6)	Alternative to Relative Accuracy Test for CEMS.	No	No CEMS required in subpart AAAAA. See data reduction requirements in §§ 63.7120 and 63.7121. See § 63.7130.
§ 63.8(g)(1)–(g)(5)	Data Reduction; Data That Cannot Be Used.	No	
§ 63.9(a)	Notification Requirements	Yes	
§ 63.9(b)	Initial Notifications	Yes.	This requirement only applies to opacity and VE performance tests required in Table 5 to subpart AAAAA. Notification not required for VE/opacity test under Table 7 to subpart AAAAA.
§ 63.9(c)	Request for Compliance Extension.	Yes.	
§ 63.9(d)	New Source Notification for Special Compliance Requirements.	Yes.	
§ 63.9(e)	Notification of Performance Test ..	Yes.	Not required for operating parameter monitoring.
§ 63.9(f)	Notification of VE/Opacity Test	Yes	
§ 63.9(g)	Additional CMS Notifications	No	

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.9(h)(1)–(h)(3)	Notification of Compliance Status	Yes.	See §§ 63.7131 through 63.7133.
§ 63.9(h)(4)		No.	
§ 63.9(h)(5)–(h)(6)	Notification of Compliance Status	Yes.	
§ 63.9(i)	Adjustment of Deadlines	Yes.	
§ 63.9(j)	Change in Previous Information ...	Yes.	
§ 63.10(a)	Recordkeeping/Reporting General Requirements.	Yes	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7132 for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.
§ 63.10(b)(1)	Records	Yes.	
§ 63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.10(b)(2)(ii)	Recordkeeping of Failures to Meet a Standard.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.10(b)(2)(iii)	Maintenance Records	Yes.	
§ 63.10(b)(2)(iv)–(v)	Actions Taken to Minimize Emissions During SSM.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7100 for OM&M requirements.
§ 63.10(b)(2)(vi)–(xii)	Recordkeeping for CMS	Yes.	
§ 63.10(b)(2)(xiii)	Records for Relative Accuracy Test.	No.	
§ 63.10(b)(2)(xiv)	Records for Notification	Yes.	
§ 63.10(b)(3)	Applicability Determinations	Yes.	
§ 63.10(c)	Additional CMS Recordkeeping ...	No	See § 63.7132.
§ 63.10(d)(1)	General Reporting Requirements	Yes.	For the periodic monitoring requirements in Table 7 to subpart AAAAA, report according to § 63.10(d)(3) only if VE observed and subsequent visual opacity test is required.
§ 63.10(d)(2)	Performance Test Results	Yes.	
§ 63.10(d)(3)	Opacity or VE Observations	Yes	
§ 63.10(d)(4)	Progress Reports	Yes.	
§ 63.10(d)(5)(i)	Periodic Startup, Shutdown, Malfunction Reports.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	
§ 63.10(d)(5)(ii)	Immediate Startup, Shutdown, Malfunction Reports.	Yes before the relevant compliance date for your source as specified in § 63.7083(e). No on and after the relevant compliance date for your source as specified in § 63.7083(e).	On and after the relevant compliance date for your source as specified in § 63.7083(e), see § 63.7131 for malfunction reporting requirements.
§ 63.10(e)	Additional CMS Reports	No	
§ 63.10(f)	Waiver for Recordkeeping/Reporting.	Yes.	See specific requirements in subpart AAAAA, see § 63.7131.
§ 63.11(a)–(b)	Control Device and Work Practice Requirements.	No	
§ 63.12(a)–(c)	State Authority and Delegations ...	Yes.	Flares not applicable.
§ 63.13(a)–(c)	State/Regional Addresses	Yes.	
§ 63.14(a)–(b)	Incorporation by Reference	No.	
§ 63.15(a)–(b)	Availability of Information and Confidentiality.	Yes.	

TABLE 9 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA—Continued

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§ 63.16	Performance Track Provisions	Yes.	

§ 63.7831 [AMENDED]

■ 30. In § 63.7831(f)(4), add the phrase “(incorporated by reference, see

§ 63.14)” immediately following the words “September 1997”.
[FR Doc. 2020–12588 Filed 7–23–20; 8:45 am]

BILLING CODE 6560–50–P

Section 5

Opacity Monitor Calibration & Maintenance

Opacity Monitor Calibration & Maintenance

Greer Lime Company maintains a continuing annual contract with Teledyne Instruments Monitor Labs (Teledyne) for preventative maintenance, corrective maintenance, monitor auditing, and clear stack calibration for both kiln opacity monitors. The contract specifies that the required maintenance and auditing will be conducted by a Teledyne technician on a semi-annual basis.

In addition to Teledyne's contract services, plant personnel have been trained to perform routine maintenance including purge air system filter replacement, lens cleaning, unit alignment, and on-stack calibration should it be needed between Teledyne's semi-annual visits.

Section 6

Template SSMP Forms, Reports, and Notifications and Completed SSMP Forms, Reports, and Notifications

- Startup/Shutdown Report**
- Malfunction Report**
- “Immediate” SSMP Reporting Requirements**
- “Periodic” SSMP Reporting Requirements**

Rotary Lime Kiln Startup/Shutdown Report - Lime MACT

Greer Lime Company – Riverton, West Virginia

Note: This report is to be completed only for startups and shutdowns of either rotary lime kiln system.

A. Person Completing Report: _____

B. Which Kiln? _____

C. Date & Time of Shutdown: _____

D. Date & Time of Startup: _____

E. Reason for Shutdown?

F. Were the Startup/Shutdown Procedures Followed? (*see below*)

_____ Yes

_____ No (*If no, then notify management immediately and document the procedures that were used to either startup or shutdown the kiln.*)

Startup and Shutdown Procedures

Startup: Before starting a kiln, ensure that the respective fabric filter dust collector and continuous opacity monitoring system (COMS) is operating properly. This is accomplished by the fabric filter dust collector being control interlocked with the lime kiln. COMS operation will be verified visually through the kiln control program by the Kiln Control Operator. If the dust collector and COMS were operating properly prior to shutdown, it is satisfactorily assumed that this equipment will operate properly prior to startup. For purposes of startup, proper operation is defined as no 6-minute block average of 15% or greater for the previous 24-hour period of operation, unless the kiln system was shutdown to correct opacity compliance issues.

Shutdown: Before intentionally taking the fabric filter dust collector and COMS out of operation, ensure that the kiln is out of operation which is defined as no longer firing on coal.

Rotary Lime Kiln Malfunction Report - Lime MACT

Greer Lime Company – Riverton, West Virginia

Note: This report is to be completed only for those malfunctions which resulted in excess particulate (dust) emissions from either rotary lime kiln system or involving the failure of the opacity monitoring system.

A. Person Completing Report: _____

B. Which Kiln? _____

C. Date: _____

D. Starting and Ending Times of the Malfunction and Corrective Actions:

Malfunction Starting Time/Date: _____

Corrective Action Starting Time/Date: _____

Corrective Action Ending Time/Date: _____

Malfunction Ending Time/Date: _____

E. Description of Malfunction and Corrective Actions:

F. Is this Specific Malfunction Listed in the Malfunction Plan? (see below)

_____ Yes _____ No (If no, then notify management immediately.)

G. Were the Corrective Actions Listed in the Malfunction Plan Followed?

_____ Yes _____ No (If no, then notify management immediately.)

Malfunction Events

Fabric filter dust collector malfunction: If a fabric filter dust collector system is malfunctioning in a manner that consistently causes the opacity limit (>15% in a 6-minute block average) to be exceeded, then the dust collector will be inspected by Greer's maintenance crew and repaired as soon as safely practicable. If a shutdown is necessary to implement repairs, then the kiln will not restart until those repairs are complete. The cause of the malfunction, malfunction start and end times, and corrective action taken will be recorded.

COMS malfunction: If the continuous opacity monitoring system (COMS) is malfunctioning, repairs will be made as soon as practicable. COMS malfunctions are identified by a fault alarm. Fault alarms are recorded by the data acquisition system. Fault alarms will be investigated in a timely manner to determine if the underlying fault condition is harming the validity of the COMS data. Most faults can be cleared in-house by performing the manufacturer's prescribed routine maintenance followed by an on-stack calibration. If this does not correct the fault condition, then the COMS manufacturer will be contacted to secure their technical services. There are some fault alarms that do not negatively impact the validity of the COMS data, but instead are used to notify the operator of an undesirable condition that needs addressed. If the fault alarm is not related to a condition causing invalid data, then those fault times will not be counted as a malfunction. A COMS malfunction is a condition causing invalid data. During a COMS outage caused by a malfunction lasting longer than 24-hours, visible emissions observations by a Method 9 certified observer will be conducted at least once per day during daylight hours. The results will be maintained in a written log and made available for review upon request.

“Immediate” SSMP Reporting Requirements

In accordance with the requirements of 40 CFR §63.10(d)(5)(ii), if actions taken by Greer during a startup, shutdown, or malfunction event are not consistent with this plan and an applicable emission limit (15% opacity for lime kilns and 10% for) has been exceeded, then immediate notification must be made to the regulatory authority. This notification consists of:

1. Communication by phone or fax within two working days; and
2. Confirmation in writing within seven working days.

Fax number:

(304) 926-0479

Mailing address:

WV Division of Air Quality

601 57th Street

Charleston, WV 25304

The written notification must contain the following elements:

1. Name, title, and certifying signature of the responsible official;
2. Explanation of the circumstances of the event;
3. Reasons the SSMP was not followed;
4. Describe all excess emissions and/or parameter monitoring exceedances that occurred during the event; and
5. Describe all actions taken to minimize emissions during the event.

“Periodic” SSMP Reporting Requirements

In accordance with the requirements of 40 CFR §63.10(d)(5)(i), if actions taken by Greer during a startup or shutdown cause an exceedance to any applicable emission limitation; or if a malfunction occurred during the reporting period and the actions were consistent with this plan then a report will be made. The startup, shutdown, and malfunction report must consist of a letter containing the following:

1. Name, title, and certifying signature of the responsible official;
2. Number of events;
3. Duration of each event; and
4. Brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded.

The report must be submitted to the regulatory authority on a semi-annual basis. The report must be postmarked by the 30th day following the end of each calendar half and may be submitted concurrently with other semiannual reports (i.e. opacity monitoring system performance report and the Title V monitoring report).

**Mullins, Robert A** <robert.a.mullins@wv.gov>

R30-07100001-2020(MM03)

1 message

Mullins, Robert A <robert.a.mullins@wv.gov>

Mon, Jun 30, 2025 at 1:55 PM

To: "Supplee, Gwendolyn" <Supplee.Gwendolyn@epa.gov>, "whapham.joseph@epa.gov" <Whapham.Joseph@epa.gov>, thomas.ballou@deq.virginia.gov, Laura.Justin@deq.virginia.gov, Alexia.Prosperti@usda.gov

This email serves as notification that on June 18, 2025, the WVDAQ received an application for a Title V minor modification for Greer Industries, Inc.'s Riverton Facility, located in Pendleton, WV. The proposed changes involve removal of the trommel Screen and associated equipment. As a result of this modification, facility PTE will decrease for -7.39 tpy PM, -2.71 tpy PM10, -0.06 tpy NOx, -0.72 tpy CO, -0.03 tpy VOC, and -0.07 tpy SO2. If you have any questions or comments about this Title V permit revision application, please contact me at your earliest convenience.

--

Robert Mullins

WV Department of Environmental Protection

Division of Air Quality

601 57th Street, SE

Charleston, WV 25304

Phone: (304)926-0499 ext. 41286



Mullins, Robert A <robert.a.mullins@wv.gov>

WV DAQ Title V Permit Application Status for Greer Lime Company; Riverton1 message

Mink, Stephanie R <stephanie.r.mink@wv.gov>

Mon, Jun 23, 2025 at 9:05 AM

To: gwynne@greerindustries.com, Scott Kisner <skisner@greerindustries.com>

Cc: Carrie McCumbers <carrie.mccumbers@wv.gov>, Robert A Mullins <robert.a.mullins@wv.gov>

RE: Application Status**Greer Lime Company****Riverton****Facility ID No. 071-00001****Application No. R30-07100001-2020 (MM03)**

Dear Mr. Gwynne,

Your application for a Title V Minor Modification Permit for Greer Lime Company's Riverton facility was received by this Division on June 18, 2025, and was assigned to Robert "R.A."Mullins.

Should you have any questions, please contact the assigned permit writer, Robert "R.A."Mullins, at 304-926-0499, extension 41286, or Robert.A.Mullins@wv.gov .

--

Stephanie Mink

Environmental Resources Associate

West Virginia Department of Environmental Protection

Division of Air Quality, Title V & NSR Permitting

601 57th Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

**Mullins, Robert A** <robert.a.mullins@wv.gov>

Greer & Antero dated applications

1 message

Mink, Stephanie R <stephanie.r.mink@wv.gov>
To: Robert A Mullins <robert.a.mullins@wv.gov>

Mon, Jun 23, 2025 at 8:57 AM

I'm working on these now and they will be in Airtrax soon.

Stephanie

--

Stephanie Mink

Environmental Resources Associate

West Virginia Department of Environmental Protection

Division of Air Quality, Title V & NSR Permitting

601 57th Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

2 attachments**R30-09500084-2025 - Antero Mid IV - RA.pdf**
5432K**R30-07100001-2020 (MM03) Greer - RA.pdf**
1269K

Division of Air Quality Permit Application Submittal

Please find attached a permit application for :

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only):
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only):

- Type of NSR Application (check all that apply):

- ☐ Construction
- ☐ Modification
- ☒ Class I Administrative Update
- ☐ Class II Administrative Update
- ☐ Relocation
- ☐ Temporary
- ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Application:

- ☐ Title V Initial
- ☐ Title V Renewal
- ☒ Administrative Amendment**
- ☐ Minor Modification**
- ☐ Significant Modification**
- ☐ Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

- Payment Type:

- ☐ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
- ☐ Check (Make checks payable to: WVDEP – Division of Air Quality)

Mail checks to:
WVDEP – DAQ – Permitting
Attn: NSR Permitting Secretary
601 57th Street, SE
Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):

- ☐ Responsible Official/Authorized Representative

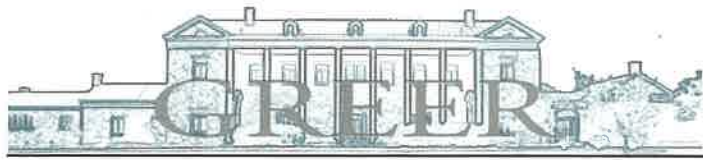
- Name:
- Email:
- Phone Number:

- ☒ Company Contact

- Name:
- Email:
- Phone Number:

- ☐ Consultant

- Name:
- Email:
- Phone Number:



INDUSTRIES, INC.

GREER ENGINEERING

8477 Veterans Memorial Hwy. • Masontown, WV 26542
(304) 864-5411
www.greerindustries.com

June 18, 2025

West Virginia Department of Environmental Protection
Division of Air Quality
Permitting
Via: DEPAirQualityPermitting@wv.gov

RE: Greer Industries, Inc. dba Greer Lime Company
Riverton Facility; 071-00001, R13-1685B
Written Request for Class I Administrative Update for Permanent Removal of Equipment

This Written Request serves as notice that the portable Trommel screen added to the Riverton Facility by R13-1685B, issued on August 17, 2021, has been permanently removed from our site. This equipment and the regulatory requirements associated with this equipment should be removed from R13-1685B. The equipment associated with this removal includes the following:

Emission Unit ID	Emission Unit Description
H1	Feed Hopper
TS1	Trommel Screen
BC1	Belt Conveyor
BC2	Belt Conveyor
BC3	Belt Conveyor
OS1	Open Stockpile
OS2	Open Stockpile
OS3	Open Stockpile
TS-DG1	Diesel Generator

With the removal of the above listed equipment, changes are necessary to specific permit sections to remove reference of applicable requirements. The permit sections requiring revision include the following: 1.0, 4.1.2.a., 4.1.2.b., 4.1.7., 4.2.1.c., 4.2.1.d., and 4.3.2. Additionally, a completed Attachment S, Title V Permit Revision Information, is attached to remove these same requirements from the Title V permit R30-07100001-2020.

If you have any questions or require additional information, please contact Scott Kisner at (304) 276-5263 or by email at skisner@greerindustries.com.

Sincerely,
Greer Industries, Inc.

J. Robert Gwynne
Executive Vice President

Attachment S

Title V Permit Revision Information

1. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision:	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☐ Section 111 NSPS (Subpart(s) _____)	☐ Section 112(d) MACT standards (Subpart(s) _____)
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64) ⁽¹⁾
☐ NO _x Budget Trading Program Non-EGUs (45CSR1)	☐ NO _x Budget Trading Program EGUs (45CSR26)
⁽¹⁾ If this box is checked, please include Compliance Assurance Monitoring (CAM) Form(s) for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why Compliance Assurance Monitoring is not applicable: These requirements do not apply to Greer Lime or this project.	

2. Non-Applicability Determinations
List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination. A permit shield is not requested for this revision.
☐ Permit Shield Requested <i>(not applicable to Minor Modifications)</i>
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>

3. Suggested Title V Draft Permit Language

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision? ☐ Yes ☒ No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

Remove references and applicable requirements associated with the Trommel screen as outlined in the Written Request letter to permanently remove this equipment.

4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision		
Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
R13-1685B	08/17/2021	N/A

5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision		
Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
N/A		

6. Change in Potential Emissions	
Pollutant	Change in Potential Emissions (+ or -), TPY
PM	-7.38
PM10	-2.71
NO_x	-0.06
CO	-0.72
VOC	-0.03
SO₂	-0.07
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>	

7. Certification for Use of Minor Modification Procedures (Required Only for Minor Modification Requests)			
<i>Note:</i>	<i>This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:</i>		
i. Proposed changes do not violate any applicable requirement; ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit; iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis; iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act; v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19; vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification; Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.			
Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.			
(Signed):	 <i>(Please use blue ink)</i>	Date:	6 / 18 / 25 <i>(Please use blue ink)</i>
Named (typed):	J. Robert Gwynne		Title:
Executive Vice President			

Note: Please check if the following included (if applicable):	
☐	Compliance Assurance Monitoring Form(s)
☐	Suggested Title V Draft Permit Language
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>	



Mullins, Robert A <robert.a.mullins@wv.gov>

Re: Greer Lime Company; Riverton, WV

1 message

McCumbers, Carrie <carrie.mccumbers@wv.gov>

Mon, Jun 23, 2025 at 7:53 AM

To: Stephanie R Mink <stephanie.r.mink@wv.gov>

Cc: Joseph R Kessler <joseph.r.kessler@wv.gov>, Thornton E Martin <thornton.e.martin@wv.gov>, "Robert.A.Mullins@wv.gov" <robert.a.mullins@wv.gov>

Stephanie,

Please assign this application as minor modification R30-07100001-2020 (MM03) to R.A.

Thanks,
CarrieOn Thu, Jun 19, 2025 at 9:26 AM Air Quality Permitting, DEP <depairqualitypermitting@wv.gov> wrote:**R13 Class I AU**

Stephanie, please assign the following Class I AU to Lee Martin.

**Greer Lime Company
Riverton
R13-1685C
071-00001****Attachment S is Included.**

Please add the following:

*"For future Class I Administrative Updates, please at a minimum include the General Application Form - "APPLICATION FOR NSR PERMIT" appropriately marked as a request for a Class I AU. While we are currently accepting signed letters as Class I AU applications, the DAQ will be moving soon to requiring at a minimum the General Application Form with all Class I AU applications."*Thanks,
Joe

----- Forwarded message -----

From: **Scott Kisner** <skisner@greerindustries.com>

Date: Wed, Jun 18, 2025 at 1:56 PM

Subject: Greer Lime Company; Riverton, WV

To: depairqualitypermitting@wv.gov <depairqualitypermitting@wv.gov>

See attached.

Thank you

Scott Kisner

Greer Industries, Inc.

Environmental Compliance Manager

304-276-5263

7/28/25, 9:00 AM

State of West Virginia Mail - Re: Greer Lime Company; Riverton, WV

**Mullins, Robert A** <robert.a.mullins@wv.gov>

RE: R30-07100001-2025 renewal questions

1 message

Scott Kisner <skisner@greerindustries.com>
To: "Mullins, Robert A" <robert.a.mullins@wv.gov>

Fri, Jun 13, 2025 at 1:22 PM

Robert,

I've reviewed Table 1 to Subpart AAAAA of Part 63 as it appears in the updated rule published in the Federal Register on July 16, 2024.

The following sections apply to both of our lime kilns at Greer Lime from Table 1:

#1, All existing lime kilns and lime coolers without a scrubber installed prior to 1/5/04: PM emissions must not exceed 0.12 lb/tsf.

#10, All preheater rotary lime kilns and lime coolers producing high calcium quicklime: HCl emissions must not exceed 0.096 lb/ton of lime produced.

#14, All existing lime kilns and lime coolers: Hg emissions must not exceed 34 lb/MMton of lime produced.

#15, All existing lime kilns and lime coolers: Total organic HAP emissions must not exceed 2.6 ppmvd @ 7% O₂.

#16, All existing lime kilns and lime coolers: D/F emissions must not exceed 0.037 ng/dscm (TEQ) @ 7% O₂.

#19, Fugitive emissions from all PSH operations: Emissions must not exceed 10% opacity.

Please let me know if you need any additional information.

Scott Kisner

Greer Industries, Inc.

Environmental Compliance Manager

304-276-5263

From: Mullins, Robert A <robert.a.mullins@wv.gov>
Sent: Friday, June 6, 2025 1:05 PM
To: Scott Kisner <skisner@greerindustries.com>
Cc: Bob Gwynne <gwynne@greerindustries.com>
Subject: Re: R30-07100001-2025 renewal questions

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Scott,

As part of the Title V Renewal I need to include the applicable requirements at the time of issuance. I plan to send this Renewal out to Notice later this month after an internal review and allowing you to review the changes.

I will most likely be proceeding with the renewal process before the R13-1685B permit is modified; so submit a joint R13/Title V modification Application in case it needs to be modified after the Title V renewal is out to Notice or Issued.

If the regulation is rescinded or reconsidered after the issuance of the renewal it will need to be modified to account for that. From my review the main significant change is the inclusion of the new limits in Table 1 of Subpart AAAAA and most of the other changes seemed minor like the renumbering of Tables in Subpart AAAAA and the inclusion of the CEDRI language.

If you become a synthetic minor after the issuance of the Title V renewal that would also involve a modification of the Title V permit.

I'll remove Item 6 from the table of emission limits I am including in the permit. Though on a related note, does any of Equipment fall under Table 1 to Subpart AAAAA of Part 63—Emission Limits Item 10. (All preheater rotary lime kilns and their associated coolers producing high-calcium quick lime) or are there any other Items from Table 1 to Subpart AAAAA that I should have included that I didn't?

Thanks,

Robert Mullins

On Fri, Jun 6, 2025 at 11:55 AM Scott Kisner <skisner@greerindustries.com> wrote:

Robert,

1. Yes, I will request that R13-1685B be modified to remove the trommel screen via a Class I written request for permanent removal.

2. Both kilns are preheater rotary and we only produce high calcium lime. In the table below, #8 applies to both and #6 applies to neither kiln. To complicate matters, this rule is now very much in flux as it was one of the rules targeted by the new administration for either being rescinded or reconsidered. EPA is currently looking to make substantial changes to the new rule and these are expected to be in the Federal Register in less than a year. Additionally, we have recently conducted HCl stack testing using our DSI control system and have proven that we can greatly reduce our HAP potential to emit to less than 10 tpy single HAP and less than 25 tpy aggregated HAPs. We intend to apply this year for a synthetic minor application to remove lime manufacturing MACT applicability. Given this information, how do you want to handle the MACT requirements at this time for the renewal?

Scott Kisner
Greer Industries, Inc.
Environmental Compliance Manager
304-276-5263

From: Mullins, Robert A <robert.a.mullins@wv.gov>
Sent: Wednesday, June 4, 2025 9:06 AM
To: Scott Kisner <skisner@greerindustries.com>; Bob Gwynne <gwynne@greerindustries.com>
Subject: R30-07100001-2025 renewal questions

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I'm working on the Title V permit renewal for Greer Industries, Inc.'s Riverton Facility and have a few questions.

1. In the Summary of Title V Changes change #2 has a note that the Trommel Screen (TS1) was permanently removed in 2023 and requested that this unit be removed from the Title V Permit. This Emission Unit was added as part of R13-1685B so it and its associated permit requirements will need to be removed from R13-1685B before it can be removed from the Title V Permit. Do you intend to modify R13-1685B to Remove the trommel screen?

2. 40 C.F.R. 63 Subpart AAAAAA was recently amended which you noted in the renewal application along with the fact the facility would be subject to new HAP emission limits with compliance by June 28, 2027 (40 CFR 63.7083(d) states July 16, 2027). I am trying to incorporate these new limits along with their compliance date so that the permit will not need to be updated in 2027 to include them. Can you let me know which sections Table 1 to Subpart AAAAAA of Part 63 —Emission Limits that the facility will be subject to and which units are subject to each Item # of the Table. I've included the Table 1 Items I think the facility is subject to below but I am unsure about Item 6 and 8 a since search of the existing permit and renewal application don't mention Dolomitic Lime or High-Calcium Lime. I am also unsure if the 6 Bay LPD Pre-Heater (4-PH-1) and 8 Bay LPD Pre-Heater (4-PH-2) would be classified as "preheater rotary lime kilns".

Table 1 to Subpart AAAAAA of Part 63—Emission Limits

For...	You must meet the following emission limit
1. All existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004. (1E and 500-115)	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).

6. Existing straight rotary lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 2.3 lb/ton of lime produced.
8. Existing straight rotary lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.52 lb/ton of lime produced.
14. All existing lime kilns and their associated coolers (1E and 500-115)	Mercury emissions must not exceed 34 lb/MMton of lime produced.
15. All lime kilns and their associated coolers (1E and 500-115)	Total Organic HAP emissions must not exceed 2.6 ppmvd @7% O ₂ .
16. All lime kilns and their associated coolers (1E and 500-115)	D/F emissions must not exceed 0.037 ng/dscm (TEQ) ¹ @7% O ₂ .
19. Fugitive emissions from all process stone handling (PSH) operations at a new or existing affected source, except as provided by item 8 of this table 1. (4-BC1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, 4-STB-2)	Emissions must not exceed 10 percent opacity.

Please review my questions and respond.

--

Robert Mullins

WV Department of Environmental Protection

Division of Air Quality

[601 57th Street, SE](#)

[Charleston, WV 25304](#)

Phone: (304)926-0499 ext. 41286

**Mullins, Robert A** <robert.a.mullins@wv.gov>

RE: R30-07100001-2025 renewal questions

1 message

Scott Kisner <skisner@greerindustries.com>
To: "Mullins, Robert A" <robert.a.mullins@wv.gov>

Thu, Jun 12, 2025 at 9:02 AM

I've been on vacation this week, but returning to the office tomorrow. I'll take a close look at Table 1 to see what else may need included when I get back.

Scott

From: Mullins, Robert A <robert.a.mullins@wv.gov>
Sent: Friday, June 6, 2025 1:05 PM
To: Scott Kisner <skisner@greerindustries.com>
Cc: Bob Gwynne <gwynne@greerindustries.com>
Subject: Re: R30-07100001-2025 renewal questions

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Scott,

As part of the Title V Renewal I need to include the applicable requirements at the time of issuance. I plan to send this Renewal out to Notice later this month after an internal review and allowing you to review the changes.

I will most likely be proceeding with the renewal process before the R13-1685B permit is modified; so submit a joint R13/Title V modification Application in case it needs to be modified after the Title V renewal is out to Notice or Issued.

If the regulation is rescinded or reconsidered after the issuance of the renewal it will need to be modified to account for that. From my review the main significant change is the inclusion of the new limits in Table 1 of Subpart AAAAA and most of the other changes seemed minor like the renumbering of Tables in Subpart AAAAA and the inclusion of the CEDRI language.

If you become a synthetic minor after the issuance of the Title V renewal that would also involve a modification of the Title V permit.

I'll remove Item 6 from the table of emission limits I am including in the permit. Though on a related note, does any of Equipment fall under Table 1 to Subpart AAAAA of Part 63—Emission Limits Item 10. (All preheater rotary lime kilns and their associated coolers producing high-calcium quick lime) or are there any other Items from Table 1 to Subpart AAAAA that I should have included that I didn't?

Thanks,

Robert Mullins

On Fri, Jun 6, 2025 at 11:55 AM Scott Kisner <skisner@greerindustries.com> wrote:

Robert,

1. Yes, I will request that R13-1685B be modified to remove the trommel screen via a Class I written request for permanent removal.
2. Both kilns are preheater rotary and we only produce high calcium lime. In the table below, #8 applies to both and #6 applies to neither kiln. To complicate matters, this rule is now very much in flux as it was one of the rules targeted by the new administration for either being rescinded or reconsidered. EPA is currently looking to make substantial changes to the new rule and these are expected to be in the Federal Register in less than a year. Additionally, we have recently conducted HCl stack testing using our DSI control system and have proven that we can greatly reduce our HAP potential to emit to less than 10 tpy single HAP and less than 25 tpy aggregated HAPs. We intend to apply this year for a synthetic minor application to remove lime manufacturing MACT applicability. Given this information, how do you want to handle the MACT requirements at this time for the renewal?

Scott Kisner

Greer Industries, Inc.

Environmental Compliance Manager

304-276-5263

From: Mullins, Robert A <robert.a.mullins@wv.gov>

Sent: Wednesday, June 4, 2025 9:06 AM

To: Scott Kisner <skisner@greerindustries.com>; Bob Gwynne <gwynne@greerindustries.com>

Subject: R30-07100001-2025 renewal questions

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I'm working on the Title V permit renewal for Greer Industries, Inc.'s Riverton Facility and have a few questions.

1. In the Summary of Title V Changes change #2 has a note that the Trommel Screen (TS1) was permanently removed in 2023 and requested that this unit be removed from the Title V Permit. This Emission Unit was added as part of R13-1685B so it and its associated permit requirements will need to be removed from R13-1685B before it can be removed from the Title V Permit. Do you intend to modify R13-1685B to Remove the trommel screen?

2. 40 C.F.R. 63 Subpart AAAAA was recently amended which you noted in the renewal application along with the fact the facility would be subject to new HAP emission limits with compliance by June 28, 2027 (40 CFR 63.7083(d) states July 16, 2027). I am trying to incorporate these new limits along with their compliance date so that the permit will not need to be updated in 2027 to include them. Can you let me know which sections Table 1 to Subpart AAAAA of Part 63—Emission Limits that the facility will be subject to and which units are subject to each Item # of the Table. I've included the Table 1 Items I think the facility is subject to below but I am unsure about Item 6 and 8 a since search of the existing permit and renewal application don't mention Dolomitic Lime or High-Calcium Lime. I am also unsure if the 6 Bay LPD Pre-Heater (4-PH-1) and 8 Bay LPD Pre-Heater (4-PH-2) would be classified as "preheater rotary lime kilns".

Table 1 to Subpart AAAAA of Part 63—Emission Limits

For...	You must meet the following emission limit
1. All existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004. (1E and 500-115)	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).
6. Existing straight rotary lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 2.3 lb/ton of lime produced.
8. Existing straight rotary lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.52 lb/ton of lime produced.
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19. Fugitive emissions from all process stone handling (PSH) operations at a new or existing affected source, except as provided by item 8 of this table 1. (4-BC1, 4-BC-2, 4-BC-4, 4-BC-5, 4-STB-1, 4-STB-2)	Emissions must not exceed 10 percent opacity.

Please review my questions and respond.

--

Robert Mullins

WV Department of Environmental Protection

Division of Air Quality

[601 57th Street, SE](#)

7/28/25, 8:59 AM

State of West Virginia Mail - RE: R30-07100001-2025 renewal questions

[Charleston, WV 25304](#)

Phone: (304)926-0499 ext. 41286



Mullins, Robert A <robert.a.mullins@wv.gov>

Read: Completeness Determination, Greer Lime Company, Application No. R30-07100001-2025

1 message

Bob Gwynne <gwynne@greerindustries.com>
To: "robert.a.mullins@wv.gov" <robert.a.mullins@wv.gov>

Sat, Mar 22, 2025 at 5:40 PM

Your message

To: Bob Gwynne
Subject: Completeness Determination, Greer Lime Company, Application No. R30-07100001-2025
Sent: Friday, March 21, 2025 1:39:30 PM (UTC-05:00) Eastern Time (US & Canada)

was read on Saturday, March 22, 2025 5:40:46 PM (UTC-05:00) Eastern Time (US & Canada).



Mullins, Robert A <robert.a.mullins@wv.gov>

Completeness Determination, Greer Lime Company, Application No. R30-07100001-2025

1 message

Mullins, Robert A <robert.a.mullins@wv.gov>

Fri, Mar 21, 2025 at 1:39 PM

To: gwynne@greerindustries.com, skisner@greerindustries.com

Your Title V renewal application for a permit to operate the above referenced facility was received by this Division on February 27, 2025. After review of said application, it has been determined that the application is administratively complete as submitted. Therefore, the above referenced facility qualifies for an Application Shield.

The applicant has the duty to supplement or correct the application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

The submittal of a complete application shall not affect the requirement that any source have all **preconstruction permits** required under the rules of the Division.

If during the processing of this application it is determined that additional information is necessary to evaluate or take final action on this application, a request for such information will be made in writing with a reasonable deadline for a response. Until which time as your renewal permit is issued or denied, please continue to operate this facility in accordance with 45CSR30, section 6.3.c. which states: *If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.* This protection shall cease to apply if, subsequent to the completeness determination made pursuant to paragraph 6.1.d. of 45CSR30 and as required by paragraph 4.1.b., the applicant fails to submit by the deadline specified in writing any additional information identified as being needed to process the application.

Please remember, **failure of the applicant to timely submit information required or requested to process the application may cause the Application Shield to be revoked.** Should you have any questions regarding this determination, please contact me.

Sincerely,

--

Robert Mullins

WV Department of Environmental Protection

Division of Air Quality

7/28/25, 8:56 AM

State of West Virginia Mail - Completeness Determination, Greer Lime Company, Application No. R30-07100001-2025

601 57th Street, SE

Charleston, WV 25304

Phone: (304)926-0499 ext. 41286



Mink, Stephanie R <stephanie.r.mink@wv.gov>

WV DAQ Title V Permit Application Status for Greer Industries, Inc. dba Greer Lime Company; Riverton

2 messages

Mink, Stephanie R <stephanie.r.mink@wv.gov>

Fri, Feb 28, 2025 at 9:26 AM

To: gwynne@greerindustries.com, Scott Kisner <skisner@greerindustries.com>

Cc: Carrie McCumbers <carrie.mccumbers@wv.gov>, Robert A Mullins <robert.a.mullins@wv.gov>

RE: Application Status

Greer Industries, Inc. dba Greer Lime Company

Riverton

Facility ID No. 071-00001

Application No. R30-07100001-2025

Dear Mr. Gwynne,

Your application for a Title V Permit Renewal for Greer Industries, Inc. dba Greer Lime Company's Riverton facility was received by this Division on February 27, 2025, and was assigned to Robert "R.A."Mullins.

Should you have any questions, please contact the assigned permit writer, Robert "R.A."Mullins, at 304-926-0499, extension 41286, or Robert.A.Mullins@wv.gov .

--

Stephanie Mink

Environmental Resources Associate

West Virginia Department of Environmental Protection

Division of Air Quality, Title V & NSR Permitting

601 57th Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

McCumbers, Carrie <carrie.mccumbers@wv.gov>

Mon, Mar 3, 2025 at 7:44 AM

To: stephanie.r.mink@wv.gov

Your message

To: McCumbers, Carrie

Subject: WV DAQ Title V Permit Application Status for Greer Industries, Inc. dba Greer Lime Company; Riverton

Sent: 2/28/25, 9:26:39 AM EST

was read on 3/3/25, 7:44:33 AM EST



Mink, Stephanie R <stephanie.r.mink@wv.gov>

Read: WV DAQ Title V Permit Application Status for Greer Industries, Inc. dba Greer Lime Company; Riverton

1 message

Bob Gwynne <gwynne@greerindustries.com>
To: "stephanie.r.mink@wv.gov" <stephanie.r.mink@wv.gov>

Fri, Feb 28, 2025 at 9:29 AM

Your message

To: Bob Gwynne
Subject: WV DAQ Title V Permit Application Status for Greer Industries, Inc. dba Greer Lime Company; Riverton
Sent: Friday, February 28, 2025 9:26:39 AM (UTC-05:00) Eastern Time (US & Canada)

was read on Friday, February 28, 2025 9:29:22 AM (UTC-05:00) Eastern Time (US & Canada).

Division of Air Quality Permit Application Submittal

Please find attached a permit application for : Greer Industries, Inc. dba Greer Lime Company; Riverton, WV

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only): 07100001

- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only): R30-07100001-2020

- Type of NSR Application (check all that apply):

- ☐ Construction
- ☐ Modification
- ☐ Class I Administrative Update
- ☐ Class II Administrative Update
- ☐ Relocation
- ☐ Temporary
- ☐ Permit Determination

- Type of 45CSR30 (TITLE V) Application:

- ☐ Title V Initial
- ☒ Title V Renewal
- ☐ Administrative Amendment**
- ☐ Minor Modification**
- ☐ Significant Modification**
- ☐ Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

- Payment Type:

- ☐ Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)

- ☒ Check (Make checks payable to: WVDEP – Division of Air Quality)

Mail checks to:

WVDEP – DAQ – Permitting

Attn: NSR Permitting Secretary

601 57th Street, SE

Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

- If the permit writer has any questions, please contact (all that apply):

- ☐ Responsible Official/Authorized Representative

- Name: J. Robert Gwynne

- Email: gwynne@greerindustries.com

- Phone Number: 304-864-5411

- ☒ Company Contact

- Name: Scott Kisner

- Email: skisner@greerindustries.com

- Phone Number: 304-276-5263

- ☐ Consultant

- Name:

- Email:

- Phone Number:

Title V Renewal Application
Permit No. R30-07100001-2020
West Virginia Department of Environmental Protection
Division of Air Quality



Greer Industries, Inc. dba Greer Lime Company
Riverton Facility
Riverton, Pendleton County, West Virginia
Plant ID No. 071-00001
February 2025

GREER ENGINEERING
8477 Veterans Memorial Highway
Masontown, West Virginia 26542
(304) 864-5411

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ATTACHMENTS F AND H ARE NOT APPLICABLE TO THIS APPLICATION.

**UPDATES TO EXISTING FACILITY INFORMATION
SUMMARY**

Summary of Title V Changes Updates to Existing Facility Information

The following updates have been included in this Title V renewal application:

1. 45CSR13, R13-1685A was issued on June 23, 2021. This modification permit allowed the replacement of two existing stone bins (1-SI-1 and 1-SI-2) and the bin crossover conveyor belt (1-BC-5). There was no increase in regulated air pollutants from this modification. The Title V permit was revised via a minor modification and approved by permit action number MM01.
2. 45CSR13, R13-1685B was issued on August 17, 2021. This modification permit allowed the installation of a portable Trommel screen for the purpose of separating undesirable material (i.e. clay, mud, etc.) from production stone. This action increased the PTE for regulated pollutants by the following amounts (TSP = 7.38 tpy; PM10 = 2.71 tpy; NO_x = 0.06 tpy; CO = 0.72 tpy; VOC = 0.03 tpy; and SO₂ = 0.07 tpy). The Title V permit was revised via a significant modification and approved by permit action number SM01.

Note: The Trommel screen was permanently removed from the site during 2023 and will not return. Permit language and associated equipment references that were added to the Title V permit via SM01 should be deleted. The facility PTE will be adjusted accordingly to reflect the removal of this equipment.

3. 45CSR13, R13-1381B was issued on May 29, 2024. This Class II Administrative Update allowed for the installation of two Direct Sorbent Injection systems to reduce HCl emissions. This action increased the PTE for regulated pollutants by the following amounts (TSP = 0.002 tpy; and PM10 = 0.002 tpy). The Title V permit was revised via a minor modification and approved by permit action number MM02.
4. Appendix 1 has been revised to reflect the actual PTE Hazardous Air Pollutants from coal combustion in the lime kilns based on extensive stack testing that took place during 2024. The Greer Lime HAP PTE has been historically based upon AP-42 factors for coal combustion in a boiler. The use of AP-42 to derive a facility HAP PTE resulted in inaccurate PTE figures and caused the listing of many HAPs that have been shown by the lime manufacturing industry to be non-existent or negligible. Appendix 1 now lists only those HAPs that are identified by the USEPA and the lime manufacturing industry to be a concern from our process.
5. The PTE greenhouse gas emissions have been updated to reflect the new Global Warming Potentials (GWP) referenced in §98 Subpart A, Table A-1.

TITLE V PERMIT APPLICATION GENERAL FORMS
SECTIONS I-VI



**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL
PROTECTION**

DIVISION OF AIR QUALITY

601 57th Street SE

Charleston, WV 25304

Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. Name of Applicant (As registered with the WV Secretary of State's Office): Greer Industries, Inc. dba Greer Lime Company	2. Facility Name or Location: Riverton, Pendleton County, WV
3. DAQ Plant ID No.: 071 - 00001	4. Federal Employer ID No. (FEIN): 34-073-7241
5. Permit Application Type: ☐ Initial Permit ☒ Permit Renewal ☐ Update to Initial/Renewal Permit Application When did operations commence? 1960 What is the expiration date of the existing permit? 09/15/2025	
6. Type of Business Entity: ☒ Corporation ☐ Governmental Agency ☐ LLC ☐ Partnership ☐ Limited Partnership	7. Is the Applicant the: ☐ Owner ☐ Operator ☒ Both If the Applicant is not both the owner and operator, please provide the name and address of the other party.
8. Number of onsite employees: 74	
9. Governmental Code: ☒ Privately owned and operated; 0 ☐ County government owned and operated; 3 ☐ Federally owned and operated; 1 ☐ Municipality government owned and operated; 4 ☐ State government owned and operated; 2 ☐ District government owned and operated; 5	
10. Business Confidentiality Claims Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ No If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY" guidance.	

11. Mailing Address		
Street or P.O. Box: 1088 Germany Valley Limestone Rd.		
City: Riverton	State: WV	Zip: 26814
Telephone Number: (304) 567-2141	Fax Number: N/A (use email contacts)	

12. Facility Location		
Street: Germany Valley Limestone Rd.	City: Riverton	County: Pendleton
UTM Easting: 640.00 km	UTM Northing: 4,293.00 km	Zone: ☒ 17 or ☐ 18
Directions: Approximately four miles south of Seneca Rocks (junction of US Route 33 and WV Route 55) on US Route 33, turn left onto Germany Valley Limestone Road. Plant is one mile from the turn on the right side.		
Portable Source? ☐ Yes ☒ No		
Is facility located within a nonattainment area? ☐ Yes ☒ No		If yes, for what air pollutants? N/A
Is facility located within 50 miles of another state? ☒ Yes ☐ No		If yes, name the affected state(s). Virginia
Is facility located within 100 km of a Class I Area¹? ☒ Yes ☐ No If no, do emissions impact a Class I Area¹? ☐ Yes ☐ No		If yes, name the area(s). Dolly Sods, WV Otter Creek Wilderness, WV
¹ Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

13. Contact Information		
Responsible Official: J. Robert Gwynne		Title: Executive Vice President
Street or P.O. Box: 8477 Veterans Memorial Highway		
City: Masontown	State: WV	Zip: 26542
Telephone Number: (304) 864-5411	Fax Number: N/A (use email contacts)	
E-mail address: gwynne@greerindustries.com		
Environmental Contact: Scott Kisner		Title: Environmental Compliance Manager
Street or P.O. Box: 8477 Veterans Memorial Highway		
City: Masontown	State: WV	Zip: 26542
Telephone Number: (304) 276-5263	Fax Number: N/A (use email contacts)	
E-mail address: skisner@greerindustries.com		
Application Preparer: Same as Environmental Contact		Title:
Company:		
Street or P.O. Box:		
City:	State:	Zip:
Telephone Number: ()-	Fax Number: ()-	
E-mail address:		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Lime Manufacturing	Lime and Hydrated Lime	32741	3274
Crushed and Broken Limestone Mining and Quarrying	Crushed and Broken Limestone	212312	1422

Provide a general description of operations.

Greer Lime Company's Riverton facility operates a limestone quarry, crushing and sizing operations, a limestone grinding system, storage and loadout systems for various limestone products, a lime hydration plant, a rotary lime kiln system with two (2) rotary kilns, a lime handling system, and a portable limestone crushing and sizing unit.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☒ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS	☒ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☒ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64)
☐ CAIR NO _x Annual Trading Program (45CSR39)	☐ CAIR NO _x Ozone Season Trading Program (45CSR40)
☐ CAIR SO ₂ Trading Program (45CSR41)	

19. Non Applicability Determinations
List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies. 40CFR64 Compliance Assurance Monitoring (CAM) - The two rotary kilns have uncontrolled potential to be Title V major for PM; however, they are subject to 40CFR63 Subpart AAAAA standards, which were proposed after 11/15/1990 and, therefore, exempts the pollutant specific emissions units (PSEU) from CAM. The coal handling system does not employ any add on control equipment that would require CAM monitoring. The fine grinding lines do not encompass any individual PSEU having pre-controlled emissions exceeding TV thresholds. 40 C.F.R. §§ 60.380 - 60.386 NSPS Subpart LL (August 24, 1982) - Standards of Performance for Metallic Mineral Processing does not apply because lime or limestone is not metallic mineral. 40C.F.R. §§60.672(h), 60.675(h) NSPS Subpart OOO (August 1, 1985) - These sections of 40 C.F.R. Part 60, Subpart OOO, do not apply to Greer Lime Company since Greer Lime Company does not incorporate wet screening operations.
☒ Permit Shield

19. Non Applicability Determinations (Continued) - Attach additional pages as necessary.

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

60 C.F.R. 60.676(c), (d), and (e) NSPS Subpart OOO (August 1, 1985) - These sections of 40 C.F.R. Part 60, Subpart OOO, do not apply to Greer Lime Company since Greer Lime Company does not incorporate a wet scrubber in their manufacturing process.

60 C.F.R. §§ 60.730 - 60.737 NSPS Subpart UUU (April 23, 1986) - Standards of Performance for Calciners and Dryers in Mineral Industries does not apply because lime is not listed as a mineral processed or produced in a mineral processing plant.

45CSR§10-5.1 (SIP approved version) - This process is not defined as a refinery process gas stream or any other process gas stream that contains hydrogen sulfides to be combusted.

45CSR17 (August 31, 2000) - Greer Lime Company is subject to 45CSR7 which exempts it from 45CSR17, To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter, as stated in 45CSR§7-10.2.

☒ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Requirement
1	45CSR§6-3.1.	3.1.1.	Open Burning	Open burning of refuse prohibited.
2	45CSR§6-3.2.	3.1.2.	Open Burning Exemptions	Stipulation to open burning exemptions of 45CSR§6-3.1.
3	40CFR§61.145(b) 45CSR34	3.1.3.	Asbestos	Asbestos inspection prior to demolition or renovation.
4	45CSR§4-3.1 State Enforceable only.	3.1.4.	Odor	Prohibits discharges of pollutants which cause or contribute to objectionable odors.
5	45CSR§11-5.2.	3.1.5.	Standby Plan for Reducing Emissions	When requested by the Secretary, standby plans for emissions reduction will be prepared.
6	WV Code §22-5-4(a)(14)	3.1.6.	Emission Inventory	Annual submission of an emission inventory.
7	40CFR82 Subpart F	3.1.7.	Ozone-depleting Substances	Requirement to follow: a. 40CFR §§ 82.154 & 82.156; b. 40CFR § 82.158; c. 40CFR § 82.161.
8	40CFR68	3.1.8.	Risk Management Plan	Submission of a risk management plan if required.
9	45CSR§7-3.1. R13-1396E, 4.1.10. R13-1685B, 4.1.5.a.	3.1.9.	Prevent & Control Particulate Matter	No smoke or particulate matter emission may exhibit greater than 20% opacity, except as noted in listed subsections.
10	45CSR§7-3.2. R13-1396E, 4.1.10. R13-1685B, 4.1.5.a.	3.1.10.	Prevent & Control Particulate Matter	Opacity provisions do not apply to smoke or particulate matter emissions which are less than 40% opacity for periods aggregating no more than 5 minutes in a 60-minute period.
11	45CSR§7-3.7.	3.1.11.	Prevent & Control Particulate Matter	No visible emissions from any storage structure required to have a full enclosure and control device pursuant to 45CSR§7 Subsection 5.1.
12	45CSR§7-4.1. R13-1396E, 4.1.10. R13-1685B, 4.1.5.c.	3.1.12.	Prevent & Control Particulate Matter	No particulate matter to open air from any source in excess of Table 45-7A.
13	45CSR§7-4.12.	3.1.13.	Prevent & Control Particulate Matter	Stacks shall have flow straightening devices or sufficient vertical length for acceptable stack sampling procedures.
14	45CSR§7-5.1. R13-1685B, 4.1.5.d.	3.1.14.	Prevent & Control Particulate Matter	Lowest fugitive particulate emissions reasonably achievable.

20. Facility-Wide Applicable Requirements, continued

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Requirement
15	45CSR§7-5.2. R13-1685B, 4.1.5.e.	3.1.15.	Prevent & Control Particulate Matter	Dust control of plant premises, roads, stockpiles, and general materials handling.
16	45CSR§7-9.1.	3.1.16.	Prevent & Control Particulate Matter	Due to unavoidable equipment malfunction the Director may permit excess emissions upon specific application to the Director.
17	45CSR§7-10.3.	3.1.17.	Prevent & Control Particulate Matter	Exemption for maintenance operations.
18	45CSR§7-10.4.	3.1.18.	Prevent & Control Particulate Matter	Ability to apply for alternative visible emission standards for startup and shutdown.
19	45CSR16 40CFR§60.672(a) R13-1685B, 4.1.6.a.	3.1.19.	Subpart OOO Standard for Particulate Matter	Standard for stack emission limits and compliance requirements from Table 2 in Subpart OOO.
20	45CSR16 40CFR§60.672(b) R13-1685B, 4.1.6.b.	3.1.20.	Subpart OOO Standard for Particulate Matter	Standard for fugitive emission limits and compliance requirements from Table 3 in Subpart OOO.
21	45CSR16 40CFR§60.672(d) R13-1685B, 4.1.6.c.	3.1.21.	Subpart OOO Standard for Particulate Matter	Truck dumping to screens, feed hoppers, or crushers is exempt from requirements.
22	45CSR16 40CFR§60.672(e) R13-1685B, 4.1.6.d.	3.1.22.	Subpart OOO Standard for Particulate Matter	Standard for transfer points enclosed within a building.
23	R13-2113K, 2.5.1.	3.1.23.	Construction	Construction facility in accordance with permit application.
24	R13-1396E, 4.1.7.	3.1.24.	Transfer Points	The listed transfer points will use the listed control devices.
25	45CSR§30-5.1.c	3.2.1.	Compliance with Opacity Requirements	Requirement to conduct Method 9/22 opacity observations to comply with requirements of 45CSR7, 40CFR60 Subpart OOO, and 40CFR60 Subpart HH.

20. Facility-Wide Applicable Requirements, continued

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Requirement
26	45CSR§30-5.1.c.	3.2.2.	Dust Collectors	Provisions for baghouse observations and monitoring
27	45CSR16 40 CFR §60.674(c)	3.2.3	Method 22 VE	Baghouse VE for affected facilities built after April 22, 2008
28	45CSR16 40 CFR §60.674(e)	3.2.4	Alternative to Method 22 VE	Alternative to follow continuous compliance requirements
29	WV Code § 22-5-4(a)(15-16) 45CSR13	3.3.1.	Stack Testing	Stack testing to determine compliance with emissions limitations.
30	45CSR§7-8.1.	3.3.2.	Prevent & Control Particulate Matter	Stack testing to determine particulate matter loading from exhaust gases.
31	45CSR§7-8.2.	3.3.3.	Prevent & Control Particulate Matter	Director or authorized representative may order other testing.
32	45CSR16 40 C.F.R. § 60.675 (a)	3.3.4.	Performance Tests	Reference methods and procedures shall be the test methods from 40CFR60.8. Alternative methods and procedures are in 40CFR60.675(e).
33	45CSR16 40 C.F.R. § 60.675 (b)	3.3.5.	Compliance with Particulate Matter Standards	Shall determine compliance with PM standards in 40CFR60.672(a) by using Method 5 or 17 to determine PM concentration and Method 9 to determine opacity.
34	45CSR16 40 C.F.R. § 60.675 (c) Subpart OOO, Table 3	3.3.6.	Compliance with Particulate Matter Standards	Imposes additional requirements to the procedures of Method 9 (40CFR60 Appendix A) and 40 CFR60.11.
35	45CSR16 40 C.F.R. § 60.675 (d)	3.3.7.	Compliance with Particulate Matter Standards	Demonstrate compliance with fugitive emissions limits for buildings.
36	45CSR16 40 C.F.R. § 60.675 (e)	3.3.8.	Compliance with Particulate Matter Standards	Alternatives to reference methods and procedures of 40CFR§ 60.675.
37	45CSR16 40 C.F.R. § 60.675 (g)	3.3.9.	Performance Testing	Method 9 testing notification may be reduced from 30 days to 7 days.

20. Facility-Wide Applicable Requirements, continued

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Requirement
38	45CSR§30-5.1.c.2.A. R13-1396E, 4.4.1., R13-2670B, 4.4.1., R13-1685B, 4.4.1. and R13-1381B, 4.4.1.	3.4.1.	Monitoring Information	Permittee shall keep records of monitoring information.
39	45CSR§30-5.1.c.2.B.	3.4.2.	Record Retention	Permittee shall keep records of all monitoring information required by this permit for a period of five (5) years
40	45CSR§30-5.1.c. State-Enforceable only.	3.4.3.	Odors	Permittee shall maintain a record of all odor complaints received.
41	45CSR§30-5.1.c.	3.4.4.	Dust Control	Permittee shall maintain records of dust suppressants or other dust control measures applied at the facility. Permittee shall inspect fugitive dust control systems daily 5/1 to 9/30 and monthly 10/1 to 4/30.
42	45CSR16 40 C.F.R. §§ 60.676 (a)	3.4.5.	Subpart OOO Standard for Particulate Matter	To seek compliance with 40CFR60.670(d) information concerning the existing facility being replaced and the replacement equipment shall be submitted to the Director.
43	45CSR16 40 C.F.R. § 60.676 (b)(1)	3.4.6.	Subpart OOO Standard for Particulate Matter	Maintain a logbook and record each periodic inspection required by 40 CFR §60.674(b).
44	45CSR16 40 C.F.R. § 60.676 (b)(3)	3.4.7.	Subpart OOO Standard for Particulate Matter	Maintain records of VE observations of stone handling in lime plants to demonstrate compliance with §63.7132(a)(3) and (b).
45	45CSR16 40 C.F.R. § 60.676 (f)	3.4.8.	Subpart OOO Standard for Particulate Matter	Submit written reports of the results of all performance tests to demonstrate compliance with the standards.
46	45CSR16 40 C.F.R. § 60.676 (g)	3.4.9.	Subpart OOO Standard for Particulate Matter	Any screen, bucket elevator, or belt conveyor that processes saturated material and subsequently processes unsaturated material is subject to opacity and test requirements.

20. Facility-Wide Applicable Requirements, continued

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Requirement
47	45CSR16 40 C.F.R. § 60.676 (h)	3.4.10.	Notification Provisions	40CFR60.7(a)(1) notification requirements are waived for facilities regulated under Subpart OOO.
48	45CSR16 40 C.F.R. § 60.676 (i)	3.4.11.	Notification Provisions	Notification of the actual startup date of each affected facility shall be submitted to the Director.
49	45CSR§30-4.4. and 5.1.c.3D.	3.5.1.	Responsible Official	Certification of required documents by a responsible official.
50	45CSR§30-5.1.c.3.E.	3.5.2.	Confidential Treatment	Confidential submission of reporting under 45CSR§30-5.1.c.3.
51	NA	3.5.3.	NA	Procedure and addresses for submissions.
52	45CSR§30-8.	3.5.4.	Fees	Pay fees on an annual basis.
53	45CSR§30-5.3.e.	3.5.5.	Compliance Certification	Certification of compliance with the conditions of the permit.
54	45CSR§30-5.1.c.3.A.	3.5.6.	Semi-Annual Monitoring Reports	Requirement to submit semi-annual reports of required monitoring.
55	NA	3.5.7.	Reserved	Reserved
56	45CSR§30-5.1.c.3.C. 45CSR§30-5.1.c.3.B.	3.5.8.	Deviations	Requirement to report imminent and substantial danger by telephone or email immediately with a follow-up written report including probable cause and corrective action within 10-days. Deviation reports will include those attributable to upset conditions.

20. Facility-Wide Applicable Requirements, continued

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Requirement
57	45CSR§30-4.3.h.1.B.	3.5.9	New Applicable Requirements	If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
58	None	3.6.1	Compliance Plan	None
59	45CSR§ 10-5.1 45CSR17 40CFR§§60.380-60.386, Subpart LL 40CFR §§ 60.674(a) and 60.676 (c), (d), and (e), Subpart OOO 40CFR§§60.730-60.737, Subpart UUU 40CFR64 Compliance Assurance Monitoring (CAM)	3.7.1 and 3.7.2	Permit Shield	Granting of Permit Shield for identified requirements.



Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Method of Compliance
1	45CSR§6-3.1.	3.1.1.	Open Burning	NA. Facility does not conduct open burning.
2	45CSR§6-3.2.	3.1.2.	Open Burning Exemptions	NA
3	40CFR§61.145(b) 45CSR34	3.1.3.	Asbestos	Inspection will occur as required.
4	45CSR§4-3.1 State Enforceable only.	3.1.4.	Odor	Recordkeeping of complaints.
5	45CSR§11-5.2.	3.1.5.	Standby Plan for Reducing Emissions	When requested.
6	WV Code §22-5-4(a)(14)	3.1.6.	Emission Inventory	Annual reporting.
7	40CFR82 Subpart F	3.1.7.	Ozone-depleting Substances	Persons are certified and work is performed per requirements.
8	40CFR68	3.1.8.	Risk Management Plan	Submission if required.
9	45CSR§7-3.1. R13-1396E, 4.1.10. R13-1685B, 4.1.5a.	3.1.9.	Prevent & Control Particulate Matter	Monitoring; Recordkeeping.
10	45CSR§7-3.2. R13-1396E, 4.1.10. R13-1685B, 4.1.5a.	3.1.10.	Prevent & Control Particulate Matter	Monitoring; Recordkeeping.
11	45CSR§7-3.7.	3.1.11.	Prevent & Control Particulate Matter	Monitoring; Recordkeeping.
12	45CSR§7-4.1. R13-1396E, 4.1.10. R13-1685B, 4.1.5.c.	3.1.12.	Prevent & Control Particulate Matter	Monitoring; Recordkeeping.
13	45CSR§7-4.12.	3.1.13.	Prevent & Control Particulate Matter	Stacks shall be so equipped.
14	45CSR§7-5.1. R13-1685B, 4.1.5.b.	3.1.14.	Prevent & Control Particulate Matter	Monitoring; Recordkeeping.
15	45CSR§7-5.2. R13-1685B, 4.1.5.e.	3.1.15.	Prevent & Control Particulate Matter	Monitoring; Recordkeeping.
16	45CSR§7-9.1.	3.1.16.	Prevent & Control Particulate Matter	Will make application as necessary.
17	45CSR§7-10.3.	3.1.17.	Prevent & Control Particulate Matter	Recordkeeping.
18	45CSR§7-10.4.	3.1.18.	Prevent & Control Particulate Matter	Will apply as necessary for alternative standards for startup and shutdown.

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Method of Compliance
19	45CSR16 40CFR§60.672(a) R13-1685B, 4.1.6.a.	3.1.19.	Subpart OOO Standard for Particulate Matter	Testing; Monitoring; Recordkeeping; Reporting.
20	45CSR16 40CFR§60.672(b) R13-1685B, 4.1.6.b.	3.1.20.	Subpart OOO Standard for Particulate Matter	Testing; Monitoring; Recordkeeping; Reporting.
21	45CSR16 40CFR§60.672(d) R13-1685B, 4.1.6.c.	3.1.21.	Subpart OOO Standard for Particulate Matter	Acknowledge that listed activities are exempt from Subpart OOO.
22	45CSR16 40CFR§60.672(e) R13-1685B, 4.1.6.d.	3.1.22.	Subpart OOO Construction for Particulate Matter	Testing; Monitoring; Recordkeeping; Reporting.
23	R13-2113K, 2.5.1	3.1.23.	Construction	Build as Permitted.
24	R13-1396E, 4.1.7.	3.1.24	Transfer Points	Install controls as required.
25	45CSR§30-5.1.c	3.2.1.	Compliance with Opacity Requirements	Testing; Monitoring; Recordkeeping; Reporting.
26	45CSR§30-5.1.c.	3.2.2.	Dust Collectors	Monitoring; Recordkeeping.
27	45CSR16 40CFR§60.674(c)	3.2.3	Method 22 VE	Testing; Recordkeeping
28	45CSR16 40CFR§60.674(e)	3.2.4	Alternative to Method 22 VE	Follow Continuous Compliance Requirements (if selected)
29	WV Code § 22-5-4(a)(14-15) 45CSR13	3.3.1.	Stack Testing	Testing; Monitoring; Recordkeeping; Reporting.
30	45CSR§7-8.1.	3.3.2.	Prevent & Control Particulate Matter	Testing; Monitoring; Recordkeeping; Reporting.
31	45CSR§7-8.2.	3.3.3.	Prevent & Control Particulate Matter	Testing; Monitoring; Recordkeeping; Reporting if so required.
32	45CSR16 40 C.F.R. § 60.675 (a)	3.3.4.	Performance Tests	Testing.
33	45CSR16 40 C.F.R. § 60.675 (b)	3.3.5.	Compliance with Particulate Matter Standards	Testing; Monitoring; Recordkeeping; Reporting.
34	45CSR16, 40 C.F.R. § 60.675 (c), and Table 3, 45CSR13, R13-1685, (B) (5) and (6), Group (002, 004, 005, 008, 011)	3.3.6.	Compliance with Particulate Matter Standards	Testing.
35	45CSR16 40 C.F.R. § 60.675 (d)	3.3.7.	Compliance with Particulate Matter Standards	Testing; Monitoring; Recordkeeping; Reporting.

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Method of Compliance
36	45CSR16 40 C.F.R. § 60.675 (e)	3.3.8.	Compliance with Particulate Matter Standards	Testing by alternatives if approved.
37	45CSR16 40 C.F.R. § 60.675 (g)	3.3.9.	Performance Testing	Appropriate notification in the test protocol.
38	45CSR§30-5.1.c.2.A. R13-1396E, 4.4.1., R13-2670B, 4.4.1., R13-1685B, 4.4.1. and R13-1381B, 4.4.1.	3.4.1.	Monitoring Information	Recordkeeping.
39	45CSR§30-5.1.c.2.B.	3.4.2.	Record Retention	Recordkeeping.
40	45CSR§30-5.1.c. State-Enforceable only.	3.4.3.	Odors	Recordkeeping.
41	45CSR§30-5.1.c.	3.4.4.	Dust Control	Recordkeeping; Monitoring.
42	45CSR16 40 C.F.R. §§ 60.676 (a)	3.4.5.	Subpart OOO Standard for Particulate Matter	Reporting.
43	45CSR16 40 C.F.R. §60.676 (b)(1)	3.4.6.	Subpart OOO Standard for Particulate Matter	Recordkeeping.
44	45CSR16 40 C.F.R. §60.676 (b)(3)	3.4.7.	Subpart OOO Standard for Particulate Matter	Recordkeeping.
45	45CSR16 40 C.F.R. § 60.676 (f)	3.4.8.	Subpart OOO Standard for Particulate Matter	Reporting.
46	45CSR16 40 C.F.R. § 60.676 (g)	3.4.9.	Subpart OOO Standard for Particulate Matter	Change in regulatory requirements acknowledged if there's a material change.
47	45CSR16 40 C.F.R. § 60.676 (h)	3.4.10.	Notification Provisions	N/A
48	45CSR16 40 C.F.R. § 60.676 (i)	3.4.11.	Notification Provisions	Reporting.
49	45CSR§30-4.4. and 5.1.c.3D.	3.5.1.	Responsible Official	Documents will be certified by a responsible official.
50	45CSR§30-5.1.c.3.E.	3.5.2.	CBI	Follow CBI instructions.
51	NA	3.5.3.	NA	Submission addresses.
52	45CSR§30-8.	3.5.4.	Fees	Pay fees on time.
53	45CSR§30-5.3.e.	3.5.5.	Compliance Certification	Reporting.

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Name	Method of Compliance
54	45CSR§30-5.1.c.3.A.	3.5.6.	Semi-Annual Monitoring Reports	Reporting.
55	NA	3.5.7.	Reserved	Reserved
56	45CSR§30-5.1.c.3.C. 45CSR§30-5.1.c.3.B.	3.5.8.	Deviations	Reporting.
57	45CSR§30-4.3.h.1.B.	3.5.9.	New Applicable Requirements	New applicable requirements promulgated during term of permit will be met in a timely manner.
58	None	3.6.1	Compliance Plan	None
59	45CSR§ 10-5.1 45CSR17 40CFR§§60.380-60.386, Subpart LL 40CFR §§ 60.674(a) and 60.676 (c), (d), and (e), Subpart OOO 40CFR§§60.730-60.737, Subpart UUU 40CFR64 Compliance Assurance Monitoring (CAM)	3.7.1 and 3.7.2	Permit Shield	A permit shield for regulations have been identified in this application.

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit <i>(if any)</i>
R30-07100001-2020	09/01/2020	PD17-013
R13-2222-P2	03/19/2002	None
R13-2670B	5/1/2014	None
R13-2113K	04/21/2016	PD11-01, PD13-095 and PD12-061
R13-1396E	09/10/2019	None
R13-1685B	08/17/2021	None
R13-1381B	05/29/2024	PD17-013

22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
R13-1685A	06/23/2021	Superseded and replaced by R13-1685B
R13-1396D	10/10/2018	Superseded and replaced by R13-1396E
R13-1396C	08/29/2013	Superseded and replaced by R13-1396D
R13-2113J	06/22/2011	Superseded and replaced by R13-2113K
R13-2113I	11/12/2009	Superseded and replaced by R13-2113J
R13-2113H	03/26/2009	Superseded and replaced by R13-2113I
R13-2113G	11/25/2008	Superseded and replaced by R13-2113H
R13-2113F	07/09/2007	Superseded and replaced by R13-2113G
R13-2113E	02/05/2007	Superseded and replaced by R13-2113F
R13-2670A	10/13/2006	Superseded and replaced by R13-2670B
R13-2113D	10/03/2006	Superseded and replaced by R13-2113E
R13-2670	08/29/2006	Superseded and replaced by R13-2670A

R13-1381A	05/25/2004	Superseded and replaced by R13-1381B
R13-1396B	02/03/2003	Superseded and replaced by R13-1396C
R13-2113C	12/10/2002	Superseded and replaced by R13-2113D
R13-2222-P1	11/05/2001	Superseded and replaced by R13-2222-P2
R13-2113B	09/25/2000	Superseded and replaced by R13-2113C
R13-1396A	08/11/1999	Superseded and replaced by R13-1396B
R13-2222	11/04/1998	Superseded and replaced by R13-2222-P1
R13-2113A	12/04/1997	Superseded and replaced by R13-2113B
R13-2113	07/28/1997	Superseded and replaced by R13-2113A
R13-1788	04/24/1995	Superseded and replaced by R13-1381B
R13-1381R	04/24/1995	Superseded and replaced by R13-1381A
R13-1685	02/10/1994	Superseded and replaced by R13-1685A
R13-1396	10/07/1991	Superseded and replaced by R13-1396A
R13-1381	06/27/1991	Superseded and replaced by R13-1381R
R13-1106	04/19/1989	Superseded and replaced by R13-1381
R13-727	12/12/1983	Superseded and replaced by R13-1396
R13-725	12/12/1983	Effectively superseded and replaced by R13-2113G which re-permitted all Group 003 equipment to Group 011.
R30-07100001-2015	05/26/2015	Superseded by R30-07100001-2020
R30-07100001-2009	11/19/2009	Superseded by R30-07100001-2015
R30-07100001-2004	10/25/2004	Superseded by R30-07100001-2009

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	160.4
Nitrogen Oxides (NO _x)	301.4
Lead (Pb)	0.0002
Particulate Matter (PM _{2.5}) ¹	84.54
Particulate Matter (PM ₁₀) ¹	188.37
Total Particulate Matter (TSP)	407.13
Sulfur Dioxide (SO ₂)	134.6
Volatile Organic Compounds (VOC)	37.72
Hazardous Air Pollutants ²	Potential Emissions
Total HAPs	49.94
HCl + Cl ₂	39.7
HF	N/A
Speciated HAPs	See Appendix 1
Regulated Pollutants other than Criteria and HAP	Potential Emissions
Carbon Dioxide (CO ₂)	421,043
Nitrous Oxide (N ₂ O)	2.65
Methane (CH ₄)	18.12
Hydrofluorocarbons (HFCs)	N/A
Perfluorocarbons (PFCs)	N/A
Sulfur Hexafluoride (SF ₆)	N/A
CO ₂ Equivalent (CO ₂ e)	422,252
¹ PM _{2.5} and PM ₁₀ are components of TSP.	
² For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.	

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)	
☒	1. Air compressors and pneumatically operated equipment, including hand tools.
☒	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4. Bathroom/toilet vent emissions.
☒	5. Batteries and battery charging stations, except at battery manufacturing plants.
☒	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7. Blacksmith forges.
☐	8. Boiler water treatment operations, not including cooling towers.
☒	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10. CO ₂ lasers, used only on metals and other materials which do not emit HAP in the process.
☒	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☒	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14. Demineralized water tanks and demineralizer vents.
☐	15. Drop hammers or hydraulic presses for forging or metalworking.
☒	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17. Emergency (backup) electrical generators at residential locations.
☒	18. Emergency road flares.
☐	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO₂, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:

24. Insignificant Activities (Check all that apply)	
☐	20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:
☐	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
☒	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☒	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☐	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☒	26. Fire suppression systems.
☒	27. Firefighting equipment and the equipment used to train firefighters.
☒	28. Flares used solely to indicate danger to the public.
☒	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32. Humidity chambers.
☐	33. Hydraulic and hydrostatic testing equipment.
☐	34. Indoor or outdoor kerosene heaters.
☒	35. Internal combustion engines used for landscaping purposes.
☐	36. Laser trimmers using dust collection to prevent fugitive emissions.
☒	37. Laundry activities, except for dry-cleaning and steam boilers.
☐	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39. Oxygen scavenging (de-aeration) of water.
☒	40. Ozone generators.
☒	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
☐	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by

24. Insignificant Activities (Check all that apply)	
	Hand” means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☒	43. Process water filtration systems and demineralizers.
☒	44. Repair or maintenance shop activities not related to the source’s primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☒	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☒	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48. Shock chambers.
☐	49. Solar simulators.
☒	50. Space heaters operating by direct heat transfer.
☐	51. Steam cleaning operations.
☐	52. Steam leaks.
☐	53. Steam sterilizers.
☐	54. Steam vents and safety relief valves.
☒	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☒	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57. Such other sources or activities as the Director may determine.
☒	58. Tobacco smoking rooms and areas.
☒	59. Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the Title V Equipment Table and provide it as ATTACHMENT D .
26. Emission Units
For each emission unit listed in the Title V Equipment Table , fill out and provide an Emission Unit Form as ATTACHMENT E .
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F .
27. Control Devices
For each control device listed in the Title V Equipment Table , fill out and provide an Air Pollution Control Device Form as ATTACHMENT G .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H .

Section 6: Certification of Information**28. Certification of Truth, Accuracy and Completeness and Certification of Compliance**

Note: This Certification must be signed by a responsible official as defined in 45CSR§30-2.38.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

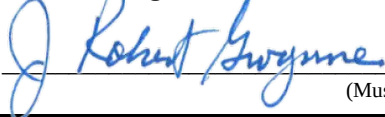
Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: J. Robert Gwynne

Title: Executive Vice President

Responsible official's signature:

Signature: 

Signature Date: February 10, 2025

(Must be signed and dated in blue ink)

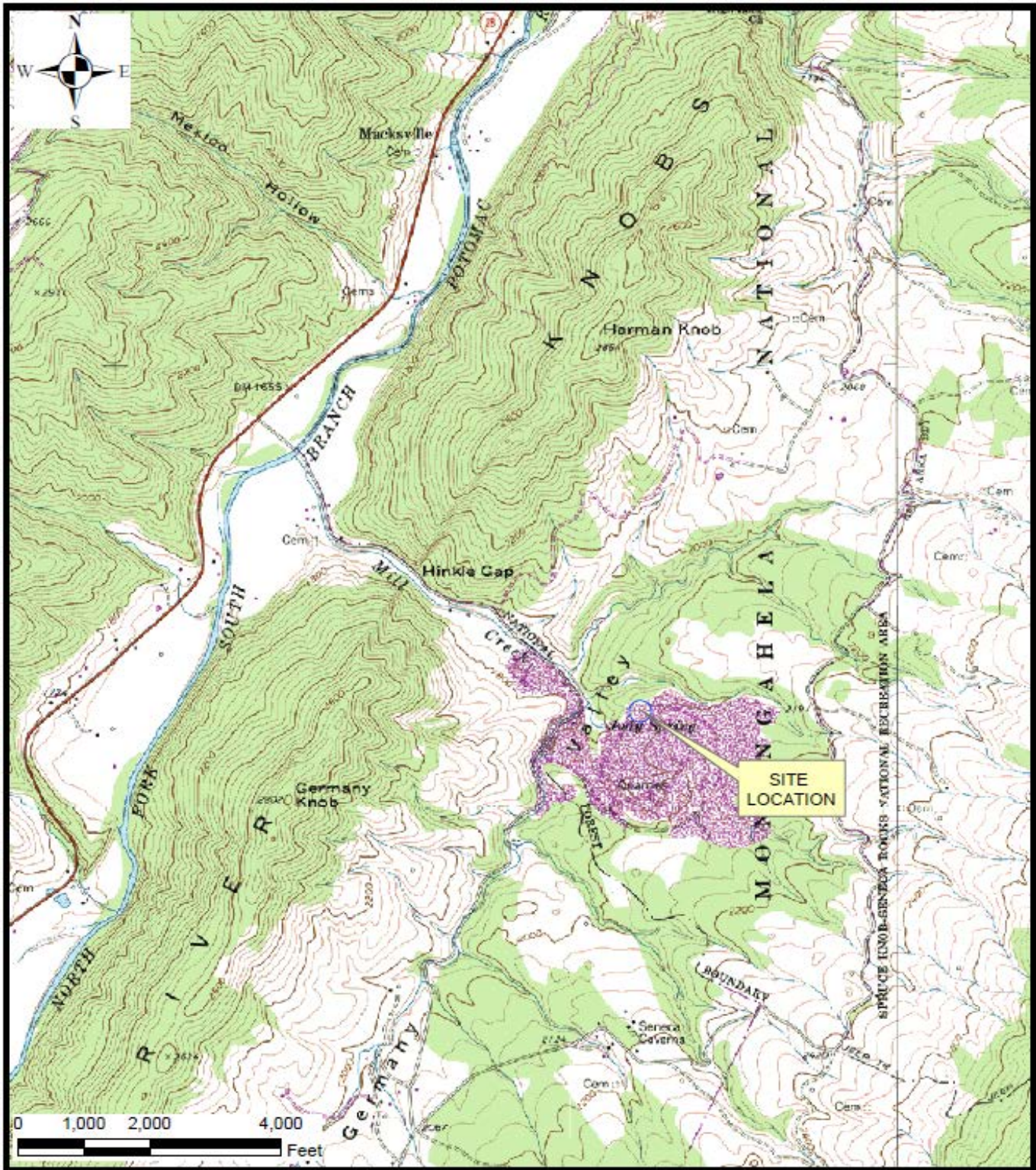
Note: Please check all applicable attachments included with this permit application:

☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☒	ATTACHMENT G: Air Pollution Control Device Form(s)
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/dag, requested by phone (304) 926-0475, and/or obtained through the mail.

ATTACHMENT A
AREA MAP

ATTACHMENT A – AREA MAP



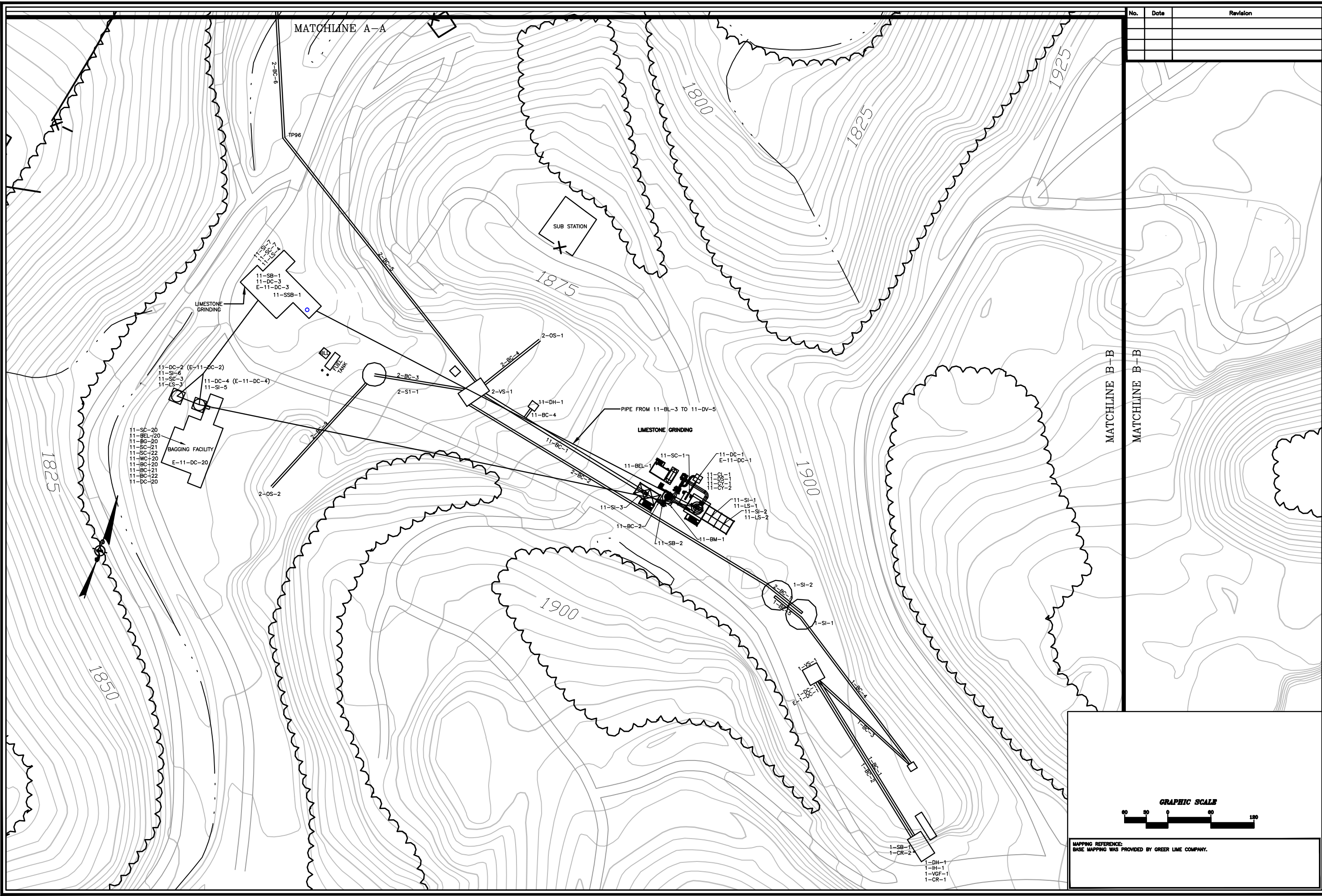
Riverton Facility

Greer Industries, Inc. dba Greer Lime Company

Riverton, Pendleton County, West Virginia

ATTACHMENT B
PLOT PLANS

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Plot Date/Time: May 16, 2014 - 8:24am
User: g.jones



No.	Date	Revision

MATCHLINE B-B

MATCHLINE B-B



MAPPING REFERENCE:
BASE MAPPING WAS PROVIDED BY GREER LIME COMPANY.

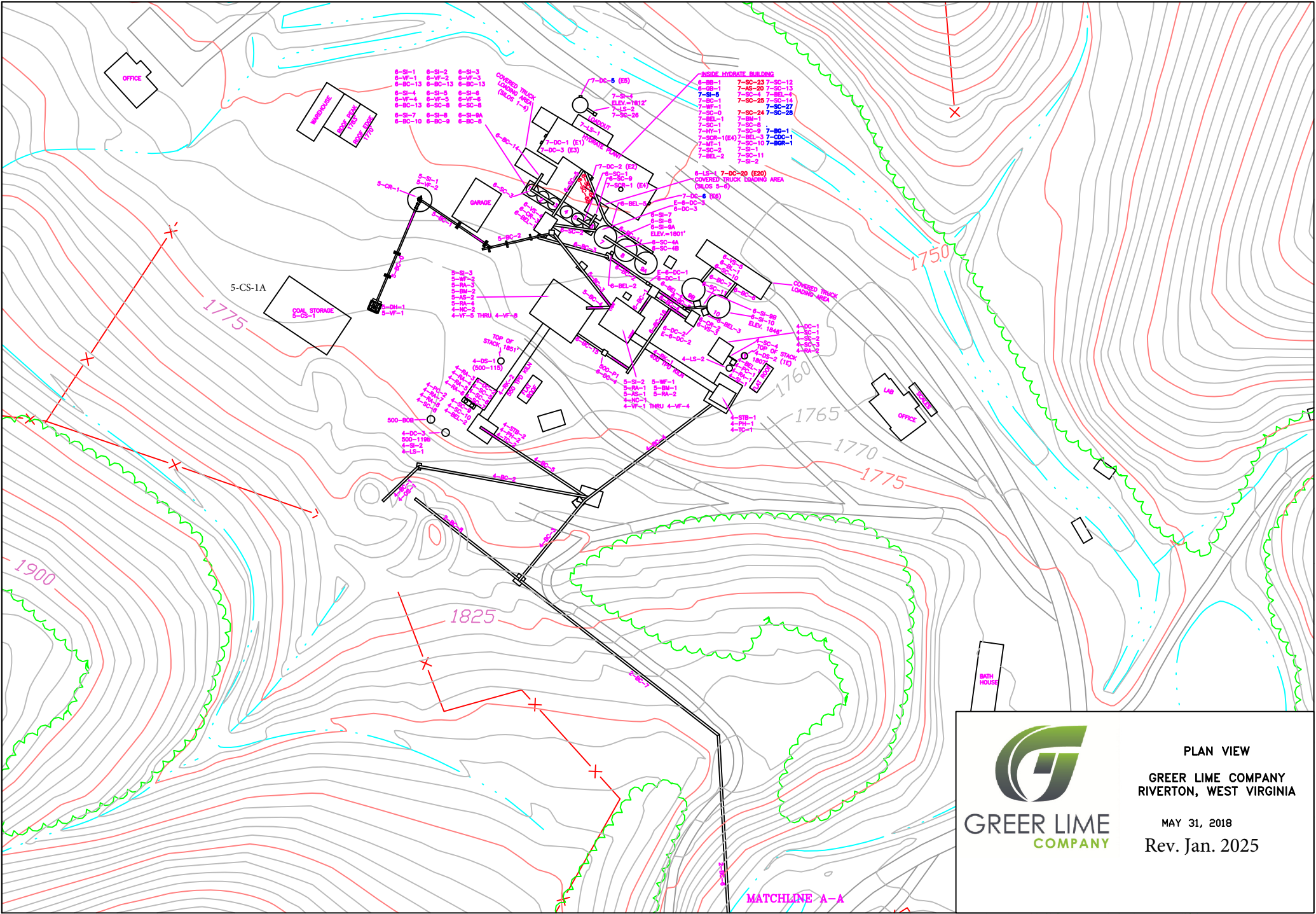
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CAD File No.
BEI
Drawn
CSS
Checked
PEW
Approved
1" = 60'
Scale:
MAY 2014
Date:
13-0394
Project No.

POTESTA
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacArthur Ave. SE, Charleston, WY 82504
TEL: (307) 342-1400 FAX: (307) 342-9031
E-Mail Address: potestadesign.com

Client
**GREER LIME COMPANY
UNION DISTRICT
PENDLETON COUNTY
WEST VIRGINIA**

Title
**PLAN VIEW
RIVERTON FACILITY**

Drawing No.
1





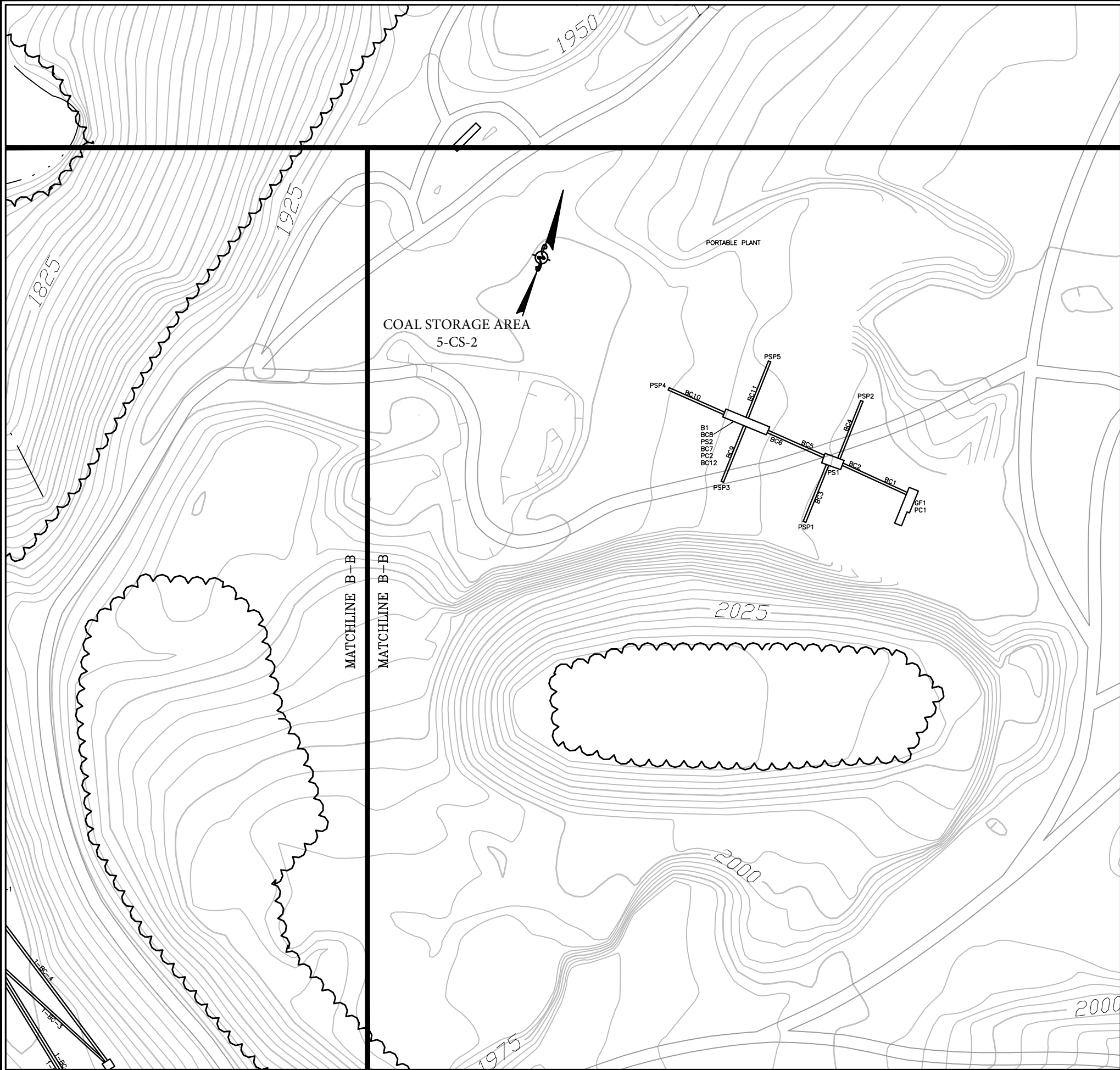
GREER LIME
COMPANY

PLAN VIEW

GREER LIME COMPANY
RIVERTON, WEST VIRGINIA

MAY 31, 2018
Rev. Jan. 2025

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Plot Date/Time: May 16, 2014 - 8:25am
Plot by: jgreen



No.	Date	Revision
1	06/22/07	INCORPORATE PERMIT R13-2113E CHANGES, OTHER CORRECTIONS

01-2
CAD File No.
BEI
Drawn
CSS
Checked
PEW
Approved
1" = 60'
Scale:
MAY 2014
Date:
13-0394
Project No.

Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacArthur Ave. SE, Charleston, WY 82504
TEL: (307) 342-1400 FAX: (307) 342-9031
E-Mail Address: potestap@potesta.com



Client: GREER LIME COMPANY
UNION DISTRICT
PENDLETON COUNTY
WEST VIRGINIA

PLAN VIEW
RIVERTON FACILITY

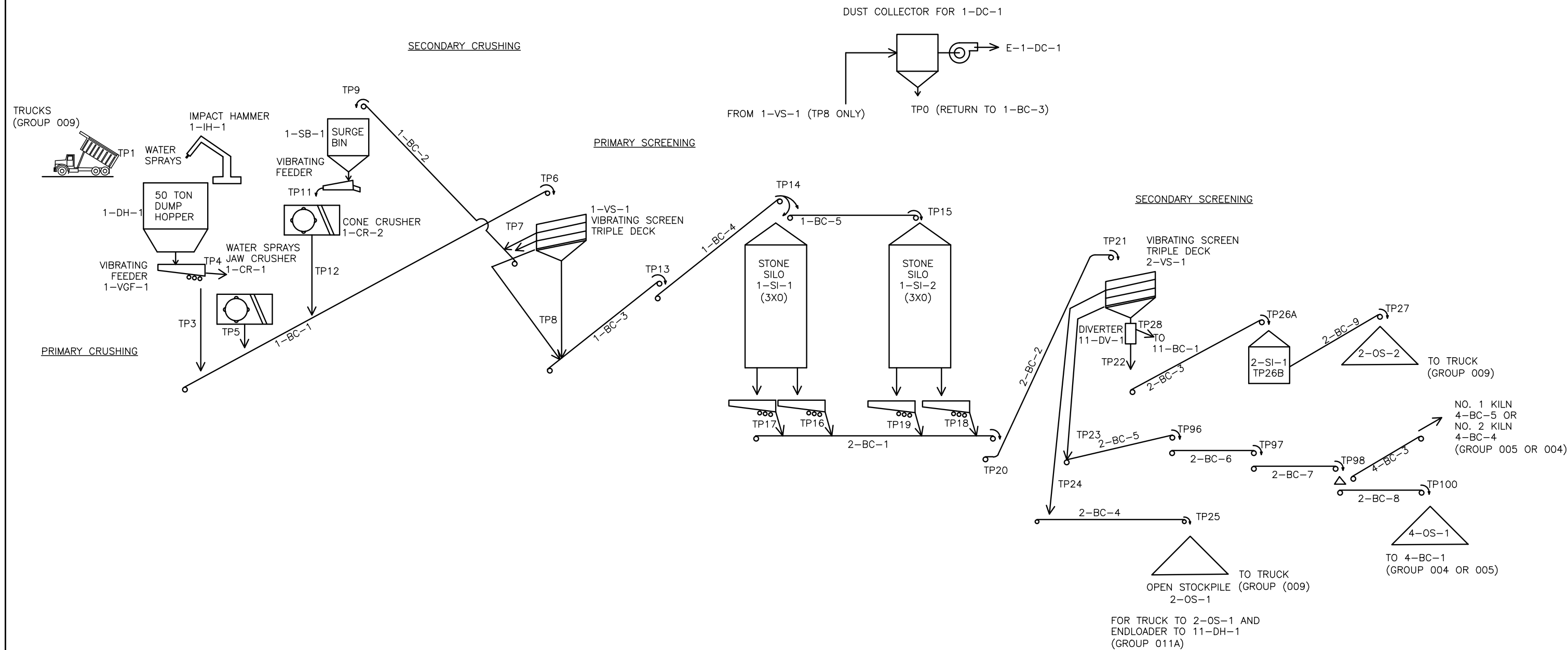
3
Drawing No.

MAPPING REFERENCE:
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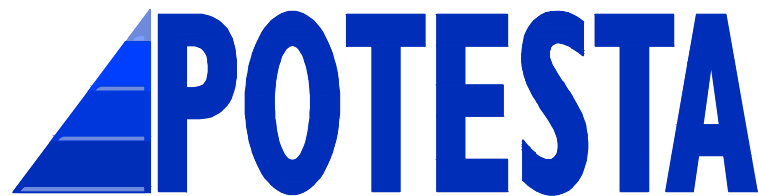


ATTACHMENT C
PROCESS FLOW DIAGRAMS

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 Plotted By: jmartin



PROJECT #: 13-0394 FILENAME: B13-0394-01-2

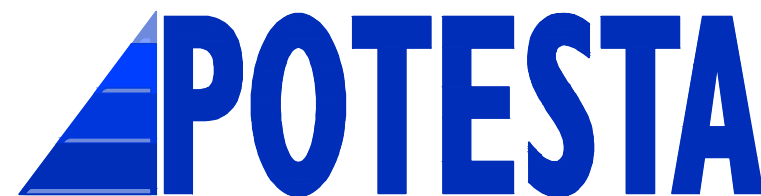


Potesta & Associates, Inc.
 ENGINEERS AND ENVIRONMENTAL CONSULTANTS

7012 MacCorkle Ave. SE, Charleston, WV 25304
 TEL: (304) 342-1400 FAX: (304) 343-9031
 E-Mail Address: potesta@potesta.com

Project		PROCESS FLOW DIAGRAM EMISSION GROUP 002 PRIMARY AND SECONDARY CRUSHING SYSTEMS GREER LIME COMPANY RIVERTON, WEST VIRGINIA	
Scale	NOT TO SCALE	Dwg. No.	GROUP 002
Date	MAY 2014		

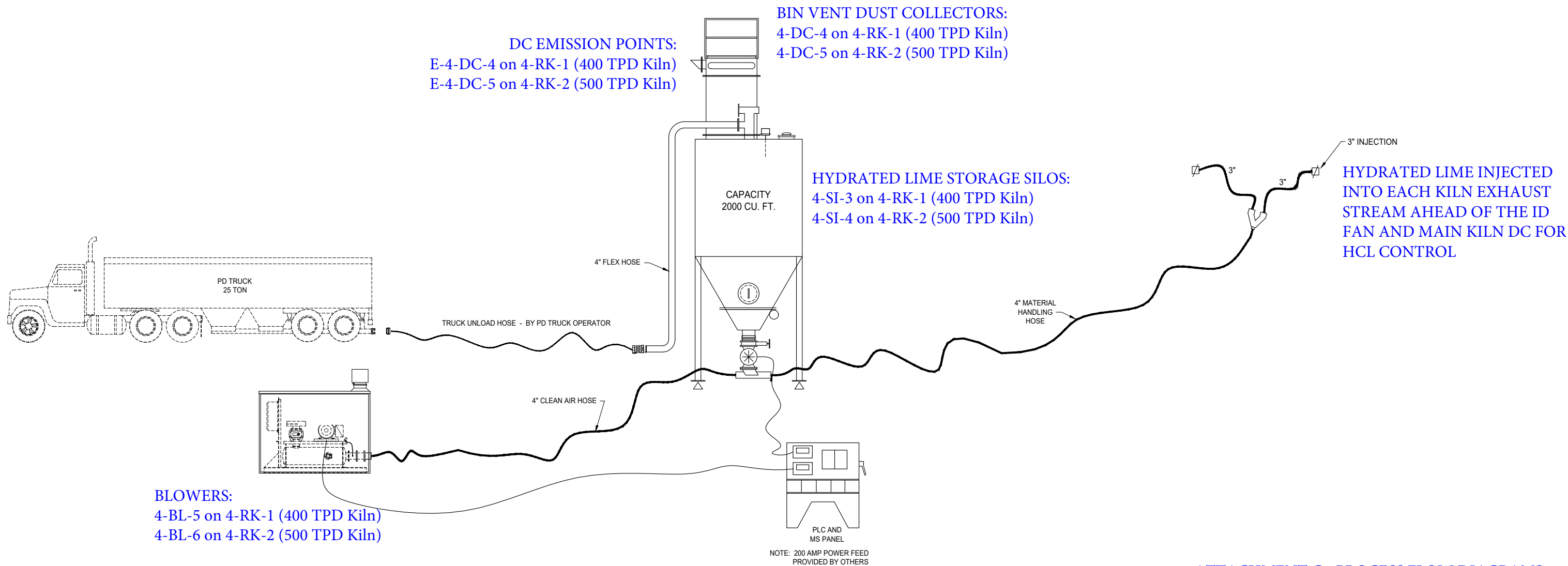
QUARRY AREA COAL STOCKPILE 5-CS-2
WITH TRANSFERS TPC1 AND TPC2
LOCATED IN QUARRY AREA NEAR THE MECHANIC SHOP



7012 MacCorkle Ave. SE, Charleston, WV 25304
TEL: (304) 342-1400 FAX: (304) 343-9031
E-Mail Address: potesta@potesta.com

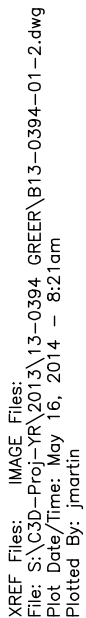
Scale NOT TO SCALE	Dwg. No. GROUP 005
Date MAY 2014 2019	

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Plot Date/Time: May 16, 2014 - 8:21am
Plotted By: jmartin



ATTACHMENT C - PROCESS FLOW DIAGRAMS
GROUPS 004/005

CERTIFIED FOR CONSTRUCTION				Industrial Accessories Company	
DESIGNER <u>XXX</u>	DATE: XXX	5200 METCALF AVE. SUITE 100 OVERLAND PARK, KANSAS 66202 (913) 384-5511 IAC-INTL.COM			
APPROVED <u>XXX</u>	DATE: XXX				
STANDARD TOLERANCES UNLESS NOTED OTHERWISE: LINEAR: I. <30' ± 1/16" II. ≥30' ± 1/8" HOLES: I. DIAMETER ± 1/32" II. LOCATION ± 1/16" ANGULAR: ± 0.5°		CUSTOMER		DRAWING NO. DATE SCALE	
		GREER LIME RIVERTON, WV		LD 11/08/23 NA	
		CUSTOMER P.O.	QTY.	PART NO. DESC.	
			1 LOT	406-0095	
DESCRIPTION LIME INJECTION EQUIPMENT PROCESS FLOW DIAGRAM		JOB NO.	CHG'D.	APPR'D.	REV.
		23168			
		DRAWING NO. 406-0095		SHT. 1 OF 1	0

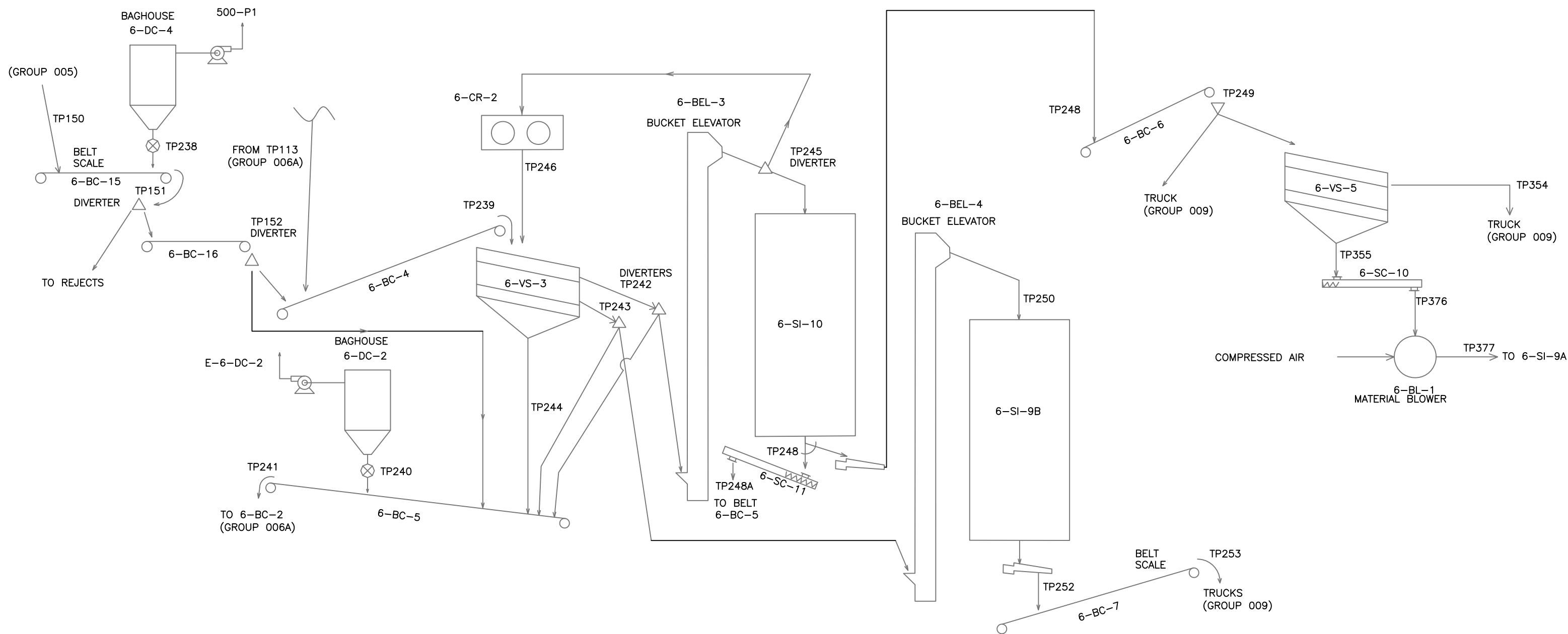


FILENAME: B13-0394-01-2



Project	PROCESS FLOW DIAGRAM EMISSION GROUP 006 LIME HANDLING SYSTEM GREER LIME COMPANY RIVERTON, WEST VIRGINIA

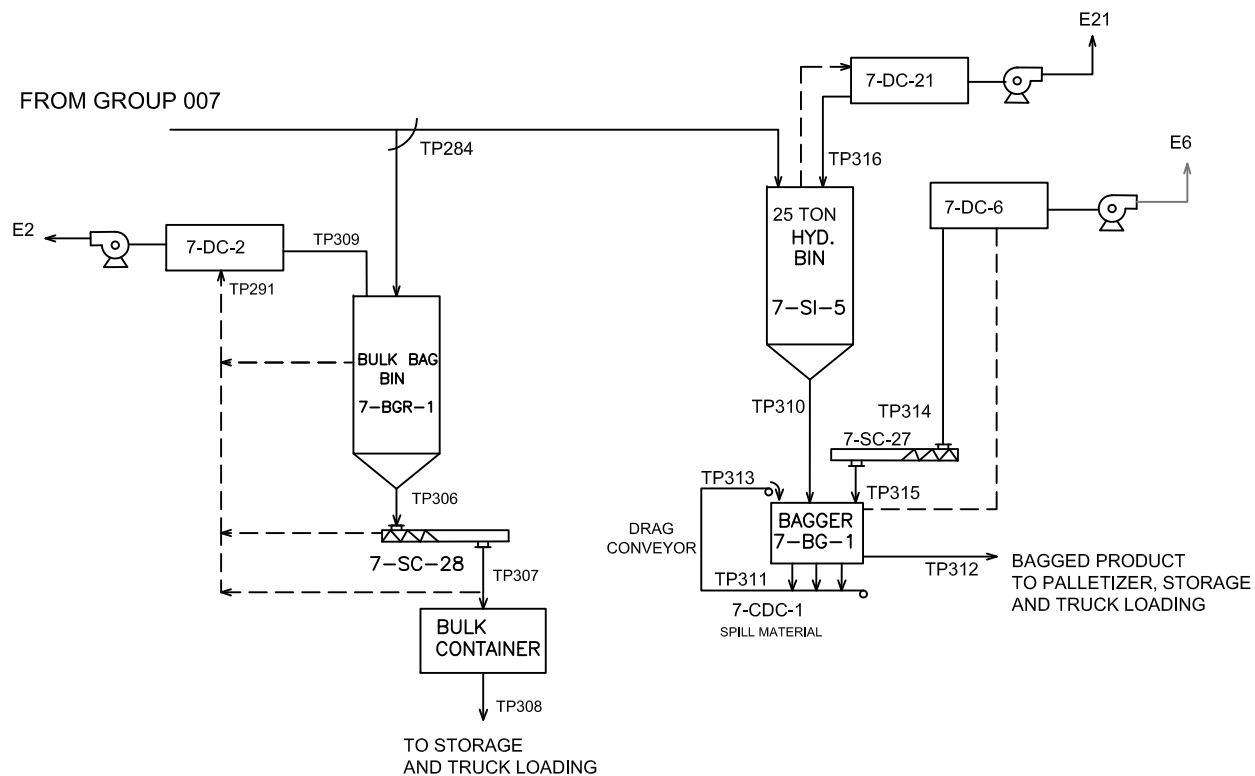
Dwg. No. **GROUP 006A**



PROCESS FLOW DIAGRAM
EMISSION GROUP 006
LIME HANDLING SYSTEM
GREER LIME COMPANY
RIVERTON, WEST VIRGINIA

(GROUP 006B)





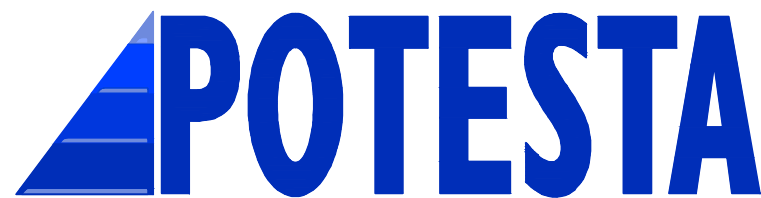
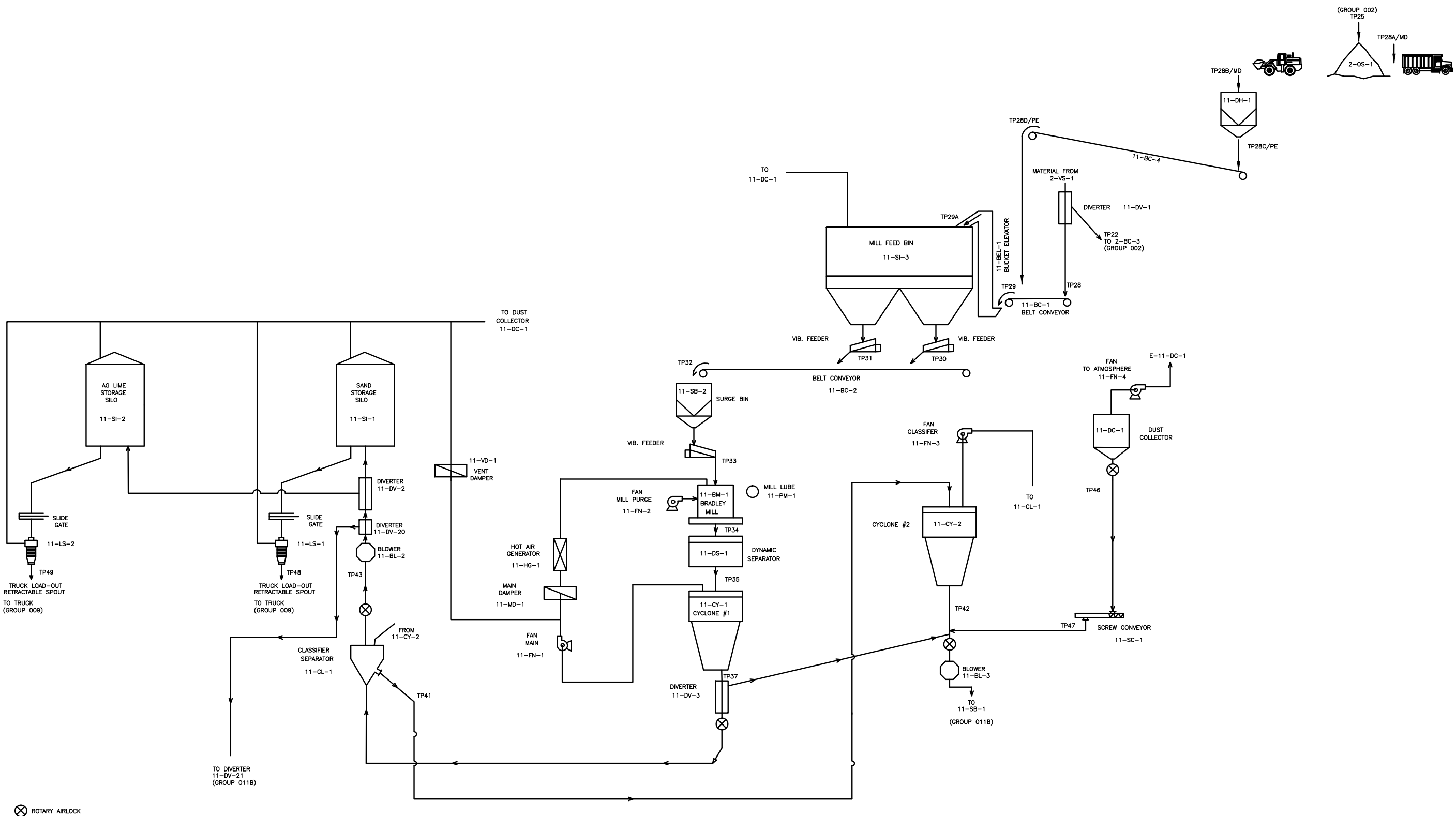
PROCESS FLOW DIAGRAM
EMISSION GROUP 007
HYDRATE PLANT
GREER LIME COMPANY
RIVERTON, WEST VIRGINIA
FEBRUARY 3, 2025

(GROUP 007B)

XREF Files: IMAGE Files:
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Plot Date/Time: May 16, 2014 - 8:18am
Plotted By: jmartin

PROJECT #: 13-0394

FILENAME: B13-0394-01-2



Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS

7012 MacCorkle Ave. SE, Charleston, WV 25304
TEL: (304) 342-1400 FAX: (304) 343-9031
E-Mail Address: potesta@potesta.com

Project	PROCESS FLOW DIAGRAM EMISSION GROUP 011 LIMESTONE GRINDING GREER LIME COMPANY RIVERTON, WEST VIRGINIA		
Scale	NOT TO SCALE	Dwg. No.	GROUP 011A
Date	APRIL 2009		

ATTACHMENT D
EMISSION UNITS TABLE

ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
PRIMARY AND SECONDARY CRUSHING (Group 002)					
1-DH-1	1-DH-1	Dump Hopper with Impact Hammer	1994	50 Tons/1.5 MMTPY	WS,PE
1-IH-1	1-IH-1	Impact Hammer	Pre 1975	250 TPH/1.5 MMTPY	WS,PE
1-VGF-1	1-VGF-1	Vibrating Grizzly Feeder(54" x 24'-0") Manufacture: Deister Model: VFG-5424	1994	800 TPH/1.5 MMTPY	WS,PE
1-CR-1	1-CR-1	Primary Jaw Crusher; Nordberg Model No.: C-140B; (41" X 55") Single Toggle	1994	800 TPH/0.6 MMTPY	WS,PE
1-BC-1	1-BC-1	Stone Belt	1994	800 TPH/1.5 MMTPY	FE
1-VS-1	1-VS-1, E-1-DC-1	Vibrating Screen Triple Deck (8X20) Deister Model No.: XHM-200T	1994	800 TPH/1.5 MMTPY	FE,WS,BH(TP8)
1-DC-1	E-1-DC-1	Dust Collector	1996	NA	NA
1-BC-2	1-BC-2	Stone Belt	1994	500 TPH/1.04 MMTPY	FE
1-SB-1	1-SB-1	Secondary Crusher Surge Bin	1994	75 Tons/1.04 MMTPY	PE
1-VF-1	1-VF-1	Electromechanical Vibrating Feeder; Syntron Model: MF400-D	1994	500 TPH/1.04 MMTPY	PE
1-CR-2	1-CR-2	Secondary Cone Crusher (5 ½ ') Nordberg Model: Standard Heavy-Duty Symons	1994	500 TPH/1.04 MMTPY	WS,PE
1-BC-3	1-BC-3	Stone Belt	1994	800 TPH/1.5 MMTPY	FE
1-BC-4	1-BC-4	Stone Belt	1994	800 TPH/1.5 MMTPY	FE
1-BC-5	1-BC-5	Stone Belt	2021	800 TPH/1.5 MMTPY	FE
1-SI-1	1-SI-1	Stone Silo 1	2021	2,000 Tons/1.5 MMTPY	FE
2-VF-3	2-VF-3	Vibrating Feeder	Pre 1976	800 TPH/1.5 MMTPY	FE
2-VF-4	2-VF-4	Vibrating Feeder	Pre 1976	800 TPH/1.5 MMTPY	FE
1-SI-2	1-SI-2	Stone Silo 2	2021	2,000 Tons/1.5 MMTPY	FE

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
PRIMARY AND SECONDARY CRUSHING (Group 002) CONTINUED					
2-VF-1	2-VF-1	Vibrating Feeder	1999	800 TPH/1.5 MMTPY	FE
2-VF-2	2-VF-2	Vibrating Feeder	1999	800 TPH/1.5 MMTPY	FE
2-BC-1	2-BC-1	Tunnel Belt	1999	800 TPH/1.5 MMTPY	FE
2-BC-2	2-BC-2	Scale Belt	1996	800 TPH/1.5 MMTPY	FE
2-VS-1	2-VS-1	Vibrating Screen Triple Deck (8' x 24')	1994	800 TPH/1.5 MMTPY	FE,WS
2-BC-3	2-BC-3	Stone Belt	1996	400 TPH/0.6 MMTPY	FE
2-SI-1	2-SI-1	Storage Silo	1960	400 TPH/0.6 MMTPY	FE
2-BC-9	2-BC-9	Belt Conveyor	1997	400 TPH/0.6 MMTPY	FE
2-OS-2	2-OS-2	Open Stockpile	1996	400 TPH/0.6 MMTPY	WS
2-BC-4	2-BC-4	Stockpile Belt	1996	400 TPH/0.6 MMTPY	FE
2-OS-1	2-OS-1	Open Stockpile	2009	14,500 Tons/0.6 MMTPY	WS
2-BC-5	2-BC-5	Kiln Stone Conveyor Belt	Pre 1990	400 TPH/0.9 MMTPY	FE
2-BC-6	2-BC-6	Kiln Stone Conveyor Belt	Pre 1990	400 TPH/0.9 MMTPY	FE
2-BC-7	2-BC-7	Kiln Stone Conveyor Belt	Pre 1990	400 TPH/0.9 MMTPY	FE
2-BC-8	2-BC-8	Kiln Stone Conveyor Belt	Pre 1990	400 TPH/0.9 MMTPY	FE

All equipment associated with the Trommel Screen permitted by R13-1685B has been removed from the site and will not return. This equipment includes the following:

H1 (feed hopper); TS1 (trommel screen); TS-BC1(belt conveyor); TS-BC2 (belt conveyor); TS-BC3 (belt conveyor); OS1 (open stockpile); OS2 (open stockpile); OS3 (open stockpile); and TS-DG1 (diesel generator).

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
400 TPD LIME KILN (GROUP 004)					
4-SI-3	E-4-DC-4	Hydrate Storage Bin	2024	2,000 CF	BH
4-BL-5	1E	Blower	2024	20 HP	BH
4-OS-1	4-OS-1	Kiln Stone Stockpile No. 1	Pre-1990	6,000 Tons/0.9 MMTYP	WS
4-BC-1	4-BC-1	Belt Conveyor	1995	150 TPH/0.9 MMTYP	FE
4-BC-2	4-BC-2	Belt Conveyor	1995	150 TPH/0.9 MMTYP	FE
4-BC-3	4-BC-3	Belt Conveyor	Pre-1990	400 TPH/0.5819 MMTYP	FE
4-BC-4	4-BC-4	Belt Conveyor	Pre-1990	400 TPH/0.276 MMTYP	FE
4-STB-1	4-STB-1	Stone Bin	Pre-1990	250 Tons/0.276 MMTYP	FE
4-PH-1	1E	6 Bay LPD Pre-Heater	Pre-1990	31.5 TPH/0.276 MMTYP	4-DC-1
4-TC-1	1E	Transfer Chute	Pre-1990	31.5 TPH/0.276 MMTYP	4-DC-1
4-RK-1	1E	400 TPD Rotary Kiln (11' 6" X 150') KVS Heat Rating; 5.0 MMBtu/ton Lime Fuel: Coal Startup Fuel: No. 2 FO	1995	16.7 TPH/0.146 MMTYP	4-DC-1
4-NC-1	E-6-DC-1	NIEMS Lime Cooler	Pre-1990	16.7 TPH/0.146 MMTYP	6-DC-1
4-VF-1	1E	Vibrating Feeder	Pre 1990	16.7 TPH/0.146 MMTYP	4-DC-1
4-VF-2	1E	Vibrating Feeder	Pre 1990	16.7 TPH/0.146 MMTYP	4-DC-1
4-VF-3	1E	Vibrating Feeder	Pre 1990	16.7 TPH/0.146 MMTYP	4-DC-1
4-VF-4	1E	Vibrating Feeder	Pre 1990	16.7 TPH/0.146 MMTYP	4-DC-1
5-SI-2	5-SI-2	Coal Bin	Pre-1990	30 Tons/0.0263 MMTYP	FE
5-WF-1	5-WF-1	Coal Weigh Feeder	Pre-1990	3 TPH/0.0263 MMTYP	FE
5-WF-1	5-WF-1	Coal Weigh Feeder	Pre-1990	3 TPH/0.0263 MMTYP	FE

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ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
400 TPD LIME KILN (GROUP 004) CONTINUED					
5-BM-1	1E	Ball Mill	Pre-1990	3 TPH/0.0263 MMTPY	4-DC-1
5-AS-1	1E	Classifier	Pre-1990	3 TPH/0.0263 MMTPY	4-DC-1
4-PC-1	1E	Primary Collector	Pre-1990	3 TPH/0.015 MMTPY	4-DC-1
4-SI-1	4-SI-1	Dust Bin	Pre-1990	30 Tons/0.015 MMTPY	FE
4-LS-2	4-LS-2	Loading Spout	Pre-1990	30 TPH/0.015 MMTPY	FE
4-DC-1	1E	Dust Collector	Pre-1990	NA	NA
4-SC-1	4-SC-1	Baghouse Screw Conveyor	Pre-1990	3 TPH/0.015 MMTPY	FE
4-SC-2	4-SC-2	Baghouse Screw Conveyor	Pre-1990	3 TPH/0.015 MMTPY	FE
4-SC-3	4-SC-3	Baghouse Collection Screw	Pre-1990	3 TPH/0.015 MMTPY	FE
4-SC-4	4-SC-4	Dust Screw Conveyor	Pre-1990	3 TPH/0.015 MMTPY	FE
4-BEL-1	4-BEL-1	Dust Elevator	Pre-1990	3 TPH/0.015 MMTPY	FE
5-CS-1	5-CS-1	3 - Sided Covered Coal Storage Pile	2002	5,000 Tons/0.054 MMTPY	PE
5-CS-1A	5-CS-1A	Coal Storage Pile	2014	15,000 TPY	NA
5-CS-2	5-CS-2	Coal Storage Pile	2014	15,000 TPY	NA
5-DH-1	5-DH-1	Dump Hopper - Coal	2006	50 TPH/0.054 MMTPY	PE
5-VF-1	5-VF-1	Vibrating Feeder - Coal	2006	50 TPH/0.054 MMTPY	PE
5-BC-0	5-BC-0	Belt Conveyor – Coal	2006	50 TPH/0.054 MMTPY	FE
5-CR-1	5-CR-1	Coal Grinder	2006	50 TPH/0.054 MMTPY	FE
5-SI-1	5-SI-1	Coal Silo	2006	2,500 Tons/0.054 MMTPY	FE

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ATTACHMENT D - Emission Units Table
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Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
400 TPD LIME KILN (GROUP 004) CONTINUED					
5-VF-2	5-VF-2	Vibrating Feeder - Coal	2006	60 TPH/0.054 MMTPY	FE
5-BC-1	5-BC-1	Belt Conveyor - Coal	2006	60 TPH/0.054 MMTPY	FE
5-BC-2	5-BC-2	Belt Conveyor - Coal	2006	60 TPH/0.054 MMTPY	FE
5-BC-3	5-BC-3	Belt Conveyor	1960s	60 TPH/0.054 MMTPY	FE
500 TPD LIME KILN (GROUP 005)					
4-SI-4	E-4-DC-5	Hydrate Storage Bin	2024	2,000 CF	BH
4-BL-6	500-115	Blower	2024	20 HP	BH
4-BC-5	4-BC-5	Belt Conveyor	1995	400 TPH/0.306 MMTPY	FE
4-STB-2	4-STB-2	Stone Bin	1995	300 Tons/0.306 MMTPY	FE
4-PH-2	500-115	8 - Bay LPD Preheater	1995	38.62 TPH/0.306 MMTPY	4-DC-2
4-TC-2	500-115	Transfer Chute	1995	38.62 TPH/0.306 MMTPY	4-DC-2
4-RK-2	500-115	500 TPD Rotary Kiln KVS Heat Rating; 89 MMBtu/hr Fuel: Coal Startup Fuel: No. 2 FO	1995	20.8 TPH/0.165 MMTPY	4-DC-2
4-NC-2	500-P1	NIEMS-Lime Cooler	1995	20.8 TPH/0.165 MMTPY	6-DC-4
5-BC-4	5-BC-4	Conveyor Belt	1995	60 TPH/0.028 MMTPY	FE
5-SI-3	5-SI-3	Coal Bin	1995	50 Tons/0.028 MMTPY	FE
5-WF-2	5-WF-2	Coal Weigh Feeder	1995	3.5 TPH/0.028 MMTPY	FE
5-BM-2	500-115	Ball Mill	1995	3.5 TPH/0.028 MMTPY	4-DC-2
5-AS-2	500-115	Classifier	1995	3.5 TPH/0.028 MMTPY	4-DC-2
4-PC-2	500-115	Primary Separator	1995	3 TPH/0.015 MMTPY	4-DC-2

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ATTACHMENT D - Emission Units Table
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Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
500 TPD LIME KILN (GROUP 005) CONTINUED					
4-SC-9	500-119b	Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SC-10	500-119b	Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-BEL-2	500-119b	Bucket Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SI-2	500-119b	Dust Bin for Bag House Dust	1995	50 Tons/0.015 MMTPY	4-DC-3
4-LS-1	500-119b	Loading Spout	1995	30 TPH/0.015 MMTPY	4-DC-3
500-BOB	500-119b	Blow Off Bin for Truck Cleaning	1997	30 Tons/0.003 MMTPY	4-DC-3
4-DC-2	500-115	Dust Collector	1995	NA	NA
4-SC-5	500-119b	Module C-D Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SC-6	500-119b	Module A-B Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SC-7	500-119b	Baghouse Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-SC-8	500-119b	Dust Screw Conveyor	1995	3 TPH/0.015 MMTPY	4-DC-3
4-DC-3	500-119b	Dust Collector	1995	NA	NA
4-VF-5	500-115	Vibrating Feeder	1995	20.8 TPH/0.165 MMTPY	4-DC-2
4-VF-6	500-115	Vibrating Feeder	1995	20.8 TPH/0.165 MMTPY	4-DC-2
4-VF-7	500-115	Vibrating Feeder	1995	20.8 TPH/0.165 MMTPY	4-DC-2
4-VF-8	500-115	Vibrating Feeder	1995	20.8 TPH/0.165 MMTPY	4-DC-2

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ATTACHMENT D - Emission Units Table
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Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
LIME HANDLING SYSTEM (GROUP 006)					
6-BC-1	6-BC-1	Belt Conveyor	Pre- 1990	16.7 TPH/0.146 MMTPY	FE
6-BC-2	E-6-DC-1	Belt Conveyor	Pre- 1990	50 TPH/0.311 MMTPY	6-DC-1
6-BEL-2	E-6-DC-3	Bucket Elevator	Pre- 1990	50 TPH/0.1 MMTPY	6-DC-3
6-BC-3	E-6-DC-1	Belt Conveyor	Pre- 1990	50 TPH/0.311 MMTPY	6-DC-1
6-CR-3	E-6-DC-1	McLanahan Double Roll Crusher Black Diamond 18"x18"	1998	50 TPH/0.311 MMTPY	6-DC-1
6-DC-1	E-6-DC-1	Dust Collector	1991	NA	NA
6-BEL-1	6-BEL-1	Bucket Elevator	1998	50 TPH/0.311 MMTPY	FE
6-VS-4	E-6-DC-3	5 Deck Vibrating Screen (5' x 10')	1998	50 TPH/0.311 MMTPY	6-DC-3
6-DC-3	E-6-DC-3	Dust Collector	1991	NA	NA
6-SC-1	6-SC-1	Screw Conveyor	Pre-1990	50 TPH/0.311 MMTPY	FE
6-SC-2	6-SC-2	Screw Conveyor	1998	50 TPH/0.311 MMTPY	FE
6-SC-3	6-SC-3	Screw Conveyor	1998	50 TPH/0.311 MMTPY	FE
6-SC-4A	6-SC-4A	Screw Conveyor	1998	50 TPH/0.1 MMTPY	FE
6-SC-4B	6-SC-4B	Screw Conveyor	1998	50 TPH/0.1 MMTPY	FE
6-SC-5	6-SC-5	Screw Conveyor	Pre-1990	50 TPH/0.311 MMTPY	FE
6-SI-1	6-SI-1	Lime Storage Silo No.1	1960s	125 Tons/0.311 MMTPY	FE
6-SI-2	6-SI-2	Lime Storage Silo No.2	1960s	125 Tons/0.311 MMTPY	FE
6-SI-3	6-SI-3	Lime Storage Silo No.3	1960s	125 Tons/0.311 MMTPY	FE
6-SI-4	6-SI-4	Lime Storage Silo No.4	1960s	125 Tons/0.311 MMTPY	FE

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ATTACHMENT D - Emission Units Table
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Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
LIME HANDLING SYSTEM (GROUP 006) CONTINUED					
6-SI-5	6-SI-5	Lime Storage Silo No.5	1960s	125 Tons/0.311 MMTYPY	FE
6-SI-6	6-SI-6	Lime Storage Silo No.6	1960s	125 Tons/0.311 MMTYPY	FE
6-SI-7	6-SI-7	Hydrate Feed Storage Silo No.7	1960s	735 Tons/0.1 MMTYPY	FE
6-SI-8	6-SI-8	Hydrate Feed Storage Silo No.8	1960s	735 Tons/0.1 MMTYPY	FE
6-SI-9A	6-SI-9A	Hydrate Feed Storage Silo No.9A	1960s	735 Tons/0.1 MMTYPY	FE
6-BB-1	6-BB-1	Granular Lime Bagging Bin	Pre 1990	25 TPH/0.311 MMTYPY	FE+FE
6-BC-8	6-BC-8	Belt Conveyor	1998	150 TPH/0.1 MMTYPY	FE
6-BC-9	6-BC-9	Belt Conveyor	1998	150 TPH/0.1 MMTYPY	FE
6-BC-10	6-BC-10	Belt Conveyor	1998	150 TPH/0.1 MMTYPY	FE
6-GB-1	6-GB-1	Granular Bagger	1998	25 TPH/0.0311 MMTYPY	FE+FE
7-WR-2	7-WR-2	Bagged Product Wire Conveyor	1998	25 TPH/0.0311 MMTYPY	FE+FE
6-SC-8	6-SC-8	Screw Conveyor	1998	150 TPH/0.311 MMTYPY	FE
6-SC-9	6-SC-9	Screw Conveyor	1998	150 TPH/0.311 MMTYPY	FE
6-SC-11	6-SC-11	Screw Conveyor	2016	50 TPH/0.311 MMTYPY	FE
6-LS-1	E-6-DC-3	Retractable Loading Spout	1998	150 TPH/0.311 MMTYPY	6-DC-3
6-BC-11	6-BC-11	Belt Conveyor	1998	150 TPH/0.1 MMTYPY	FE
6-BEL-5	6-BEL-5	Bucket Elevator	1984	150 TPH/0.1 MMTYPY	FE
6-SC-6	E3	Screw Conveyor	2018	50 TPH/0.125 MMTYPY	7-DC-3
6-BC-13	6-BC-13	Belt Conveyor	1998	150 TPH/0.311 MMTYPY	FE

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ATTACHMENT D - Emission Units Table
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LIME HANDLING SYSTEM (GROUP 006) CONTINUED					
6-BC-14	6-BC-14	Belt Conveyor	1998	150 TPH/0.311 MMTPY	FE
6-DC-4	500-P1	Dust Collector	1995	NA	NA
6-BC-15	500-P1	Belt Conveyor	1995	20.8 TPH/0.165 MMTPY	6-DC-4
6-BC-16	500-P1	Belt Conveyor	1995	20.8 TPH/0.165 MMTPY	6-DC-4
6-BC-4	500-P1	Product Belt Conveyor	1995	50 TPH/0.311 MMTPY	6-DC-4
6-DC-2	E-6-DC-2	Dust Collector	1998	NA	NA
6-BC-5	E-6-DC-2	Product Belt Conveyor	Pre 1990	50 TPH/0.311 MMTPY	FE
6-VS-3	E-6-DC-2	Double Deck Vibrating Screen (4' x 8')	Pre 1990	50 TPH/0.311 MMTPY	6-DC-2
6-BEL-3	6-BEL-3	Bucket Elevator	Pre 1990	50 TPH/0.311 MMTPY	FE
6-CR-2	E-6-DC-2	Roll Crusher	1998	50 TPH/0.311 MMTPY	6-DC-2
6-SI-10	E-6-DC-2	Storage Silo	1991	1,200 Tons/0.311 MMTPY	6-DC-2
6-BC-6	6-BC-6	Conveyer Belt	1991	150 TPH/0.311 MMTPY	FE
6-BEL-4	6-BEL-4	Bucket Elevator	1991	50 TPH/0.311 MMTPY	FE
6-SI-9B	E-6-DC-2	Storage Silo	1991	1,200 Tons/0.311 MMTPY	6-DC-2
6-BC-7	6-BC-7	Conveyer Belt	1991	150 TPH/0.311 MMTPY	FE
6-VS-5	6-VS-5	Single Deck Vibrating Screen	2006	50 TPH/0.06 MMTPY	FE
6-SC-10	6-SC-10	Screw Conveyor	2006	50 TPH/0.06 MMTPY	FE
6-BL-1	6-BL-1	DensPhase Pump System	2006	50 TPH/0.06 MMTPY	FE

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LIME HANDLING SYSTEM (GROUP 006) CONTINUED					
6-VF-1	6-VF-1	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-2	6-VF-2	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-3	6-VF-3	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-4	6-VF-4	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-5	6-VF-5	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
6-VF-6	6-VF-6	Vibrating Feeder	1998	150 TPH/0.311 MMTPY	FE
HYDRATE PLANT (GROUP 007)					
7-SB-1	E3	Hydrate Feed Bin	1984	50 TPH	7-DC-3
7-DC-3	E3	Dust Collector	1984	NA	NA
7-BC-1	7-BC-1	Belt Conveyor	1984	15 TPH	FE+FE
7-SC-0	7-SC-0	Screw Conveyor	1984	15 TPH	FE+FE
7-BEL-1	7-BEL-1	Bucket Elevator	1984	15 TPH	FE+FE
7-SC-1	E4	Screw Conveyor	2013	15 TPH	7-SCR-1
7-SCR-1	E4	Wet Scrubber	1999	NA	NA
7-MT-1	7-MT-1	Mixing Tub	1999	15 TPH	FE+FE
7-HY-1	E4	Atmospheric Hydrator	1999	15 TPH	7-SCR-1
7-SC-2	E20	Screw Conveyor	1984	15 TPH	7-DC-20
7-BEL-2	E20	Bucket Elevator	2013	25 TPH	7-DC-20
7-SC-23	E20	Screw Conveyor	2013	25 TPH	7-DC-20

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ATTACHMENT D - Emission Units Table
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HYDRATE PLANT (GROUP 007) CONTINUED					
7-AS-20	E20	Air Separator	2013	25 TPH	7-DC-20
7-BM-1	E20	Ball Mill	2019	20 TPH	7-DC-20
7-SM-1	E20	Pin Mill	2018	20 TPH	7-DC-20
7-SC-24	E20	Screw Conveyor	2013	20 TPH	7-DC-20
7-SC-8	E20	Screw Conveyor	1984	20 TPH	7-DC-20
7-SC-9	E20	Screw Conveyor	1984	20 TPH	7-DC-20
7-SC-29	E20	Screw Conveyor	2019	20 TPH	7-DC-20
7-SC-30	E20	Screw Conveyor	2019	20 TPH	7-DC-20
7-SC-31	E20	Screw Conveyor	2019	20 TPH	7-DC-20
7-SC-32	E20	Screw Conveyor	2019	20 TPH	7-DC-20
7-DC-20	E20	Dust Collector	2013	NA	NA
7-SC-25	E1	Screw Conveyor	2013	20 TPH	7-DC-1
7-BEL-3	E1	Bucket Elevator	1984	20 TPH	7-DC-1
7-SC-10	E1	Screw Conveyor	1984	20 TPH	7-DC-1
7-SC-11	E1	Screw Conveyor	1984	20 TPH	7-DC-1
7-DC-1	E1	Dust Collector	1984	NA	NA
7-SI-1	E1	Hydrate Bin	1984	150 TONS	7-DC-1
7-SI-2	E1	Hydrate Bin	1984	150 TONS	7-DC-1

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HYDRATE PLANT (GROUP 007) CONTINUED					
7-SC-12	E1	Screw Conveyor	1984	25 TPH	7-DC-1
7-SC-13	E1	Screw Conveyor	1984	25 TPH	7-DC-1
7-BL-1	E2/E5/E21	Blower	2018	25 TPH	7-DC-2/5/21
7-SI-4	E5	Hydrate Silo	1997	200 TONS	7-DC-5
7-LS-2	7-LS-2	Truck Loading Spout	1997	100 TPH	PE
7-DC-5	E5	Dust Collector	2018	NA	NA
7-BEL-4	E1	Bucket Elevator	1984	25 TPH	7-DC-1
7-SC-14	E1	Screw Conveyor	1984	25 TPH	7-DC-1
7-LS-1	E1	Truck Loading Spout	1991	25 TPH	PE
7-SI-5	E21	Hydrate Bagging Bin	2018	25 TONS	7-DC-21
7-DC-21	E21	Dust Collector	2018	NA	NA
7-SC-27	E6	Screw Conveyor	2018	5 TPH	7-DC-6
7-SC-28	E2	Screw Conveyor	2018	25 TPH	7-DC-2
7-BG-1	E6	Hydrate Bagging Machine	2018	25 TPH	7-DC-6
7-CDC-1	E6	Chain Drag Conveyor	2018	2.5 TPH	7-DC-6
7-BGR-1	E6	Hydrate Bulk Bin	2018	15 TONS	7-DC-6
7-DC-2	E2	Dust Collector	2018	NA	NA
7-DC-6	E6	Dust Collector	2018	NA	NA

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
PORTABLE PLANT (GROUP 008)					
GF1	GF1	Grizzly Feeder	2002	300 TPH/0.6 MMTPY	WS
PC1	PC1	Jaw Crusher	2002	300 TPH/0.6 MMTPY	WS
BC1	BC1	Under Crusher Belt Conveyor	2002	300 TPH/0.6 MMTPY	WS
BC2	BC2	Screen Feed Radial Stacker	2002	300 TPH/0.6 MMTPY	COM
PS1/BC5	PS1/BC5	Triple Deck Scalping Screen with built-in Under Screen Belt Conveyor	2002	300 TPH/0.6 MMTPY	PE, WS
BC3	BC3	Stockpile Feed Radial Stacker Belt	2002	110 TPH/0.6 MMTPY	COM
PSP1	PSP1	Open Stockpile 1 Area: 8,460 ft ² ; Height: 32 Feet	2002	8,000 Tons/0.6 MMTPY	COM
BC4	BC4	Stockpile Feed Radial Stacker	2002	190 TPH/0.6 MMTPY	WS
PSP2	PSP2	Open Stockpile 2 Area: 8,460 ft ² ; Height: 32 Feet	2002	8,000 Tons/0.05 MMTPY	COM
BC6	BC6	Surge Bin Feed Radial Stacker	2002	300 TPH/0.6 MMTPY	COM
B1	B1	Surge Bin	2002	50 Tons/0.6 MMTPY	COM
BC7	BC7	Under-Bin Main Feed Belt Conveyor	2002	300 TPH/1.2 MMTPY	COM
PS2/BC12	PS2/BC12	Triple Deck Screen with built-in Under Screen Belt Conveyor	2002	300 TPH/1.2 MMTPY	FE, WS
PC2	PC2	Cone Crusher	2002	300 TPH/0.6 MMTPY	WS
BC8	BC8	Belt Conveyor	2002	300 TPH/0.6 MMTPY	COM
BC9	BC9	Stockpile Feed Radial Stacker	2002	150 TPH/0.6 MMTPY	COM
PSP3	PSP3	Limestone Open Stockpile 3 Area: 8,460 ft ² ; Height: 32 Feet	2002	8,000 Tons/0.6 MMTPY	COM
BC10	BC10	Stockpile Feed Radial Stacker	2002	190 TPH/0.6 MMTPY	COM
PSP4	PSP4	Open Stockpile 4 Area: 8,460 ft ² ; Height: 32 Feet	2002	8,000 Tons/0.6 MMTPY	COM

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
PORTABLE PLANT (GROUP 008) CONTINUED					
BC11	BC11	Stock Feed Radial Stacker	2002	75 TPH/0.6 MMTPY	COM
PSP5	PSP5	Open Stockpile 5 Area: 8,460 ft ² ; Height: 32 Feet	2002	8,000 Tons/0.6 MMTPY	COM
VEHICULAR TRAFFIC (GROUP 009)					
VT	VT	Vehicles Traveling Plant Haulroads/Areas	Pre 1972	NA	WT
LIMESTONE GRINDING SYSTEM (GROUP 011)					
11-DH-1	11-DH-1	Feed Hopper	2009	100 TPH/0.1 MMTPY	PE
11-BC-4	11-BC-4	Belt Conveyor	2009	100 TPH/0.1 MMTPY	PE
11-BC-1	11-BC-1	Belt Conveyor	2007	200 TPH/0.5694 MMTPY	FE
11-BEL-1	11-BEL-1	Bucket Elevator	2007	200 TPH/0.5694 MMTPY	FE
11-SI-3	E-11-DC-1	Mill Feed Bin	2007	500 Tons/0.5694 MMTPY	11-DC-1
11-BC-2	11-BC-2	Belt Conveyor	2007	65 TPH/0.5694 MMTPY	FE
11-SB-2	11-SB-2	Surge Bin	2007	10 Ton/0.5694 MMTPY	FE
11-BM-1	E-11-DC-1	Bradley Mill	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-DS-1	E-11-DC-1	Dynamic Separator	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-HG-1	E-11-DC-1	Hot Air Generator	2007	7.5 MM Btu/Hr	11-DC-1
11-CY-1	E-11-DC-1	Cyclone Separator	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-BL-3	E-11-DC-1	Blower	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-CL-1	E-11-DC-1	Classifier Separator	2007	65 TPH/0.5694 MMTPY	11-DC-1

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ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
LIMESTONE GRINDING SYSTEM (GROUP 011) CONTINUED					
11-BL-2	E-11-DC-1	Blower	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-SI-1	E-11-DC-1	Sand Storage Silo	2007	250 Tons/0.5694 MMTPY	11-DC-1
11-CY-2	E-11-DC-1	Cyclone Separator	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-SI-2	E-11-DC-1	Ag Lime Storage Silo	2007	150 Tons/0.5694 MMTPY	11-DC-1
11-DC-1	E-11-DC-1	Dust Collector	2007	NA	NA
11-SC-1	11-SC-1	Screw Conveyor	2007	1 TPH/0.0028 MMTPY	FE
11-DC-4	E-11-DC-4	Dust Collector	2011	0.022 gr/dscf	N/A
11-SI-5	E-11-DC-4	Rock Dust Silo	2007	400 Tons/0.5694 MMTPY	11-DC-4
11-SI-6	E-11-DC-2	Rock Dust Bulk Silo	2007	400 Tons/0.5694 MMTPY	11-DC-2
11-SC-3	E-11-DC-2	Screw Conveyor	2007	65 TPH/0.5694 MMTPY	11-DC-2
11-DC-2	E-11-DC-2	Dust Collector	2011	NA	NA
11-SB-1	E-11-DC-3	Rock Dust Bin	2008	100 Tons/0.5694 MMTPY	11-DC-3
11-SSB-1	E-11-DC-3	Super Sack Bagger	2008	30 TPH/0.2628 MMTPY	11-DC-3
11-SI-7	E-11-DC-3	Ultra-Fine Rock Dust Bin	2008	125 Tons/0.5694 MMTPY	11-DC-3
11-SC-7	E-11-DC-3	Screw Conveyor	2008	65 TPH/0.5694 MMTPY	11-DC-3
11-LS-4	E-11-DC-3	Truck Loading Spout	2008	65 TPH/0.5694 MMTPY	11-DC-3
11-DC-3	E-11-DC-3	Dust Collector	2011	NA	NA
11-SC-4	E-11-DC-3	Screw Conveyor	2008	2 TPH/0.002934 MMTPY	11-DC-3
11-SC-5	E-11-DC-3	Screw Conveyor	2008	2 TPH/0.002934 MMTPY	11-DC-3

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ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
LIMESTONE GRINDING SYSTEM (GROUP 011) CONTINUED					
11-SC-6	E-11-DC-3	Screw Conveyor	2008	2 TPH/0.002934 MMTPY	11-DC-3
11-SI-4	E-11-DC-3	Baghouse Dust Bin	2008	50 Tons/0.002934	11-DC-3
11-LS-3	E-11-DC-2	Truck Loading Spout	2008	65 TPH/0.5694 MMTPY	11-DC-2
11-LS-2	E-11-DC-1	Truck Loading Spout	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-LS-1	E-11-DC-1	Truck Loading Spout	2007	65 TPH/0.5694 MMTPY	11-DC-1
11-SC-20	E-11-DC-20	Screw Conveyor	2011	30 TPH/262,800 TPY	11-DC-20
11-BEL-20	E-11-DC-20	Bucket Elevator	2011	38.5 TPH/332,880 TPY	11-DC-20
11-BG-20	E-11-DC-20	Bagger	2011	30 TPH/262,800 TPY	11-DC-20
11-SC-21	E-11-DC-20	Screw Conveyor	2011	7.5 TPH/65,700 TPY	11-DC-20
11-SC-22	E-11-DC-20	Screw Conveyor	2011	7.5 TPH/65,700 TPY	11-DC-20
11-WC-20	N/A	Wire Conveyor	2011	30 TPH/262,800 TPY	No Emissions
11-BC-20	N/A	Belt Conveyor (bagged product)	2011	30 TPH/262,800 TPY	No Emissions
11-BC-21	N/A	Belt Conveyor (bagged product)	2011	30TPH/262,800 TPY	No Emissions
11-BC-22	N/A	Belt Conveyor (empty bags)	2011	30TPH/262,800 TPY	No Emissions
11-DC-20	E-11-DC-20	Dust Collector	2011	0.014 gr/dscf	N/A

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ¹
Tanks (Group 010)					
6	6	Fine Grinding Dryer Diesel Fuel	2007	8,000 gal	N
7	7	Quarry Trucks Diesel Fuel	1999	15,000 gal	N
8	NA	Mechanic Shop Motor Oil	2013	500 gal	N
9	NA	Mechanic Shop Hydraulic Oil	2013	500 gal	N
10	NA	Mechanic Shop Transmission Oil	2023	500 gal	N
11	NA	Mechanic Shop Gear Oil	2023	500 gal	N
12	NA	Mechanic Shop Heater Fuel	2000	300 gal	N
14	NA	Mechanic Shop Used Oil	2000	2,000 gal	N
15	15	Mechanic Shop Diesel Fuel	2020	1,000 gal	N
16	16	Mechanic Shop Gasoline Fuel	2013	1,000 gal	N
17	17	Buckeye Shop Heater Diesel Fuel	1990	275 gal	N
19	NA	Used Oil Collection	2013	1,000 gal	N
20	20	Lime Kiln Startup Diesel Fuel	2017	2,000 gal	N
49	NA	Buckeye Shop Gear Oil	2017	440 gal	N
54	NA	Mechanic Shop Motor Oil	2023	500 gal	N
55	NA	Mechanic Shop Hydraulic Oil	2023	500 gal	N
Contractor	Contractor	Contractor Trucks Diesel Fuel	Unknown	8,000 gal	N

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E
EMISSION UNIT FORMS

ATTACHMENT E - Emission Unit Form

Emission Unit Description Group 002

Emission unit ID number: 1-VGF-1, 1-BC-1, 1-BC-2, 1-BC-3, 1-BC-4, 1-BC-5, 2-BC-1, 2- BC-2, 2-BC-3, 2-BC-4, 2-BC-5, 2- BC-6, 2-BC-7, 2-BC-8, 2-BC-9, 1- VF-1, 2-VF-1, 2-VF-2, 2-VF-3, 2- VF-4	Emission unit name: Group 002 Conveying	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Various conveying of limestone in primary crushing and screening operations on a vibrating grizzly feeder (VGF), belt conveyors (BC), and vibrating feeders (VF).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D
Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes X No	If yes, is it? ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	7.78/2.44	8.16/2.55
Total Particulate Matter (TSP)	16.03	15.41
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 002 (PTE has not changed for this Group since the previous Title V renewal).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E13.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E13.

Are you in compliance with all applicable requirements for this emission unit? X Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Group 002

Emission unit ID number: 1-IH-1, 1-CR-1, 1-CR-2,	Emission unit name: Group 002 Crushing	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various crushing of limestone in primary crushing and screening operations by an impact hammer (I-IH-1), a primary jaw crusher (1-CR-1) and a cone crusher (1-CR2).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes ☒ No	If yes, is it? ___ Indirect Fired ___Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	7.78/2.44	8.16/2.55
Total Particulate Matter (TSP)	16.03	15.41
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 002 (PTE has not changed for this Group since the previous Title V renewal).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E13.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E13.

Are you in compliance with all applicable requirements for this emission unit? X Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form			
Emission Unit Description Group 002			
Emission unit ID number: 1-VS-1, 2-VS-1	Emission unit name: Group 002 Screening	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Various screening of limestone in primary crushing and screening operations on triple deck vibrating screens (VS).			
Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D	
Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): See Attachment D			
Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr	
Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE			
Does this emission unit combust fuel? ___Yes ☒ No		If yes, is it? ___ Indirect Fired ___ Direct Fired	
Maximum design heat input and/or maximum horsepower rating: N/A		Type and Btu/hr rating of burners: N/A	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. N/A			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	7.78/2.44	8.16/2.55
Total Particulate Matter (TSP)	16.03	15.41
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 002 (PTE has not changed for this Group since the previous Title V renewal).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E13.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E13.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Group 002

Emission unit ID number: 1-DH-1, 1-SB-1, 1-SI-1, 1-SI-2, 2-SI-1, 2-OS-1, 2-OS-2	Emission unit name: Group 002 Storage	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various storage of limestone in primary crushing and screening operations in dump hoppers (DH), a surge bin (SB), silos (SI), and an open stockpile (OS).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes ☒ No	If yes, is it? ___ Indirect Fired ___Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	7.78/2.44	8.16/2.55
Total Particulate Matter (TSP)	16.03	15.41
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 002 (PTE has not changed for this Group since the previous Title V renewal).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E13.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E13.

Are you in compliance with all applicable requirements for this emission unit? X Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment E Group 002

Limitations and Standards

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
1	45CSR13, R13-1685B, 4.1.1.	4.1.1.	Only the emission units/sources identified in Table 1.0 of R13-1685B, with the exception of any de minimis sources as identified under Table 45-13B of 45CSR13, is authorized at the permitted facility by permit R13-1685B. In accordance with the information filed in Permit Applications R13-1685, R13-1685A, and R13-1685B, the emission units/sources identified under Table 1.0 of R13-1685B shall not exceed the listed maximum design capacity where listed, shall utilize the specified emission control device, and comply with any other information provided under Table 1.0 of R13-1685B.
2	45CSR13, R13-1685B, 4.1.2.	4.1.2.	Input of stone to the primary crusher shall not exceed 800 tons per hour or 1,500,000 tons per year. Remove reference to Trommel Screen and Generator.
3	45CSR13, R13-1685B, 4.1.3.	4.1.3.	Fugitive dust control equipment as proposed in Permit Application R13-1685 and its supplements shall be installed, operated and maintained in such a manner as to minimize fugitive dust generation and atmospheric entrainment. Such measures shall include: a) Pressurized water sprays located at the primary and secondary crushers, primary and secondary screens, conveyor belt discharge for stockpile 2-OS-1, truck dump hopper, and truck dump hopper vibrating feeder. b) Primary and secondary screens (1-VS-1 and 2-VS-1) shall be fully enclosed except for entry and discharge points. c) Water sprays at stockpile, 2-OS-2, during material storage. d) Water truck utilizing pressurized spray nozzles for dust control of haulroads and stockpile areas.
4	45CSR13, R13-1685B, 4.1.4.	4.1.4.	Pressurized water spray system shall be winterized by equipping each spray manifold with a drain and heat taping all exposed piping in accordance with Permit Application R13-1685.
5	45CSR13, R13-1685B, 4.1.7. 45CSR16 40CFR60, Subpart IIII	4.1.5.	Delete this section as the generator is no longer on site.
6	45CSR13, R13-1685B, 4.1.8.	4.1.6.	The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
7	45CSR13, R13-1685B, 4.1.9.	4.1.7.	The permittee shall meet all applicable requirements, including those not specified above, as given under 45CSR7 and 40 CFR 60, Subpart OOOO. Any final revisions made to the above rules will, where applicable, supersede those specifically cited in this permit.
8	45CSR16 40CFR60, Subpart OOO.	4.1.8.	See Section 3.1.19. through 3.1.22. for all affected facilities. The stone silos (1-SI-1 and 1-SI-2) and vibrating feeders (2-VF-3 and 2-VF-4) are not subject to NSPS, Subpart OOO,

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
	3.1.19. R13-1685B, 4.1.6.a. 45CSR16 40CFR §60.672 (a) and Table 2 3.1.20. R13-1685B, 4.1.6.b. 45CSR16 40CFR §60.672 (b) and Table 3		since construction of these facility commenced prior to 1983. The open stockpile (2-OS-1) is not subject to the NSPS, Subpart OOO. Affected facilities as defined in 40 C.F.R. §§ 60.670 and 60.671 must meet the stack emission limits and compliance requirements in Table 2 of 40 C.F.R. Part 60 Subpart OOO within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 C.F.R. § 60.8. The requirements in Table 2 of 40 C.F.R. Part 60 Subpart OOO apply for affected facilities with capture systems used to capture and transport particulate matter to a control device. (a) Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008 must meet the following stack emission limits: (1) A particulate matter (PM) limit of 0.05 g/dscm (0.022 gr/dscf), except for equipment identified in 40 C.F.R. §§ 60.672 (d) through (f); and (2) An opacity limit of 7 percent for dry control devices. (b) Affected facilities that commenced construction, modification, or reconstruction on or after April 22, 2008 must meet the following stack emission limits: (1) A particulate matter (PM) limit of 0.032 g/dscm (0.014 gr/dscf), except for equipment identified in 40 C.F.R. §§ 60.672 (d) through (f); and (2) An opacity limit of 7 percent for dry control devices on individual enclosed storage bins. Affected facilities as defined in 40 C.F.R. §§ 60.670 and 60.671 must meet the fugitive emission limits and compliance requirements in Table 3 of 40 C.F.R. Part 60 Subpart OOO within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 C.F.R. § 60.11. The requirements in Table 3 of 40 C.F.R. Part 60 Subpart OOO apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems. Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008 must meet the following fugitive emission limits: a. Ten (10) percent opacity for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility. b. Fifteen (15) percent opacity for crushers without a capture system. Affected facilities that commenced construction, modification, or reconstruction on or after April 22, 2008 must meet the following fugitive emission limits: c. Seven (7) percent opacity for grinding mills, screening

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
	3.1.21. 45CSR13, R13-1685B, 4.1.6.b. 45CSR16 40CFR §60.672 (d) 3.1.22. 45CSR16 40CFR §60.672 (e)		operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility. d. Twelve (12) percent opacity for crushers without a capture system. Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of 40 C.F.R. §60.672. If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in 40 C.F.R. § 60.672 (a) and (b) [Sections 3.1.19 and 3.1.20.], or the building enclosing the affected facility or facilities must comply with the following emission limits: (1) Fugitive emissions from the building openings (except for vents as defined in 40 C.F.R. § 60.671) must not exceed 7 percent opacity; and (2) Vents (as defined in 40 C.F.R. § 60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of 40 C.F.R. Part 60 Subpart OOO (see Section 3.1.19.).
9	45CSR34 40CFR §63.6590(c)(7)	4.1.9.	Delete this section as the generator is no longer on site.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	3.2.1. 45CSR§30-5.1.c. 3.2.2. 45CSR §30-5.1.c.	4.2.1.	See Section 3.2. for opacity and dust collector monitoring requirements. The permittee shall implement the following maintenance and monitoring work practices in order to demonstrate continuous compliance with opacity requirements of 45CSR7 and 40 C.F.R. Part 60 Subparts OOO and HH. Notwithstanding the following exceptions. [Not required for open stockpiles (2-OS-1, 2-OS-2, and 4-OS-1) Coal and Limestone Feed Stockpile Common to 400 TPD & 500 TPD Lime Kilns, PSP1, PSP2, PSP3, PSP4, PSP5, and haulroads] Visible emission observations shall be conducted at least annually by a certified Method 9 observer for all transfer points and fugitive dust sources during periods of normal operation for a sufficient time interval to determine if any of the emission units or transfer points have visible emissions. If emissions are evident and quantifiable their opacity shall be determined by conducting a documented Method 9 observation. If any emission unit or transfer point has visible emissions exceeding the applicable regulatory limit then it should be documented as such and the permittee shall initiate corrective actions to minimize emissions in a timely manner in accordance with the maintenance and monitoring work practice procedures established below. a. Monitoring in the form of inspections shall be conducted at least once per calendar quarter on all transfer points and emission units subject to the opacity requirements of 45CSR7 and 40 C.F.R. Part 60 Subpart OOO or HH. The inspections shall utilize a certified Method 9 observer to evaluate each source of emissions using Method 22. If during the inspection or anytime the permittee recognizes visual emissions approaching opacity limits, maintenance activities shall be initiated to minimize PM emissions and maintain opacity within compliance levels based on the applicable opacity standard. Maintenance activities shall be completed and a satisfactory inspection documented before the end of the following quarterly inspection. b. A record of each visible emissions observation shall be maintained, including any data required by 40 C.F.R. Part 60 Appendix A, Method 22 or Method 9, whichever is appropriate. The record shall include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer. Records shall be maintained on site stating any maintenance or corrective actions taken as a result of the quarterly inspections, and the times the fugitive dust control system(s) are inoperable and any corrective actions taken. The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall operate each baghouse within its pressure drop (ΔP) range listed in the table below. Records of the weekly pressure drops for each baghouse shall be maintained. The permittee shall also maintain records of the maintenance

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
	3.3.2. 45CSR §7-8.2.		testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary. d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following: 1. The permit or rule evaluated, with the citation number and language. 2. The result of the test for each permit or rule condition. 3. A statement of compliance or non-compliance with each permit or rule condition. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
3	45CSR13, R13-1685B, 4.3.2.	4.3.2.	The permittee shall conduct compliance demonstrations to satisfy the testing requirement of §60.672 within 180 days after initial start-up of the new sources associated with and including the Trommel Screen. Remove reference to the Trommel Screen.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
4	3.3.4. 45CSR16 40CFR §60.675 (a) 3.3.5. 45CSR16 40CFR §60.675 (b) 3.3.6. 45CSR16 40CFR §60.675 (c) and Table 3	4.3.3.	See Sections 3.3.4. through 3.3.9. for Opacity and PM testing requirements from 40 CFR60 Part 600. In conducting the performance tests required in 40 C.F.R. § 60.8, the owner or operator shall use as reference methods and procedures the test methods in 40 C.F.R. Part 60 Appendices A–1 through A–7 or other methods and procedures as specified in this section, except as provided in 40 C.F.R. § 60.8 (b). Acceptable alternative methods and procedures are given in 40 C.F.R. § 60.675 (e) [Section 3.3.8.]. The owner or operator shall determine compliance with the particulate matter (PM) standards in 40 C.F.R. § 60.672 (a) [Section 3.1.19.] as follows: (1) Method 5 of 40 C.F.R. Part 60 Appendix A–3 or Method 17 of 40 C.F.R. Part 60 Appendix A–6 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 C.F.R. Part 60, Appendix A–3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter. (2) Method 9 of 40 C.F.R. Part 60 Appendix A–4 and the procedures in 40 C.F.R. § 60.11 shall be used to determine opacity. a. In determining compliance with the particulate matter standards in 40 C.F.R. § 60.672 (b) [Section 3.1.20.] or 40 C.F.R. § 60.672 (e) (1) [Section 3.1.22.a.], the owner or operator shall use Method 9 of 40 C.F.R. Part 60 Appendix A–4 and the procedures in 40 C.F.R. § 60.11, with the following additions: (1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet). (2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of 40 C.F.R. Part 60 Appendix A–4, Section 2.1) must be followed. (3) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible. (b) (1) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under 40 C.F.R. § 60.672 (f), using Method 9 (40 C.F.R. Part 60 Appendix A–4), the duration of the Method 9 (40 C.F.R. Part 60 Appendix A–4) observations shall be 1 hour (ten 6-minute averages). (2) The duration of the Method 9 (40 C.F.R. Part 60 Appendix

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
	3.3.7. 45CSR16 40CFR §60.675 (d) 3.3.8. 45CSR16 40CFR §60.675 (e)		A–4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time. (c) When determining compliance with the fugitive emissions standard for any affected facility described under 40 C.F.R. § 60.672 (b) [Section 3.1.20.] or 40 C.F.R. § 60.672 (e) (1) [Section 3.1.22.a.], the duration of the Method 9 (40 C.F.R. Part 60 Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of 40 C.F.R. Part 60 Subpart OOO must be based on the average of the five 6-minute averages. To demonstrate compliance with the fugitive emission limits for buildings specified in 40 C.F.R. § 60.672 (e) (1) [Section 3.1.22.a.], the owner or operator must complete the testing specified in 40 C.F.R. § 60.675 (d) (1) and (2) [Section 3.3.7.a. and b.]. Performance tests must be conducted while all affected facilities inside the building are operating. (a) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 C.F.R. Part 60 Appendix A–4) performance test according to this section and 40 C.F.R. § 60.11. (b) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 C.F.R. Part 60 Appendix A–7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in 40 C.F.R. § 60.672 (e) (1) [Section 3.1.22.a.]. If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 C.F.R. Part 60 Appendix A–4) performance test according to this section and 40 C.F.R. § 60.11 to show compliance with the opacity limit in 40 C.F.R. § 60.672 (e) (1) [Section 3.1.22.a.]. The owner or operator may use the following as alternatives to the reference methods and procedures specified in 40 C.F.R. § 60.675: (a) For the method and procedure of 40 C.F.R. § 60.675 (c) [Section 3.3.6.], if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used: (1) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream. (2) Separate the emissions so that the opacity of emissions from each affected facility can be read. (b) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
	3.3.9. 45CSR16 40CFR §60.675 (g)		(1) No more than three emission points may be read concurrently. (2) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points. (3) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point. (c) Method 5I of 40 C.F.R. Part 60, Appendix A–3 may be used to determine the PM concentration as an alternative to the methods specified in 40 C.F.R. § 60.675 (b) (1). Method 5I (40 C.F.R. Part 60, Appendix A–3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations. (d) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of 40 C.F.R. Part 60 Appendix A–1 of this part [i.e., velocity head <1.3 mm H₂O (0.05 in. H₂O)] and referred to in EPA Method 5 of 40 C.F.R. Part 60 Appendix A–3. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (e.g., from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates. $V_e = Q_f / A_e$ (Eq. 1) Where: V_e = average building vent velocity (feet per minute); Q_f = average fan flow rate (cubic feet per minute); and A_e = area of building vent and measurement location (square feet). For performance tests involving only Method 9 (40 C.F.R. Part 60 Appendix A–4) testing, the owner or operator may reduce the 30-day advance notification of performance test in 40 C.F.R. § 60.7 (a) (6) and 40 C.F.R. § 60.8 (d) to a 7-day advance notification.
5	45CSR13, R13-1685B, 4.2.1.	4.4.1.	For the purpose of determining compliance: (a) The applicant shall maintain certified daily records of the limestone charged through the primary and secondary crushing and screening circuit in tons per day. (b) The applicant shall maintain certified daily records of water used for particulate control in gallons per day. Such records shall be retained by the permittee for at least (5) years. Certified records shall be made available to the Director or the duly authorized representative upon request. Remove 4.4.1.c. and 4.4.1.d. from the Title V permit because the Trommel Screen and generator are no longer on site.
6	45CSR13, R13-1685B, 4.4.2.	4.4.2.	For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
7	45CSR13, R13-1685B, 4.4.3.	4.4.3.	For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded: (a) The equipment involved. (b) Steps taken to minimize emissions during the event. (c) The duration of the event. (d) The estimated increase in emissions during the event. For each such case associated with an equipment malfunction, the additional information shall also be recorded: (e) The cause of the malfunction. (f) Steps taken to correct the malfunction. (g) Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 004

Emission unit ID number: 4-BC-1, 4-BC-2, 4-BC-3, 4-BC-4, 4-TC-1, 4-SC-1, 4-SC-2, 4-SC-3, 4-SC-4, 4-BEL-1, 4-LS-2, 4-VF-1, 4-VF-2, 4-VF-3, 4-VF-4, 4-BL-5	Emission unit name: Group 004 Conveying and Transfer	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various conveying and transfer of limestone, lime, coal and dust in 400 TPD Lime Kiln operations on belt conveyors (BC), transfer chute (TC), vibrating feeders (VF), weigh feeder (WF), radial airlocks (RA), screw conveyors (SC), and a bucket elevator (BEL).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	5.14/1.64	5.891/1.801
Total Particulate Matter (TSP)	10.61	11.841
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are particulate matter totals only for the entire Group 004. There is a slight increase in emissions due to the installation of the DSI control system approved by R13-1381B.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E38.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E38.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 004

Emission unit ID number:
5-SI-2, 5-WF-1, 5-BM-1, 5-AS-1

Emission unit name:
Group 004 Coal Circuit

List any control devices associated with this emission unit.
4-DC-1

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Coal system for feed sizing and separating the coal to be fed to the kiln for combustion.

Manufacturer:
See Attachment D

Model number:
See Attachment D

Serial number:
See Attachment D

Construction date:
See Attachment D

Installation date:
See Attachment D

Modification date(s):
See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
See Attachment D

Maximum Hourly Throughput:
See Attachment D

Maximum Annual Throughput:
See Attachment D

Maximum Operating Schedule:
8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes X No

If yes, is it?

___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating:

N/A

Type and Btu/hr rating of burners:

N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	5.14/1.64	5.891/1.801
Total Particulate Matter (TSP)	10.61	11.841
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are particulate matter totals only for the entire Group 004. There is a slight increase in emissions due to the installation of the DSI control system approved by R13-1381B.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E38.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E38.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 004

Emission unit ID number:
4-OS-1, 4-STB-1, 4-SI-1, 4-SI-3

Emission unit name:
Group 004 Storage

List any control devices associated with this emission unit.
See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Various storage associated with 400 TPD lime kiln operations in an open stockpile (OS), a stone bin (STB), 3-sided covered coal storage pile (CS), and silos (SI).

Manufacturer:
See Attachment D

Model number:
See Attachment D

Serial number:
See Attachment D

Construction date:
See Attachment D

Installation date:
See Attachment D

Modification date(s):
See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
See Attachment D

Maximum Hourly Throughput:
See Attachment D

Maximum Annual Throughput:
See Attachment D

Maximum Operating Schedule:
8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes XNo

If yes, is it?

___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating:

N/A

Type and Btu/hr rating of burners:

N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	5.14/1.64	5.891/1.801
Total Particulate Matter (TSP)	10.61	11.841
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are particulate matter totals only for the entire Group 004. There is a slight increase in emissions due to the installation of the DSI control system approved by R13-1381B.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E38.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E38.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 004

Emission unit ID number: 4-PH-1, 4-RK-1, 4-NC-1	Emission unit name: Group 004 Pre-Heater, 400 TPD Lime Kiln, and Lime Cooler	List any control devices associated with this emission unit. 4-DC-1, 6-DC-1, 4-PC-1

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Pre-heater (4-PH-1), 400 TPD Rotary Lime Kiln (4-RK-1) and NIEMS Lime Cooler (4-NC-1).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ☒ Yes ☐ No	If yes, is it? ☐ Indirect Fired ☒ Direct Fired

Maximum design heat input and/or maximum horsepower rating: 75 MMBtu/hour	Type and Btu/hr rating of burners: NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Coal, 3.0 tph, 26,280 tpy

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Coal	1.1%	10 %	12,500 – 14,500
No. 2 Fuel Oil (Startup Fuel Only)	0.05%	NA	138,000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	17.0	74.5
Nitrogen Oxides (NO _x)	30.0	131.4
Lead (Pb)	1.92E-05	0.0001
Particulate Matter (PM ₁₀ /PM _{2.5})	0.28/0.14	1.21/0.60
Total Particulate Matter (TSP)	0.5	2.19
Sulfur Dioxide (SO ₂)	16.0	70.0
Volatile Organic Compounds (VOC)	4.0	17.5
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAPs*	5.7	24.92
* For speciated list see Appendix 1.		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO ₂ e	NA	74,576.86
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). PM and NO _x emission factors were calculated from February 25, 1991 stack test. SO ₂ emission factor is the manufacturer's guarantee of performance. CO emission factor calculated from a December 16, 1994 stack test. VOC emission factor is the manufacturer's guarantee of performance. HAP emission factors are based upon source specific stack testing conducted during September, 2023, with the exception of the lead emission factor which was provided by the National Lime Association.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E38.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E38.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 004 and 005

Emission unit ID number: 5-CS-1, 5-CS-1A, 5-CS-2, 5-DH-1, 5-VF-1, 5-BC-0, 5-CR-1, 5-SI-1, 5- VF-2, 5-BC-1, 5-BC-2, 5-BC-3	Emission unit name: Common Coal Circuit for Group 004 and 005	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Modified coal circuit associated with kiln operations includes a coal silo (CS) dump hopper (DH), vibrating feeders (VF), belt conveyors (BC), a crusher (CR), a silo (SI), weigh feeder (WF), radial airlocks (RA), a bradley mill (BM), and air separator (AS). This is a modified system and was permitted under R13-2670B.

Manufacturer: N/A	Model number: N/A	Serial number: N/A

Construction date: Various - see Attachment D	Installation date: Various - See Attachment D	Modification date(s): Various - see Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 N/A

Maximum Hourly Throughput: See Attachment D.	Maximum Annual Throughput: See Attachment D.	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	5.14/1.64	5.891/1.801
Total Particulate Matter (TSP)	10.61	11.841
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are particulate matter totals only for the entire Group 004. There is a slight increase in emissions due to the installation of the DSI control system approved by R13-1381B.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E38.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E38.

Are you in compliance with all applicable requirements for this emission unit? X Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment E Group 004

Applicable Requirements

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement																		
1	45CSR16 40 CFR §60.342 (a) 45CSR13, R13-1381B, 4.1.1.	6.1.1.	Total particulate emissions to the atmosphere from the one (1) stack (4-DS-2) which constitute emission point 1E (emissions from the 400 TPD lime kiln 105 [4-RK-1] after baghouse 112 [4-DC-1]) shall not exceed the more stringent limitation of either 0.6 pounds particulate matter per ton of limestone feed according to 40 C.F.R. Part 60 Subpart HH (following), "Standards of Performance for Lime Manufacturing Plants," or that particulate matter emission limitation in Section 6.1.2. On and after the date on which the performance test required to be conducted by 40 C.F.R. § 60.8 is completed, no owner or operator subject to the provisions of this 40 C.F.R. Part 60, Subpart HH, shall cause to be discharged into the atmosphere from any rotary lime kiln any gases which: (a) Contain particulate matter in excess of 0.30 kilogram per megagram (0.60 lb/ton) of stone feed. (b) Exhibit greater than 15 percent opacity when exiting from a dry emission control device. <i>Compliance with Section 6.1.1.a. is streamlined by demonstrating compliance with 40 C.F.R. Part 63 Subpart AAAAA [0.12 lb/ton stone feed (tsf)] incorporated within Section 12.1.1.</i>																		
2	45CSR13, R13-1381B, 4.1.2.	6.1.2.	Emissions to the atmosphere from emission point 1E [4-DS-2] that is controlled by the 4-module baghouse (4-DC-1) shall not exceed the following maximum rates: <table><tr><th>Pollutant</th><th>lb/hr</th><th>TPY</th></tr><tr><td>Particulate Matter</td><td>0.5</td><td>2.19</td></tr><tr><td>Sulfur Dioxide</td><td>16</td><td>70</td></tr><tr><td>Nitrogen Oxides</td><td>30</td><td>131.4</td></tr><tr><td>Carbon Monoxide</td><td>17</td><td>74.5</td></tr><tr><td>Non-Methane Hydrocarbons</td><td>4</td><td>17.5</td></tr></table>	Pollutant	lb/hr	TPY	Particulate Matter	0.5	2.19	Sulfur Dioxide	16	70	Nitrogen Oxides	30	131.4	Carbon Monoxide	17	74.5	Non-Methane Hydrocarbons	4	17.5
Pollutant	lb/hr	TPY																			
Particulate Matter	0.5	2.19																			
Sulfur Dioxide	16	70																			
Nitrogen Oxides	30	131.4																			
Carbon Monoxide	17	74.5																			
Non-Methane Hydrocarbons	4	17.5																			
3	45CSR13, R13-1381A, 4.1.3.	6.1.3.	The maximum throughputs associated with the 400 TPD lime kiln (4-RK-1) shall not exceed: <table><tr><th>Substance</th><th>TPH</th><th>TPD</th><th>TPY</th></tr><tr><td>Limestone Feed</td><td>31.5</td><td>756.16</td><td>275,997</td></tr><tr><td>Bituminous Coal Burned</td><td>3</td><td>72</td><td>26,280</td></tr><tr><td>Lime Product</td><td>16.7</td><td>400</td><td>146,000</td></tr></table>	Substance	TPH	TPD	TPY	Limestone Feed	31.5	756.16	275,997	Bituminous Coal Burned	3	72	26,280	Lime Product	16.7	400	146,000		
Substance	TPH	TPD	TPY																		
Limestone Feed	31.5	756.16	275,997																		
Bituminous Coal Burned	3	72	26,280																		
Lime Product	16.7	400	146,000																		
4	45CSR13, R13-1381B, 4.1.4.	6.1.4.	Bituminous coal as fired in the rotary lime kiln 4-RK-1 shall not exceed 1.1% sulfur by weight and 10% by weight in ash content.																		
5	45CSR§10-4.1. 45CSR13, R13-1381B, 4.1.5.	6.1.5.	No person shall cause, suffer, allow, or permit the emission into open air from any source operation an in-stack sulfur dioxide concentration exceeding 2000 ppm by volume from existing source operations, except as provided in subdivisions of 45CSR§10-4.1.																		
6	45CSR§10-4.2. 45CSR13, R13-1381B, 4.1.6.	6.1.6.	Compliance with the allowable sulfur dioxide concentration limitations from manufacturing process source operation(s) set forth in this rule shall be based on a block three (3) hour averaging time.																		

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
7	45CSR16 40CFR §60.672 (a) and (b)	6.1.7.	See Sections 3.1.19. and 3.1.20. for belt conveyor, transfer points and affected facilities (4-BC-3 and 4-BC-4). NOTE: See Attachment E pp 13-22 for the above referenced requirements.
8	45CSR§7-5.1. 45CSR13, R13-1381B, 4.1.7.	6.1.8.	No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
9	45CSR13, R13-1381B, 2.5.1.	6.1.9.	The permitted facility must be constructed and operated in accordance with information filed in Permit Application No. R13-1381, R13-1381A, R13-1381B and R13-1788 and any modifications, administrative updates or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.
10	45CSR§10-8.2.c.	6.1.10.	The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with 45CSR§§10-3, 4 and 5 by testing and /or monitoring in accordance with one or more of the following: 40 C.F.R. Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit. Compliance with this requirement may be satisfied through compliance with the requirements of the approved 45CSR10 Monitoring Plan (Appendix A) submitted on March 30, 2001 and any amendments thereto.
11	45CSR§10-8.3.a.	6.1.11.	The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to 45CSR§§10-3, 4 and 5 shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to 45CSR§10-8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years. Compliance with this requirement may be satisfied through compliance with the requirements of the approved 45CSR10 Monitoring Plan (Appendix A) submitted on March 30, 2001 and any amendments thereto.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
12	45CSR §10-8.3.b.	6.1.12.	The owner or operator shall submit a periodic exception report to the Director, in a manner specified by the Director. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause of the excursion and the corrective action taken. Compliance with this requirement may be satisfied through compliance with the requirements of the approved 45CSR10 Monitoring Plan (Appendix A) submitted on March 30, 2001 and any amendments thereto.
13	45CSR§10-8.3.c.	6.1.13.	The owner or operator of a fuel burning unit(s) or a combustion source(s) shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each unit in a manner specified by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request. Compliance with this requirement may be satisfied through compliance with the requirements of the approved 45CSR10 Monitoring Plan (Appendix A) submitted on March 30, 2001 and any amendments thereto.
14	45CSR§10-9.1.	6.1.14.	Due to unavoidable malfunction of equipment or inadvertent fuel shortages, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the equipment malfunction or fuel shortage. In cases of major equipment failure or extended shortages of conforming fuels, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.
15	45CSR §7-4.1. 45CSR13, R13-1381B, 4.1.19.	6.1.15.	PM/PM2.5 emissions from Hydrated Lime Silo (4-SI-3) shall not exceed 0.03 pounds per hour. PM/PM2.5 emissions of from both Hydrated Lime Silos (4-SI-3 and 4-SI-4) combined shall not exceed 0.01 tons per year. <i>(Compliance with this streamlined PM lb/hr limit assures compliance with 45CSR§7-4.1)</i>
16	45CSR13, R13-1381B, 4.1.20.	6.1.16.	Maximum loading of hydrated lime to the Hydrated Lime Silo (4-SI-3) shall not exceed 2,000 tons per year. Compliance with said limit shall be based on a 12 month rolling total.
17	45CSR13, R13-1381B, 4.1.21.	6.1.17.	The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Group 004 of Section 1.1. and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	45CSR16 40CFR §60.343(a) 45CSR13, R13-1381B, 4.2.1.	6.2.1.	The owner or operator of a facility that is subject to the provisions of 40 C.F.R. Part 60, Subpart HH, shall install, calibrate, maintain, and operate a continuous monitoring system (4-OM-2), except as provided in 40 C.F.R. §§ 60.343 (b) and (c), to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 40 percent opacity
2	45CSR16 40CFR §60.343(d) 45CSR13, R13-1381B, 4.2.2.	6.2.2.	For the purpose of conducting a performance test under 40 C.F.R. § 60.8, the owner or operator of any lime manufacturing plant subject to the provisions of 40 C.F.R. Part 60, Subpart HH, shall install, calibrate, maintain, and operate a device for measuring the mass rate of stone feed to any affected rotary lime kiln. The measuring device used must be accurate to within ± 5 percent of the mass rate over its operating range.
3	45CSR §10-8.2.a., 45CSR13, R13-1381B, 4.2.3.	6.2.3.	At the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of 45CSR§10-8.2.a. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of 45CSR10.
4	45CSR §10-8.2.a. and b. 45CSR §10-8.2.b. 45CSR13, R13-1381B, 4.3.1.a., b. and c.	6.3.1.	45CSR10 Testing Requirement a) At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of 45CSR10 sections 3, 4 or 5. Such tests shall be conducted in accordance with the appropriate test method set forth in 40 C.F.R. Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. b) The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions other than those noted in section 3 of 45CSR10. c) Prior to the installation of calibrated stack gas monitoring devices, sulfur dioxide emission rates shall be calculated on an equivalent fuel sulfur content basis.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
5	45CSR16 40CFR § 60.344 (a) 45CSR13, R13-1381B, 4.3.2.	6.3.2.	In conducting the performance tests required in 40 C.F.R. § 60.8, the owner or operator shall use as reference methods and procedures the test methods in 40 C.F.R. Part 60 Appendix A or other methods and procedures as specified in 40 C.F.R. § 60.344, except as provided in 40 C.F.R. §60.8(b).
6	40CFR16 40CFR §60.344 (b)	6.3.3.	The owner or operator shall determine compliance with the particulate matter standards in 40 C.F.R. § 60.342(a) [Section 6.1.1.] as follows: (a) The emission rate (E) of particulate matter shall be computed for each run using the following equation: $E = (cs \text{ Qsd}) / PK$ where: E = emission rate of particulate matter, kg/Mg (1b/ton) of stone feed. cs = concentration of particulate matter, g/dscm (gr/dscf). Qsd = volumetric flow rate of effluent gas, dscm/hr (dscf/hr). P = stone feed rate, Mg/hr (ton/hr). K = conversion factor, 1000 g/kg (7000 gr/lb). (b) Method 5 (40 C.F.R. Part 60, Appendix A) shall be used at negative-pressure fabric filters and other types of control devices and Method 5D (40 C.F.R. Part 60, Appendix A) shall be used at positive-pressure fabric filters to determine the particulate matter concentration (cs) and the volumetric flow rate (Qsd) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). (c) The monitoring device of 40 C.F.R. § 60.343(d) [Section 6.2.2.] shall be used to determine the stone feed rate (P) for each run. (d) Method 9 (40 C.F.R. Part 60, Appendix A) and the procedures in 40 C.F.R. § 60.11 shall be used to determine opacity.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting																											
7	45CSR§30-5.1.c.	6.3.4.	The permittee shall conduct tests to determine compliance with the nitrogen oxides (NOx) and carbon monoxide (CO) emission limitations in Section 6.1.2 for the one (1) vent stack (4-DC-1). The Methods listed below from Appendix A of 40 C.F.R. Part 60 shall be utilized for purposes of conducting performance tests, unless the Director approves an alternate or equivalent method. Requirements shall be met with respect to submission of a test protocol and notification of testing. <table><tr><td><u>Pollutant</u></td><td><u>Method</u></td></tr><tr><td>Carbon Monoxide</td><td>10</td></tr><tr><td>Nitrogen Oxides</td><td>7</td></tr></table> Tests for nitrogen oxides (NOx) were conducted in October of 2005 and in October of 2008 and resulted in mass emission rates between 50% and 90 % for each test. The results of those tests showed that the current nitrogen oxides (NOx) testing frequency is “Once/ 3 years.” A test for carbon monoxide (CO) was conducted in October of 2005 and resulted in mass emission rates #50%. The results of this test showed that the current carbon monoxide (CO) testing frequency is “Once/5 years.” Subsequent testing to determine compliance with the nitrogen oxides (NOx) and carbon monoxide (CO) limitations of Section 6.1.2 shall be conducted in accordance with the schedule set forth in the following table. <table><tr><th>Test</th><th>Test Results</th><th>Testing Frequency</th></tr><tr><td>Annual</td><td>If annual testing is required, after two successive tests indicate mass emission rates between 50% and 90 % of nitrogen oxides (NOx) or carbon monoxide (CO) limit</td><td>Once/3 years</td></tr><tr><td>Annual</td><td>If annual testing is required, after three successive tests indicate mass emission rates #50% of nitrogen oxides (NOx) or carbon monoxide (CO) limit</td><td>Once/5 years</td></tr><tr><td>Once/3 years</td><td>If testing is required once/3 years, after two successive tests indicate mass emission rates 50% of nitrogen oxides (NOx) or carbon monoxide (CO) limit</td><td>Once/5 years</td></tr><tr><td>Once/3 years</td><td>If testing is required once/3 years and any test indicates a mass emission rate ≥90% of nitrogen oxides (NOx) or carbon monoxide (CO) limit</td><td>Annual</td></tr><tr><td>Once/5 years</td><td>If testing is required once /5 years and any test indicates mass emission rates between 50% and 90 % of nitrogen oxides (NOx) or carbon monoxide (CO) limit</td><td>Once/3 years</td></tr><tr><td>Once/5 years</td><td>If testing is required once/5 years and any test indicates a mass emission rate ≥90% of nitrogen oxides (NOx) or carbon monoxide (CO) limit</td><td>Annual</td></tr></table>	<u>Pollutant</u>	<u>Method</u>	Carbon Monoxide	10	Nitrogen Oxides	7	Test	Test Results	Testing Frequency	Annual	If annual testing is required, after two successive tests indicate mass emission rates between 50% and 90 % of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Once/3 years	Annual	If annual testing is required, after three successive tests indicate mass emission rates #50% of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Once/5 years	Once/3 years	If testing is required once/3 years, after two successive tests indicate mass emission rates 50% of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Once/5 years	Once/3 years	If testing is required once/3 years and any test indicates a mass emission rate ≥90% of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Annual	Once/5 years	If testing is required once /5 years and any test indicates mass emission rates between 50% and 90 % of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Once/3 years	Once/5 years	If testing is required once/5 years and any test indicates a mass emission rate ≥90% of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Annual
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Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting												
8	45CSR13, R13-1381B, 4.3.3.	6.3.5.	In the event that the Secretary requests emissions tests to be conducted to determine the particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, and total hydrocarbon emissions from emission point 1E, the methods listed below from Appendix A of 40 C.F.R. Part 60 shall be utilized for purposes of conducting performance tests, unless the Secretary approves an alternate or equivalent method. For any tests to be conducted by the permittee, a test protocol shall be submitted to the DAQ by the permittee at least thirty (30) days prior to the test and shall be approved by the Secretary. The Secretary shall be notified at least fifteen (15) days in advance of the actual dates and times during which the test will be conducted. <table><tr><td><u>Pollutant</u></td><td><u>Method</u></td></tr><tr><td>Particulate Matter</td><td>5D</td></tr><tr><td>Sulfur Dioxide</td><td>6B</td></tr><tr><td>Nitrogen Oxides</td><td>7</td></tr><tr><td>Carbon Monoxide</td><td>10</td></tr><tr><td>Total Non-methane Hydrocarbons</td><td>25</td></tr></table>	<u>Pollutant</u>	<u>Method</u>	Particulate Matter	5D	Sulfur Dioxide	6B	Nitrogen Oxides	7	Carbon Monoxide	10	Total Non-methane Hydrocarbons	25
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Particulate Matter	5D														
Sulfur Dioxide	6B														
Nitrogen Oxides	7														
Carbon Monoxide	10														
Total Non-methane Hydrocarbons	25														
9	None	6.3.6.	See Sections 3.3.4 through 3.3.9 for NSPS testing requirements. NOTE: See Attachment E pp 13-22 for the above referenced requirements.												
10	45CSR §30-5.1.c. 45CSR §30-5.1.c.2.B. 45CSR13, R13-1381B, 4.4.4.	6.4.1.	For the purpose of determining compliance with Sections 6.1.1 through 6.1.6, the company shall maintain certified monthly and annual records on the following for the 400 TPD Rotary Lime Kiln. Such records shall be retained by the permittee for at least five (5) years. Certified records shall be made available to the Director or the duly authorized representative upon request. (a) daily usage of the amount of coal purchased to determine the monthly usage and the twelve- (12) monthly rolling total (b) sulfur content on a weight basis of the coal purchased (c) ash content on a weight basis of the coal purchased (d) the approximate heating value of the coal purchased (e) limestone feed rates to determine the monthly usage and the twelve- (12) monthly rolling total (f) lime production to determine the monthly usage and the twelve- (12) monthly rolling total.												
11	45CSR13, R13-1381B, 4.4.5.	6.4.2.	Compliance with the emission limits set forth in Section 6.1.2. and 7.1.3. for VOC, SO2 and PM from bag houses (4-DC-1 and 4-DC-2) shall be demonstrated by complying with Section 6.1.4 and 7.1.2.												
12	45CSR§10-8.3 45CSR13, R13-1381B, 4.4.6.	6.4.3.	In accordance with Greer’s 45CSR10 Monitoring Plan that was submitted on March 30, 2001, Greer will maintain sulfur content statements from the fuel suppliers on-site for a period of at least five (5) years in accordance with 45CSR10A, Section 7. Greer will submit a “Monitoring Summary Report” and an “Excursion and Monitoring Plan Performance Report” on a quarterly basis to the Director by the 30th day of the month following the calendar quarter. Greer’s 45CSR10 Monitoring Plan for the 400 and 500 TPD Rotary Lime Kilns (4-RK-1 and 4-RK-2) are attached in Appendix A.												
13	45CSR13, R13-1381B, 4.4.2.	6.4.4.	For all pollution control equipment listed in Group 004 of Section 1.1., the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.												

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
14	45CSR13, R13-1381B, 4.4.3.	6.4.5.	For all air pollution control equipment listed in Group 004 of Section 1.1., the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded: a. The equipment involved. b. Steps taken to minimize emissions during the event. c. The duration of the event. d. The estimated increase in emissions during the event. For each such case associated with an equipment malfunction, the additional information shall also be recorded: e. The cause of the malfunction. f. Steps taken to correct the malfunction. g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
15	45CSR13, R13-1381B, 4.4.7.	6.4.6.	In order to determine compliance with 6.1.16., the permittee shall maintain records of the amount of hydrated lime loaded to each silo on a monthly basis.
16	45CSR16 40CFR §60.343(e)	6.5.1.	For the purpose of reports required under 40 C.F.R. § 60.7 (c), periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity of the visible emissions from any lime kiln Section 6.1.1. [40 C.F.R. § 60.342 (a)] is greater than 15 percent.

Attachment E Group 004

Applicable Requirements (Coal Circuit)

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
1	45CSR13, R13-2670B, 4.1.1.	11.1.1.	The amount of coal processed or conveyed shall not exceed 54,000 tons per year. Compliance with the throughput limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of coal throughput at any given time for the previous twelve (12) consecutive calendar months.
2	45CSR13, R13-2670B, 4.1.2.	11.1.2.	The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply water, or a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haulroads and other work areas where mobile equipment is used. The spraybar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated. The pump delivering the water, or solution, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of water, or solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haulroads and work areas where mobile equipment is used. The permittee shall properly install, operate and maintain designed winterization systems for all water trucks and/or water sprays in a manner that all such fugitive dust control systems remain functional during winter months and cold weather.
3	45CSR13, R13-2670B, 4.1.3. 45CSR §5-3.4	11.1.3.	No person shall cause, suffer, allow or permit emission of particulate matter into the open air from any fugitive dust control system which is twenty percent (20%) opacity or greater.
4	45CSR13, R13-2670B, 4.1.4.1. and 4.1.4.2. 45CSR16 40CFR §60.254(a) and (b)	11.1.4.	Standards for Particulate Matter. a. On and after the date on which the performance test is conducted or required to be completed under 40 CFR § 60.8, whichever date comes first, an owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit $\geq 20\%$ opacity. [5-DH-1, 5-VF-1, 5-VF-2, 5-CR-1, 5-BC-0, 5-BC-1, 5-SI-1, 5-CS-1] b. On and after the date on which the performance test is conducted or required to be completed under 40 CFR § 60.8, whichever date comes first, an owner or operator of

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
			any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs b.1. through 3. of this section, as applicable to the affected facility. [5-CS-1A, 5-CS-2] 1. Except as provided in paragraph b.3. of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit $\geq 10\%$ opacity. 2. The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf). 3. Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph b.1. of this section.
5	45CSR13, R13-2670B, 4.1.4.3. 45CSR16 40CFR §60.254(c)	11.1.5.	The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions as specified in paragraphs a. through f. of this section. a. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. b. For open coal storage piles, the fugitive coal dust emissions control plan must require that one or more of the following control measures be used to minimize to the greatest extent practicable fugitive coal dust: Locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source (when the provisions of paragraph f. of this section are met), use of a wind barrier, compaction, or use of a vegetative cover. The owner or operator must select, for inclusion in the fugitive coal dust emissions control plan, the control measure or measures listed in this paragraph that are most appropriate for site conditions. The plan must also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan must be revised as needed to reflect any changing conditions at the source. c. Any owner or operator of an affected facility that is required to have a fugitive coal dust emissions control plan may petition the Administrator to approve, for inclusion in the plan for the affected facility, alternative control

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
			measures other than those specified in paragraph (b) of this section as specified in paragraphs c.i. through iv. of this section. i. The petition must include a description of the alternative control measures, a copy of the fugitive coal dust emissions control plan for the affected facility that includes the alternative control measures, and information sufficient for EPA to evaluate the demonstrations required by paragraph c.ii. of this section. ii. The owner or operator must either demonstrate that the fugitive coal dust emissions control plan that includes the alternate control measures will provide equivalent overall environmental protection or demonstrate that it is either economically or technically infeasible for the affected facility to use the control measures specifically identified in paragraph b. iii. While the petition is pending, the owner or operator must comply with the fugitive coal dust emissions control plan including the alternative control measures submitted with the petition. Operation in accordance with the plan submitted with the petition shall be deemed to constitute compliance with the requirement to operate in accordance with a fugitive coal dust emissions control plan that contains one of the control measures specifically identified in paragraph b. of this section while the petition is pending. iv. If the petition is approved by the Administrator, the alternative control measures will be approved for inclusion in the fugitive coal dust emissions control plan for the affected facility. In lieu of amending this subpart, a letter will be sent to the facility describing the specific control measures approved. The facility shall make any such letters and the applicable fugitive coal dust emissions control plan available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point. d. The owner or operator must submit the fugitive coal dust emissions control plan to the Administrator or delegated authority as specified in paragraphs d.i. and d.ii. of this section. i. The plan must be submitted to the Administrator or delegated authority prior to startup of the new, reconstructed, or modified affected facility, or 30 days after the effective date of this rule, whichever is later. ii. The plan must be revised as needed to reflect any changing conditions at the source. Such revisions must be dated and submitted to the Administrator or delegated authority before a source can operate pursuant to these revisions. The Administrator or delegated authority may also object to such revisions as specified in paragraph e. of

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
			this section. e. The Administrator or delegated authority may object to the fugitive coal dust emissions control plan as specified in paragraphs e.i. and e.ii. of this section. i. The Administrator or delegated authority may object to any fugitive coal dust emissions control plan that it has determined does not meet the requirements of paragraphs a. and b. of this section. ii. If an objection is raised, the owner or operator, within 30 days from receipt of the objection, must submit a revised fugitive coal dust emissions control plan to the Administrator or delegated authority. The owner or operator must operate in accordance with the revised fugitive coal dust emissions control plan. The Administrator or delegated authority retain the right, under paragraph e. of this section, to object to the revised control plan if it determines the plan does not meet the requirements of paragraphs a. and b. of this section. f. Where appropriate chemical dust suppression agents are selected by the owner or operator as a control measure to minimize fugitive coal dust emissions, (1) only chemical dust suppressants with Occupational Safety and Health Administration (OSHA)-compliant material safety data sheets (MSDS) are to be allowed; (2) the MSDS must be included in the fugitive coal dust emissions control plan; and (3) the owner or operator must consider and document in the fugitive coal dust emissions control plan the site-specific impacts associated with the use of such chemical dust suppressants. [5-CS-1A, 5-CS-2]
6	45CSR13, R13-2670B, 4.1.5.	11.1.6.	The amount of coal loaded into open stockpiles 5-CS-1A and 5-CS-2 shall not exceed 15,000 tons per year.
7	45CSR13, R13-2670B, 4.1.6.	11.1.7.	The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 of R13-2670B and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	45CSR13, R13-2670B, 4.2.1.	11.2.1.	For the purpose of determining compliance with the maximum throughput limit set forth in 11.1.1, the permittee shall maintain certified monthly and annual records of the amount of coal transferred or processed. Such records shall be retained onsite by the permittee for at least five (5) years. Certified records shall be made available to the Director or his duly authorized representative upon request.
2	45CSR13, R13-2670B, 4.2.2.	11.2.2.	For the purposes of determining compliance with water truck usage set forth in 11.1.2, the permittee shall monitor water truck activity and maintain certified daily records. Such records shall be retained onsite by the permittee for at least five (5) years. Certified records shall be made available to the Director or his duly authorized representative upon request.
3	45CSR7 45CSR13, R13-2670B, 4.2.3.	11.2.3.	For the purpose of determining compliance with the opacity limits of 11.1.3 or 11.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course. Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stacks, conveyors, crushers, silos, bins, and screens) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions. If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. Method 9 checks shall be performed on the source for at least six (6) minutes. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.
4	45CSR13, R13-2670B, 4.2.4.	11.2.4.	For the purpose of determining compliance with the maximum throughput limit set forth in Section 11.1.6., the permittee shall maintain certified monthly and annual records of the amount of coal transferred to open stockpiles 5-CS-1A and 5-CS-2. Such records shall be retained onsite by the permittee for at least five (5) years. Certified records shall be made available to the Director or his duly authorized representative upon request.
5	4.3.1.45CSR§5-12.4. 45CSR13, R13-2670B,	11.3.1.	The permittee shall conduct tests to determine compliance with the visible emission limitation of 11.1.3, tests shall be conducted by

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
			certified visible emission observers in accordance with Method 9 of 40 CFR Part 60, Appendix A.
6	45CSR16 40CFR §60.257(a)	11.3.2.	The owner or operator must determine compliance with Section 11.1.4. opacity standards as specified in paragraphs a. through c. of this section. a. Method 9 of 40CFR60, appendix A-4 and the procedures in 40 CFR §60.11 must be used to determine opacity, with the exceptions specified in paragraphs a.i. and ii. below: i. The duration of the Method 9 performance test shall be 1 hour (ten 6-minute averages). ii. If, during the initial 30 minutes of the observation of a Method 9 performance test, all of the 6-minute average opacity readings are less than or equal to half the applicable opacity limit, then the observation period may be reduced from 1 hour to 30 minutes. b. To determine opacity for fugitive coal dust emissions sources, the additional requirements specified in paragraphs b.i. through iii. must be used. i. The minimum distance between the observer and the emission source shall be 5.0 meters (16 feet), and the sun shall be oriented in the 140-degree sector of the back. ii. The observer shall select a position that minimizes interference from other fugitive coal dust emissions sources and make observations such that the line of vision is approximately perpendicular to the plume and wind direction. iii. The observer shall make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Water vapor is not considered a visible emission. c. A visible emissions observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions specified in paragraphs c.i. through iii. of this section are met. i. No more than three emissions points may be read concurrently. ii. All three emissions points must be within a 70-degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points. iii. If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), then the observer must stop taking readings for the other two points and continue reading just that single point.
7	45CSR13, R13-2670B, 4.4.2.	11.4.1.	For all pollution control equipment listed in Section 1.0 of R13-2670A, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
8	45CSR13, R13-2670B, 4.4.3.	11.4.2.	For all air pollution control equipment listed in Section 1.0 of R13-2670A, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded: a. The equipment involved. b. Steps taken to minimize emissions during the event. c. The duration of the event. d. The estimated increase in emissions during the event. For each such case associated with an equipment malfunction, the additional information shall also be recorded: e. The cause of the malfunction. f. Steps taken to correct the malfunction. g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
9	45CSR13, R13-2670B, 4.4.4.	11.4.3.	The permittee shall maintain records of all monitoring data required by 11.2.4 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix A. Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note “out of service” (O/S) or equivalent.
10	45CSR16 40CFR §60.258(a) and (d)	11.4.4.	The owner or operator of an open storage pile constructed after May 27, 2009, shall maintain a logbook containing the information specified in 11.4.4.1. through 11.4.4.6.
11	45CSR13, R13-2670B, 4.5.1.	11.5.1.	Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

Attachment E Groups 004 and 005

Applicable Requirements (NESHAPS MACT AAAAA)

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
1	45CSR34 40CFR§63.7090(a), Table 1-#1	12.1.1.	Lime kilns 4-RK-1, 4-RK-2 and their associated lime coolers shall limit PM emissions not to exceed 0.12 pounds per ton of stone feed (lb/tsf).
2	45CSR34 40CFR§63.7090(a), Table 1-#7	12.1.2.	Fugitive emissions from all process stone handling (PSH) operations must not exceed 10 percent opacity.
3	45CSR34 40CFR §63.7090(b), Table 2-#1 40CFR §63.7090(b), Table 2-#5 40CFR §63.7100(d) 40CFR §63.7090(b), Table 2-#6	12.1.3.	The permittee shall meet the following operating limits from Table 2 of 40 C.F.R. Part 63 Subpart AAAAA: a.Each lime kiln equipped with a fabric filter (FF) shall maintain a 6-minute average opacity for any 6-minute block period that does not exceed 15% percent; and comply with the requirements in 40 C.F.R. §§ 63.7113 (f) and (g) and Table 5 of 40 C.F.R. Part 63 Subpart AAAAA. The referenced requirements are incorporated Sections 12.2.1 and 12.2.2. b.The permittee shall prepare and implement for each lime manufacturing plant (LMP) a written operations, maintenance, and monitoring (OM&M) plan in accordance with 40 C.F.R. § 63.7100 (d). This plan has been approved and is provided for reference as Appendix B. Any subsequent changes to the plan must be submitted to the applicable permitting authority, WVDEP Division of Air Quality, for review and approval. Pending approval of an initial or amended plan, the permittee must comply with the provisions of the submitted plan. Each plan must contain the information listed in 40 C.F.R. §§ 63.7100 (d) (1) through (7). c.Each emission unit equipped with an add-on air pollution control device shall vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter (FF); and operate each capture/collection system in accordance with the procedures and requirements defined in the OM&M plan required by Section 12.1.3. (b).
4	45CSR34 40CFR §63.7100(e)	12.1.4.	The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3). This SSM plan is provided for reference as Appendix C.
5	45CSR34 40CFR §63.7121(d)	12.1.5.	Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
6	45CSR34 40CFR §63.7121(b)	12.1.6.	You must report each instance in which you did not meet each operating limit, opacity limit, and VE limit in Tables 2 and 6 of 40 C.F.R. Part 63 Subpart AAAAAA that applies to you. This includes periods of startup, shutdown, and malfunction. These instances are deviations from the emission limitations in this subpart. These deviations must be reported according to the requirements in 40 C.F.R. § 63.7131 incorporated herein as Section 12.5.2.
7	45CSR34 40CFR §63.6(e)(1)(i)	12.1.7.	At all times, including periods of startup, shutdown, and malfunction, the owner or operator must 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. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in 40 C.F.R. § 63.6 (e) (3), review of operation and maintenance records, and inspection of the source.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
8	45CSR34 40CFR §63.6(e)(3)(viii)	12.1.8.	The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part, 40CFR63, or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by §63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.
9	45CSR34 40CFR §63.7140	12.1.9.	The permittee shall comply with the General Provisions of 40 C.F.R. § 63.1 through § 63.15 that apply in accordance with Table 8 of 40 C.F.R. Part 63 Subpart AAAAA. When there is overlap between 40 C.F.R. Part 63 Subpart A and 40 C.F.R. Part 63 Subpart AAAAA, as indicated in the Explanations” column in Table 8, 40 C.F.R. Part 63 Subpart AAAAA takes precedence.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	45CSR34 40CFR §63.7113(a) and (g) 40CFR§63.7121(a), Table 5, Item 4	12.2.1.	The permittee must install, operate, and maintain each continuous opacity monitoring system (COMS) in accordance with the following: For each COMS used to monitor an add-on air pollution control device, you must install the COMS at the outlet of the control device and install, maintain, calibrate, and operate the COMS as required by 40 C.F.R. Part 63 Subpart A, General Provisions and according to 40 C.F.R. Part 60 Appendix B, Performance Specifications (PS)-1. Facilities that operate COMS installed before February 6, 2001, may continue to meet the requirements in effect at the time of COMS installation unless specifically required to recertify the COMS by their permitting authority. Continuous compliance shall be established by collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.
2	45CSR34 40CFR §63.7113(f)	12.2.2.	For each emission unit equipped with an add-on air pollution control device you must inspect each capture/collection and closed vent system at least once each calendar year to ensure each system is operating in accordance with the operating requirements of 40 C.F.R. Part 63 Subpart AAAAA, Table 2 Item 6, incorporated herein as Section 12.1.3 (c), and record the results of each inspection.
3	45CSR34 40CFR §63.7120(b)	12.2.3.	Except for monitor malfunctions, associated repairs, required quality assurance or control activities (including, as applicable, calibration checks and required zero adjustments), and except for PSH operations subject to monthly VE testing, you must monitor continuously (or collect data at all required intervals) at all times that the emission unit is operating.
4	45CSR34 40CFR §63.7120(c)	12.2.4.	Data recorded during the conditions described in 40 C.F.R. §§ 63.7120 (c) (1) through (3) [Section 12.2.4.] may not be used either in data averages or calculations of emission or operating limits; or in fulfilling a minimum data availability requirement. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. a. Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments; b. Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and c. Start-ups, shutdowns, and malfunctions.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
5	40CFR§63.7121(a) and Table 6 of 40CFR Part 63, Subpart AAAAA	12.2.5.	Ongoing compliance with the fugitive opacity requirements referenced in Section 12.1.2 shall be demonstrated by conducting monthly visual emission checks for at least 1 minute per each emission unit while the affected source is in operation in accordance with 40 C.F.R. § 63.7121 (e), which is stated as follows: (a) For each PSH operation subject to an opacity limit as specified in 40 C.F.R. Part 63 Subpart AAAAA, Table 1, and any vents from buildings subject to an opacity limit, you must conduct a VE check according to item 1 in 40 C.F.R. Part 63 Subpart AAAAA, Table 6, and as follows: (1) Conduct visual inspections that consist of a visual survey of each stack or process emission point over the test period to identify if there are VE, other than condensed water vapor. (2) Select a position at least 15 but not more 1,320 feet from the affected emission point with the sun or other light source generally at your back. (3) The observer conducting the VE checks need not be certified to conduct 40 C.F.R. Part 60 Appendix A, Method 9, but must meet the training requirements as described in 40 C.F.R. Part 60 Appendix A, Method 22. b. Additionally, 40 C.F.R. Part 63 Subpart AAAAA, Table 6, items 1 (a) (ii), (iii), and (iv) allows a tiered monitoring frequency to be utilized in accordance with the following criteria: (1) If no VE are observed in 6 consecutive monthly checks for any emission unit, you may decrease the frequency of VE checking from monthly to semi-annually for that emission unit; if VE are observed during any semiannual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; (2) If no VE are observed during the semiannual check for any emission unit you may decrease the frequency of VE checking from semi-annually to annually for that emission unit; if VE are observed during any annual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and (3) If VE are observed during any VE check, you must conduct a 6-minute test of opacity in accordance with 40 C.F.R. Part 60 Appendix A, Method 9; you must begin the method 9 test within 1 hour of any observation of VE and the 6-minute opacity reading must not exceed the applicable opacity limit.
6	45CSR34 40CFR §63.7111	12.3.1.	The permittee shall conduct a subsequent performance test for sources defined in 40 C.F.R. Part 63 Subpart AAAAA, Table 4, which is currently PM and fugitive opacity testing, within 5 years following the initial performance test, conducted October 25, 2006 and within 5 years following each subsequent performance test thereafter.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
7	45CSR34 40CFR §63.7132(a)	12.4.1.	You must keep the records specified in 40 C.F.R. §§ 63.7132 (a) (1) through (3) [Section 12.4.1 (a)]. a. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in 40 C.F.R. § 63.10 (b) (2) (xiv). b. The records in 40 C.F.R. §§ 63.6 (e) (3) (iii) through (v) related to startup, shutdown, and malfunction. c. Records of performance tests, performance evaluations, and opacity and VE observations as required in 40 C.F.R. § 63.10 (b) (2) (viii).
8	45CSR34 40CFR §63.7132(b)	12.4.2.	You must keep the records in 40 CFR § 63.6(h)(6) for VE observations. Compliance with this condition shall be satisfied by documenting the VE monitoring required by Section 12.2.5.
9	45CSR34 40CFR §63.7132(c)	12.4.3.	You must keep the records required by 40 C.F.R. Part 63 Subpart AAAAA, Tables 5 and 6 incorporated as Sections 12.2.1, 12.2.2, and 12.2.5, to show continuous compliance with each emission limitation that applies to you.
10	45CSR34 40CFR §63.7133(a)	12.4.4.	Your records must be in a form suitable and readily available for expeditious review, according to 40 CFR §63.10(b)(1).
11	45CSR34 40CFR §63.7133(b)	12.4.5.	As specified in 40 CFR §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
12	45CSR34 40CFR §63.7133(c)	12.4.6.	You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR §63.10(b)(1). You may keep the records offsite for the remaining 3 years.
13	45CSR34, 40CFR§63.7130(d)	12.5.1.	When conducting performance test, such as those incorporated by 12.3.1, the permittee shall submit a notification of intent to conduct a such testing at least 60 calendar days before the performance test is scheduled to begin, as required in 40CFR§63.7(b)(1).
14	45CSR34 40CFR §63.7131(a) and (b) 40CFR Part 63, Subpart AAAAA, Table 7	12.5.2.	The permittee shall submit each report listed in 40 C.F.R. Part 63 Subpart AAAAA, Table 7 as applicable. See 40CFR Part 63, Subpart AAAAA, Table 7 for specifics.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
15	45CSR34 40CFR §63.7131(c)	12.5.3.	Each semiannual compliance report must contain the information specified by 40 C.F.R. §§63.7131(c)(1) through (6). a. Company name and address. b. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. c. Date of report and beginning and ending dates of the reporting period. d. If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in §63.10(d)(5)(i). e. If there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that apply to you, the compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. f. If there were no periods during which the continuous monitoring systems (CMS) were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS were out-of-control during the reporting period.
16	45CSR34 40CFR §63.7131(d)	12.5.4.	For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information specified in 40 CFR §§ 63.7131(c)(1) through (4) and 40 CFR §§ 63.7131(d)(1) and (2). The deviations must be reported in accordance with the requirements in 40 CFR § 63.10(d). a. The total operating time of each emission unit during the reporting period. b. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
17	45CSR34 40CFR §63.7131(e)	12.5.5.	For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) occurring at an affected source where you are using a CMS to comply with the emission limitation in this subpart, you must include the information specified in 40 CFR §§ 63.7131(c)(1) through (4) and 40 CFR §§ 63.7131(e)(1) through (11). This includes periods of startup, shutdown, and malfunction. a. The date and time that each malfunction started and stopped. b. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks. c. The date, time and duration that each CMS was out-of-control, including the information in 40 CFR § 63.8(c)(8). d. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period. e. A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total affected source operating time during that reporting period. f. A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes. g. A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total emission unit operating time during that reporting period. h. A brief description of the process units. i. A brief description of the CMS. j. The date of the latest CMS certification or audit. k. A description of any changes in CMS, processes, or controls since the last reporting period.
18	45CSR34 40CFR §63.7131(f)	12.5.6.	Each facility that has obtained a title V operating permit pursuant to 40 C.F.R. Part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report 40 C.F.R. §§ 70.6 (a) (3) (iii) (A) or 71.6 (a) (3) (iii) (A). If you submit a compliance report specified in 40 C.F.R. Part 63 Subpart AAAAA, Table 7 along with, or as part of, the semiannual monitoring report required by 40 C.F.R. §§ 70.6 (a) (3) (iii) (A) or 71.6 (a) (3) (iii) (A), and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation you may have to report deviations from permit requirements to the permit authority.
On June 28, 2024, the USEPA issued final rule amendments to the NESHAP for Lime Manufacturing Plants under the Clean Air Act. This action finalizes MACT standards for four air toxics or hazardous air pollutants that include hydrogen chloride, mercury, organic hazardous air pollutants and dioxin/furans. As an existing source, Greer Lime Company must meet the new standards by June 28, 2027.			

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 005

Emission unit ID number:
4-BC-5, 4-TC-2, 4-SC-9, 4-SC-10,
4-BEL-2, 4-SC-5, 4-SC-6, 4-SC-7,
4-SC-8, 4-LS-1, 4-VF-5, 4-VF-6, 4-
VF-7, 4-VF-8, 4-BL-6

Emission unit name:
Group 005 Conveying and
Transfer

**List any control devices associated
with this emission unit.**
See Attachment D for Individual
Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Various conveying and transfer associated with 500 TPD kiln operations using belt conveyors (BC), transfer chute (TC), vibrating feeders (VF), radial airlocks (RA), screw conveyors (SC), a bucket elevator (BEL), and a retractable loading chute.

Manufacturer:
See Attachment D

Model number:
See Attachment D

Serial number:
See Attachment D

Construction date:
See Attachment D

Installation date:
See Attachment D

Modification date(s):
See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

See Attachment D

Maximum Hourly Throughput:
See Attachment D

Maximum Annual Throughput:
See Attachment D

Maximum Operating Schedule:
8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes XNo

If yes, is it?

___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating:

N/A

Type and Btu/hr rating of burners:

N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	8.62/2.60	11.541/5.921
Total Particulate Matter (TSP)	16.95	20.351
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are particulate matter totals only for the entire Group 005. There is a slight increase in emissions due to the installation of the DSI control system approved by R13-1381B.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E73.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E73.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 005

Emission unit ID number:
4-STB-2, 4-SI-2, 500-BOB, 4-SI-4

Emission unit name:
Group 005 Storage

List any control devices associated with this emission unit.
See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Various storage associated with 500 TPD kiln operations in a stone bin (STB), a silo (SI) and a blow-off bin (BOB).

Manufacturer:
See Attachment D

Model number:
See Attachment D

Serial number:
See Attachment D

Construction date:
See Attachment D

Installation date:
See Attachment D

Modification date(s):
See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
See Attachment D

Maximum Hourly Throughput:
See Attachment D

Maximum Annual Throughput:
See Attachment D

Maximum Operating Schedule:
8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes X No

If yes, is it?
___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating:
N/A

Type and Btu/hr rating of burners:
N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	8.62/2.60	11.541/5.921
Total Particulate Matter (TSP)	16.95	20.351
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are particulate matter totals only for the entire Group 005. There is a slight increase in emissions due to the installation of the DSI control system approved by R13-1381B.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E73.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E73.

Are you in compliance with all applicable requirements for this emission unit? X Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 005

Emission unit ID number: 4-PH-2, 4-RK-2, 4-NC-2	Emission unit name: Group 005 Pre-Heater, 500 TPD Lime Kiln and Lime Cooler	List any control devices associated with this emission unit. 4-DC-2, 6-DC-4, 4-PC-2

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Pre-heater (PH), 500 TPD Rotary Lime Kiln (RK) and NIEMS Lime Cooler (NC) associated with 500 TPD kiln operations.

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ☒ Yes ☐ No	If yes, is it? ☐ Indirect Fired ☒ Direct Fired

Maximum design heat input and/or maximum horsepower rating: 89 MMBtu/hour	Type and Btu/hr rating of burners: NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Coal, 3.5 tph, and 27,720 tpy

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Coal	1.1 %	10%	12,500 – 14,500
No. 2 Fuel Oil (Startup Fuel Only)	0.05%	NA	138,000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	21	83.2
Nitrogen Oxides (NO _x)	42	166
Lead (Pb)	2.39E-05	0.0001
Particulate Matter (PM ₁₀ /PM _{2.5})	2.30/1.10	8.91/4.40
Total Particulate Matter (TSP)	4.1	16.2
Sulfur Dioxide (SO ₂)	12.08	47.8
Volatile Organic Compounds (VOC)	5	19.8
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAPs*	6.31	25.01
* For speciated HAPs see Appendix 1.		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO ₂ e	NA	78,647.84
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). PM and NO _x emission factors were calculated from February 25, 1991 stack test. SO ₂ emission factor is the manufacturer's guarantee of performance. CO emission factor calculated from a December 16, 1994 stack test. VOC emission factor is the manufacturer's guarantee of performance. HAP emission factors are based upon source specific stack testing conducted during September, 2023, with the exception of the lead emission factor which was provided by the National Lime Association.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E73.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E73.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 005

Emission unit ID number: 5-BC-4, 5-SI-3, 5-WF-2, 5-BM-2, 5-AS-2	Emission unit name: Group 005 Coal Circuit	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Coal system for feed, sizing, and separating the coal to be fed to the kiln for combustion.

Manufacturer:

N/A

Model number:

N/A

Serial number:

N/A

Construction date:

Various - see Attachment D

Installation date:

Various - See Attachment D

Modification date(s):

Various - see Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

N/A

Maximum Hourly Throughput:

See Attachment D.

Maximum Annual Throughput:

See Attachment D.

Maximum Operating Schedule:

7,920 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes X No

If yes, is it?

___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating:

N/A

Type and Btu/hr rating of burners:

N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	8.62/2.60	11.541/5.921
Total Particulate Matter (TSP)	16.95	20.351
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are particulate matter totals only for the entire Group 005. There is a slight increase in emissions due to the installation of the DSI control system approved by R13-1381B.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E73.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E73.

Are you in compliance with all applicable requirements for this emission unit? X Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment E Group 005

Applicable Requirements

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement																		
1	45CSR16 40CFR §60.342(a)(1) 45CSR13, R13-1381B, 4.1.8.	7.1.1.	Total particulate emissions to the atmosphere from emission point 500-115 [4-DS-1], the 500 TPD lime kiln (500-105) [4-RK-2] baghouse [4-DC-2], shall not exceed the more stringent of limitation of either 0.6 pounds particulate matter per ton of limestone feed according to 40 C.F.R. 60 Subpart HH, "Standards of Performance for Lime Manufacturing Plants," or that particulate matter emission limitation in Section 7.1.3. On and after the date on which the performance test required to be conducted by 40 C.F.R. § 60.8 is completed, no owner or operator subject to the provisions of 40 C.F.R. Part 60 Subpart HH, shall cause to be discharged into the atmosphere from any rotary lime kiln any gases which: a.Contain particulate matter in excess of 0.30 kilogram per megagram (0.60 lb/ton) of stone feed. b.Exhibit greater than 15 percent opacity when exiting from a dry emission control device. Compliance with Section 7.1.1.a. is streamlined by demonstrating compliance with 40 C.F.R. Part 63 Subpart AAAAA [0.12 lb/ton stone feed (tsf)] incorporated within Section 12.1.1.																		
2	45CSR13, R13-1381B, 4.1.4.	7.1.2.	Bituminous coal as fired in the rotary lime kiln, 4-RK-2, shall not exceed 1.1% sulfur by weight and 10% by weight in ash content.																		
3	45CSR13, R13-1381B, 4.1.9.	7.1.3.	Emissions to the atmosphere from the emission point 500-115 [vent stack (4-DS-1)], the 500 TPD lime kiln (500-105) baghouse (500-110 [4-DC-2]), shall not exceed the following maximum rates. <table><tr><th>Pollutant</th><th>lb/hr</th><th>TPY</th></tr><tr><td>Particulate Matter</td><td>4.1</td><td>16.2</td></tr><tr><td>Sulfur Dioxide</td><td>12.08</td><td>47.8</td></tr><tr><td>Nitrogen Oxides</td><td>42</td><td>166</td></tr><tr><td>Carbon Monoxide</td><td>21</td><td>83.2</td></tr><tr><td>Non-Methane Hydrocarbons</td><td>5</td><td>19.8</td></tr></table>	Pollutant	lb/hr	TPY	Particulate Matter	4.1	16.2	Sulfur Dioxide	12.08	47.8	Nitrogen Oxides	42	166	Carbon Monoxide	21	83.2	Non-Methane Hydrocarbons	5	19.8
Pollutant	lb/hr	TPY																			
Particulate Matter	4.1	16.2																			
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Nitrogen Oxides	42	166																			
Carbon Monoxide	21	83.2																			
Non-Methane Hydrocarbons	5	19.8																			
4	45CSR13, R13-1381B, 4.1.10.	7.1.4.	The maximum throughputs associated with lime kiln 500-105 shall not exceed. <table><tr><td>Substance</td><td>TPH</td><td>TPD</td><td>TPY</td></tr><tr><td>Limestone Feed</td><td>38.62</td><td>926.88</td><td>305,870</td></tr><tr><td>Bituminous Coal Burned</td><td>3.5</td><td>84</td><td>27,720</td></tr><tr><td>Lime Product</td><td>20.8</td><td>500</td><td>165,000</td></tr></table>	Substance	TPH	TPD	TPY	Limestone Feed	38.62	926.88	305,870	Bituminous Coal Burned	3.5	84	27,720	Lime Product	20.8	500	165,000		
Substance	TPH	TPD	TPY																		
Limestone Feed	38.62	926.88	305,870																		
Bituminous Coal Burned	3.5	84	27,720																		
Lime Product	20.8	500	165,000																		
5	45CSR13, R13-1381B, 4.1.10.	7.1.5.	The bituminous coal fuel stockpile, common to both lime kilns (4-RK-1) and (4-RK-2), shall not exceed 5,000 tons at any given time.																		
6	45CSR13, R13-1381B, 4.1.11.	7.1.6.	The limestone feed stockpile (4-OS-1) common to both lime kilns (4-RK-2) and (4-RK-1), shall not exceed 6,000 tons at any given time.																		
7	45CSR13, R13-1381B, 4.1.12.	7.1.7.	Dust Collector (4-DC-2) controls shall include equipment to monitor and maintain a negative pressure drop of 16 inches of water across the baghouse.																		

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement												
8	45CSR13, R13-1381B, 4.1.13.	7.1.8.	The following equipment shall vent to baghouse 500-119 (4-DC-3). <table><tr><th>Identification Number</th><th>Equipment Description</th></tr><tr><td>4-SI-2</td><td>Baghouse Dust Bin</td></tr><tr><td>4-SC-7</td><td>Dust Screw Conveyor #1</td></tr><tr><td>4-SC-8</td><td>Dust Screw Conveyor #2</td></tr><tr><td>4-BEL-2</td><td>Dust Bucket Elevator</td></tr><tr><td>4-LS-1</td><td>Dust Truck Loading Spout</td></tr></table>	Identification Number	Equipment Description	4-SI-2	Baghouse Dust Bin	4-SC-7	Dust Screw Conveyor #1	4-SC-8	Dust Screw Conveyor #2	4-BEL-2	Dust Bucket Elevator	4-LS-1	Dust Truck Loading Spout
Identification Number	Equipment Description														
4-SI-2	Baghouse Dust Bin														
4-SC-7	Dust Screw Conveyor #1														
4-SC-8	Dust Screw Conveyor #2														
4-BEL-2	Dust Bucket Elevator														
4-LS-1	Dust Truck Loading Spout														
9	45CSR13, R13-1381B, 4.1.14.	7.1.9.	Maximum particulate emissions from baghouse (4-DC-3) emission point 500-119b shall not exceed 0.273 lb/hr.												
10	45CSR13, R13-1381B, 4.1.15.	7.1.10.	Side of baghouse (4-DC-3) emission point 500-119b shall be equipped in such a manner as to discharge emissions vertically into the atmosphere.												
11	45CSR13, R13-1381B, 4.1.16.	7.1.11.	The following equipment shall vent to baghouse (6-DC-4). <table><tr><th>Identification Number</th><th>Equipment Description</th></tr><tr><td>6-BC-15</td><td>Product Conveyor #1</td></tr><tr><td>6-BC-16</td><td>Product Conveyor #2</td></tr><tr><td>6-BC-4</td><td>Product Conveyor #3</td></tr></table>	Identification Number	Equipment Description	6-BC-15	Product Conveyor #1	6-BC-16	Product Conveyor #2	6-BC-4	Product Conveyor #3				
Identification Number	Equipment Description														
6-BC-15	Product Conveyor #1														
6-BC-16	Product Conveyor #2														
6-BC-4	Product Conveyor #3														
12	45CSR13, R13-1381B, 4.1.17.	7.1.12.	Maximum particulate emissions from baghouse (6-DC-4) emission point 500-P1 shall not exceed 1.89 lb/hr.												
13	45CSR13, R13-1381B, 4.1.18.	7.1.13	Side of baghouse (6-DC-4) emission point 500-P1 shall be equipped in such a manner as to discharge emissions vertically into the atmosphere.												
14	45CSR13, R13-2113K, 4.1.4.	7.1.14.	The maximum processing rate of material to or from the Blow Off Bin (500-BOB) shall not exceed 20 TPH and 3,000 TPY.												
15	45CSR §10-4.1. 45CSR13, R13-1381B, 4.1.5.	7.1.15.	No person shall cause, suffer, allow, or permit the emission into open air from any source operation an in-stack sulfur dioxide concentration exceeding 2000 ppm by volume from existing source operations, except as provided in subdivisions of 45CSR§10-4.1.												
16	45CSR §10-3.7.	7.1.16.	No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device. Compliance with this streamlined opacity limit assures compliance with 40 C.F.R. 60 Subpart OOO.												
17	45CSR §10-4.1. 45CSR13, R13-1381B, 4.1.19.	7.1.17.	PM/PM2.5 emissions from Hydrated Lime Silo (4-SI-4) shall not exceed 0.03 pounds per hour. PM/PM2.5 emissions of from both Hydrated Lime Silos (4-SI-3 and 4-SI-4) combined shall not exceed 0.01 tons per year. <i>(Compliance with this streamlined PM lb/hr limit assures compliance with 45CSR§7-4.1)</i>												
18	45CSR13, R13-1381B, 4.1.20.	7.1.18.	Maximum loading of hydrated lime to the Hydrated Lime Silo (4-SI-4) shall not exceed 2,000 tons per year. Compliance with said limit shall be based on a 12 month rolling total.												
19	None	7.1.19.	Refer to 6.1.10 – 6.1.14 for 45CSR10 sulfur dioxide monitoring requirements, which also pertain to the 500 TPD kiln. Note: See pp E38-E60 for referenced sections.												

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
20	45CSR13, R13-1381B, 4.1.21.	7.1.20.	The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Group 005 of Section 1.1. and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting															
1	45CSR16 40CFR §60.343(a) 45CSR13, R13-1381B, 4.2.1.	7.2.1.	The owner or operator of a facility that is subject to the provisions of this 40 C.F.R. Part 60, Subpart HH, shall install, calibrate, maintain, and operate a continuous monitoring system (4-OM-1), except as provided in 40 C.F.R. §§ 60.343 (b) and (c), to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from any rotary lime kiln. The span of this system shall be set at 40 percent opacity.															
2	None	7.2.2.	See Section 6.2.2. for 40 C.F.R. Part 60, Subpart HH, operating requirements for devices measuring mass rate of stone feed.															
3	None	7.2.3.	See Section 6.2.3. for the 500 TPD Rotary Lime Kiln, (4-RK-2), 45CSR10 stack monitoring provisions.															
4	None	7.3.1.	See Section 3.3.4 through 3.3.9 for NSPS testing requirements. NOTE: See Attachment E pp 13-22 for the above referenced sections.															
5	None	7.3.2.	See Sections 6.3.2 and 6.3.3 for 40CFR Part 60 Subpart HH testing requirements. Note: See pp E38-E60 for referenced sections.															
6	None	7.3.3.	See Sections 6.3.1. for 45CSR10 SO2 testing requirements. Note: See pp E38-E60 for referenced sections.															
7	45CSR §30-5.1.c.	7.3.4.	The permittee shall conduct tests to determine compliance with the nitrogen oxides (NO_x) and carbon monoxide (CO) emission limitations in Section 7.1.3 for the one (1) vent stack (4-DC-2). The Methods listed below from 40 C.F.R. Part 60 Appendix A shall be utilized for purposes of conducting performance tests, unless the Director approves an alternate or equivalent method. Requirements shall be met with respect to submission of a test protocol and notification of testing. <table><tr><td>Pollutant</td><td>Method</td></tr><tr><td>Carbon Monoxide</td><td>10</td></tr><tr><td>Nitrogen Oxides</td><td>7</td></tr></table> Tests for nitrogen oxides (NO_x) were conducted in October of 2005 and in October of 2008 and resulted in mass emission rates between 50% and 90 % for each test. The results of those tests showed that the current nitrogen oxides (NO_x) testing frequency is “Once/ 3 years.” A test for carbon monoxide (CO) was conducted in October of 2005 and resulted in mass emission rates #50%. The results of this test showed that the current carbon monoxide (CO) testing frequency is “Once/5 years.” Subsequent testing to determine compliance with the nitrogen oxides (NO_x) and carbon monoxide (CO) limitations of Section 6.1.2 shall be conducted in accordance with the schedule set forth in the following table. <table><tr><th>Test</th><th>Test Results</th><th>Testing Frequency</th></tr><tr><td>Annual</td><td>If annual testing is required, after two successive tests indicate mass emission rates between 50% and 90 % of nitrogen oxides (NO_x) or carbon monoxide (CO) limit</td><td>Once/3 years</td></tr><tr><td>Annual</td><td>If annual testing is required, after three successive tests indicate mass emission rates #50% of nitrogen oxides (NO_x) or carbon monoxide (CO) limit</td><td>Once/5 years</td></tr></table>	Pollutant	Method	Carbon Monoxide	10	Nitrogen Oxides	7	Test	Test Results	Testing Frequency	Annual	If annual testing is required, after two successive tests indicate mass emission rates between 50% and 90 % of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/3 years	Annual	If annual testing is required, after three successive tests indicate mass emission rates #50% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/5 years
Pollutant	Method																	
Carbon Monoxide	10																	
Nitrogen Oxides	7																	
Test	Test Results	Testing Frequency																
Annual	If annual testing is required, after two successive tests indicate mass emission rates between 50% and 90 % of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/3 years																
Annual	If annual testing is required, after three successive tests indicate mass emission rates #50% of nitrogen oxides (NO _x) or carbon monoxide (CO) limit	Once/5 years																

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting		
			Once/3 years	If testing is required once/3 years, after two successive tests indicate mass emission rates 50% of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Once/5 years
			Once/3 years	If testing is required once/3 years and any test indicates a mass emission rate $\geq$ 90% of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Annual
			Once/5 years	If testing is required once /5 years and any test indicates mass emission rates between 50% and 90 % of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Once/3 years
			Once/5 years	If testing is required once/5 years and any test indicates a mass emission rate $\geq$ 90% of nitrogen oxides (NOx) or carbon monoxide (CO) limit	Annual
8	45CSR §30-5.1.c. 45CSR§ 30-5.1.c.2.B. 45CSR13, R13-1381B, 4.4.4.	7.4.1	For the purpose of determining compliance with Sections 7.1.1 through 7.1.6, the company shall maintain certified monthly and annual records on the following for the 500 TPD Rotary Lime Kilns. Such records shall be retained by the permittee for at least five (5) years. Certified records shall be made available to the Director or the duly authorized representative upon request. a. daily usage of the amount of coal purchased to determine the monthly usage and the twelve- (12) monthly rolling total b. sulfur content on a weight basis of the coal purchased c. ash content on a weight basis of the coal purchased d. the approximate heating value of the coal purchased e. limestone feed rates to determine the monthly usage and the twelve- (12) monthly rolling total f. lime production to determine the monthly usage and the twelve- (12) monthly rolling total		
9	45CSR13, R13-2113K, 4.4.4. 3.4.2. 45CSR §30-5.1.c.2.B.	7.4.2.	For the purpose of determining compliance with the maximum processing limits set forth in Section 7.1.14, the company shall maintain certified monthly and annual records of blow off processing rates from the Blow Off Bin. An example data form is given in Appendix A of R13-2113. Such records shall be maintained in accordance with Section 3.4.2. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.		
10	None	7.4.3.	See Section 6.4.3. for 45CSR10 SO ₂ recordkeeping requirements. Note: See pp E38-E60 for referenced sections.		
11	45CSR13, R13-1381B, 4.4.2.	7.4.4.	For all pollution control equipment listed in Group 005 of Section 1.1., the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.		
12	45CSR13, R13-1381B, 4.4.3.	7.4.5.	For all air pollution control equipment listed in Group 005 of Section 1.1., the permittee shall maintain records of the occurrence		

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
			and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded: a. The equipment involved. b. Steps taken to minimize emissions during the event. c. The duration of the event. d. The estimated increase in emissions during the event. For each such case associated with an equipment malfunction, the additional information shall also be recorded: e. The cause of the malfunction. f. Steps taken to correct the malfunction. g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
13	45CSR13, R13-1381B, 4.4.7.	7.4.6.	In order to determine compliance with 7.1.18., the permittee shall maintain records of the amount of hydrated lime loaded to each silo on a monthly basis.
14	45CSR16, 40CFR60.343(e)	7.5.1.	For the purpose of reports required under 40 C.F.R. §60.7(c), periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity of the visible emissions from any lime kiln in Section 7.1.1 [40 C.F.R. §60.342(a)] is greater than 15 percent.

Attachment E Groups 004 and 005

Applicable Requirements (NESHAPS MACT AAAAA)

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
1	45CSR34 40CFR§63.7090(a), Table 1-#1	12.1.1.	Lime kilns 4-RK-1, 4-RK-2 and their associated lime coolers shall limit PM emissions not to exceed 0.12 pounds per ton of stone feed (lb/tsf).
2	45CSR34 40CFR§63.7090(a), Table 1-#7	12.1.2.	Fugitive emissions from all process stone handling (PSH) operations must not exceed 10 percent opacity.
3	45CSR34 40CFR §63.7090(b), Table 2-#1 40CFR §63.7090(b), Table 2-#5 40CFR §63.7100(d) 40CFR §63.7090(b), Table 2-#6	12.1.3.	The permittee shall meet the following operating limits from Table 2 of 40 C.F.R. Part 63 Subpart AAAAA: a.Each lime kiln equipped with a fabric filter (FF) shall maintain a 6-minute average opacity for any 6-minute block period that does not exceed 15% percent; and comply with the requirements in 40 C.F.R. §§ 63.7113 (f) and (g) and Table 5 of 40 C.F.R. Part 63 Subpart AAAAA. The referenced requirements are incorporated Sections 12.2.1 and 12.2.2. b.The permittee shall prepare and implement for each lime manufacturing plant (LMP) a written operations, maintenance, and monitoring (OM&M) plan in accordance with 40 C.F.R. § 63.7100 (d). This plan has been approved and is provided for reference as Appendix B. Any subsequent changes to the plan must be submitted to the applicable permitting authority, WVDEP Division of Air Quality, for review and approval. Pending approval of an initial or amended plan, the permittee must comply with the provisions of the submitted plan. Each plan must contain the information listed in 40 C.F.R. §§ 63.7100 (d) (1) through (7). c.Each emission unit equipped with an add-on air pollution control device shall vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter (FF); and operate each capture/collection system in accordance with the procedures and requirements defined in the OM&M plan required by Section 12.1.3. (b).
4	45CSR34 40CFR §63.7100(e)	12.1.4.	The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3). This SSM plan is provided for reference as Appendix C.
5	45CSR34 40CFR §63.7121(d)	12.1.5.	Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
6	45CSR34 40CFR §63.7121(b)	12.1.6.	You must report each instance in which you did not meet each operating limit, opacity limit, and VE limit in Tables 2 and 6 of 40 C.F.R. Part 63 Subpart AAAAAA that applies to you. This includes periods of startup, shutdown, and malfunction. These instances are deviations from the emission limitations in this subpart. These deviations must be reported according to the requirements in 40 C.F.R. § 63.7131 incorporated herein as Section 12.5.2.
7	45CSR34 40CFR §63.6(e)(1)(i)	12.1.7.	At all times, including periods of startup, shutdown, and malfunction, the owner or operator must 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. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in 40 C.F.R. § 63.6 (e) (3), review of operation and maintenance records, and inspection of the source.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
8	45CSR34 40CFR §63.6(e)(3)(viii)	12.1.8.	The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part, 40CFR63, or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by §63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.
9	45CSR34 40CFR §63.7140	12.1.9.	The permittee shall comply with the General Provisions of 40 C.F.R. § 63.1 through § 63.15 that apply in accordance with Table 8 of 40 C.F.R. Part 63 Subpart AAAAA. When there is overlap between 40 C.F.R. Part 63 Subpart A and 40 C.F.R. Part 63 Subpart AAAAA, as indicated in the Explanations” column in Table 8, 40 C.F.R. Part 63 Subpart AAAAA takes precedence.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	45CSR34 40CFR §63.7113(a) and (g) 40CFR§63.7121(a), Table 5, Item 4	12.2.1.	The permittee must install, operate, and maintain each continuous opacity monitoring system (COMS) in accordance with the following: For each COMS used to monitor an add-on air pollution control device, you must install the COMS at the outlet of the control device and install, maintain, calibrate, and operate the COMS as required by 40 C.F.R. Part 63 Subpart A, General Provisions and according to 40 C.F.R. Part 60 Appendix B, Performance Specifications (PS)-1. Facilities that operate COMS installed before February 6, 2001, may continue to meet the requirements in effect at the time of COMS installation unless specifically required to recertify the COMS by their permitting authority. Continuous compliance shall be established by collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.
2	45CSR34 40CFR §63.7113(f)	12.2.2.	For each emission unit equipped with an add-on air pollution control device you must inspect each capture/collection and closed vent system at least once each calendar year to ensure each system is operating in accordance with the operating requirements of 40 C.F.R. Part 63 Subpart AAAAA, Table 2 Item 6, incorporated herein as Section 12.1.3 (c), and record the results of each inspection.
3	45CSR34 40CFR §63.7120(b)	12.2.3.	Except for monitor malfunctions, associated repairs, required quality assurance or control activities (including, as applicable, calibration checks and required zero adjustments), and except for PSH operations subject to monthly VE testing, you must monitor continuously (or collect data at all required intervals) at all times that the emission unit is operating.
4	45CSR34 40CFR §63.7120(c)	12.2.4.	Data recorded during the conditions described in 40 C.F.R. §§ 63.7120 (c) (1) through (3) [Section 12.2.4.] may not be used either in data averages or calculations of emission or operating limits; or in fulfilling a minimum data availability requirement. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. a. Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments; b. Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and c. Start-ups, shutdowns, and malfunctions.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
5	40CFR§63.7121(a) and Table 6 of 40CFR Part 63, Subpart AAAAA	12.2.5.	Ongoing compliance with the fugitive opacity requirements referenced in Section 12.1.2 shall be demonstrated by conducting monthly visual emission checks for at least 1 minute per each emission unit while the affected source is in operation in accordance with 40 C.F.R. § 63.7121 (e), which is stated as follows: (a) For each PSH operation subject to an opacity limit as specified in 40 C.F.R. Part 63 Subpart AAAAA, Table 1, and any vents from buildings subject to an opacity limit, you must conduct a VE check according to item 1 in 40 C.F.R. Part 63 Subpart AAAAA, Table 6, and as follows: (1) Conduct visual inspections that consist of a visual survey of each stack or process emission point over the test period to identify if there are VE, other than condensed water vapor. (2) Select a position at least 15 but not more 1,320 feet from the affected emission point with the sun or other light source generally at your back. (3) The observer conducting the VE checks need not be certified to conduct 40 C.F.R. Part 60 Appendix A, Method 9, but must meet the training requirements as described in 40 C.F.R. Part 60 Appendix A, Method 22. b. Additionally, 40 C.F.R. Part 63 Subpart AAAAA, Table 6, items 1 (a) (ii), (iii), and (iv) allows a tiered monitoring frequency to be utilized in accordance with the following criteria: (1) If no VE are observed in 6 consecutive monthly checks for any emission unit, you may decrease the frequency of VE checking from monthly to semi-annually for that emission unit; if VE are observed during any semiannual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; (2) If no VE are observed during the semiannual check for any emission unit you may decrease the frequency of VE checking from semi-annually to annually for that emission unit; if VE are observed during any annual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and (3) If VE are observed during any VE check, you must conduct a 6-minute test of opacity in accordance with 40 C.F.R. Part 60 Appendix A, Method 9; you must begin the method 9 test within 1 hour of any observation of VE and the 6-minute opacity reading must not exceed the applicable opacity limit.
6	45CSR34 40CFR §63.7111	12.3.1.	The permittee shall conduct a subsequent performance test for sources defined in 40 C.F.R. Part 63 Subpart AAAAA, Table 4, which is currently PM and fugitive opacity testing, within 5 years following the initial performance test, conducted October 25, 2006 and within 5 years following each subsequent performance test thereafter.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
7	45CSR34 40CFR §63.7132(a)	12.4.1.	You must keep the records specified in 40 C.F.R. §§ 63.7132 (a) (1) through (3) [Section 12.4.1 (a)]. a. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in 40 C.F.R. § 63.10 (b) (2) (xiv). b. The records in 40 C.F.R. §§ 63.6 (e) (3) (iii) through (v) related to startup, shutdown, and malfunction. c. Records of performance tests, performance evaluations, and opacity and VE observations as required in 40 C.F.R. § 63.10 (b) (2) (viii).
8	45CSR34 40CFR §63.7132(b)	12.4.2.	You must keep the records in 40 CFR § 63.6(h)(6) for VE observations. Compliance with this condition shall be satisfied by documenting the VE monitoring required by Section 12.2.5.
9	45CSR34 40CFR §63.7132(c)	12.4.3.	You must keep the records required by 40 C.F.R. Part 63 Subpart AAAAA, Tables 5 and 6 incorporated as Sections 12.2.1, 12.2.2, and 12.2.5, to show continuous compliance with each emission limitation that applies to you.
10	45CSR34 40CFR §63.7133(a)	12.4.4.	Your records must be in a form suitable and readily available for expeditious review, according to 40 CFR §63.10(b)(1).
11	45CSR34 40CFR §63.7133(b)	12.4.5.	As specified in 40 CFR §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
12	45CSR34 40CFR §63.7133(c)	12.4.6.	You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR §63.10(b)(1). You may keep the records offsite for the remaining 3 years.
13	45CSR34, 40CFR§63.7130(d)	12.5.1.	When conducting performance test, such as those incorporated by 12.3.1, the permittee shall submit a notification of intent to conduct a such testing at least 60 calendar days before the performance test is scheduled to begin, as required in 40CFR§63.7(b)(1).
14	45CSR34 40CFR §63.7131(a) and (b) 40CFR Part 63, Subpart AAAAA, Table 7	12.5.2.	The permittee shall submit each report listed in 40 C.F.R. Part 63 Subpart AAAAA, Table 7 as applicable. See 40CFR Part 63, Subpart AAAAA, Table 7 for specifics.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
15	45CSR34 40CFR §63.7131(c)	12.5.3.	Each semiannual compliance report must contain the information specified by 40 C.F.R. §§63.7131(c)(1) through (6). a. Company name and address. b. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. c. Date of report and beginning and ending dates of the reporting period. d. If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in §63.10(d)(5)(i). e. If there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that apply to you, the compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. f. If there were no periods during which the continuous monitoring systems (CMS) were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS were out-of-control during the reporting period.
16	45CSR34 40CFR §63.7131(d)	12.5.4.	For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information specified in 40 CFR §§ 63.7131(c)(1) through (4) and 40 CFR §§ 63.7131(d)(1) and (2). The deviations must be reported in accordance with the requirements in 40 CFR § 63.10(d). a. The total operating time of each emission unit during the reporting period. b. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
17	45CSR34 40CFR §63.7131(e)	12.5.5.	For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) occurring at an affected source where you are using a CMS to comply with the emission limitation in this subpart, you must include the information specified in 40 CFR §§ 63.7131(c)(1) through (4) and 40 CFR §§ 63.7131(e)(1) through (11). This includes periods of startup, shutdown, and malfunction. a. The date and time that each malfunction started and stopped. b. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks. c. The date, time and duration that each CMS was out-of-control, including the information in 40 CFR § 63.8(c)(8). d. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period. e. A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total affected source operating time during that reporting period. f. A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes. g. A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total emission unit operating time during that reporting period. h. A brief description of the process units. i. A brief description of the CMS. j. The date of the latest CMS certification or audit. k. A description of any changes in CMS, processes, or controls since the last reporting period.
18	45CSR34 40CFR §63.7131(f)	12.5.6.	Each facility that has obtained a title V operating permit pursuant to 40 C.F.R. Part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report 40 C.F.R. §§ 70.6 (a) (3) (iii) (A) or 71.6 (a) (3) (iii) (A). If you submit a compliance report specified in 40 C.F.R. Part 63 Subpart AAAAA, Table 7 along with, or as part of, the semiannual monitoring report required by 40 C.F.R. §§ 70.6 (a) (3) (iii) (A) or 71.6 (a) (3) (iii) (A), and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation you may have to report deviations from permit requirements to the permit authority.
On June 28, 2024, the USEPA issued final rule amendments to the NESHAP for Lime Manufacturing Plants under the Clean Air Act. This action finalizes MACT standards for four air toxics or hazardous air pollutants that include hydrogen chloride, mercury, organic hazardous air pollutants and dioxin/furans. As an existing source, Greer Lime Company must meet the new standards by June 28, 2027.			

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 006

Emission unit ID number: 6-BC-1, 6-BC-2, 6-BEL-1, 6-BC-3, 6-SC-1, 6-SC-2, 6-SC-3, 6-SC-4B, 6-SC-4A, 6-SC-5, 6-BC-8, 6-BC-9, 6-BC-10, 7-WR-2, 6-SC-8, 6-SC-9, 6-LS-1, 6-BC-11, 6-BEL-5, 6-SC-6, 6-BC-13, 6-BC-14, 6-BC-15, 6-BC-16, 6-BC-4, 6-BC-5, 6-BEL-3, 6-BC-6, 6-BEL-4, 6-BC-7, 6-VF-1, 6-VF-2, 6-VF-3, 6-VF-4, 6-VF-5, 6- VF-6, 6-BEL-2, 6-SC-11	Emission unit name: Group 006 Conveying and Transfer	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various conveying and transfer associated with lime handling system using belt conveyors (BC), bucket elevators (BEL), screw conveyors (SC), vibrating feeders (VF), a wire conveyor (WR), loading spout (LS), and slide gates (SG).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	18.69/5.99	57.20/18.32
Total Particulate Matter (TSP)	39.43	120.55
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 006. These emissions have not changed since the last Title V renewal.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E105.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E105.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 006

Emission unit ID number: 6-CR-3, 6-CR-2	Emission unit name: Group 006 Crushing	List any control devices associated with this emission unit. 6-DC-1, 6-DC-2

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various crushing associated with lime handling operation using roll crushers (CR).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	18.69/5.99	57.20/18.32
Total Particulate Matter (TSP)	39.43	120.55
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 006. These emissions have not changed since the last Title V renewal.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E105.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E105.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 006

Emission unit ID number: 6-VS-4, 6-VS-3	Emission unit name: Group 006 Screening	List any control devices associated with this emission unit. 6-DC-3, 6-DC-2

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various screening associated with lime handling operations using a 5-deck vibrating screen (6-VS-4), and double-deck vibrating screen (6-VS-3).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	18.69/5.99	57.20/18.32
Total Particulate Matter (TSP)	39.43	120.55
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 006. These emissions have not changed since the last Title V renewal.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E105.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E105.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 006

Emission unit ID number: 6-SI-1, 6-SI-2, S-SI-3, 6-SI-4, 6-SI-5, 6-SI-6, 6-SI-7, 6-SI-8, 6-SI-9A, 6-BB-1, 6-SI-10, 6-SI-9B	Emission unit name: Group 006 Storage	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various storage associated with lime handling operations in silos (SI), a granulated lime bagging bin (6-BB-1).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	18.69/5.99	57.20/18.32
11.22	39.43	120.55
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 006. These emissions have not changed since the last Title V renewal.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E105.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E105.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 006

Emission unit ID number: 6-GB-1	Emission unit name: Group 006 Granular Bagger	List any control devices associated with this emission unit. FE + FE

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Granular bagger (GB) associated with lime handling operations.

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	18.69/5.99	57.20/18.32
Total Particulate Matter (TSP)	39.43	120.55
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 006. These emissions have not changed since the last Title V renewal.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E105.

 X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E105.

Are you in compliance with all applicable requirements for this emission unit? X Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 006

Emission unit ID number: 6-VS-5, 6-SC-10, 6-BL-1	Emission unit name: Group 006 Screen and Conveyors	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Single Deck Vibrating Screen (6-VS-5), screw conveyor (SC) and DensPhase pump system blower (BL) for pebble lime.

Manufacturer: 6-BL-1 - DensPhase™	Model number: NA	Serial number: NA

Construction date: 2006	Installation date: 2006	Modification date(s): NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 NA

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) Not Applicable

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	18.69/5.99	57.20/18.32
Total Particulate Matter (TSP)	39.43	120.55
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 006. These emissions have not changed since the last Title V renewal.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E105.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E105.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment E Group 006

Applicable Requirements

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
1	45CSR13, R13-2113K, 4.1.2.	8.1.1.	In the Lime Handling Area, the maximum processing rate of lime through the replacement Roll Crusher (6-CR-3) and the new Roll Crusher (6-CR-2) shall not exceed 50 TPH and 311,000 TPY.
2	45CSR §7-3.1 45CSR §7-3.2 45CSR13, R13-2113K, 4.1.3.	8.1.2.	Emission points identified as E-6-DC-1, E-6-DC-2, E-6-DC-3, and 6-VS-5 shall not emit visible particulate matter greater than 20% opacity except for visible particulate matter emission less than 40% for a period or periods aggregating no more than 5 minutes in any 60-minute period.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	None	8.2.1.	See Sections 3.2.1 and 3.2.2 for 45CSR7 opacity monitoring requirements and dust collector monitoring. NOTE: See Attachment E pp 13-22 for above referenced sections.
2	None	8.3.1.	See Sections 3.3.1 and 3.3.2. NOTE: See Attachment E pp 13-22 for above referenced sections.
3	45CSR13, R13-2113K, 4.4.4. 3.4.1. 45CSR §30-5.1c.2.A. 45CSR13	8.4.1.	For the purpose of determining compliance with the maximum processing limits set forth in 8.1.1., the company shall maintain certified monthly and annual records of lime processing rates in the Lime Storage and Truck Loading System. An example data form is given in Appendix A of R13-2113. Such records shall be maintained in accordance with condition 3.4.1. The permittee shall keep records of monitoring information that include the following: a. The date, place as defined in this permit and time of sampling or measurements; b. The date(s) analyses were performed; c. The company or entity that performed the analyses; d. The analytical techniques or methods used; e. The results of the analyses; and f. The operating conditions existing at the time of sampling or measurement.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 007

Emission unit ID number: 7-BC-1, 7-SC-0, 7-BEL-1, 7-SC-1, 7-SC-2, 7-BEL-2, 7-SC-23, 7-SC-24, 7-SC-8, 7-SC-9, 7-SC-29, 7-SC-30, 7-SC-31, 7-SC-32, 7-SC-25, 7-BEL- 3, 7-SC-10, 7-SC-11, 7-SC-12, 7- SC-13, 7-BL-1, 7-LS-2, 7-BEL-4, 7- SC-14, 7-LS-1, 7-SC-27, 7-SC-28, 7- CDC-1	Emission unit name: Group 007 Conveying and Transfer	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various conveying and Transfer associated with hydrate plant operations using belt conveyors (BC), screw conveyors (SC), bucket elevators (BEL), radial airlocks (RA), a loading spout (LS), and wire conveyor (WR).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	23.14/7.73	41.95/22.14
Total Particulate Matter (TSP)	30.26	50.40
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 007. These emissions have been adjusted since the last Title V renewal application to reflect the change in PTE caused by the issuance of R13-1396E.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E124.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E124.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 007

Emission unit ID number: 7-BM-1, 7-SM-1	Emission unit name: Group 007 Crushing	List any control devices associated with this emission unit. 7-DC-20

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Ball mill (BM) associated with hydrate plant operations.

Manufacturer:
See Attachment D

Model number:
See Attachment D

Serial number:
See Attachment D

Construction date:
See Attachment D

Installation date:
See Attachment D

Modification date(s):
See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
See Attachment D

Maximum Hourly Throughput:
See Attachment D

Maximum Annual Throughput:
See Attachment D

Maximum Operating Schedule:
8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes X No

If yes, is it?

___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating:

N/A

Type and Btu/hr rating of burners:

N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	23.14/7.73	41.95/22.14
Total Particulate Matter (TSP)	30.26	50.40
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 007. These emissions have been adjusted since the last Title V renewal application to reflect the change in PTE caused by the issuance of R13-1396E.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E124.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E124.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 007

Emission unit ID number: 7-AS-20	Emission unit name: Group 007 Air Separation	List any control devices associated with this emission unit. 7-DC-20

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Air separator (AS) associated with hydrate plant operations.

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	23.14/7.73	41.95/22.14
Total Particulate Matter (TSP)	30.26	50.40
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 007. These emissions have been adjusted since the last Title V renewal application to reflect the change in PTE caused by the issuance of R13-1396E.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E124.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E124.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 007

Emission unit ID number: 7-SB-1, 7-SI-1, 7-SI-2, 7-SI-4, 7-SI-5, 7-BGR-1	Emission unit name: Group 007 Storage	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various storage associated with hydrate plant operations using silos (SI) and a hydrate bagging bin (HBB).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	23.14/7.73	41.95/22.14
Total Particulate Matter (TSP)	30.26	50.40
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 007. These emissions have been adjusted since the last Title V renewal application to reflect the change in PTE caused by the issuance of R13-1396E.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E124.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E124.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 007

Emission unit ID number: 7-MT-1, 7-HY-1	Emission unit name: Group 007 Mixing Tub and Atmospheric Hydrator	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Mixing tub (MT) and atmospheric hydrator (HY) associated with hydrate plant operation.

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	23.14/7.73	41.95/22.14
Total Particulate Matter (TSP)	30.26	50.40
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 007. These emissions have been adjusted since the last Title V renewal application to reflect the change in PTE caused by the issuance of R13-1396E.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E124.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E124.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 007

Emission unit ID number: 7-BG-1	Emission unit name: Group 007 Hydrate Bagger	List any control devices associated with this emission unit. 7-DC-6

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Hydrate bagger (HB) associated with hydrate plant operations.

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	23.14/7.73	41.95/22.14
Total Particulate Matter (TSP)	30.26	50.40
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are totals for Group 007. These emissions have been adjusted since the last Title V renewal application to reflect the change in PTE caused by the issuance of R13-1396E.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E124.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E124.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment E Group 007

Applicable Requirements

	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
1	45CSR13, R13-1396E, 4.1.1.	9.1.1.	Only those emission units/sources as identified in Table 1.0 of R13-1396, with the exception of any de minimis sources as identified under Table 45-13B of 45CSR13, are authorized at the Hydrate Plant (the Equipment identified as the Hydrate System (Group 007) in Section 1.1 Emission Units). In accordance with the information filed in Permit Application R13-1396E, the emission units/sources identified under Table 1.0 of R13-1396 shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, shall not exceed the listed maximum design capacities, and shall use the specified control devices.
2	45CSR13, R13-1396E, 4.1.2.	9.1.2.	Hydrated lime production shall not exceed 125,000 TPY.
3	45CSR13, R13-1396E, 4.1.3.	9.1.3.	Emissions of particulate matter for the listed emission points shall not exceed the limits given in the table. Limits are given for E1 (7-DC-1), E2 (7-DC-2), E3 (7-DC-3), E4 (7-SCR-1), E5 (7-DC-5), E6 (7-DC-6), E20 (7-DC-20) and E21 (7-DC-21). Compliance with these limits will ensure compliance with 45CSR§7-4.1. See Table 9.1.3. in the Title V permit or Table 4.1.3. in R13-1396E for detailed limits.
4	45CSR13, R13-1396E, 4.1.4.	9.1.4.	Dust collectors 7-DC-1 and 7-DC-3 shall be installed, operated, and maintained so as to not exceed a maximum particulate matter stack emission concentration of 0.03 grains/ACF.
5	45CSR13, R13-1396E, 4.1.5.	9.1.5.	Dust collectors 7-DC-2, 7-DC-5, 7-DC-6, and 7-DC-21 shall be installed, operated, and maintained so as to not exceed a maximum particulate matter stack emission concentration of 0.02 grains/ACF.
6	45CSR13, R13-1396E, 4.1.6.	9.1.6.	Dust collector 7-DC-20 shall be installed, operated, and maintained so as to not exceed a maximum particulate matter stack emission concentration of 0.01 grains/ACF.
7	45CSR13, R13-1396E, 4.1.8.	9.1.7.	The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply water as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haul roads and other work areas where mobile equipment is used. The spray bar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated. The pump delivering the water, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haul roads and work areas where mobile equipment is used.
8	45CSR13, R13-1396E, 4.1.9.	9.1.8.	The permittee shall properly install, operate and maintain winterization systems for all water trucks and/or water sprays in a manner that all such fugitive dust control

	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
			systems remain effective and functional, to the maximum extent practicable, during winter months and cold weather. At all times, including periods of cold weather, the registrant shall comply with the water trucks and/or water sprays requirements of this permit.
9	45CSR13, R13-1396E, 4.1.11.	9.1.9.	The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 of R13-1396 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
10	45CSR §7-3.7.	9.1.10.	No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device.
11	None	9.1.11.	See Sections 3.1.9 through 3.1.18 for 45CSR7 limitation and standard requirements for the Hydrate System. See Sections 3.1.9 through 3.1.18 in the current Title V permit for relevant language.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	45CSR13, R13-1396E, 4.2.1.	9.2.1.	For the purpose of demonstrating compliance with the maximum production limit set forth in 9.1.1, the permittee shall monitor and record the monthly and rolling twelve-month amount of hydrated lime produced.
2	45CSR13, R13-1396E, 4.2.2.	9.2.2.	For the purposes of demonstrating compliance with visible emissions limitations set forth in 3.1.9, the permittee shall: a. Conduct monthly Method 22 visible emission observations of the applicable units (or associated control devices) to ensure proper operation for a sufficient time interval, but no less than one (1) minute each month the units are in operation. b. In the event visible emissions are observed in excess of the limitations given under 3.1.9, take immediate corrective action. c. Maintain records of all visual emission observations pursuant to the monitoring required under 9.2.2. including any corrective action taken. d. In the event of any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22, report in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
3	45CSR13, R13-1396E, 4.3.1.	9.3.1.	At such reasonable time(s) as the Secretary may designate, in accordance with the provisions of 3.3 of this permit, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established in the permit application and/or applicable regulations.
4	45CSR13, R13-1396E, 4.3.2.	9.3.2.	The permittee shall meet all applicable Performance Testing Requirements as given under 45CSR7.
5	45CSR13, R13-1396E, 4.4.2.	9.4.1.	For all pollution control equipment listed in Section 1.0 of R13-1396, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
6	45CSR13, R13-1396E, 4.4.3.	9.4.2.	For all air pollution control equipment listed in Section 1.0 of R13-1396, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded: a. The equipment involved. b. Steps taken to minimize emissions during the event. c. The duration of the event. d. The estimated increase in emissions during the event. For each such case associated with an equipment malfunction, the additional information shall also be recorded: e. The cause of the malfunction. f. Steps taken to correct the malfunction. g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 008

Emission unit ID number: GF1, BC1, BC2, BC3, BC4, BC5, BC6, BC7, BC8, BC9, BC10, BC11, BC-12	Emission unit name: Group 008 Conveying	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Various conveying associated with portable plant operations using a grizzly feeder (GF) and belt conveyors (BC).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	4.73/1.51	7.01/2.23
Total Particulate Matter (TSP)	9.92	14.70
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emissions shown above are total for Group 008 (PTE has not changed for this Group since the previous Title V renewal).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E139.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E139.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 008

Emission unit ID number: PC1, PC2	Emission unit name: Group 008 Crushing	List any control devices associated with this emission unit. WS

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various crushing associated with portable plant operation using a 400-ton jaw crusher (PC1) and a cone crusher (PC2).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	4.73/1.51	7.01/2.23
Total Particulate Matter (TSP)	9.92	14.70
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are total for Group 008 (PTE has not changed for this Group since the previous Title V renewal).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E139.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E139.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 008

Emission unit ID number: PS1, PS2	Emission unit name: Group 008 Screening	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various screening associated with portable plant operations using triple deck screens (PS).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	4.73/1.51	7.01/2.23
Total Particulate Matter (TSP)	9.92	14.70
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emissions shown above are total for Group 008 (PTE has not changed for this Group since the previous Title V renewal).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E139.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E139.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 008

Emission unit ID number:
PSP1, PSP2, B1, PSP3, PSP4, PSP5

Emission unit name:
Group 008 Storage

List any control devices associated with this emission unit.
COM

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Various storage associated with portable plant operations in open stockpiles (PSP) and a surge bin (B).

Manufacturer:
See Attachment D

Model number:
See Attachment D

Serial number:
See Attachment D

Construction date:
See Attachment D

Installation date:
See Attachment D

Modification date(s):
See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
See Attachment D

Maximum Hourly Throughput:
See Attachment D

Maximum Annual Throughput:
See Attachment D

Maximum Operating Schedule:
8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes X No

If yes, is it?
___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating:
N/A

Type and Btu/hr rating of burners:
N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	4.73/1.51	7.01/2.23
Total Particulate Matter (TSP)	9.92	14.70
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are total for Group 008 (PTE has not changed for this Group since the previous Title V renewal).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E139.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E139.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment E Group 008

Applicable Requirements

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement					
1	45CSR13, R13-2222-P2, A.1.	10.1.1.	In accordance with the information filed in Permit Application R13-2222-P2, the following process/transfer rates shall not be exceeded, and the following methods of control shall be installed, maintained, and operated so as to minimize particulate matter (PM) emissions:					
Equipment Capacity ID Number	Description	Method of Control	Maximum Capacity		Associated Transfer Points or Equipment			
			TPH	TPY x 10 ⁶	Location B-Before A-After	ID No.	Method of Control	
Grizzly Feeder	Grizzly Feeder - Receives limestone from front endloader. Transfers it to Jaw Crusher (PC1).	N	300	600,000	B A	TP1 -----	WS -----	
PC1	450 TPH Jaw Crusher (PC1) - Receives limestone from the Grizzly Feeder. Transfers it to Under Crusher Belt Conveyor (BC1).	WS	300	600,000	B A	----- TP2	----- WS	
BC1	Under Crusher Belt Conveyor (BC1) - Receives limestone from Jaw Crusher (PC1). Transfers it to Screen Feed Radial Stacker (RS2)	WS	300	600,000	B A	TP2 TP3	WS COM	
RS2	Screen Feed Radial Stacker (RS2) - Receives limestone from Under Crusher Belt Conveyor (BC1) and transfers it to Double-deck Scalping Screen (PS1).	COM	300	600,000	B A	TP3 TP4	COM COM	
PS1	550 TPH Double-deck Scalping Screen (PS1) - Receives limestone from Screen Feed Radial Stacker (RS2) and transfers it to three (3) different locations.	FE/WS	550	600,000	B A	TP4 TP5 TP8 TP11	COM WS WS WS	
RS3	Radial Stacker (RS3) – Receives crusher run limestone from Scalping Screen (PS1) and transfers it to Stockpile (PSP1).	WS	110	600,000	B A	TP5 TP6	WS COM	
PSP1	Stockpile (PSP1) - Receives crusher run limestone from Radial Stacker (RS3) and transfers it by front endloader into dump trucks.	COM	110	600,000	B A	TP6 TP7	COM MD	
RS4	Radial Stacker (RS4) – Receives gabion (limestone) from Scalping Screen (PS1) and transfers it to Stockpile (PSP2).	WS	190	600,000	B A	TP8 TP9	WS COM	
PSP2	Stockpile (PSP2) - Receives gabion (limestone) from Radial Stacker (RS4) and transfers it by front endloader into dump trucks.	COM	190	50,000	B A	TP9 TP10	COM COM	
BC5	Under Screen Belt Conveyor (BC5) - Receives limestone from Scalping Screen (PS1) and transfers it to Surge Bin Feed Radial Stacker (RS6).	WS	300	600,000	B A	TP11 TP12	WS COM	
RS6	Surge Bin Feed Radial Stacker (RS6) - Receives limestone from Belt Conveyor (BC5) and transfers it to 50 Ton Bin.	COM	300	600,000	B A	TP12 TP13	COM COM	
Equipment Capacity	Description	Method of Control	Maximum Capacity		Associated Transfer Points or Equipment			

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement					
ID Number			TPH	TPY x 10 ⁶	Location B-Before A-After	ID No	Method of Control	
B1	50 Ton Bin (B1) – Receives limestone from Radial Stacker (RS6) and transfers it to Under-Bin Belt Conveyor (BC7).	COM	300	600,000	B A	TP13 TP14	COM MD	
BC7	Under-Bin Main Feed Belt Conveyor (BC7) to screen - Receives limestone from 50 Ton Bin and Belt Conveyor (BC8), and transfers it to Three Deck (TD) Screen (PS2).	COM	300	1.2 MM	B A	TP14 TP17 TP15	COM COM COM	
PS2	Three Deck (TD) Screen (PS2) - Receives limestone from Belt Conveyors (BC7 and BC8) and transfers it to four (4) different locations.	FE/WS	300	1.2 MM	B A	TP15 TP16 TP18 TP19 TP20	COM WS WS WS WS	
PC2	Cone Crusher (PC2) - Receives limestone from Chute exiting TD Screen (PS2) and transfers it to Belt Conveyor (BC8).	WS	300	600,000	B A	----- TP16	----- WS	
BC8	Belt Conveyor (BC8) - Receives limestone from Cone Crusher (PC2) and transfers it to back to Belt Conveyor (BC7) for reprocessing through TD Screen (PS2).	WS	300	600,000	B A	TP16 TP7	WS COM	
RS9	Radial Stacker (RS9) - Receives 57's (limestone) from TD Screen (PS2) and transfers it to Stockpile (PSP3).	WS	150	600,000	B A	TP18 TP25	WS COM	
PSP3	Stockpile (PSP3) - Receives 57's (limestone) from Radial Stacker (RS9) and transfers it with a front endloader into dump trucks.	COM	150	600,000	B A	TP25 TP26	COM MD	
RS10	Radial Stacker (RS10) – Receives crusher limestone from TD Screen (PS2) and transfers it to Stockpile (PSP4).	WS	190	600,000	B A	TP19 TP21	WS COM	
PSP4	Stockpile (PSP4) - Receives crusher run limestone from Radial Stacker (RS10) and transfers it with a front endloader into dump trucks.	COM	190	600,000	B A	TP21 TP22	COM MD	
RS11	Radial Stacker (RS11) - Receives 8's (limestone) from TD Screen (PS2) and transfers it to Stockpile (PSP5).	WS	75	600,000	B A	TP20 TP23	WS COM	
PSP5	Stockpile (PSP5) - Receives 8's (limestone) from Radial Stacker (RS11) and transfers it with a front endloader into dump trucks.	COM	75	600,000	B A	TP23 TP24	COM MD	
2	45CSR13, R13-2222-P2, A.2.	10.1.2.	In the event that this facility is modified for any reason(s), the facility and its associated emissions shall be reviewed in their entirety for 45CSR14 applicability.					
3	45CSR13, R13-2222-P2, C.3.	10.1.3.	The permitted facility shall be constructed and operated in accordance with information filed in Permit Application R13-2222-P2 and any amendments thereto. The Director may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered					
4	None	10.1.4.	See Section 3.1.19 through 3.1.22. for 40CFR Part 60 Subpart OOO requirements. NOTE: See Attachment E pp 13-22 for above referenced sections.					

Monitoring/Testing/Recordkeeping/Reporting

	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	45CSR13, R13-2222-P2, B.4.c. 45CSR16 40CFR §60.672 (b) and Table 3	10.2.1.	See Sections 3.1.20 (b) and (d) for fugitive emissions from any crushers without a capture system. Note: See Attachment E, pp 13-22 for above-referenced sections.
2	45CSR13, R13-2222-P2, B.3.	10.4.1.	The company shall maintain certified monthly and annual records of limestone processing rate by the Portable Limestone Crushing and Sizing facility. The annual limestone processing rate shall be calculated using a rolling total for any continuous span of twelve (12) months. The company may use the forms identified as Attachment A in Permit R13-2222-P2.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 009

Emission unit ID number: VT	Emission unit name: Group 009 Vehicular Traffic	List any control devices associated with this emission unit. WT

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Vehicular traffic (VT) associated with facility operations.

Manufacturer: NA	Model number: NA	Serial number: NA

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 NA

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	48.98/25.75	41.85/21.99
Total Particulate Matter (TSP)	169.44	144.69
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). PTE has not changed for this Group since the previous Title V renewal.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E145.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E145.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment E Group 009 Vehicular Traffic

Applicable Requirements

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
1	45CSR§7-5.2. 45CSR13, R13-1685B, 4.1.5.d.	3.1.15.	The owner or operator of a plant shall maintain dust control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary dust suppressants shall be applied in relation to stockpiling and general material handling to prevent dust generation and atmospheric entrainment.
2	45CSR13, R13-1685B, 4.1.6.c. 45CSR16 40CFR §60.672 (d)	3.1.21.	Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.
3	45CSR13, R13-1685B, 4.1.3.	4.1.3.	Fugitive dust control equipment as proposed in Permit Application R13-1685 and its supplements shall be installed, operated and maintained in such a manner as to minimize fugitive dust generation and atmospheric entrainment. Such measures shall include: a) Pressurized water sprays located at the primary and secondary crushers, primary and secondary screens, conveyor belt discharge for stockpile 2-OS-1, truck dump hopper, and truck dump hopper vibrating feeder. b) Primary and secondary screens (1-VS-1 and 2-VS-1) shall be fully enclosed except for entry and discharge points. c) Water sprays at stockpile, 2-OS-2, during material storage. d) Water truck utilizing pressurized spray nozzles for dust control of haulroads and stockpile areas.
4	45CSR13, R13-1685B, 4.1.3.	4.1.4.	Pressurized water spray system shall be winterized by equipping each spray manifold with a drain and heat taping all exposed piping in accordance with Permit Application R13-1685.
5	45CSR13, R13-1396E, 4.1.8.	9.1.7.	The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply water as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haul roads and other work areas where mobile equipment is used. The spray bar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated. The pump delivering the water, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haul roads and work areas where mobile equipment is used.
6	45CSR13, R13-1396E, 4.1.9.	9.1.8.	The permittee shall properly install, operate and maintain winterization systems for all water trucks and/or water

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
			sprays in a manner that all such fugitive dust control systems remain effective and functional, to the maximum extent practicable, during winter months and cold weather. At all times, including periods of cold weather, the registrant shall comply with the water trucks and/or water sprays requirements of this permit.
6	45CSR13, R13-2670B, 4.1.2.	11.1.2.	The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply water, or a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haulroads and other work areas where mobile equipment is used. The spraybar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated. The pump delivering the water, or solution, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of water, or solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haulroads and work areas where mobile equipment is used. The permittee shall properly install, operate and maintain designed winterization systems for all water trucks and/or water sprays in a manner that all such fugitive dust control systems remain functional during winter months and cold weather.

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	45CSR§30-5.1.c.	3.4.4.	The permittee shall maintain daily records indicating the use of any dust suppressants or any other suitable dust control measures applied at the facility. The permittee shall also inspect all fugitive dust control systems weekly from May 1 through September 30 and monthly from October 1 through April 30 to ensure that they are operated and maintained in conformance with their designs. The permittee shall maintain records of all scheduled and non-scheduled maintenance and shall state any maintenance or corrective actions taken as a result of the weekly and/or monthly inspections, the times the fugitive dust control system(s) were inoperable and any corrective actions taken.
2	45CSR13, R13-1685B, 4.2.1.	4.4.1.	For the purpose of determining compliance: (a) The applicant shall maintain certified daily records of the limestone charged through the primary and secondary crushing and screening circuit in tons per day. (b) The applicant shall maintain certified daily records of water used for particulate control in gallons per day. Such records shall be retained by the permittee for at least Five (5) years. Certified records shall be made available to the Director or the duly authorized representative upon request. Remove 4.4.1.c. and 4.4.1.d. from the Title V permit because the Trommel Screen and generator are no longer on site.
3	45CSR13, R13-2670B, 4.2.2.	11.2.2.	For the purposes of determining compliance with water truck usage set forth in 11.1.2, the permittee shall monitor water truck activity and maintain certified daily records. Such records shall be retained onsite by the permittee for at least five (5) years. Certified records shall be made available to the Director or his duly authorized representative upon request.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Group 010

Emission unit ID number: Tanks 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 19, 20, 49, 54 and 55	Emission unit name: Group 010 Tanks	List any control devices associated with this emission unit. NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Various petroleum storage tanks associated with facility operations ranging from 275 gallons to 15,000 gallon capacity.

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: See Attachment D	Installation date: See Attachment D	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀)	0	0
Total Particulate Matter (TSP)	0	0
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0.066	0.29
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). PTE has slightly increased from 0.27 tpy VOC to 0.29 tpy VOC for this Group since the previous Title V renewal due to an increase in total petroleum tank capacity from 39,175 gallons to 42,015 gallons.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

There are no source specific requirements for this emissions unit group.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

There are no source specific monitoring/testing/recordkeeping/reporting for this emissions unit group.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Emissions Units Controlled by Baghouse 11-DC-1

Emission unit ID number: 11-SI-3, 11-BM-1, 11-DS-1, 11-CY-1, 11-BL-3, 11-CL-1, 11-BL-2, 11-SI-1, 11-CY-2, 11-SI-2, 11-HG-1, 11-LS-1, 11-LS-2	Emission unit name: Group 011 Limestone Grinding	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Silos (SI), ball mill (BM), dynamic separator (DS), cyclones (CY), blowers (BL) classifier (CL), hot air generator (HG), and loading spouts (LS).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: 2007-2008	Installation date: 2007-2008	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) Hot Air Generator 11-HG-1

Does this emission unit combust fuel? ☒ Yes ☐ No	If yes, is it? ☐ Indirect Fired ☒ Direct Fired

Maximum design heat input and/or maximum horsepower rating: 7.5MM Btu/hr	Type and Btu/hr rating of burners: Single burner; 7.5 MM Btu/hr

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

No. 2 Fuel Oil - 54 gal/hr and 473,040 gal/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
No. 2 Fuel Oil	0.5%	Negligible	138,000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.59	2.58
Nitrogen Oxides (NO _x)	0.72	3.15
Lead (Pb)	NA	NA
Particulate Matter (PM ₁₀ /PM _{2.5})	0.83/0.83	3.64/3.64
Total Particulate Matter (TSP)	1.75	7.64
Sulfur Dioxide (SO ₂)	3.80	16.64
Volatile Organic Compounds (VOC)	0.02	0.09
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.00001	0.0001
Ethylbenzene	0.000003	0.00002
Formaldehyde	0.002	0.008
Naphthalene	0.0001	0.0003
1,1,1-Trichloroethane	0.00001	0.0001
Toluene	0.0003	0.001
Xylenes (o/m/p)	0.00001	0.00003
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO ₂ e	NA	5,339.5
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions in the above table are from the emission point E-11-DC-1. There are no changes since the previous Title V renewal application. For particulate matter an engineering estimate based on the baghouse manufacturer's stated emissions of 0.01 grains PM/ actual cubic foot of flow. CO and NO _x emission factors provided by manufacturer. Other emission factors referenced from AP-42, Section 1.3, Fuel Oil Combustion (9/98).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E166.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E166.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Emissions Units Controlled by Baghouse 11-DC-2 & 11-DC-4

Emission unit ID number: 11-SI-5, 11-SI-6, 11-SC-3, 11-LS-3	Emission unit name: Group 011 Limestone Grinding	List any control devices associated with this emission unit. 11-DC-2 Emission Point E-11-DC-2 11-DC-4 Emission Point E-11-DC-4 11-SI-5 & 6 are connected and can vent through either dust collector

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Silos (SI), screw conveyor (SC), and loading spout (LS).

Manufacturer: See Attachment D	Model number: See Attachment D	Serial number: See Attachment D

Construction date: 2007-2008	Installation date: 2007-2008	Modification date(s): See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	0.27/0.27 each	1.18/1.18 each
Total Particulate Matter (TSP)	0.57 each	2.48 each
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions in the above table are from emissions points E-11-DC-2 and E-11-DC-4 each. No change since the previous Title V renewal application.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E166.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E166.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Emissions Units Controlled by Baghouse 11-DC-3

Emission unit ID number: 11-SB-1, 11-SSB-1, 11-SI-7, 11-SC-7, 11-LS-4, 11-SC-4, 11-SC-5, 11-SC-6, 11-SI-4	Emission unit name: Group 011	List any control devices associated with this emission unit. 11-DC-3 Emission point E11-DC-3

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Bins (SB),super sack bagger (SSB), silos (SI), screw conveyors (SC), , and loading spout (LS).

Manufacturer: See Attachment D.	Model number: See Attachment D.	Serial number: See Attachment D.

Construction date: 2007-2008	Installation date: 2007-2008	Modification date(s): See Attachment D.

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	0.27/0.27	1.18/1.18
Total Particulate Matter (TSP)	0.57	2.48
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions in the above table are from emissions point E-11-DC-3. No change since the previous Title V renewal application.		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E166.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E166.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description Emission Units and Transfers Without Baghouse Controls

Emission unit ID number: 11-DH-1, 11-BC-4, 11-BC-1, 11-BEL-1, 11-BC-2, 11-SB-2, 11-SC-1	Emission unit name: Group 011 Limestone Grinding	List any control devices associated with this emission unit. See Attachment D for Individual Source Control Devices.

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Dump hopper (DH), belt conveyors (BC), bucket elevator (BEL), bin (SB), and screw conveyor (SC).

Manufacturer: See Attachment D.	Model number: See Attachment D.	Serial number: See Attachment D.

Construction date: 2007-2008	Installation date: 2007-2008	Modification date(s): See Attachment D.

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___ Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___ Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter (PM ₁₀ /PM _{2.5})	5.97/1.22	7.77/2.59
Total Particulate Matter (TSP)	12.12	14.49
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). Emissions shown above are for non-DC emissions from Group 011 (PTE has not changed for this Group since the previous Title V renewal).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E166.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E166.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description: Emissions Units Controlled by Baghouse 11-DC-20

Emission unit ID number: 11-SC-20, 11-BEL-20, 11-BG-20, 11-SC-21, 11-SC-22, 11-WC-20, 11- BC-20, 11-BC-21, 11-BC-22	Emission unit name: Group 011 Bagging	List any control devices associated with this emission unit. 11-DC-20 through Emission Point E-11-DC-20

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Rock dust bagging system.

Manufacturer: See Attachment D.	Model number: See Attachment D.	Serial number: See Attachment D.

Construction date: 2011	Installation date: 2011	Modification date(s): See Attachment D.

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
 See Attachment D

Maximum Hourly Throughput: See Attachment D	Maximum Annual Throughput: See Attachment D	Maximum Operating Schedule: 8,760 hrs/yr

Fuel Usage Data (fill out all applicable fields) NOT APPLICABLE

Does this emission unit combust fuel? ___Yes <u>X</u> No	If yes, is it? ___ Indirect Fired ___Direct Fired

Maximum design heat input and/or maximum horsepower rating: N/A	Type and Btu/hr rating of burners: N/A

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

N/A

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0	0
Nitrogen Oxides (NO _x)	0	0
Lead (Pb)	0	0
Particulate Matter PM ₁₀ /PM _{2.5}	0.23/0.23	1.0/1.0
Total Particulate Matter (TSP)	0.48	2.10
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	0	0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
N/A		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N/A		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emissions in the above table are from emissions point E-11-DC-20. No change since the previous Title V renewal application.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the rule citation and/or permit with the condition number. If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See applicable requirements starting on page E166.

X Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See applicable requirements starting on page E166.

Are you in compliance with all applicable requirements for this emission unit? X Yes ___ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

Attachment E Group 011

Applicable Requirements

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement																														
1	45CSR13, R13-2113K, 4.1.1.	5.1.1.	The maximum processing rate of limestone to the Fine Grinding System from the Secondary Crushing System shall not exceed 400 tons per hour (TPH) and 600,000 tons per year (TPY).																														
2	45CSR13, R13-2113K, 4.1.5., 45CSR16 40CFR §60.672(a)(2)	5.1.2.	The fine grinding circuit shall employ a hot air generator, grinding mill, dynamic separator, cyclone #1, cyclone #2, classifier separator and two centrifugal blowers identified as 11-HG-1, 11-BM-1, 11-DS-1, 11-CY-1, 11-CY-2, 11-CL-1, 11-BL-2, 11-BL-3 respectively. The operation of this circuit shall not exceed the following maximum operating and emission limitations: a. Emissions from the emission point E-11-DC-1 shall not exceed the maximum individual hourly and annual emission limits set forth in Table 4.1.5.a. (see below) b. The hot air generator shall not consume more than 54 gallons per hour or 473,040 gallons per year of No. 2 fuel oil; c. The No. 2 fuel oil consumed by the hot air generator shall not contain sulfur greater than 0.5 percent by weight. This limit and the fuel restriction limit in 5.1.3.b. coincide with the SO₂ limits in Table 4.1.5.a.; d. The feed rate of material (limestone or lime) into the circuit shall not exceed 65 tons per hour or 569,400 tons per year; e. Visible PM from emission point E-11-DC-1 shall not be exhibited greater than 7 percent opacity.																														
<table border="1"> <tr> <th colspan="4">Table 4.1.5.a.</th></tr> <tr> <th rowspan="2">Emission Source ID</th><th rowspan="2">Pollutant</th><th colspan="2">Maximum Emissions</th></tr> <tr> <th>Hourly (lb/hr)</th><th>Annual TPY</th></tr> <tr> <td rowspan="5">11-HG-1, 11-BM-1, 11-DS-1, 11-CY-1, 11-CY-2, 11-CL-1, 11-BL-2, 11-BL-3, 11-SI-1, 11-SI-2, 11-SI-3</td><td>PM</td><td>1.75</td><td>7.64</td></tr> <tr> <td>PM₁₀</td><td>0.83</td><td>3.64</td></tr> <tr> <td>SO₂</td><td>3.84</td><td>16.8</td></tr> <tr> <td>NO_x</td><td>0.72</td><td>3.2</td></tr> <tr> <td>CO</td><td>0.59</td><td>2.6</td></tr> <tr> <td colspan="4">[40 CFR §60.672(a)(1) for PM and 45CSR§10-4.1. for SO₂]</td></tr> </table>				Table 4.1.5.a.				Emission Source ID	Pollutant	Maximum Emissions		Hourly (lb/hr)	Annual TPY	11-HG-1, 11-BM-1, 11-DS-1, 11-CY-1, 11-CY-2, 11-CL-1, 11-BL-2, 11-BL-3, 11-SI-1, 11-SI-2, 11-SI-3	PM	1.75	7.64	PM ₁₀	0.83	3.64	SO ₂	3.84	16.8	NO _x	0.72	3.2	CO	0.59	2.6	[40 CFR §60.672(a)(1) for PM and 45CSR§10-4.1. for SO ₂]			
Table 4.1.5.a.																																	
Emission Source ID	Pollutant	Maximum Emissions																															
		Hourly (lb/hr)	Annual TPY																														
11-HG-1, 11-BM-1, 11-DS-1, 11-CY-1, 11-CY-2, 11-CL-1, 11-BL-2, 11-BL-3, 11-SI-1, 11-SI-2, 11-SI-3	PM	1.75	7.64																														
	PM ₁₀	0.83	3.64																														
	SO ₂	3.84	16.8																														
	NO _x	0.72	3.2																														
	CO	0.59	2.6																														
[40 CFR §60.672(a)(1) for PM and 45CSR§10-4.1. for SO ₂]																																	
3	45CSR13, R13-2113K, 4.1.6. 45CSR16 40CFR §60.672 (a)	5.1.3.	Emissions discharged to the atmosphere from emission points E-11-DC-20, E-11-DC-4, E-11-DC-3 and E-11-DC-2 shall be limited to the following maximum emission limitations: a. PM concentration in the exhaust stream from the emission points E-11-DC-2, E-11-DC-4, and E-11-DC-3 shall not exceed 0.022 gr/dscf while emissions from emission point E-11-DC-20 shall not exceed 0.014																														

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement
			gr/dscf; b. Annual PM ₁₀ and PM emissions from emission point E-11-DC-3 shall not exceed 1.18 TPY and 2.48 TPY respectively; c. Annual PM ₁₀ and PM emissions from emission point E-11-DC-2/E-11-DC-4 (combined) shall not exceed 1.18 TPY and 2.48 TPY respectively; and d. Annual PM ₁₀ and PM emissions from E-11-DC-20 shall not exceed 1.00 TPY and 2.1 TPY respectively; and e. Visible PM from the emission point shall not exceed greater than 7 percent opacity.
4	45CSR13, R13-2113K, 4.1.7. 45CSR16 40CFR §60.672(a)(2), (b) and (e)	5.1.4.	The equipment listed below shall not exhibit visible PM emissions greater than 10 percent opacity, unless the transfer points of belt conveyors or the unit is located in an enclosed building. Then, the enclosed building shall not exhibit visible PM emissions greater than 7 percent opacity.

Table 4.1.7.1		
Emission Unit ID	Emission Point ID	Emission Unit Description
11-BC-1	11-BC-1	Belt conveyor
11-BEL-1	11-BEL-1	Bucket elevator
11-BC-2	11-BC-2	Belt conveyor
11-BC-4*	11-BC-4	Belt Conveyor
11-SB-2	11-SB-2	Surge Bin
11-DH-1*	11-DH-1	Feed Hopper
11-SC-4	E-11-DC-3	Screw Conveyor
*Since 11-DH-1 and 11-BC-4 were installed after April 22, 2008, they are subject to 7 percent opacity requirement [see Section 3.1.20.c.]		

	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Requirement		
5	45CSR13, R13-2113K, 4.1.8	5.1.5.	Compliance with all annual limits stated in Section 5.1 of this permit shall be demonstrated using a 12-month rolling total.		
6	45CSR13, R13-2113K, 4.1.9. 45CSR16 40CFR §60.672(b)	5.1.7	The equipment listed in Table 5.1.7.1. shall not exhibit visible PM emissions greater than 7 percent opacity.		
			Emission Unit ID	Emission Point ID	Emission Unit Description
			11-BC-20	None	Belt Conveyor
			11-BC-21	None	Belt Conveyor
			11-BC-22	None	Belt Conveyor
7	45CSR13, R13-2113K, 4.1.10, 45CSR§13-5.11	5.1.6.	The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in the Fine Grinding Circuit [dust collectors (11-DC-1, 11-DC-2, 11-DC-3, 11-DC-4, 11-DC-20)] and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.		

Monitoring/Testing/Recordkeeping/Reporting

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
1	45CSR13, R13-2113K, 4.2.1.	5.2.1.	For the purpose of determining compliance with the opacity limits in Sections 5.1.2.e, 5.1.3. e and 5.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit. The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course. Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions. If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR7A for the sources subject to 45CSR§§7-3.1 and 3.2, and Method 9 for all other sources as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A 45CSR7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.
2	45CSR13, R13-2113K, 4.2.1. 45CSR16 40CFR Part 60, Subpart OOO	5.2.2	The owner or operator shall determine compliance with the opacity limits in Section 5.1.6. in accordance with the requirements of 40 CFR Part 60, Subpart OOO, Section 60.75(b)(2) and Table 3 with an initial Method 9 performance test and a repeat performance test within 5 years from the previous performance test.
3	45CSR16, 40CFR60, Subpart OOO, (Section 1.0, Emission Group 011)	5.3.1.	See Section 3.3.4 through 3.3.9 for 40 C.F.R. Part 60 Subpart OOO testing requirements. NOTE: See Attachment E pp 13-22 for above referenced sections.
4	45CSR13, R13-2113K, 4.4.4.	5.4.1.	For the purpose of determining compliance with the maximum processing limits set in 5.1.1. and 5.1.2.d., maintain certified monthly and annual records of limestone processing rates of the Fine Grinding System.
5	45CSR13, R13-2113K, 4.4.5.	5.4.2.	For the purpose of determining compliance with the maximum fuel consumption limit set forth for in Section 5.1.2.b, the company shall maintain certified monthly and annual records of #2 fuel oil consumption.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
6	45CSR §30-5.1.c.	5.4.3.	The permittee shall maintain records from fuel oil supplier certifying the fuel sulfur content in order to demonstrate compliance with 5.1.2.c.
7	45CSR13, R13-2113K, 4.4.6.	5.4.4.	The permittee shall maintain records of all monitoring data required by Section 5.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80° F, 6 - 10 mph NE wind) during the visual emission check(s). An example form is supplied as Appendix G. Should a visible emission observation be required to be performed per the requirements specified in 45CSR7A, the data records of each observation shall be maintained per the requirements of 45CSR7A. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.
8	45CSR13, R13-2113K, 4.4.2.	5.4.5.	Record of Maintenance of Air Pollution Control Equipment. For all pollution control equipment listed in Emission Group (011) of Section 1.0 as dust collectors (11-DC-1, 11-DC-2, and 11-DC-3), the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
9	45CSR13, R13-2113K, 4.4.3.	5.4.6.	For all air pollution control equipment listed Emission Group (011) of Section 1.0 as dust collectors (11-DC-1, 11-DC-2, and 11-DC-3), the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded: a. The equipment involved. b. Steps taken to minimize emissions during the event. c. The duration of the event. d. The estimated increase in emissions during the event. For each such case associated with an equipment malfunction, the additional information shall also be recorded: e. The cause of the malfunction. f. Steps taken to correct the malfunction. g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
10	45CSR13, R13-2113K, 4.5.1.	5.5.1.	Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 45CSR7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

Ref #	Rule/ Regulation/ R13 Permit	Existing R30 Permit Condition	Monitoring/Testing/Recordkeeping/Reporting
11	45CSR13, R13-2113K, 4.5.2. 45CSR16 40CFR §60.676(f)	5.5.2.	The permittee shall submit a written report of the results of testing required in 40 CFR Part 60, Subpart OOO before the close of business on the 60 th day following the completion of such testing to the Director and U.S. EPA Administrator. Such report(s) shall include all records of the opacity observations made during such testing.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: Building Heaters/Torch	Emission unit name: Building Heaters/Torch	List any control devices associated with this emission unit: None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Make	Model	Heat Input	Fuel	Type	Year Installed
Lowboy	OAL112-DHS	140,000 Btu/hr	No. 2 Fuel Oil	Indirect	1990s
Horizon	315	315,000 Btu/hr	No. 2 Fuel Oil and Used Oil	Indirect	2005
Carrier	Z158MXA120	120,000 Btu/hr	Propane	Indirect	2003
Torch	Hand Held Torch	150,000 Btu/hr	Propane	Direct	1980s

Manufacturer: See Above	Model number: See Above	Serial number: NA
Construction date: See Above	Installation date: See Above	Modification date(s): NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): See Above

Maximum Hourly Throughput: See Above	Maximum Annual Throughput: See Above	Maximum Operating Schedule: As Needed

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? ☒ Yes ☐ No	If yes, is it? See Above ☐ Indirect Fired ☐ Direct Fired

Maximum design heat input and/or maximum horsepower rating: See Above	Type and Btu/hr rating of burners: See Above

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
See Above

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value*
No. 2 Fuel Oil	15 ppm	Trace	138,000 per gal
Used Oil	15 ppm	Trace	138,000 per gal
Propane	0.15 gr/100 scf	NA	91,000 per gal

*Btu/gallon is the default values provided by 40CFR98.

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.06	0.16
Nitrogen Oxides (NO _x)	0.11	0.52
Lead (Pb)	4.10×10^{-6}	1.79×10^{-5}
Particulate Matter (PM _{2.5})	0.04	0.04
Particulate Matter (PM ₁₀)	0.04	0.04
Total Particulate Matter (TSP)	0.04	0.05
Sulfur Dioxide (SO ₂)	0.04	0.04
Volatile Organic Compounds (VOC)	0.04	0.04
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAPs	1.53×10^{-4}	6.70×10^{-4}
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
CO ₂ e	NA	490
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.). AP-42 and 40CFR98		

<i>Applicable Requirements</i>
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. None
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) None
Are you in compliance with all applicable requirements for this emission unit? ☒ Yes ☐ No If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT G
AIR POLLUTION CONTROL DEVICE FORMS

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 1-DC-1 Emission Point E-1-DC-1	List all emission units associated with this control device. See Attachment D	
Manufacturer: Dalamatic	Model number: 30/15	Installation date: 1994
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 20 Cloth Area (ft ²): 340		Δ P Compliant Range: 0.5 - 9 inches water* Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 1,900
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

* Based on weekly Δ P and concurrently-observed compliant opacity readings from November 2004 to April 2006.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 4-DC-1 Emission Point 1E	List all emission units associated with this control device. See Attachment D	
Manufacturer: MikroPul	Model number: 289S-12-20-TRH	Installation date: Pre 1990
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: Gore-Tex Number of Bags: 1,156 Cloth Area (ft²): 16,300 ΔP Compliant Range: 2 - 15 inches water* Exhaust Temp (°F): 400 Air Flow (ft³/min): 61,500		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date. See page G3.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

Attachment G 4-DC-1 *Continued*

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 12.2.1. [45CSR34, 40CFR§63.7113(a) and (g), 40CFR§63.7121(a), Table 5, Item 4, Emission Point ID (E1, and 500-115)]

The permittee must install, operate, and maintain each continuous opacity monitoring system (COMS) in accordance with the following:

For each COMS used to monitor an add-on air pollution control device, you must install the COMS at the outlet of the control device and install, maintain, calibrate, and operate the COMS as required by 40 C.F.R. Part 63 Subpart A, General Provisions and according to 40 C.F.R. Part 60 Appendix B, Performance Specifications (PS)-1. Facilities that operate COMS installed before February 6, 2001, may continue to meet the requirements in effect at the time of COMS installation unless specifically required to recertify the COMS by their permitting authority.

Continuous compliance shall be established by collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.

Section 12.2.2. [45CSR34, 40CFR§63.7113(f), (4-RK-1 and 4-RK-2)]

For each emission unit equipped with an add-on air pollution control device you must inspect each capture/collection and closed vent system at least once each calendar year to ensure each system is operating in accordance with the operating requirements of 40 C.F.R. Part 63 Subpart AAAAA, Table 2 Item 6, incorporated herein as Section 12.1.3 (c), and record the results of each inspection.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 4-DC-2 Emission Point 500-115	List all emission units associated with this control device. See Attachment D	
Manufacturer: Amerex	Model number: RP-14-225 D6	Installation date: 1995
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: Gore-Tex Number of Bags: 900 Cloth Area (ft²): 20,800 ΔP Compliant Range: 2 - 15 inches water* Exhaust Temp (°F): 400 Air Flow (ft³/min): 77,500		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date. See page G5.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

Attachment G 4-DC-2 Continued

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 7.1.7 [45CSR13, R13-1381B, 4.1.12. (4-DC-2)]

Baghouse 500-110 (4-DC-2) controls shall include equipment to monitor and maintain a negative pressure drop of 16 inches of water across the baghouse.

Section 12.2.1. [45CSR34, 40CFR§63.7113(a) and (g), 40CFR§63.7121(a), Table 5, Item 4, Emission Point ID (E1,500-115)]

The permittee must install, operate, and maintain each continuous opacity monitoring system (COMS) in accordance with the following:

For each COMS used to monitor an add-on air pollution control device, you must install the COMS at the outlet of the control device and install, maintain, calibrate, and operate the COMS as required by 40 C.F.R. Part 63 Subpart A, General Provisions and according to 40 C.F.R. Part 60 Appendix B, Performance Specifications (PS)-1. Facilities that operate COMS installed before February 6, 2001, may continue to meet the requirements in effect at the time of COMS installation unless specifically required to recertify the COMS by their permitting authority.

Continuous compliance shall be established by collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.

Section 12.2.2. [45CSR34, 40CFR§63.7113(f), Equipment Point ID (4-RK-1 and 4-RK-2)]

For each emission unit equipped with an add-on air pollution control device you must inspect each capture/collection and closed vent system at least once each calendar year to ensure each system is operating in accordance with the operating requirements of 40 C.F.R. Part 63 Subpart AAAAA, Table 2 Item 6, incorporated herein as Section 12.1.3 (c), and record the results of each inspection.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 4-DC-3 Emission Point 500-119b	List all emission units associated with this control device. See Attachment D	
Manufacturer: Amerex	Model number: RP-10-36 D4	Installation date: 1995
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	93.33 %	99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 36 Cloth Area (ft²): 440 ΔP Compliant Range: 0.5 - 6 inches water Exhaust Temp (°F): ambient Air Flow (ft³/min): 2,500		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 6-DC-1 Emission Point E-6-DC-1	List all emission units associated with this control device. See Attachment D	
Manufacturer: Flex-Kleen	Model number: 100 WRVBS-48IIIIG	Installation date: 1991
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 48 pleated cartridges Cloth Area (ft ²): 1,100		ΔP Compliant Range: 0.5 - 8 inches water* Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 4,000
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 6-DC-2 Emission Point E-6-DC-2	List all emission units associated with this control device. See Attachment D	
Manufacturer: Pneumafil	Model number: PCFH-12	Installation date: 1998
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 12 pleated cartridges Cloth Area (ft ²): 540		ΔP Compliant Range: 0.5 - 8 inches water* Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 2,500
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 6-DC-3 Emission Point E-6-DC-3	List all emission units associated with this control device. See Attachment D	
Manufacturer: Pneumafil	Model number: PCFH-12	Installation date: 1991
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 12 pleated cartridges Cloth Area (ft ²): 540		ΔP Compliant Range: 0.5 - 8 inches water* Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 2,500
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 6-DC-4 Emission Point 500-P1	List all emission units associated with this control device. See Attachment D	
Manufacturer: Pneumafil	Model number: PCFH-24	Installation date: 1995
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	93.33%	99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 24 pleated cartridges Cloth Area (ft ²): 1,080		ΔP Compliant Range: 0.5 - 8 inches water Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 5,000
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 7-DC-1 Emission Point E1	List all emission units associated with this control device. See Attachment D	
Manufacturer: Pneumafil	Model number: PCFH-16	Installation date: 1984
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester		ΔP Compliant Range: 0.5 - 8 inches water
Number of Bags: 16 pleated cartridges		Exhaust Temp (°F): ambient
Cloth Area (ft²): 720		Air Flow (ft³/min): 3,300
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 7-DC-2 Emission Point E2	List all emission units associated with this control device. See Attachment D	
Manufacturer: Camfil APC	Model number: GS4	Installation date: 2018
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 4 pleated cartridges Cloth Area (ft ²): 1,300		ΔP Compliant Range: 0.5 - 10 inches water Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 2,500
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 7-DC-3 Emission Point E3	List all emission units associated with this control device. See Attachment D	
Manufacturer: Wheelabrator	Model number: 22WSC BV	Installation date: 1984
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester		ΔP Compliant Range: 0.5 - 10 inches water
Number of Bags: 4 pleated cartridges		Exhaust Temp (°F): ambient
Cloth Area (ft²): 200		Air Flow (ft³/min): 1,500
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

* Based on weekly ΔP and concurrently-observed compliant opacity readings from November 2004 to April 2006.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 7-DC-5 Emission Point E5	List all emission units associated with this control device. See Attachment D	
Manufacturer: Camfil APC	Model number: GS4	Installation date: 2018
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 4 pleated cartridges Cloth Area (ft ²): 1,300		ΔP Compliant Range: 0.5 - 10 inches water Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 2,500
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 7-DC-6 Emission Point E6	List all emission units associated with this control device. See Attachment D	
Manufacturer: Camfil APC	Model number: GS6	Installation date: 2018
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 4 pleated cartridges Cloth Area (ft ²): 1,950		ΔP Compliant Range: 0.5 - 10 inches water Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 5,500
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 7-DC-20 Emission Point E20	List all emission units associated with this control device. See Attachment D	
Manufacturer: Mac Process LLC	Model number: 144MCF494	Installation date: 2013
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 494 bags Cloth Area (ft ²): 7,118		ΔP Compliant Range: 0.5 - 10 inches water Exhaust Temp (°F): ambient Air Flow (ft ³ /min): 5,500
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 7-DC-21 Emission Point E21	List all emission units associated with this control device. See Attachment D	
Manufacturer: Camfil APC	Model number: GS4	Installation date: 2018
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester		ΔP Compliant Range: 0.5 - 10 inches water
Number of Bags: 4 pleated cartridges		Exhaust Temp (°F): ambient
Cloth Area (ft ²): 1,300		Air Flow (ft ³ /min): 2,500
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 7-SCR-1 Emission Point E4	List all emission units associated with this control device. See Attachment D	
Manufacturer: Glean Gas System	Model number: Wet dynamic scrubber with wet fan using re-circulated water	Installation date: 1999
Type of Air Pollution Control Device: ☐ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☒ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		96.4 %
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Gas flow rate into collector: 7,500 ACFM @ 200° F and 13.65 PSIA. Scrubber liquor is re-circulated water. Scrubbing liquor losses: 0.7 gpm @ 200° F. Liquor flow rates: 21 gpm to fan, 49 gpm to scrubber body. Liquor pressure to scrubber: 12-18 psig. 25 hp fan. Stainless steel paddle wheel fan with 5 blades.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Section 9.2.2. [45CSR13, R13-1396E] Conduct monthly Method 22 observations for no less than one minute. Take immediate corrective action if emissions are in excess of limitation. Maintain all observation records. Report deviations to DAQ.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 11-DC-1 Emission Point E-11-DC-1	List all emission units associated with this control device. See Attachment D	
Manufacturer: Pinnacle APC, Inc.	Model number: 6P-345-11-TA	Installation date: 2007
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99.9%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 345 Cloth Area (ft²): 5,713 ΔP Range: 0.5 - 8 inches water* Exhaust Temp (°F): 160 Air Flow (ft³/min): 20,360		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date. See page G20.		

* Requested range, based on combination of manufacturer's guarantee and facility's experience.

Attachment G 11-DC-1 Continued

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 5.2.1. [45CSR13, R13-2113K, 4.2.1., (E-11-DC-1, E-11-DC-3, E-11-DC-2, and Section 5.1.4. Transfer Points)]

For the purpose of determining compliance with the opacity limits in Sections 5.1.2.e, 5.1.3.e and 5.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR7A for the sources subject to 45CSR§§7-3.1 and 3.2, and Method 9 for all other sources as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A 45CSR7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 11-DC-2 Emission Point E-11-DC-2	List all emission units associated with this control device. See Attachment D	
Manufacturer: Camfil APC	Model number: GFS-4	Installation date: 2011
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter		99%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: polyester Number of Bags: 4 (cartridges) Cloth Area (ft²): 1,300 ΔP Range: 0~80" H₂O Exhaust Temp (°F): 100 Air Flow (ft³/min): 3,000		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date. See page G22.		

Attachment G 11-DC-2 Continued

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 5.2.1. [45CSR13, R13-2113K, 4.2.1., (E-11-DC-1, E-11-DC-3, E-11-DC-2, and Section 5.1.4. Transfer Points)]

For the purpose of determining compliance with the opacity limits in Sections 5.1.2.e, 5.1.3.e and 5.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR7A for the sources subject to 45CSR§§7-3.1 and 3.2, and Method 9 for all other sources as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A 45CSR7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 11-DC-3 Emission Point E-11-DC-3	List all emission units associated with this control device. See Attachment D	
Manufacturer: Camfil APC	Model number: GS-4	Installation date: 2011
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: Polyester ΔP Compliant Range: 8.0" H₂O		
Number of Bags: 4 (cartridges) Exhaust Temp (°F): 100		
Cloth Area (ft²): 1,300 Air Flow (ft³/min): 3,000		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date. See page G24.		

Attachment G 11-DC-3 Continued

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 5.2.1. [45CSR13, R13-2113K, 4.2.1., (E-11-DC-1, E-11-DC-3, E-11-DC-2, and Section 5.1.4. Transfer Points)]

For the purpose of determining compliance with the opacity limits in Sections 5.1.2.e, 5.1.3.e and 5.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR7A for the sources subject to 45CSR§§7-3.1 and 3.2, and Method 9 for all other sources as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A 45CSR7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 11-DC-4
Emission Point E-11-DC-4

List all emission units associated with this control device.
See Attachment D

Manufacturer:
Camfil APC

Model number:
GS-4

Installation date:
2011

Type of Air Pollution Control Device:

☒ Baghouse/Fabric Filter	☐ Venturi Scrubber	☐ Multiclone
☐ Carbon Bed Adsorber	☐ Packed Tower Scrubber	☐ Single Cyclone
☐ Carbon Drum(s)	☐ Other Wet Scrubber	☐ Cyclone Bank
☐ Catalytic Incinerator	☐ Condenser	☐ Settling Chamber
☐ Thermal Incinerator	☐ Flare	☐ Other (describe) _____
☐ Wet Plate Electrostatic Precipitator	☐ Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Cloth Type: Polyester	ΔP : ~8.0" H ₂ O
Number of Bags: 4 (cartridges)	Exhaust Temp (°F): 100
Cloth Area (ft ²): 1,300	Air Flow (ft ³ /min): 3,000

Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No

If Yes, **Complete ATTACHMENT H**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)]

The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.

See page G26.

Attachment G 11-DC-4 Continued

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 5.2.1. [45CSR13, R13-2113K, 4.2.1., (E-11-DC-1, E-11-DC-3, E-11-DC-2, and Section 5.1.4. Transfer Points)]

For the purpose of determining compliance with the opacity limits in Sections 5.1.2.e, 5.1.3.e and 5.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR7A for the sources subject to 45CSR§§7-3.1 and 3.2, and Method 9 for all other sources as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A 45CSR7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 11-DC-20
Emission Point E-11-DC-20

List all emission units associated with this control device.
See Attachment D

Manufacturer:
Camfil APC

Model number:
GS-6

Installation date:
2011

Type of Air Pollution Control Device:

☒ Baghouse/Fabric Filter	☐ Venturi Scrubber	☐ Multiclone
☐ Carbon Bed Adsorber	☐ Packed Tower Scrubber	☐ Single Cyclone
☐ Carbon Drum(s)	☐ Other Wet Scrubber	☐ Cyclone Bank
☐ Catalytic Incinerator	☐ Condenser	☐ Settling Chamber
☐ Thermal Incinerator	☐ Flare	☐ Other (describe) _____
☐ Wet Plate Electrostatic Precipitator	☐ Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Cloth Type: Polyester	ΔP : ~8.0" H ₂ O
Number of Bags: 6 (cartridges)	Exhaust Temp (°F): 100
Cloth Area (ft ²): 1,950	Air Flow (ft ³ /min): 4,000

Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No

If Yes, **Complete ATTACHMENT H**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)]

The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date.

See page G28.

Attachment G 11-DC-4 Continued

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Section 5.2.1. [45CSR13, R13-2113K, 4.2.1., (E-11-DC-1, E-11-DC-3, E-11-DC-2, and Section 5.1.4. Transfer Points)]

For the purpose of determining compliance with the opacity limits in Sections 5.1.2.e, 5.1.3.e and 5.1.4, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60 Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60 Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for six (6) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR7A for the sources subject to 45CSR§§7-3.1 and 3.2, and Method 9 for all other sources as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A 45CSR7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 4-DC-4 Emission Point E-4-DC-4	List all emission units associated with this control device. See Attachment D	
Manufacturer: Industrial Accessories Company	Model number: 54TB-BVT-36:S6	Installation date: 2024
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: Polyester ΔP: ~8.0" H₂O Number of Bags: 36 Exhaust Temp (°F): Ambient Cloth Area (ft²): 254.34 Air Flow (ft³/min): 350		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date. See page G28.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: 4-DC-5 Emission Point E-4-DC-5	List all emission units associated with this control device. See Attachment D	
Manufacturer: Industrial Accessories Company	Model number: 54TB-BVT-36:S6	Installation date: 2024
Type of Air Pollution Control Device:		
☒ Baghouse/Fabric Filter ☐ Venturi Scrubber ☐ Multiclone ☐ Carbon Bed Adsorber ☐ Packed Tower Scrubber ☐ Single Cyclone ☐ Carbon Drum(s) ☐ Other Wet Scrubber ☐ Cyclone Bank ☐ Catalytic Incinerator ☐ Condenser ☐ Settling Chamber ☐ Thermal Incinerator ☐ Flare ☐ Other (describe) _____ ☐ Wet Plate Electrostatic Precipitator ☐ Dry Plate Electrostatic Precipitator		
List the pollutants for which this device is intended to control and the capture and control efficiencies.		
Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
Cloth Type: Polyester ΔP: ~8.0" H₂O Number of Bags: 36 Exhaust Temp (°F): Ambient Cloth Area (ft²): 254.34 Air Flow (ft³/min): 350		
Is this device subject to the CAM requirements of 40 C.F.R. 64? ☐ Yes ☒ No		
If Yes, Complete ATTACHMENT H		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Section 3.2.2. [45CSR§30-5.1.c., Section 1.0 (Dust Collectors)] The permittee shall conduct weekly visual emission observations on all dust collectors and the permittee shall maintain a pressure gauge on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any. Records shall be maintained on site for five (5) years from the record creation date. See page G28.		

APPENDIX 1
SUMMARY OF SPECIATED HAPs PTE

Greer Lime Company
PTE HAPs
February 10, 2025

Total PTE HAPs			
Pollutant	CAS No.	Type	Annual PTE Emissions (TPY)
1,1,1-Trichloroethane	71556	HAP	0.0001
1,3-Butadiene	106990	HAP	0.2761
Acetaldehyde	75070	HAP	4.6400
Acrolein	107028	HAP	0.5630
Benzene	71432	HAP	0.1702
Carbon Disulfide	75150	HAP	0.2533
Dioxin/Furans	N/A	HAP	1.20E-07
Ethyl Benzene	100414	HAP	0.1555
Formaldehyde	50000	HAP	0.6941
HCl	7647010	HAP	39.7
Mercury (Hg)	7439976	HAP	1.10E-03
Methanol	67561	HAP	0.4570
Naphthalene	91203	HAP	0.1558
Styrene	100425	HAP	0.1555
Toluene	108883	HAP	0.4681
Vinyl Chloride	75014	HAP	1.9390
Xylenes (o/m/p)	1330207	HAP	0.3110
Lead	7439921	HAP	2.00E-04
Aggregated HAP Totals =			49.94

Greer Lime Company
Group 004: 400 TPD Rotary Lime Kiln (4-RK-1)
PTE HAPs
February 10, 2025

Emission Unit Group 004: 400 TPD Rotary Lime Kiln (4-RK-1) Lime Production While Burning Coal					
Pollutant	CAS No.	Type	Emission Factor ⁽¹⁾ (lb Pollutant / ton lime produced)	Permitted Lime Production (TPY)	PTE HAPs (TPY)
1,3-Butadiene	106990	HAP	0.0022	146,000	0.1606
Acetaldehyde	75070	HAP	0.05		3.6500
Acrolein	107028	HAP	0.005		0.3650
Benzene	71432	HAP	0.0012		0.0876
Carbon Disulfide	75150	HAP	0.002		0.1460
Dioxin/Furans	N/A	HAP	7.92E-10		0.0000001
Ethyl Benzene	100414	HAP	0.001		0.0730
Formaldehyde	50000	HAP	0.006		0.4380
HCl	7647010	HAP	0.25		18.2500
Mercury (Hg)	7439976	HAP	2.98E-06		0.0002
Methanol	67561	HAP	0.004		0.2920
Naphthalene	91203	HAP	0.001		0.0730
Styrene	100425	HAP	0.001		0.0730
Toluene	108883	HAP	0.003		0.2190
Vinyl Chloride	75014	HAP	0.013		0.9490
Xylenes (o/m/p)	1330207	HAP	0.002		0.1460
Lead	7439921	HAP	1.15E-06		0.0001

(1) Emission factors either derived from source specific stack testing on this kiln or provided by the National Lime Association.

Greer Lime Company
Group 005: 500 TPD Rotary Lime Kiln (4-RK-2)
PTE HAPs
February 10, 2025

Emission Unit Group 005: 500 TPD Rotary Lime Kiln (4-RK-2) Lime Production While Burning Coal					
Pollutant	CAS No.	Type	Emission Factor ⁽¹⁾ (lb Pollutant / ton lime produced)	Permitted Lime Production (TPY)	PTE HAPs (TPY)
1,3-Butadiene	106990	HAP	0.0014	165,000	0.1155
Acetaldehyde	75070	HAP	0.012		0.9900
Acrolein	107028	HAP	0.0024		0.1980
Benzene	71432	HAP	0.001		0.0825
Carbon Disulfide	75150	HAP	0.0013		0.1073
Dioxin/Furans	N/A	HAP	2.20E-10		0.00000002
Ethyl Benzene	100414	HAP	0.001		0.0825
Formaldehyde	50000	HAP	0.003		0.2475
HCl	7647010	HAP	0.26		21.4500
Mercury (Hg)	7439976	HAP	1.11E-05		0.0009
Methanol	67561	HAP	0.002		0.1650
Naphthalene	91203	HAP	0.001		0.0825
Styrene	100425	HAP	0.001		0.0825
Toluene	108883	HAP	0.003		0.2475
Vinyl Chloride	75014	HAP	0.012		0.9900
Xylenes (o/m/p)	1330207	HAP	0.002		0.1650
Lead	7439921	HAP	1.15E-06		0.0001

(1) Emission factors either derived from source specific stack testing on this kiln or provided by the National Lime Association.

Greer Lime Company

Group 004/005: Kilns Startup Fuel Use (4-RK-1 and 4-RK-2)

Group 011: Hot Air Generator (11-HG-1)

PTE HAPs

February 10, 2025

Emission Unit Group 011: Hot Air Generator (11-HG-1) Group 004/005: Kilns Startup Fuel Use (4-RK-1 and 4-RK-2)					
Pollutant	CAS No.	Type	Emission Factor ⁽¹⁾ (lb Pollutant / 1,000 gallons FO2)	Max Potential Startup Fuel ⁽²⁾ (Gallons x 10 ³)	PTE HAPs (TPY)
Benzene	71432	HAP	0.000214	523.04	0.00006
Ethyl Benzene	100414	HAP	0.0000636		0.00002
Formaldehyde	50000	HAP	0.033		0.00863
Naphthalene	91203	HAP	0.00113		0.00030
1,1,1-Trichloroethane	71556	HAP	0.000236		0.00006
Toluene	108883	HAP	0.0062		0.00162
Xylenes (o/m/p)	1330207	HAP	0.000109		0.00003

(1) Fuel oil emission factors from AP-42, Section 1.3, Fuel Oil Combustion

(2) FO2 gallons determined by 473,040 gallon limit in 11-HG-1 and assumption that maximum startup fuel will not exceed 50,000 gallons/year.

Greer Lime Company
HAP Emission Factor Update - Rotary Lime Kilns
February 10, 2025

Table 1: Emission Unit Group 004: 400 TPD Rotary Lime Kiln (4-RK-1)

Pollutant	CAS No.	Type	Emission Factor (lb Pollutant / ton lime produced)	How does factor change?	Source / Date
1,3-Butadiene	106990	HAP	0.0022	New pollutant	Stack Test / 09-23
Acetaldehyde	75070	HAP	0.05	Updated factor	Stack Test / 09-23
Acrolein	107028	HAP	0.005	Updated factor	Stack Test / 09-23
Benzene	71432	HAP	0.0012	Updated factor	Stack Test / 09-23
Carbon Disulfide	75150	HAP	0.002	Updated factor	Stack Test / 09-23
Dioxin/Furans	N/A	HAP	7.92E-10	New pollutant	Stack Test / 09-23
Ethyl Benzene	100414	HAP	0.001	Updated factor	Stack Test / 09-23
Formaldehyde	50000	HAP	0.006	Updated factor	Stack Test / 09-23
HCl	7647010	HAP	0.25	Updated factor	Stack Test / 09-23
Mercury (Hg)	7439976	HAP	2.98E-06	Updated factor	Stack Test / 09-23
Methanol	67561	HAP	0.004	New pollutant	Stack Test / 09-23
Naphthalene	91203	HAP	0.001	Updated factor	Stack Test / 09-23
Styrene	100425	HAP	0.001	Updated factor	Stack Test / 09-23
Toluene	108883	HAP	0.003	Updated factor	Stack Test / 09-23
Vinyl Chloride	75014	HAP	0.013	New pollutant	Stack Test / 09-23
Xylenes (o/m/p)	1330207	HAP	0.002	Updated factor	Stack Test / 09-23
Lead	7439921	HAP	1.15E-06	Same as previous	NLA

Table 2: Emission Unit Group 005: 500 TPD Rotary Lime Kiln (4-RK-2)

Pollutant	CAS No.	Type	Emission Factor (lb Pollutant / ton lime produced)	How does factor change?	Source / Date
1,3-Butadiene	106990	HAP	0.0014	New pollutant	Stack Test / 09-23
Acetaldehyde	75070	HAP	0.012	Updated factor	Stack Test / 09-23
Acrolein	107028	HAP	0.0024	Updated factor	Stack Test / 09-23
Benzene	71432	HAP	0.001	Updated factor	Stack Test / 09-23
Carbon Disulfide	75150	HAP	0.0013	Updated factor	Stack Test / 09-23
Dioxin/Furans	N/A	HAP	2.20E-10	New pollutant	Stack Test / 09-23
Ethyl Benzene	100414	HAP	0.001	Updated factor	Stack Test / 09-23
Formaldehyde	50000	HAP	0.003	Updated factor	Stack Test / 09-23
HCl	7647010	HAP	0.26	Updated factor	Stack Test / 09-23
Mercury (Hg)	7439976	HAP	1.11E-05	Updated factor	Stack Test / 09-23
Methanol	67561	HAP	0.002	New pollutant	Stack Test / 09-23
Naphthalene	91203	HAP	0.001	Updated factor	Stack Test / 09-23
Styrene	100425	HAP	0.001	Updated factor	Stack Test / 09-23
Toluene	108883	HAP	0.003	Updated factor	Stack Test / 09-23
Vinyl Chloride	75014	HAP	0.012	New pollutant	Stack Test / 09-23
Xylenes (o/m/p)	1330207	HAP	0.002	Updated factor	Stack Test / 09-23
Lead	7439921	HAP	1.15E-06	Same as previous	NLA

Table 3: Remove these HAPs from the PTE for Both Rotary Lime Kilns

1,1,1-Trichloroethane	71556
2-Chloroacetophenone	532274
2,4-Dinitrotoluene	121142
Acetophenone	98862
Antimony (Sb ₂ O ₃)	1327339
Arsenic (As ₂ O ₃)	1303282
Benzyl chloride	100447
Beryllium (BeO)	1304569
Biphenyl	92524
Bis (2-ethylhexyl)phthalate (DEHP)	117817
Bromoform	75252
Cadmium (CdO)	1306190
Chlorobenzene	108907
Chloroform	67663
Chromium (CrO ₃)	1333820
Chromium (VI)	18540299
Cobalt (CoO)	1307966
Cumene	98828
Cyanide	57125
Dimethyl sulfate	77781

Table 3: Remove these HAPs from the PTE for Both Rotary Lime Kilns

Ethyl chloride	75003
Ethylene dibromide	106934
Ethylene dichloride	107062
Hexane	110543
Hydrogen Fluoride	7664393
Isophorone	78591
Manganese (MnO ₂)	1313139
Methyl bromide	74839
Methyl chloride	74873
Methyl ethyl ketone	Delisted
Methyl hydrazine	60344
Methyl methacrylate	80626
Methyl tert butyl ether	1634044
Methylene chloride	75092
Nickel (NiO)	1313991
Phenol	108952
Propionaldehyde	123386
Selenium (SeO ₂)	12640890
Tetrachloroethylene	127184
Vinyl Acetate	108054

* Table 3 HAPs are based on old, inaccurate AP-42 factors for coal combustion in boilers and do not apply to lime kilns.