



State of Utah

SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Tim Davis
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN103130049-25

September 25, 2025

Colby Roberts
Graymont Western US Incorporated
585 West Southridge Way
Sandy, UT 84070
croberts@graymont.com

Dear Mr. Roberts:

Re: Approval Order: Modification to Approval Order DAQE-AN103130047-24 to Update Kiln Drive Motor Power Ratings and Add New Equipment
Project Number: N103130049

The attached Approval Order (AO) is issued pursuant to the Notice of Intent (NOI) received on June 5, 2024. Graymont Western US Incorporated must comply with the requirements of this AO, all applicable state requirements (R307), and Federal Standards.

The project engineer for this action is **John Jenks**, who can be contacted at (385) 306-6510 or jjenks@utah.gov. Future correspondence on this AO should include the engineer's name as well as the DAQE number shown on the upper right-hand corner of this letter. No public comments were received on this action.

Sincerely,

Bryce C. Bird
Director

BCB:JJ:jg

cc: Central Utah Health Department
EPA Region 8

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

APPROVAL ORDER
DAQE-AN103130049-25
Modification to Approval Order DAQE-AN103130047-24 to
Update Kiln Drive Motor Power Ratings and
Add New Equipment

Prepared By
John Jenks, Engineer
(385) 306-6510
jjenks@utah.gov

Issued to
Graymont Western US Incorporated - Cricket Mountain Plant

Issued On
September 25, 2025

Issued By



Bryce C. Bird
Director
Division of Air Quality

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GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name

Graymont Western US Incorporated

Source Name

Graymont Western US Incorporated - Cricket Mountain Plant

Mailing Address

585 West Southridge Way
Sandy, UT 84070

Physical Address

32 Miles Southwest of Delta, Utah; Highway 257
PO Box 669
Delta (Millard), UT 84624

Source Contact

Name: Jon Anderson
Phone: (385) 418-3044
Email: jcanderson@graymont.com

UTM Coordinates

343,100 m Easting
4,311,010 m Northing
Datum NAD27
UTM Zone 12

SIC code 1422 (Limestone, Crushed & Broken)

SOURCE INFORMATION

General Description

Graymont Western US Inc. (Graymont) operates the Cricket Mountain Lime Plant in Millard County. The Cricket Mountain Lime Plant consists of quarries and a lime processing plant, which includes five rotary lime kilns (Kilns #1 through #5). The rotary kilns are used to convert crushed limestone ore into quicklime. The products produced for resale are lime, limestone, and kiln dust. The kilns operate on pet coke and coal. Sources of emissions at this source include mining, limestone processing, rotary lime kilns, post-kiln lime handling, and truck & loadout facilities.

NSR Classification

Minor Modification at Major Source

Source Classification

Located in Attainment Area
Millard County
Airs Source Size: A

Applicable Federal Standards

NSPS (Part 60), A: General Provisions
NSPS (Part 60), Y: Standards of Performance for Coal Preparation and Processing Plants
NSPS (Part 60), HH: Standards of Performance for Lime Manufacturing Plants
NSPS (Part 60), OOO: Standards of Performance for Nonmetallic Mineral Processing Plants
NSPS (Part 60), IIII: Standards of Performance for Stationary Compression Ignition Internal

Combustion Engines

MACT (Part 63), A: General Provisions

MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

MACT (Part 63), AAAAA: National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

Title V (Part 70) Major Source

Project Description

Graymont submitted an initial request to replace the Kiln #3 drive motor with a new engine. Graymont submitted an addendum to the NOI to similarly replace the drive motors on Kilns #1, #2, and #4. Each engine will be a Tier-4 certified 75 hp unit. There will be no change in emissions from this project. Graymont also submitted a request to install a new limestone crushing plant located adjacent to the southwest quarry. The new crushing facility will consist of a primary and secondary crusher, primary and secondary screen towers, belt conveyors, and radial stackers. Dust suppression systems consisting of water sprays, baghouses, and passive dust filters will be used to control particulate emissions.

SUMMARY OF EMISSIONS

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

| Criteria Pollutant | Change (TPY) | Total (TPY) |
|--|--------------|-------------|
| CO ₂ Equivalent | 0 | 887964.00 |
| Carbon Monoxide | 0 | 7821.19 |
| Nitrogen Oxides | 0 | 3883.85 |
| Particulate Matter - PM ₁₀ | 8.58 | 620.45 |
| Particulate Matter - PM _{2.5} | 4.49 | 615.27 |
| Sulfur Oxides | 0 | 760.29 |
| Volatile Organic Compounds | 0 | 117.84 |

| Hazardous Air Pollutant | Change (lbs/yr) | Total (lbs/yr) |
|--|-----------------|----------------|
| Acetaldehyde (CAS #75070) | 0 | 1963 |
| Acrolein (CAS #107028) | 0 | 1 |
| Arsenic (TSP) (CAS #7440382) | 0 | 88 |
| Benzene (Including Benzene From Gasoline) (CAS #71432) | 0 | 7734 |
| Cadmium (CAS #7440439) | 0 | 58 |
| Chlorine (CAS #7782505) | 0 | 1078 |
| Chromium Compounds (CAS #CMJ500) | 0 | 1214 |
| Cobalt (TSP) (CAS #7440484) | 0 | 1154 |
| Ethyl Benzene (CAS #100414) | 0 | 488 |
| Formaldehyde (CAS #50000) | 0 | 1612 |
| Hexane (CAS #110543) | 0 | 2566 |
| Hydrochloric Acid (Hydrogen Chloride) (CAS #7647010) | 0 | 44400 |
| Hydrogen Fluoride (Hydrofluoric Acid) (CAS #7664393) | 0 | 156 |

| | | |
|--|---------------------|--------------------|
| Lead (CAS #7439921) | 0 | 1204 |
| Manganese (TSP) (CAS #7439965) | 0 | 546 |
| Mercury (TSP) (CAS #7439976) | 0 | 64 |
| Nickel (CAS #7440020) | 0 | 422 |
| Selenium & Compounds (CAS #253) | 0 | 402 |
| Toluene (CAS #108883) | 0 | 2678 |
| Xylenes (Isomers And Mixture) (CAS #1330207) | 0 | 2562 |
| | Change (TPY) | Total (TPY) |
| Total HAPs | 0 | 35.19 |

SECTION I: GENERAL PROVISIONS

| | |
|-----|--|
| I.1 | All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101] |
| I.2 | The limits set forth in this AO shall not be exceeded without prior approval. [R307-401] |
| I.3 | Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1] |
| I.4 | All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the five-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of five years. [R307-401-8] |
| I.5 | At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4] |
| I.6 | The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107] |
| I.7 | The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150] |
| I.8 | The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18] |

SECTION II: PERMITTED EQUIPMENT

II.A THE APPROVED EQUIPMENT

| | |
|--------|---|
| II.A.1 | Cricket Mountain Plant [All equipment designation numbers are those used by Graymont Western U.S. Inc.] |
| II.A.2 | K-1 Kiln Rotary Lime Kiln #1 rated at 600 tons of lime per 24-hour period with a preheater and baghouse emissions control system (D-85) rated at an exhaust gas flow rate 54,000 scfm and an Air to Cloth (A/C) ratio of 3.26:1. NESHAP Applicability: 40 CFR 63 Subpart AAAAA |
| II.A.3 | K-2 Kiln Rotary Lime Kiln #2 rated at 600 tons of lime per 24-hour period with a preheater, cyclone, and baghouse emissions control system (D-275) rated at an exhaust gas flow rate of 48,000 scfm and an A/C ratio of 2.9:1. NESHAP Applicability: 40 CFR 63 Subpart AAAAA |
| II.A.4 | K-3 Kiln Rotary Lime Kiln #3 rated at 840 tons of lime per 24-hour period with a preheater, cyclone, and baghouse emissions control system (D-375) rated at an exhaust gas flow rate of 55,000 scfm and a A/C ratio of 2.49:1. NESHAP Applicability: 40 CFR 63 Subpart AAAAA |
| II.A.5 | K-4 Kiln Rotary Lime Kiln #4 rated at 1266 tons of lime per 24-hour period with a preheater, cyclone, and baghouse emissions control system (D-485) rated at an exhaust gas flow rate of 100,000 scfm and an A/C ratio of 5:1. NESHAP Applicability: 40 CFR 63 Subpart AAAAA |
| II.A.6 | K-5 Kiln Rotary Lime Kiln #5 rated at 1400 tons of lime per 24-hour period with a preheater and baghouse emissions control system (D-585) rated at an exhaust gas flow rate of 103,000 scfm and an A/C ratio of 3.5:1. NESHAP Applicability: 40 CFR 63 Subpart AAAAA |
| II.A.7 | KDE-1 Kiln Drive Engine Rating: 75 hp Fuel: Diesel NSPS Applicability: 40 CFR 60 Subpart IIII MACT Applicability: 40 CFR 63 Subpart ZZZZ |
| II.A.8 | KDE-2 Kiln Drive Engine Rating: 75 hp Fuel: Diesel NSPS Applicability: 40 CFR 60 Subpart IIII MACT Applicability: 40 CFR 63 Subpart ZZZZ |
| II.A.9 | KDE-3 Kiln Drive Engine Rating: 75 hp Fuel: Diesel NSPS Applicability: 40 CFR 60 Subpart IIII MACT Applicability: 40 CFR 63 Subpart ZZZZ |

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| II.A.10 | <p>KDE-4 Kiln Drive Engine Rating: 75 hp Fuel: Diesel NSPS Applicability: 40 CFR 60 Subpart III MACT Applicability: 40 CFR 63 Subpart ZZZZ</p> |
| II.A.11 | <p>KDE-5 Kiln Drive Engine Rating: 173.5 hp Fuel: Diesel NSPS Applicability: 40 CFR 60 Subpart III MACT Applicability: 40 CFR 63 Subpart ZZZZ</p> |
| II.A.12 | <p>D-91 Coal Silo Baghouse For Kiln #1 Exhaust gas flow rate: 1,000 scfm</p> |
| II.A.13 | <p>D-94 Coal Silo Baghouse For Kiln #2 Exhaust gas flow rate: 1,000 scfm</p> |
| II.A.14 | <p>D-391 Coal Silo Baghouse For Kiln #3 Exhaust gas flow rate: 1,000 scfm</p> |
| II.A.15 | <p>D-491 Coal Silo Baghouse For Kiln #4 Exhaust gas flow rate: 1,500 scfm</p> |
| II.A.16 | <p>D-591 Coal Silo Baghouse For Kiln #5 Exhaust gas flow rate: 1,000 acfm</p> |
| II.A.17 | <p>D-331 Product Baghouse For Kiln #1, #2 loadout area, and screenhouse dust collector Exhaust gas flow rate: 32,000 scfm</p> |
| II.A.18 | <p>D-330 Product Baghouse For Kiln #3 cooler pit dust collector Exhaust gas flow rate: 11,000 scfm</p> |
| II.A.19 | <p>D-447 Product Baghouse For Kiln #4 cooler and screenhouse dust collector Exhaust gas flow rate: 18,300 scfm</p> |
| II.A.20 | <p>D-463 Product Baghouse For Kiln #4 product loadout and C-463 dust collector Exhaust gas flow rate: 8,300 scfm</p> |
| II.A.21 | <p>D-341 Product Baghouse For Silo T-341 Exhaust gas flow rate: 2,000 scfm</p> |
| II.A.22 | <p>D-530 Product Baghouse Product handling baghouse #1 for Kiln #5 screen house Exhaust gas flow rate: 9,000 acfm</p> |

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| II.A.23 | D-564 Product Baghouse Product handling baghouse #2 for Kiln #5 screen house Exhaust gas flow rate: 9,000 acfm |
| II.A.24 | D-547 Product Baghouse Product handling baghouse #3 for Kiln #5 screen house Exhaust gas flow rate: 9,000 acfm |
| II.A.25 | D-83 Lime Kiln Dust Silo Baghouse For Kilns #1 and #2 Exhaust gas flow rate: 6,000 scfm |
| II.A.26 | D-489 Lime Kiln Dust Silo Baghouse For Kilns #4 lime kiln dust silo Exhaust gas flow rate: 6,000 scfm |
| II.A.27 | D-486 Lime Kiln Dust Silo Baghouse For Kiln #4 Exhaust gas flow rate: 4,000 scfm |
| II.A.28 | D-466 Lime Kiln Dust Silo Baghouse For lime kiln dust silo Exhaust gas flow rate: 4,000 scfm |
| II.A.29 | D-586 Lime Kiln Dust Silo Baghouse For Kiln #5 dust silo Exhaust gas flow rate: 2,500 scfm |
| II.A.30 | D-589 Lime Kiln Dust Silo Baghouse For loadout of Kiln #5 dust silo Exhaust gas flow rate: 1,500 scfm |
| II.A.31 | T-381 Lime Kiln Dust Silo Maximum Capacity: 300 tons |
| II.A.32 | D-381 Lime Kiln Dust Silo Baghouse For 300-ton lime kiln dust silo (T-381) Exhaust gas flow rate: 3,000 scfm |
| II.A.33 | T-381 Loadout Spout For 300-ton lime kiln dust silo (T-381) |
| II.A.34 | D-382 Loadout Spout (T-381) Baghouse For Loadout Spout (T-381) Exhaust gas flow rate: 2,000 scfm |
| II.A.35 | D-333 Product Loadout Baghouse For rail loadout Exhaust gas flow rate: 10,000 scfm |
| II.A.36 | D-10 Limestone Ore Preparation Baghouse For stone reclaim screen for Kiln #1 & #2 Exhaust gas flow rate: 8,000 scfm |

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| II.A.37 | <p>D-310 Limestone Ore Processing Baghouse For stone dressing screen for Kiln #3 Exhaust gas flow rate: 8,000 scfm NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.38 | <p>D-414 Limestone Ore Processing Baghouse For stone dressing screen for Kiln #4 Exhaust gas flow rate: 3,100 scfm NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.39 | <p>D-514 Limestone Ore Processing Baghouse For stone dressing screen for Kiln #5 Exhaust gas flow rate: 4,500 acfm NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.40 | <p>D-1 Limestone Ore Processing Baghouse For quarry crusher & screen Exhaust gas flow rate: 28,000 scfm NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.41 | <p>D-503 Conveying System For dust collection for Kiln #5 limestone conveyor transfer points Exhaust flow rate: 2,000 acfm NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.42 | <p>D-403 Conveying System For stone dump from conveyors 408 & 409 to reclaim pile Exhaust gas flow rate: 2,200 scfm NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.43 | <p>D-415 Conveying System with Baghouse For limestone dump to Kiln #4 preheater Exhaust gas flow rate: 600 scfm NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.44 | <p>D-479 Dolomitic Lime Handling System Baghouse Product transfer from baghouse to S-471, T-471, T-472, T-473, and T-474. The 435-material handling system consists of 2 elevators, a vibratory conveyor, a number of belt conveyors, and a mixing screw conveyor Exhaust gas flow rate: 4,300 scfm</p> |
| II.A.45 | <p>R-486 Dolomite Crusher Rating: 40 tons/hr</p> |
| II.A.46 | <p>N-470 Dolomitic Lime Handling System Recycle Bin</p> |
| II.A.47 | <p>Processed Stone Handling (PSH) Operations Operations to transport material from storage piles (fines, small stone, medium stone, large stone [sugar]) to kiln preheaters. Includes bins, bin transfer points, preheater transfer points, and conveyors. NESHAP Applicability: 40 CFR 63 Subpart AAAAA</p> |
| II.A.48 | <p>Sugar Stone System System to store, screen, and load sugar stones. Includes a hopper (HP-1), screen (S-2), loadout system (203255SSS001), conveyors (C-MISC2), and generator (GEN-1).</p> |

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| II.A.49 | HP-1 Hopper Sugar Stone System |
| II.A.50 | S-2 Screen Sugar Stone System NSPS Applicability: 40 CFR 60 Subpart OOO |
| II.A.51 | Loadout Sugar Stone System Rail Loadout |
| II.A.52 | C-MISC2 Sugars Stone System Miscellaneous Conveyors NSPS Applicability: 40 CFR 60 Subpart OOO |
| II.A.53 | GEN-1 Generator Sugar Stone System Rating: 130.1 hp Fuel: Diesel MACT Applicability: 40 CFR 63 Subpart ZZZZ |
| II.A.54 | Portable Crusher System (PCS) Includes hopper, crushers (PCS-1), hopper (HP-2), generator (PCS-4), and conveyors. |
| II.A.55 | PCS Hopper Feed Hopper |
| II.A.56 | PCS-1 Crusher System ICR101: Primary Crusher Capacity: 690 tons/hr ICR102: Secondary Crusher Capacity: 690 tons/hr NSPS Applicability: 40 CFR 60 Subpart OOO |
| II.A.57 | PCS-2 Screen/Conveyor Transfer Points Screens and material transfer points to and from conveyor belts NSPS Applicability: 40 CFR 60 Subpart OOO |
| II.A.58 | PCS-3 Conveyor Drop Points Material drop points to the fines and product stockpiles NSPS Applicability: 40 CFR 60 Subpart OOO |
| II.A.59 | PCS-4 Generator Portable Crusher System Quantity: 3 Rating: 740 hp combined Fuel: Diesel |
| II.A.60 | PCS Conveyors NSPS Applicability: 40 CFR 60 Subpart OOO |
| II.A.61 | D-7122 Limestone Grinding Plant Baghouse For grinding mill, direct-fire heater, material separator Exhaust gas flow rate: 10,000 scfm NSPS Applicability: 40 CFR 60 Subpart OOO |
| II.A.62 | D-7133 Limestone Grinding Plant Baghouse For the screen, three bucket elevators, three storage silos Exhaust gas flow rate: 4,500 scfm NSPS Applicability: 40 CFR 60 Subpart OOO |

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| II.A.63 | D-7141 Limestone Grinding Plant Baghouse For truck load-out and rail load-out Exhaust gas flow rate: 3,500 scfm NSPS Applicability: 40 CFR 60 Subpart 000 |
| II.A.64 | C-MISC1 Limestone Grinding Plant Miscellaneous Conveyors |
| II.A.65 | D-488 Briquetter and Crusher Baghouse For crusher (R-486), briquetters (BRI-474 and BRI-014), and silo (T-470) Exhaust gas flow rate: 1,700 scfm |
| II.A.66 | BRI-474 Briquetter |
| II.A.67 | BRI-014 Briquetter |
| II.A.68 | C-045 Conveying System Fines Truck Loadout Conveyor - 250 tons/hr |
| II.A.69 | C-305 Conveying System Medium and Small Stone Pile Conveyor - 600 tons/hr |
| II.A.70 | S-466 Screen Dolomitic Screen |
| II.A.71 | C-Coal Handling Miscellaneous Conveyors |
| II.A.72 | Feeder-Coal Handling Four Vibratory Feeders |
| II.A.73 | PW Portable Pressure Washer Rating: 18 hp Fuel: Gasoline |
| II.A.74 | HR-1 Haul Road Quarry to plant and plant to highway. Length: 6 miles |
| II.A.75 | HR-2 Haul Road Inside the quarry |
| II.A.76 | Limestone Fines Product (LFP) Loadout System Includes a screen hopper, screen, screen conveyors, tent storage area, product loadout hopper, product loadout conveyor, and engines (CAT4.4 and V3600-T). |
| II.A.77 | LFP - Engines CAT 4.4 Generator Rating: 130 hp Kubota V3600-T Generator Rating: 52 hp Fuel: Diesel NSPS Applicability: 40 CFR 60 Subpart IIII MACT Applicability: 40 CFR 63 Subpart ZZZZ |

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| II.A.78 | <p>LFP-1 Hopper Capacity: 250 tons/hour</p> |
| II.A.79 | <p>LFP-2 Screen Capacity: 250 tons/hour NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.80 | <p>LFP-3 Conveyors Capacity: 250 tons/hour NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.81 | <p>LFP-4 Storage Tent storage area</p> |
| II.A.82 | <p>LFP-5 Hopper Product loadout hopper Capacity: 100 tons/hour NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.83 | <p>LFP-6 Conveyor Product Loadout Conveyor Capacity: 100 tons/hour NSPS Applicability: 40 CFR 60 Subpart OOO</p> |
| II.A.84 | <p>Stationary Pressure Washer Rating: 0.4 MMBtu/hr Fuel: Propane Listed for information purposes only</p> |
| II.A.85 | <p>Fuel Storage Tanks Four 10,150-gallon diesel storage tanks One 12,000-gallon diesel storage tank One 2,000-gallon gasoline storage tank One 500-gallon gasoline storage tank</p> |
| II.A.86 | <p>New crushing plant Hopper/Apron Feeder, controlled by water sprays</p> <p>Primary and secondary crushers, controlled by passive dust filters Maximum crushing rate: 1,200 tons per hour combined Operated online power</p> <p>Primary and secondary screen towers, controlled by baghouses Operated online power</p> <p>Belt conveyors (#1-#8), controlled by moisture carryover Operated online power</p> <p>Stockpiles</p> |

SECTION II: SPECIAL PROVISIONS

II.B REQUIREMENTS AND LIMITATIONS

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|---------------|--|
| II.B.1 | Site-wide Requirements |
| II.B.1.a | <p>The following limits shall not be exceeded:</p> <ul style="list-style-type: none"> A. For Kilns #1, #2, #3, #4, and #5 collectively: <ul style="list-style-type: none"> 1) 1,516,250 tons of lime per rolling 12-month period 2) 4,706 tons of lime per day B. Sugar Stone System <ul style="list-style-type: none"> 1) 135,000 tons of sugar stone per rolling 12-month period 2) 750 hours of operation for the 130.1 hp generator per rolling 12-month period C. Portable Crushing System <ul style="list-style-type: none"> 1) 750,000 tons of limestone per rolling 12-month period 2) 4,000 hours of operation per rolling 12-month period D. Truck hauling of stone from the quarry to the plant <ul style="list-style-type: none"> 1) No more than 108 round trips per day (midnight to midnight) 24-hour period E. Limestone Fines Product Loadout Process <ul style="list-style-type: none"> 1) 200,000 tons of limestone per rolling 12-month period 2) 6,500 hours of operation per rolling 12-month period. <p>[R307-401]</p> |
| II.B.1.a.1 | <p>Compliance with the above 12-month production limitations shall be determined on a rolling 12-month total. Calculations for the 12-month production shall be completed within 25 calendar days from the end of the previous month. Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by plant production records, such as scale records or sales receipts. Hours of operation and number of truck trips shall be determined by records of operation. The records shall be kept on a daily basis. [R307-401-8]</p> |

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|---|--|--------------------------|-----------------------------|-----------------------|
| <p>II.B.1.b</p> | <p>Emissions to the atmosphere from the indicated emission point shall not exceed the following rates and concentrations (standardized at 68 °F, 29.92 in Hg) (lbs/tsf = pounds per ton of stone fed):</p> | | | |
| | <p>Emission Point: Kiln #1 Baghouse Stack</p> | | | |
| | <p>Pollutant</p> | <p>lb/hr</p> | <p>grain/dscf</p> | <p>lbs/tsf</p> |
| | <p>TSP</p> | | <p>0.020</p> | <p>0.12</p> |
| | <p>PM₁₀ (Filterable + Condensable)</p> | <p>6.0</p> | <p>0.016</p> | |
| | <p>SO₂</p> | <p>22.4</p> | | |
| | <p>NO_x</p> | <p>90.0</p> | | |
| | <p>Emission Point: Kiln #2 Baghouse Stack</p> | | | |
| | <p>Pollutant</p> | <p>lb/hr</p> | <p>grain/dscf</p> | <p>lbs/tsf</p> |
| | <p>TSP</p> | <p>8.23</p> | <p>0.020</p> | <p>0.12</p> |
| | <p>PM₁₀ (Filterable + Condensable)</p> | <p>6.58</p> | <p>0.016</p> | |
| | <p>SO₂</p> | <p>22.4</p> | | |
| | <p>NO_x</p> | <p>120.0</p> | | |
| | <p>Emission Point: Kiln #3 Baghouse Stack</p> | | | |
| | <p>Pollutant</p> | <p>lb/hr</p> | <p>grain/dscf</p> | <p>lbs/tsf</p> |
| | <p>TSP</p> | <p>7.49</p> | <p>0.020</p> | <p>0.10</p> |
| | <p>PM₁₀ (Filterable + Condensable)</p> | <p>7.54</p> | <p>0.016</p> | |
| | <p>SO₂</p> | <p>27.2</p> | | |
| | <p>NO_x</p> | <p>160.0</p> | | |
| | <p>Emission Point: Kiln #4 Baghouse Stack</p> | | | |
| | <p>Pollutant</p> | <p>lb/hr</p> | <p>grain/dscf</p> | <p>lbs/tsf</p> |
| | <p>TSP</p> | <p>17.14</p> | <p>0.020</p> | <p>0.12</p> |
| | <p>PM₁₀ (Filterable + Condensable)</p> | <p>13.7</p> | <p>0.016</p> | |
| | <p>SO₂</p> | <p>38.4</p> | | |
| | <p>NO_x</p> | <p>200.0</p> | | |
| <p>Emission Point: Kiln #5 Baghouse Stack</p> | | | | |
| <p>Pollutant</p> | <p>lb/hr</p> | <p>grain/dscf</p> | <p>Other</p> | |
| <p>TSP</p> | | <p>0.020</p> | <p>0.10 lbs/tsf</p> | |
| <p>PM₁₀ (Filterable + Condensable)</p> | <p>11.7</p> | <p>0.016</p> | | |
| <p>SO₂</p> | <p>59.0</p> | | <p>1.01 lb/ton lime</p> | |
| <p>NO_x</p> | <p>210.0</p> | | <p>3.60 lb/ton lime</p> | |
| <p>CO</p> | <p>233.0</p> | | <p>4.00 lb/ton lime</p> | |
| <p>Emission Point: Briquetter and Crusher Baghouse (D-488) Stack</p> | | | | |
| <p>Pollutant</p> | <p>lb/hr</p> | <p>grain/dscf</p> | | |
| <p>TSP</p> | <p>0.29</p> | <p>0.020</p> | | |
| <p>PM₁₀ (Filterable)</p> | <p>0.15</p> | <p>0.010</p> | | |
| <p>PM_{2.5} (Filterable)</p> | <p>0.15</p> | <p>0.010</p> | | |
| <p>After the installation of an SO₂ CEMS, compliance with the SO₂ emission limit will be based on a three hour block average.</p> | | | | |
| <p>Testing for compliance with the lb/ton lime limits must comply with all stack testing requirements.</p> | | | | |
| <p>[R307-401]</p> | | | | |

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| II.B.1.b.1 | Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below: | | | |
| | Emission Point | Pollutant | Status | Test Frequency |
| | Kiln #1 Baghouse Stack | TSP PM ₁₀ SO ₂ NO _x | *** *** *** *** | + + + + |
| | Emission Point | Pollutant | Status | Test Frequency |
| | Kiln #2 Baghouse Stack | TSP PM ₁₀ SO ₂ NO _x | *** *** * * | + + + + |
| | Emission Point | Pollutant | Status | Test Frequency |
| | Kiln #3 Baghouse Stack | TSP PM ₁₀ SO ₂ NO _x | *** *** * *** | + + + + |
| | Emission Point | Pollutant | Status | Test Frequency |
| | Kiln #4 Baghouse Stack | TSP PM ₁₀ SO ₂ NO _x | *** *** *** *** | + + + + |
| | Emission Point | Pollutant | Status | Test Frequency |
| | Kiln #5 Baghouse Stack | TSP PM ₁₀ SO ₂ NO _x CO | *** *** *** *** *** | + + + + + |
| | Emission Point | Pollutant | Status | Test Frequency |
| | (D-488) Baghouse Stack | TSP PM ₁₀ PM _{2.5} (Filterable) | *** *** *** | + + + |
| | * No Initial Testing was required. The source shall be tested if directed by the Director at any time. | | | |
| | ** Initial compliance testing is required. The initial test date shall be performed as soon as possible and in no case later than 180 days after the startup of a new emission source, an existing source without an AO, or the granting of an AO to an existing emission source that has not had an initial compliance test performed. If an existing source is modified, a compliance test is required on the modified emission point that has an emission rate limit. | | | |
| | *** Initial compliance testing was required and completed. | | | |
| | + Test every three years. The Director may require testing at any time. | | | |
| | [R307-401] | | | |

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| <p>II.B.1.b.2</p> | <p>A. Notification The Director shall be notified at least 60 days prior to conducting any required emission testing for sources subject to 40 CFR 63 Subpart AAAAAA. All other sources shall notify the Director at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Director.</p> <p>The source test protocol shall be approved by the Director prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, the stack to be tested, and the procedures to be used. A pretest conference shall be held, if directed by the Director.</p> <p>B. Sample Location The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Director. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.</p> <p>C. Volumetric Flow Rate 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method acceptable to the Director.</p> <p>D. Total Suspended Particulate (TSP) 40 CFR 60, Appendix A, Method 5, or other EPA-approved testing method acceptable to the Director.</p> <p>E. PM₁₀ (Filterable + Condensable) For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a, or other EPA approved methods as acceptable to the Director. The back half condensable shall also be tested using the EPA approved method acceptable by the Director. All particulate captured shall be considered PM₁₀.</p> <p>For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate, or other EPA approved methods as acceptable to the Director. The back half condensable shall also be tested using the EPA method as acceptable to the Director. The portion of the front half of the catch considered PM₁₀ shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Director.</p> <p>F. PM_{2.5} (Filterable) 40 CFR 60, Appendix A, Method 5; 40 CFR 51, Appendix M, Method 201A or other EPA-approved testing methods as acceptable to the Director. If other approved testing methods are used which cannot measure the PM_{2.5} fraction of the filterable particulate emissions, all of the filterable particulate emissions shall be considered PM_{2.5}. The portion of the front half of the catch considered PM_{2.5} shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Director.</p> <p>G. Sulfur Dioxide (SO₂) 40 CFR 60, Appendix A, Method 6, 6A, 6B, 6C, or other EPA-approved testing method acceptable to the Director.</p> <p>H. Nitrogen Oxides (NO_x) 40 CFR 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other EPA approved method as acceptable to the Director.</p> <p>I. Carbon Monoxide (CO) 40 CFR 60, Appendix A, Method 10, or other EPA approved method as acceptable to the Director.</p> <p>[R307-401]</p> |
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| <p>II.B.1.b.3</p> | <p>J. Calculations To determine mass emission rates (lb/hr, etc.), the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.</p> <p>To determine emission rates in units of lbs/ton lime, the emission rate in lbs/hour shall be divided by the tons/hour lime production rate. Lime production rate shall either be a direct measurement or shall be calculated using the following conversion factor: 2 tons of limestone feed equates to 1 ton of lime produced (2 tons limestone: 1 ton lime).</p> <p>K. New Source Operation For a new source/emission point, the production rate during all compliance testing shall be no less than 90% of the production rate listed in this AO. If the maximum AO allowable production rate has not been achieved at the time of the test, the following procedure shall be followed:</p> <p style="padding-left: 40px;">1) Testing shall be at no less than 90% of the production rate achieved to date.</p> <p style="padding-left: 40px;">2) If the test is passed, the new maximum allowable production rate shall be 110% of the tested achieved rate, but not more than the maximum allowable production rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate.</p> <p style="padding-left: 40px;">3) The owner/operator shall request a higher production rate when necessary. Testing at no less than 90% of the higher rate shall be conducted. A new maximum production rate (110% of the new rate) will then be allowed if the test is successful. This process may be repeated until the maximum AO production rate is achieved.</p> <p>L. Existing Source Operation For the existing kilns, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three years.</p> <p>M. Reporting The results of stack testing shall be submitted to the Director within 60 days of completion of the testing. Reports shall clearly identify results as compared to permit limits and indicate compliance status.</p> <p>[R307-165, R307-401]</p> |
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|----------|--|------|------------------------------|-----|----|---|-----|----|--|-----|----|-------------------|------|----|-----------------------|----|----|----------------------|-----|----|---------------------|-----|----|--------------------------------------|-----|----|-----------------------|--|--|------------------------|-----|--|------------------------|-----|----|----------------------|--|--|------------------------|----|--|------------------------|-----|----|---------------------------------------|--|--|------------------------|----|--|------------------------|-----|----|--------------------------|-----|----|-----------------------|-----|----|--------------------------------|----|----|-----------------------------------|-----|----|-------------------------|-----|
| II.B.1.c | <p>Visible emissions from the following emission points shall not exceed the following opacity values:</p> <table border="0"> <tr> <td style="padding-left: 20px;">A.</td> <td>Kilns #1, #2, #3, #4, and #5</td> <td style="text-align: right;">15%</td> </tr> <tr> <td style="padding-left: 20px;">B.</td> <td>Kiln #1-4 drive motors 10%, Kiln #5 drive motor</td> <td style="text-align: right;">20%</td> </tr> <tr> <td style="padding-left: 20px;">C.</td> <td>All ancillary silo and storage bin baghouses</td> <td style="text-align: right;">10%</td> </tr> <tr> <td style="padding-left: 20px;">D.</td> <td>Product baghouses</td> <td style="text-align: right;">10 %</td> </tr> <tr> <td style="padding-left: 20px;">E.</td> <td>Subpart OOO baghouses</td> <td style="text-align: right;">7%</td> </tr> <tr> <td style="padding-left: 20px;">F.</td> <td>All non-OOO crushers</td> <td style="text-align: right;">15%</td> </tr> <tr> <td style="padding-left: 20px;">G.</td> <td>All non-OOO screens</td> <td style="text-align: right;">10%</td> </tr> <tr> <td style="padding-left: 20px;">H.</td> <td>All non-OOO conveyor transfer points</td> <td style="text-align: right;">10%</td> </tr> <tr> <td style="padding-left: 20px;">I.</td> <td>Subpart OOO crushers*</td> <td></td> </tr> <tr> <td style="padding-left: 40px;"></td> <td style="padding-left: 20px;">i. Post-April 22, 2008</td> <td style="text-align: right;">12%</td> </tr> <tr> <td style="padding-left: 40px;"></td> <td style="padding-left: 20px;">ii. Pre-April 22, 2008</td> <td style="text-align: right;">15%</td> </tr> <tr> <td style="padding-left: 20px;">J.</td> <td>Subpart OOO screens*</td> <td></td> </tr> <tr> <td style="padding-left: 40px;"></td> <td style="padding-left: 20px;">i. Post-April 22, 2008</td> <td style="text-align: right;">7%</td> </tr> <tr> <td style="padding-left: 40px;"></td> <td style="padding-left: 20px;">ii. Pre-April 22, 2008</td> <td style="text-align: right;">10%</td> </tr> <tr> <td style="padding-left: 20px;">K.</td> <td>Subpart OOO conveyor transfer points*</td> <td></td> </tr> <tr> <td style="padding-left: 40px;"></td> <td style="padding-left: 20px;">i. Post-April 22, 2008</td> <td style="text-align: right;">7%</td> </tr> <tr> <td style="padding-left: 40px;"></td> <td style="padding-left: 20px;">ii. Pre-April 22, 2008</td> <td style="text-align: right;">10%</td> </tr> <tr> <td style="padding-left: 20px;">L.</td> <td>All other diesel engines</td> <td style="text-align: right;">20%</td> </tr> <tr> <td style="padding-left: 20px;">M.</td> <td>Conveyors drop points</td> <td style="text-align: right;">20%</td> </tr> <tr> <td style="padding-left: 20px;">N.</td> <td>PSH operations stack emissions</td> <td style="text-align: right;">7%</td> </tr> <tr> <td style="padding-left: 20px;">O.</td> <td>PSH operations fugitive emissions</td> <td style="text-align: right;">10%</td> </tr> <tr> <td style="padding-left: 20px;">P.</td> <td>All other point sources</td> <td style="text-align: right;">20%</td> </tr> </table> <p>*Opacity limits from 40 CFR 60 Subpart OOO shown as "Post-April 22, 2008" apply to emission units constructed, modified, or reconstructed on or after April 22, 2008, and "Pre-April 22, 2008" applies to emission units constructed, modified, or reconstructed on or after August 31, 1983, but before April 22, 2008.</p> <p>Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.</p> <p>For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.</p> <p>Visible emissions from haul road traffic shall be minimized in accordance with the fugitive dust control plan.</p> <p>[R307-401]</p> | A. | Kilns #1, #2, #3, #4, and #5 | 15% | B. | Kiln #1-4 drive motors 10%, Kiln #5 drive motor | 20% | C. | All ancillary silo and storage bin baghouses | 10% | D. | Product baghouses | 10 % | E. | Subpart OOO baghouses | 7% | F. | All non-OOO crushers | 15% | G. | All non-OOO screens | 10% | H. | All non-OOO conveyor transfer points | 10% | I. | Subpart OOO crushers* | | | i. Post-April 22, 2008 | 12% | | ii. Pre-April 22, 2008 | 15% | J. | Subpart OOO screens* | | | i. Post-April 22, 2008 | 7% | | ii. Pre-April 22, 2008 | 10% | K. | Subpart OOO conveyor transfer points* | | | i. Post-April 22, 2008 | 7% | | ii. Pre-April 22, 2008 | 10% | L. | All other diesel engines | 20% | M. | Conveyors drop points | 20% | N. | PSH operations stack emissions | 7% | O. | PSH operations fugitive emissions | 10% | P. | All other point sources | 20% |
| A. | Kilns #1, #2, #3, #4, and #5 | 15% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B. | Kiln #1-4 drive motors 10%, Kiln #5 drive motor | 20% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C. | All ancillary silo and storage bin baghouses | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D. | Product baghouses | 10 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E. | Subpart OOO baghouses | 7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F. | All non-OOO crushers | 15% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G. | All non-OOO screens | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H. | All non-OOO conveyor transfer points | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I. | Subpart OOO crushers* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | i. Post-April 22, 2008 | 12% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ii. Pre-April 22, 2008 | 15% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J. | Subpart OOO screens* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | i. Post-April 22, 2008 | 7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ii. Pre-April 22, 2008 | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| K. | Subpart OOO conveyor transfer points* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | i. Post-April 22, 2008 | 7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ii. Pre-April 22, 2008 | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L. | All other diesel engines | 20% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M. | Conveyors drop points | 20% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N. | PSH operations stack emissions | 7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| O. | PSH operations fugitive emissions | 10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P. | All other point sources | 20% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| II.B.1.c.1 | The owner/operator shall make at least one visual opacity survey each quarter for each kiln drive engine. The visual opacity survey shall be performed while the unit is operating by an individual trained on the observation procedures of 40 CFR 60, Appendix A, Method 9. The individual is not required to be a certified visual emissions observer (VEO). If visible emissions are observed from an emission unit, an opacity determination of that emission unit shall be performed by a certified observer within 24 hours of the initial survey. The opacity determination shall be performed in accordance with 40 CFR 60, Appendix A, Method 9. The owner/operator shall maintain a log of the visual opacity surveys, opacity determinations, and all data required by 40 CFR 60, Appendix A, Method 9. [R307-401] |
| II.B.2 | Fuel Requirements |
| II.B.2.a | The owner/operator shall use coal as the primary fuel, except a combination of coal and petroleum coke (pet coke) may be used in Kilns #1 and #5, and propane and fuel oil as a startup fuel in all kilns. Prior to burning pet coke in Kilns #1 and #5 or coal with a sulfur content in excess of 1.0 lb/MMBTU in Kilns #1, #2, #3, #4, or #5, an SO ₂ CEM must be installed, calibrated, and operating on that kiln. [R307-401] |
| II.B.2.b | The owner/operator shall use propane, diesel, and used oil in any combination in the direct fire heating system for the limestone grinding plant. [R307-401] |
| II.B.2.c | <p>The sulfur content of any coal or any mixture of coals burned shall not exceed 1.0 pound of sulfur per MMBTU heat input. Sulfur content shall be determined by the owner/operator or the coal supplier using ASTM Method D3174-12(2018), D3176-15, D4239-18e1, D5016-16 or an approved equivalent ASTM Method. If the owner/operator chooses supplier certification, the sulfur content shall be tested quarterly from a composite sample. If the owner/operator chooses to test the sulfur content of the coal, the composite sample shall be tested quarterly from a composite grab sample taken every 24 hours of operation. Records, or supplier-furnished certifications, of this testing shall be kept on-site for a period of five years and be provided to the Director upon request.</p> <p>After a SO₂ CEMS has been installed, calibrated, and is operating on a kiln, the coal that is burned in that kiln is exempt from the 1.0 pound of sulfur per MMBTU heat input limitation of UAC R307-203-1(1).</p> <p>[R307-203-1]</p> |
| II.B.2.d | Except for diesel, the sulfur content of any fuel oil burned as a startup fuel in all kilns shall not exceed 0.85 pounds of sulfur per MMBTU heat input. Sulfur content shall be decided by ASTM Method D-3175-75, or an approved equivalent. The sulfur content shall be tested if directed by the Director. [R307-401] |

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| <p>II.B.2.e</p> | <p>The air heating combustor burning used oil for energy recovery shall comply with the following:</p> <p>A. The concentration/parameters of contaminants in any used oil burned as fuel shall not exceed the following levels:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>1) Arsenic</td> <td>5</td> <td>ppm by weight</td> </tr> <tr> <td>2) Cadmium</td> <td>2</td> <td>ppm by weight</td> </tr> <tr> <td>3) Chromium</td> <td>10</td> <td>ppm by weight</td> </tr> <tr> <td>4) Lead</td> <td>100</td> <td>ppm by weight</td> </tr> <tr> <td>5) Total halogens</td> <td>1,000</td> <td>ppm by weight</td> </tr> <tr> <td>6) Sulfur</td> <td>0.50</td> <td>percent by weight</td> </tr> </table> <p>B. The flash point of all used oil to be burned as fuel shall not be less than 100 degrees F</p> <p>C. Used oil that does not exceed any of the listed contaminant's content may be burned. The owner/operator shall record the quantities of oil burned</p> <p>D. Sources utilizing used oil as a fuel shall comply with the State Division of Waste Management and Radiation Control in accordance with R315-15, UAC.</p> <p>[R307-401]</p> | 1) Arsenic | 5 | ppm by weight | 2) Cadmium | 2 | ppm by weight | 3) Chromium | 10 | ppm by weight | 4) Lead | 100 | ppm by weight | 5) Total halogens | 1,000 | ppm by weight | 6) Sulfur | 0.50 | percent by weight |
| 1) Arsenic | 5 | ppm by weight | | | | | | | | | | | | | | | | | |
| 2) Cadmium | 2 | ppm by weight | | | | | | | | | | | | | | | | | |
| 3) Chromium | 10 | ppm by weight | | | | | | | | | | | | | | | | | |
| 4) Lead | 100 | ppm by weight | | | | | | | | | | | | | | | | | |
| 5) Total halogens | 1,000 | ppm by weight | | | | | | | | | | | | | | | | | |
| 6) Sulfur | 0.50 | percent by weight | | | | | | | | | | | | | | | | | |
| <p>II.B.2.f</p> | <p>The owner/operator shall only use diesel fuel (e.g., fuel oil #1, #2, or diesel fuel oil additives) as fuel in the KDE-1, KDE-2, KDE-4, and KDE-5 drive engines; GEN-1 engine; portable generators; and LFP engines. [R307-401-8]</p> | | | | | | | | | | | | | | | | | | |
| <p>II.B.2.g</p> | <p>The owner/operator shall only combust diesel fuel that meets the definition of ultra-low sulfur diesel (ULSD), which has a sulfur content of 15 ppm or less. [R307-401-8]</p> | | | | | | | | | | | | | | | | | | |
| <p>II.B.2.g.1</p> | <p>To demonstrate compliance with the ULSD fuel requirement, the owner/operator shall maintain records of diesel fuel purchase invoices or obtain certification of sulfur content from the diesel fuel supplier. The diesel fuel purchase invoices shall indicate that the diesel fuel meets the ULSD requirements. [R307-401-8]</p> | | | | | | | | | | | | | | | | | | |
| <p>II.B.3</p> | <p>SO₂ and Opacity CEMS Requirements</p> | | | | | | | | | | | | | | | | | | |
| <p>II.B.3.a</p> | <p>The owner/operator shall install, calibrate, maintain, and continuously operate a continuous emissions monitoring system for the continuous measurement of opacity on kiln stacks #1, #2, #3, #4, and #5. The owner/operator shall record the output of the system for measuring the opacity of emissions. The monitoring system shall comply with all applicable sections of R307-170, UAC and 40 CFR 60, Appendix B, Specification 1 - Opacity. [R307-170]</p> | | | | | | | | | | | | | | | | | | |
| <p>II.B.3.b</p> | <p>The owner/operator shall install, calibrate, maintain, and continuously operate a continuous emissions monitoring system (consisting of a SO₂ pollutant concentration monitor and a flow monitoring device) for the continuous measurement of SO₂ emissions on a kiln if that kiln burns pet coke or coal with a sulfur content in excess of 1.0 lb Sulfur/MMBtu.</p> <p>The owner/operator shall record the output of the system for measuring SO₂ emissions. The monitoring system shall comply with all applicable sections of R307-170, UAC and 40 CFR 50 Appendix B, Performance Specifications 2 - SO₂ and NO_x Continuous Emission Monitoring Systems.</p> <p>[R307-170]</p> | | | | | | | | | | | | | | | | | | |

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| <p>II.B.3.c</p> | <p>When a SO₂ CEMS has been installed, calibrated, and is operating, the emission rate of SO₂ in pounds per hour measured by the SO₂ CEMS for each 3-hour block averaging period will be calculated by the following formula:</p> $Eh = K * Chp * Qhs * [(100 - \%H_2O)/100]$ <p>Where: Eh = hourly SO₂ mass emission rate during unit operation, lb/hr K = 1.66 E-7 for SO₂, lb/scf/ppm Chp = hourly average SO₂ concentration during unit operation, ppm (dry) Qhs = hourly average volumetric flow rate during unit operation, scfh (wet) %H₂O = constant moisture value specific to each kiln, percent by volume.</p> <p>[R307-401]</p> |
| <p>II.B.3.d</p> | <p>All continuous opacity monitoring devices as required in federal regulations and state rules shall be installed and operational prior to placing the affected source in operation. SO₂ CEMS shall be installed and operational on a kiln prior to that kiln burning coal with a sulfur content in excess of 1.0 lb Sulfur/MMBtu or burning pet coke.</p> <p>Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), the owner/operator of an affected source shall continuously operate all required continuous monitoring devices and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13(e) and R307-170, UAC.</p> <p>[40 CFR 60, R307-170]</p> |

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| <p>II.B.3.e</p> | <p>The Director shall consider the continuous monitoring requirements to be met when the following provisions are met:</p> <p>A. Opacity Monitors and SO₂ CEMS</p> <ol style="list-style-type: none"> 1) Shall operate in accordance with 40 CFR 60.13 and R307-170 UAC. 2) Prior to installation of a SO₂ CEMS on a kiln, the average of three one-hour stack test results are less than the corresponding SO₂ emission limit for that kiln. 3) After installation of the SO₂ CEMS on a kiln, the 3-hour block average is less than the corresponding SO₂ emission limit for that kiln. 4) Three-hour block averages will begin on 12:01 am and end every three hours thereafter. <p>B. Excess Emission Requirements</p> <ol style="list-style-type: none"> 1) At no time shall the owner/operator allow excess gaseous emissions to be emitted to the atmosphere, except as provided by the provisions of R307-107 (Breakdowns), UAC. <p>C. Reporting</p> <ol style="list-style-type: none"> 1) All sources required to install a continuous emission monitor shall submit a quarterly report in an electronic format provided by the DAQ. 2) All exceedances are to be reported in the quarterly report with explanations (R307-170-8 Reason Categories, UAC) and corrective actions. <p>[40 CFR 60, R307-170]</p> |
| <p>II.B.4</p> | <p>Haul Roads and Fugitive Dust Requirements</p> |
| <p>II.B.4.a</p> | <p>The owner/operator shall implement a fugitive dust control plan acceptable to the Director for control of all dust sources associated with the Cricket Mountain Plant. Adherence to the most recently approved fugitive dust control plan shall be monitored to demonstrate that appropriate measures are being implemented to control fugitive dust. At least once during each permit term, the fugitive dust control plan shall be reviewed and evaluated. If the plan review indicates changes to the dust control plan are necessary to reflect current site operations, an updated fugitive dust control plan shall be submitted. The owner/operator shall operate in accordance with the most current fugitive dust control plan approved by the Director. For each plan review, a record of the date and results of the review shall be maintained. Records that demonstrate compliance with the most recently approved fugitive dust control plan shall also be maintained. [R307-401]</p> |
| <p>II.B.5</p> | <p>Other Baghouse Requirements</p> |
| <p>II.B.5.a</p> | <p>The pressure drop on the Briquetter and Crusher (D-488) Baghouses shall not be less than 4.0 inches of water column or more than 8.0 inches of water column. [R307-401-8]</p> |
| <p>II.B.5.a.1</p> | <p>The pressure drop shall be monitored and recorded weekly while the unit is operating, with equipment located such that an inspector/operator can safely read the output at any time. [R307-401-8]</p> |
| <p>II.B.5.a.2</p> | <p>All instruments shall be calibrated according to the manufacturer's instructions at least once every 12 months. [R307-401-8]</p> |

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| II.B.6 | Alternate Operating Scenario for Synthetic HAPs Minor Operations |
| II.B.6.a | <p>This Section contains the requirements for the AOS. If the owner/operator chooses to comply with the AOS requirements in this Section, the source will be reclassified as an area source of HAPs as defined in 40 CFR 63.2 effective on the date that AOS operations commence. Once reclassified, the requirements of 40 CFR 63 Subpart AAAAA will no longer apply.</p> <p>Once effective, the limits of the AOS shall apply permanently, and a modification to the AO will be required should the owner/operator need to remove or modify these limits. All other requirements in this AO will continue to apply. The AOS limits will be applied in addition to the requirements in II.B.1 through II.B.5. [R307-401-8]</p> |
| II.B.6.b | <p>The owner/operator shall notify the Director at least 30 days prior to the effective date on which operations will commence under the AOS requirements specified in this section of the AO. The notification shall include:</p> <ul style="list-style-type: none"> A. Test results for HCl and total organic HAPs that demonstrate the source meets the definition of area source given in 40 CFR 63.2. Methods for measuring HCl and total HAPs shall be those specified in 40 CFR 63.7142, or other EPA-approved methods, as acceptable to the Director. Documentation of the testing shall be maintained. B. Date when operations will commence under the AOS and the AOS conditions limiting HAPs emissions become effective. C. Proposed schedule for CEMS installation. <p>[R307-401-8]</p> |
| II.B.6.c | <p>Under the AOS, the owner/operator shall limit facility-wide emissions to:</p> <ul style="list-style-type: none"> A. 9.5 tons of HCl per 12-month block period B. 24 tons of total HAPs per 12-month block period <p>Total HAPs emissions must include the following compounds:</p> <ul style="list-style-type: none"> A. Organic HAPs: acetaldehyde benzene, chlorine, ethylbenzene, formaldehyde, hexane, toluene, and xylenes B. Metal HAPs: arsenic, cadmium, chromium compounds, cobalt, lead, manganese, mercury, nickel, and selenium. C. HCl. <p>[R307-401-8]</p> |
| II.B.6.c.1 | <p>To determine compliance with the 12-month block total, the owner/operator shall calculate a monthly total by the twenty-fifth day of each month using data from the previous month. The monthly totals shall be added to determine HCl and total HAP emissions for the current 12-month block. The 12-month block period starts on the day that the owner/operator commences operations under the AOS. A new 12-month block period will begin each year on the date AOS operations commenced. [R307-401-8]</p> |
| II.B.6.c.2 | <p>The owner/operator shall demonstrate compliance with the HCl emission limit using CEMS data as outlined in Condition II.B.6.f, except as specified in II.B.6.e. The HCl CEMS shall operate for all periods the kilns are in operation. Records, including CEMS data and calculated emissions, shall be tabulated for each day. [R307-401-8]</p> |

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| <p>II.B.6.c.3</p> | <p>The owner/operator shall demonstrate compliance with the total HAPs limit using the following data:</p> <ul style="list-style-type: none"> A. HCl CEMS data, as per II.B.6.c.2 B. Emission rates in lbs/hr measured in the most recent stack test for organic HAPs and metal HAPs. Stack testing requirements are specified in II.B.6.j. C. Monthly hours of operation. Hours of operation shall be determined by records of operation and shall be kept on a daily basis. <p>[R307-401-8]</p> |
| <p>II.B.6.d</p> | <p>The owner/operator shall install, calibrate, maintain, and continuously operate a continuous emissions monitoring system(s) for the continuous measurement of HCl emissions on Kilns #1-#5. The CEMS(s) shall be installed and used as the primary method of compliance within 180 days from the date the owner/operator commences operation under the AOS. At a minimum, the HCl CEMS shall consist of HCl concentration monitor(s) for each kiln, flow monitors, and a data acquisition system capable of recording measurements from Kilns 1# - #5. [R307-401-8]</p> |
| <p>II.B.6.e</p> | <p>If the CEMS are not in operation when the owner/operator commences operation under the AOS, compliance with the HCl emission limit shall be demonstrated as follows for the first 180 days of operation under the AOS:</p> <ul style="list-style-type: none"> A. Emissions shall be estimated by multiplying the lime throughput (tons/month) for each kiln by HCl emission factors. B. The following emission factors shall be used: <ul style="list-style-type: none"> i. 1.67E-1 lbs HCl/ton of lime for the dolomitic lime line ii. 1.26E-1 lbs HCl/ton of lime for the high calcium line. <p>[R307-401-8]</p> |

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| <p>II.B.6.f</p> | <p>When the HCl CEMS have been installed, calibrated, and are operating, HCl emissions shall be calculated as follows for each kiln:</p> <p>A. Hourly HCl emissions (Eh) shall be calculated using CEMS data as follows:</p> $Eh = K * C * Q$ <p>Where: Eh = hourly HCl mass emission rate during unit operation, lb/hr $K = 9.46E-8$ for HCl, lb/scf/ppm C = HCl concentration averaged for each one-hour period, ppmvw, as measured by the CEMS Q = volumetric flow rate averaged for each one-hour period, scfh (wet)</p> <p>B. The daily HCl emissions (Ed) in pounds shall be calculated by summing the hourly HCl emissions (Eh) during measured during the day. For purposes of this subsection, a "day" is defined as a period of 24-hour commencing at midnight and ending the following midnight</p> <p>C. Measured monthly HCl emissions shall be calculated by summing up the daily emissions for all operating days in each month.</p> <p>[R307-401-8]</p> |
| <p>II.B.6.g</p> | <p>The owner/operator shall follow the data replacement procedure below when the HCl CEMS data are not valid or unavailable due to monitor downtime or because the monitor is out of control, as determined by 40 CFR 60 Appendix F, Procedure 1 and/or 6:</p> $Ema = Em * (1 + (1/DA - 1) * C$ <p>Where:</p> <p>Ema = adjusted monthly HCl emissions, lbs Em = total unadjusted HCl mass emission for the month, prior to data replacement procedure, lb/hr DA = data availability, fraction of operating time for which monitor data is available during the reporting period (e.g. 95% data availability = 0.95) and, C = Conservative Factor = 1.05 = 5% increase.</p> <p>[R307-401-8]</p> |
| <p>II.B.6.h</p> | <p>The owner/operator shall record the output of the system for measuring HCl emissions. The monitoring system shall comply with all applicable sections of R307-170, UAC and 40 CFR 60 Subpart A and Appendix B, and either Performance Specification PS-18 or Performance Specification PS-15 as applicable and approved by the Director. [R307-401-8]</p> |

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| <p>II.B.6.i</p> | <p>The Director shall consider the continuous monitoring requirements to be met when the following provisions are met:</p> <ul style="list-style-type: none"> A. Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), the owner/operator of an affected source shall continuously operate all required continuous monitoring devices and shall meet minimum frequency of operation requirements as outlined in 40 CFR 60.13(e) and R307-170, UAC. Flow measurement shall be in accordance with the requirements of 40 CFR 52, Appendix E; 40 CFR 60 Appendix B; or 40 CFR 75, Appendix A B. Initial performance specification test shall be performed within 60 days of installation. The performance specification test shall be conducted in accordance with the procedures contained in 40 CFR 60, Appendix B, Performance Specifications 15 or 18. The Director shall be notified prior to conducting the performance specification test C. At no time shall the owner/operators allow excess gaseous emissions to be emitted to the atmosphere, except as provided by the provisions of R307-107(Breakdowns), UAC. <p>[R307-170]</p> |
| <p>II.B.6.j</p> | <p>The owner/operator shall follow the following requirements for stack testing of organic and metal HAPs:</p> <ul style="list-style-type: none"> A. Emission Units Emission units subject to organic and metal HAPs testing requirements are Kiln #1, Kiln #2, Kiln #3, Kiln #4, and Kiln #5 B. Initial Compliance Testing Initial compliance testing shall be performed as soon as possible and not later than 180 days after the owner/operator commences operation under the AOS C. Frequency Test every three years D. Test Method Organic HAPs 40 CFR 60, Appendix A, Method 320 and Method 18, or other EPA-approved testing method acceptable to the Director E. Test Method Chlorine 40 CFR 60, Appendix A, Method 26A, or other EPA-approved testing method acceptable to the Director F. Test Method Metal HAPs 40 CFR 60, Appendix A, Method 29, or other EPA-approved testing method acceptable to the Director G. Other Unless otherwise specified in this Section, the stack requirements in II.B.1.b.2 and II.B.1.b.3 apply. <p>[R307-401-8]</p> |

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| II.B.6.k | Quarterly reports shall be submitted as outlined in R307-170. The reports shall also include: A. Total HCl emissions for the cumulative quarters of the current 12-month block B. Total HAPs emissions for the cumulative quarters of the current 12-month block. [R307-170, R307-401-8] |
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PERMIT HISTORY

This Approval Order shall supersede (if a modification) or will be based on the following documents:

Supersedes
Is Derived From
Incorporates
Incorporates

AO DAQE-AN103130047-24 dated January 29, 2024
NOI dated June 5, 2024
Additional Information Received dated March 10, 2025
Additional Information Received dated June 12, 2025

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

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| 40 CFR | Title 40 of the Code of Federal Regulations |
| AO | Approval Order |
| BACT | Best Available Control Technology |
| CAA | Clean Air Act |
| CAAA | Clean Air Act Amendments |
| CDS | Classification Data System (used by Environmental Protection Agency to classify sources by size/type) |
| CEM | Continuous emissions monitor |
| CEMS | Continuous emissions monitoring system |
| CFR | Code of Federal Regulations |
| CMS | Continuous monitoring system |
| CO | Carbon monoxide |
| CO ₂ | Carbon Dioxide |
| CO _{2e} | Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations Part 98, Subpart A, Table A-1 |
| COM | Continuous opacity monitor |
| DAQ/UDAQ | Division of Air Quality |
| DAQE | This is a document tracking code for internal Division of Air Quality use |
| EPA | Environmental Protection Agency |
| FDCP | Fugitive dust control plan |
| GHG | Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i) |
| GWP | Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a) |
| HAP or HAPs | Hazardous air pollutant(s) |
| ITA | Intent to Approve |
| LB/YR | Pounds per year |
| MACT | Maximum Achievable Control Technology |
| MMBTU | Million British Thermal Units |
| NAA | Nonattainment Area |
| NAAQS | National Ambient Air Quality Standards |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NOI | Notice of Intent |
| NO _x | Oxides of nitrogen |
| NSPS | New Source Performance Standard |
| NSR | New Source Review |
| PM ₁₀ | Particulate matter less than 10 microns in size |
| PM _{2.5} | Particulate matter less than 2.5 microns in size |
| PSD | Prevention of Significant Deterioration |
| PTE | Potential to Emit |
| R307 | Rules Series 307 |
| R307-401 | Rules Series 307 - Section 401 |
| SO ₂ | Sulfur dioxide |
| Title IV | Title IV of the Clean Air Act |
| Title V | Title V of the Clean Air Act |
| TPY | Tons per year |
| UAC | Utah Administrative Code |
| VOC | Volatile organic compounds |