

ADEQ OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 0045-AOP-R3

Renewal #1

IS ISSUED TO:

Arkansas Lime Company

600 Limedale Road

Batesville, AR 72503

Independence County

AFIN: 32-00014

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

AND

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Michael Bonds
Chief, Air Division

Date

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List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO _x	Nitrogen Oxide
PM	Particulate Matter
PM ₁₀	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO ₂	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

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SECTION I: FACILITY INFORMATION

PERMITTEE: Arkansas Lime Company

AFIN: 32-00014

PERMIT NUMBER: 0045-AOP-R3

FACILITY ADDRESS: 600 Limedale Road
Batesville, AR 72503

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COUNTY: Independence

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UTM North South (Y): Zone 15: 3961.9 km

UTM East West (X): Zone 15: 613.4 km

SECTION II: INTRODUCTION

Summary of Permit Activity

Arkansas Lime Company owns and operates a limestone quarry and lime manufacturing plant near Batesville, in Independence County, Arkansas. The Batesville plant currently includes two identical Preheater Rotary Lime Kilns. This Prevention of Significant Deterioration (PSD) permit modification will allow for construction and operation of a third Preheater Rotary Lime Kiln (Kiln 3). This is also the Title V Renewal for this facility and also includes Compliance Assurance Monitoring (CAM) and Lime MACT requirements.

Kiln 3 will have a maximum daily lime production capacity of 687 tons per day. It will be fueled with a combination of coal, coke, and/or natural gas. Existing stone and lime product processing equipment will provide sufficient material handling for Kiln 3.

The following emission units will be either modified or installed with this permit modification:

Source Number	Description	Type of Change
04Q	Limestone Piles	Changed Size and Location
20Q	Coal/Coke Storage Piles	Changed Size and Location
29Q	Paved Quarry Haul Roads	Increased Traffic
30Q	Rotary Lime Kiln 3	New
31Q	Limestone Transfer Points	New
32Q	#3 Lime Product Cooler	New
33Q	#3 Coal/Coke Bin Vent	New
34Q	#3 Coal/Coke Transfer Points	New
35Q	Kiln Feed Belt to #3 Kiln Limestone Surge Bin	New
36Q	Lime Storage Silo Dust Collector	New
37Q	Lime Storage Silo Dust Collector	New
38Q	Lime Loadout Dust Collector	New
39Q	Lime Loadout Dust Collector	New

In addition to the kiln expansion, other changes will be made in this permit. They include but are not limited to:

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1. Establishing new %O₂ ranges used to demonstrate compliance with the NO_x and CO limits for each kiln,
2. Numerous updates to the Insignificant Activities List,
3. Changes in the averaging period for production limits,
4. Changes in the monitoring requirements for NO_x emissions,
5. Installation of a new Modified PLS Products Loading Station (SN-36P),
6. Quantifying emissions of HCl from the kilns, and
7. Increasing SO₂ dry scrubbing control efficiency in the kilns from 92% to 95%.

Process Description

Quarry

Arkansas Lime extracts high-grade limestone from its quarry located approximately 6.5 miles west-northwest of Batesville. Commercial bulk and bag explosives are used to blast limestone away from the quarry face. Front-end loaders transfer the rock into quarry trucks, which carry the limestone to the quarry dump hopper. The larger limestone rocks that cannot pass through the Grizzly are fed to the Primary Crusher (SN-01Q). The smaller rocks pass through the Grizzly and drop onto a conveyor belt. This conveyor catches the crushed rocks and drops the limestone onto either the Fine-Grained or Coarse-Grained Surge Pile (SN-04Q).

The reclaim tunnels under the Surge Piles feed limestone to the Triple-Deck (or Primary) Screen (SN-03Q). Rocks larger than that suitable for kiln feed (typically larger than 2 1/4" in diameter) are routed to a Secondary Crusher (SN-02Q). The crusher discharge is recycled back into the screen feed. Rocks suitable for kiln feed (typically 5/8" to 2 1/4" in diameter) are diverted to the Rotary Kiln Feed Surge Pile(s). Rocks smaller than that suitable for kiln feed are sent to the Pulverized Limestone (PLS)/Ag-Lime screen (SN-09Q).

The limestone pebbles from the Triple-Deck Screen too small for kiln feed are discharged to the Pulverized Limestone (PLS)/Ag-Lime Screen. The pebbles discharged from the PLS/Ag-Lime Screen are combined with the fines rejected from the Kiln Feed Screen (SN-10Q) and are dropped onto the Roller Mill Feed Loadout Surge Pile. The fines from the PLS/Ag-Lime Screen are dropped onto the Ag-Lime Storage Pile. The PLS feed and/or Ag-Lime can either be gathered by a reclaim tunnel and loaded into railcars (SN-05Q) for sale or for transport to the PLS/Lime Plant or can be loaded into trucks for sale via a front-end loader. Screens on the Ag-Lime screen may be changed to produce stone for sale. Screened stone will be stockpiled next to the Ag-Lime pile for sale by truck and will be loaded by front end loader.

Lime Kilns

One or two of five vibrating feeders reclaim the stone from the Kiln Feed Surge Pile and feed it to belt conveyors (SN-07Q). The belt conveyors transport the stone to the Kiln Feed Screen where any "fines" are removed and routed to the PLS Surge Pile. The limestone pebbles are conveyed to the Preheater Surge Bin (SN-07Q, SN-27Q, and SN-35Q) of one of the three Rotary Lime Kilns (SN-11Q, SN-24Q, and SN-30Q). No fugitive emissions escape from the bin since it operates under a slight vacuum.

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The limestone flows through vertical stone chutes, which are completely full of limestone, from the bottom of the stone bin to the Limestone Preheater where the limestone begins the calcination process. Hot combustion kiln exhaust gases are brought into contact with the limestone in the Preheater. Heat is used to release carbon dioxide from the limestone via the following reaction:



The residence time needed depends upon the size of the limestone feed because the centers of the limestone rocks must reach temperatures sufficient for the reaction to take place.

The hot kiln exhaust gases are drawn through each preheater to a kiln dust collector, where particulate is separated from the kiln exhaust gases before the gases are released through a stack. Each kiln is designed with its own dust collector and exhaust stack. The collected dust is conveyed to the Kiln Dust Bin (SN-12aQ) where it is loaded into trucks (SN-bQ) for sales or disposal.

Limestone is transported into the Rotary Kiln via transfer chutes by the action of hydraulic rams in the bottom of the preheater. In the Rotary Kiln, the limestone flows countercurrent to the hot combustion gases. The combustion gases are generated through the firing of a combination of coal and coke. Alternately, pipeline-quality natural gas is fired in the kilns during startup and to produce low-sulfur lime. Gas firing results in higher fuel consumption and cost. Therefore, gas firing will primarily be used to meet the demand for low-sulfur product. In either process, the combustion occurs within the Rotary Kiln. The lime exits the Kiln through a Lime Cooler (SN-13Q, SN-25Q, and SN-32Q).

Lime is transferred from the Lime Cooler (one for each kiln) via covered conveyors and bucket elevators to the Kiln Run Silos (SN-14Q) and eventually to the Storage and Loadout Area. During startup or upset conditions, lime is diverted to the Fringe Bin, where it is loaded onto trucks and transported to the lime plant as hydrate feed, sold as-is, or stockpiled in the quarry for future sales. Under normal conditions, lime is temporarily stored in the Kiln Run Silos. The two Kiln Run Silos and one Fringe Bin are shared by all kilns. From the Kiln Run Silos, the lime is conveyed, screened, and crushed (if necessary) to meet product size specifications. The silos can load lime, also called quicklime, through “dustless” spouts to either trucks or railcars for shipment. Potential emissions from the screen, crusher, and silos are controlled by the Lime Screen/Storage Dust Collectors (SN-15Q, SN-16Q, SN-17Q, SN-18Q, SN-36Q, and SN-37Q). Potential emissions from the loadout operations are controlled by “dustless” loadout spouts (SN-38Q and SN-39Q).

Coal and Coke Handling System

The primary heat source for the Rotary Lime Kilns is coal, petroleum coke, and/or natural gas combustion. The combination of coal, coke, and/or natural gas firing are adjusted daily based on the relative prices of each fuel, fuel availability, fuel sulfur content versus sulfur permit limits, and process needs (i.e., product requirements).

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Coal and coke are unloaded from railcar (SN-19Q) and transported to the respective storage pile (SN-20a/bQ) either via a conveyor system or by a backhoe and dump truck. The piles are partially covered with a roof. Front-end loaders withdraw coal or coke from the respective pile and dump the fuel into the appropriate coal or coke feed hopper (SN-21Q).

Weigh feeders and belt conveyors (SN-28Q) mix the coal and coke and transfer the mixture to one of three Fuel Bins (SN-26Q and SN-33Q). Each Fuel Bin holds one day's fuel mix and will feed the Bowl Mill for each kiln directly. The coal/coke mixture is ground to a fine powder in the Bowl Mill and is then blown directly into each Rotary Kiln.

Lime Processing at the Lime Plant

Quicklime is loaded into railcars for sales at the Quarry. Some of these railcars are diverted for use at the PLS/Lime plant. Quicklime is offloaded at the PLS/Lime Plant via a lime unloading system (SN-01P) and conveyed to the Lime Crusher and Screen (SN-15P) then to storage silos as hydrate feed or rice lime. The crusher is used to make hydrate feed from reject lime from the kiln. Rice Lime will be stored in an existing bin and will be loaded out by truck (SN-16P)

Lime from the Quicklime Storage Silo is also sent via screw conveyors to two existing storage bins which feed the Hydrate System. Quicklime is reacted with water to form hydrated lime, which is a fine powder. Separators (SN-12P) and cyclones are used to remove coarse fractions. The hydrated lime is either sent to Bagging Operations (SN-14P) where it is packaged for sales or the Hydrate Storage Bin (SN-29P). From the Hydrate Storage Bin, the hydrate is loaded into trucks for shipment to customers (SN-13P).

Pulverized Limestone Plant (PLS)

Small limestone pebbles are transferred from the Quarry to the PLS/Lime plant via railcars. The limestone is dumped into the existing Dump Hopper (SN-35P) at the PLS/Lime Plant and conveyed to the Roller Mill Surge Bin. Alternatively, the limestone can be off loaded onto an emergency stockpile. The Surge Bin feeds the two Stone and Roller Mills (SN-18P and SN-19P) via screw conveyors. The two mills (#1 and #2) operate in parallel in the same manner.

Each mill is fed via an automatically controlled screw conveyor. In unusual circumstances, the feed rate can be controlled manually. The motor setting can be adjusted depending on the size and the moisture content of the limestone feed and the product requirements.

Fresh air is heated in a natural gas-fired heater before being added to the conveying air prior to entering the mill to dry the incoming limestone and facilitate the fine grinding operation. The makeup inlet operates under a slight vacuum. A portion of the air along with the moisture is removed through a vent fan. The amount of moisture removed from the system is controlled by the temperature balance between the makeup air temperature and the recycle air temperature. The gases removed from the system go to a dust collector.

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Products from each mill are pneumatically transported through an exhaust cyclone. The products collected from the exhaust cyclone flow through a motorized dump valve, a flop gate, and a screw conveyor to the mechanical air separator. The coarse PLS (14 and 6 mesh) drops into a screw conveyor which sends the material to the PLS screen (SN-20P). The 200 mesh product from the separators is conveyed by the fines screw conveyor, which also receives 200 mesh material from the dust collector via a rotary airlock feeder.

The discharge from the fines screw conveyor can be routed in one of two locations: the 270 product storage tank or to the PLS Bagging Operations (SN-24P).

The mechanical air separator can be bypassed by switching the flop gate. This mode of operation is used when demand is for fine products. In this mode, fine material leaves the mill and is separated from the air stream in a cyclone. As in the normal mode, fine material is transported to storage.

The PLS Screen separates the limestone into two categories: medium coarse PLS and large coarse PLS. The medium coarse PLS is sent to the 140 Product Bins. From there, it can be sent to PLS Bagging or to the PLS Loadout Area. The large coarse PLS is either recycled to the Roller Mill's feed stream or sent to the 106 Storage Bin.

Each roller mill unit is enclosed. A dust collector serves each mill and controls the potential emissions from all the individual components including the conveyors, crushers, and screens.

The PLS Loadout operation consist of one partitioned bin (SN-30P) equipped with "dustless" loading spouts (SN-31P) for the limestone trucks. A truck scale is located under the bin to streamline the loading process. The products (i.e., 106, 140, 270, and 280) are stored in the four sections of the partitioned bin. Certain modified PLS products are loaded out to truck or rail via a dustless loading spout vented to a dust collector (SN-36P).

Railcars are loaded through dustless loading spouts (SN-33P and SN-34P) installed in dropouts from the conveyors to the truck loadout bin. These loadout spouts are for each of the two products shipped via rail (140 and 270).

The roads at the facility have been divided into the Unpaved Quarry Haul Roads (SN-06Q), the Paved Quarry/Kiln Area Roads (SN-29Q), and the Paved PLS/Lime Plant Roads (SN-26P)

PREVENTION OF SIGNIFICANT DETERIORATION

General Information and Applicability

One definition of a major stationary source under the PSD regulations is any source that emits or has the potential to emit over 100 tons per year of at least one criteria pollutant and is one of the 28 specifically listed industrial source categories. Lime plants are on the list of specified industrial sources and therefore, Arkansas Lime is a PSD major stationary source since it has the potential to emit over 100 tons per year of at least one criteria pollutant.

A major modification is defined as a physical change or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant regulation under the Clean Air Act. A significant net emissions increase is defined by the PSD regulation for each pollutant.

If a proposed modification (considered by itself) at an existing major source results in a significant emissions increase, emissions netting is required to quantify the net emissions change. Emissions netting considers the contemporaneous emissions increased and decreases for comparison to the PSD significant emission rates. The following table lists the emissions increases, net increases if over the significant emission rate, and significance rates for the PSD pollutants emitted by Arkansas Lime:

PSD Applicability Table				
Pollutant	Permitted Emission Increase (tpy)	PSD Significant Emission Rate (tpy)	Net Emissions Increase (tpy)	PSD Review Required?
PM	38.6	25.0	41.88	Yes
PM ₁₀	36.3	15.0	39.6	Yes
SO ₂	142.0	40.0	142.0	Yes
VOC	14.7	40.0	Not required	No
CO	342.0	100.0	388.0	Yes
NO _x	399.0	40.0	399.0	Yes

The Kiln 3 project will result in increased emissions of the following PSD-regulated air pollutants: Particulate matter (PM), PM less than or equal to 10 microns in diameter (PM₁₀), nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), and volatile organic compounds (VOC). Associated emissions increases of PM and PM₁₀ will also occur from unmodified units that experience an increase in operating rate as a result of this project. The net emissions increases of PM, PM₁₀, NO_x, SO₂, and CO are greater than their respective significant emissions rates. The proposed increase in VOC emissions does not exceed the significant emission rate.

BACT Analysis

A Best Available Control Technology (BACT) analysis is required for each new or physically modified emissions unit for each pollutant that exceeds an applicable PSD significant emission rate. Since the PM, PM₁₀, NO_x, SO₂, and CO emissions changes exceed the PSD significance levels, a BACT analysis is required to assess the necessary level of control for these pollutants. For this BACT analysis, PM₁₀ was evaluated jointly with PM. No BACT analysis is required for VOC because emissions did not exceed the significance level.

In a memorandum dated December 1, 1987, the U.S. EPA stated its preference for a “top-down” analysis. The first step in this approach is to determine, for the emissions unit and pollutant in question, the most stringent control available for a similar or identical source or source category. If it can be shown that this level of control is technically or economically infeasible for the unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level cannot be eliminated by any substantial or unique technical, environmental, or economic objections. The steps can be summarized as follows:

1. Identify all control technologies,
2. Eliminate technically infeasible options,
3. Rank remaining control technologies by control effectiveness,
4. Evaluate most effective controls and document results, and
5. Select BACT.

In evaluating BACT for this project, Arkansas Lime has grouped the sources into two categories, the Lime Kiln and all other particulate sources.

BACT Analysis for the Lime Kiln

The first step is identifying possible control technologies. The following table lists the strategies available for the Lime Kiln:

Pollutant	Control Technologies Available
PM ₁₀ /TSP	Dust Collector ESP Wet Scrubber Cyclone
SO ₂	Wet Scrubber Dust Collector (Dry Scrubbing)*
CO	Catalytic Incineration Thermal Oxidation Excess Air Proper Kiln Design and Operation

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Pollutant	Control Technologies Available
NO _x	Oxidation/Reduction Scrubbing Selective Catalytic Reduction (SCR) Selective non-Catalytic Reduction (SNCR) Non-Selective Non-Catalytic Reduction (NSNCR) Low NO _x Burner Proper Kiln Design and Operation

* Dry scrubbing occurs naturally in the kiln and the kiln dust collector as the caustic lime reacts with the acidic sulfur dioxide.

The second step is to eliminate technically infeasible options. For the Lime Kiln, the only option eliminated was the Non-Selective Non-Catalytic Reduction (NSNCR). NSNCR is comprised of an initial burn zone (oxidizing), a secondary burn zone (reducing), and a final burn zone (oxidizing). This technology is only used in one full-scale industrial operation (a cement kiln in Norway). Process differences between cement and lime production are the reason this technology was not applied to the lime industry. A multi-stage preheater and cyclones, which a lime kiln does not have, are necessary for the staged combustion required for this control technology.

Step three is the ranking of the remaining control technologies by effectiveness. The following table lists the strategies available for the Lime Kiln in order of control effectiveness:

Pollutant	Control Technologies Available	Potential Control Efficiency
PM ₁₀ /TSP	Dust Collector	99.9%
	ESP	99.5%
	Wet Scrubber	90.0%
	Cyclone	90.0%
SO ₂	Wet Scrubbing and Dry Scrubbing combined	99.0%
	Dust Collector (Dry Scrubbing)*	92.0-99.0%
CO	Thermal Oxidation	95.0%
	Catalytic Incineration	90.0-95.0%
	Excess Air	75.0%
	Proper Kiln Design and Operation	Base case
NO _x	Oxidation/Reduction Scrubbing	90.0%
	Selective Catalytic Reduction (SCR)	70.0-90.0%
	Selective non-Catalytic Reduction (SNCR)	40.0-70.0%
	Low NO _x Burner	0-30.0%
	Proper Kiln Design and Operation	Base Case

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The fourth step in the BACT analysis is a top-down evaluation of the control options on the basis of economic, energy, and environmental considerations. The Kiln 3 applicability section is subdivided into five sections: Post-combustion NO_x control, combustion NO_x control, SO₂ control, PM control, and CO control.

Post-combustion NO_x control removes NO_x from the Kiln 3 exhaust gases and therefore has the potential for the greatest NO_x reduction. Three post-combustion NO_x controls were considered: oxidation/reduction scrubbing, selective catalytic reduction, and selective non-catalytic reduction.

1. Oxidation/reduction scrubbing uses an oxidizing agent, such as ozone or sodium chlorite, to oxidize NO to NO₂ in a primary scrubbing stage. Then, NO₂ is removed through caustic scrubbing in a secondary scrubbing stage. Saturated flue gas from this second scrubber must be heated before exiting the flue stack to prevent in-stack condensation. This scrubbing system would require two scrubbing towers, a recirculation tank, a pre-mix tank, blowers, a heat exchanger, and a waste handling system. The average removal cost is approximately \$7,090 per ton of NO_x removed. Furthermore, this technology is not listed in the RBLC database for lime kilns.
2. Selective catalytic reduction (SCR) is an exhaust gas treatment process in which ammonia is injected into the exhaust gas upstream of a catalyst bed. On the catalyst surface, ammonia and nitric oxide react to form diatomic nitrogen and water. When operated within the optimum temperature range of 575° to 750° F, the reaction can result in removal efficiencies between 70 and 90 percent. Efficient operation of the SCR process requires fairly constant exhaust temperatures. To avoid fouling, an SCR unit must be located downstream of the dust collector. However, due to the low exhaust gas temperature exiting the dust collector, a heat exchanger system would be required. The necessary equipment for SCR includes a catalytic reactor and heat exchanger in addition to storage and handling equipment for the ammonia. Additional concerns with SCR include the hazards involved with storage and use of large quantities of ammonia. The average removal cost is approximately \$5,010 per ton of NO_x removed. Furthermore, this technology is not listed in the RBLC database for lime kilns.
3. Selective non-catalytic reduction (SNCR) uses ammonia or urea to reduce NO_x through a chemical reaction similar to SCR. Unlike SCR, SNCR requires a high temperature range (between 1,600 and 1,900° F for ammonia and 1,300° to 1,400° F for a special blend of urea) due to the lack of a catalyst. There is no stable temperature point to inject the ammonia or urea at this plant except for after the dust collector.

This would require an even larger heat exchanger than the SCR system and would include ammonia or urea handling issues as well. The average removal cost is approximately \$8,322 per ton of NO_x removed. Furthermore, this technology is not listed in the RBLC database for lime kilns.

Combustion NO_x controls reduces the amount of NO_x that is generated. Two combustion control methods were examined: Low-NO_x burners and proper kiln design.

1. Low-NO_x burners reduce the amount of NO_x initially formed at the flame. The principle is stepwise combustion and local exhaust gas recirculation. Stepwise combustion delays the mixing of fuel and air to achieve an initial fuel-rich flame core, which decreases fuel-generated NO_x and lowers peak flame temperature, which decreases thermal-generated NO_x. Exhaust gas recirculation at the flame lowers the peak flame temperature due to the diluent effect of oxygen-depleted air, and the lower peak flame temperature decreases the formation of thermal NO_x. Low NO_x burners can only be used in indirect-fired kilns. However, Kiln 3 is a direct-fired kiln. For the proposed Kiln 3, the additional annualized cost for a low NO_x burner system (with the associated conversion to indirect-firing) is \$163,000 per year. Currently, only a few lime kilns are indirect fired, and vendors will not guarantee any NO_x reduction above a traditional design.
2. Proper kiln design and operation is used to reduce fuel consumption thus minimizing NO_x emissions. Another parameter than can affect NO_x generation is the amount of excess air. The amount of oxygen in the exhaust gases is a direct indicator of the amount of excess air in the kiln. Excess air contributes to increased NO_x emissions in two ways. First, increasing excess air increases the amount of air that must be heated, thus resulting in decreased fuel efficiency and higher NO_x emissions. Secondly, the excess oxygen in the air increases NO_x formation. Proper kiln operations translate into anticipated oxygen concentrations in the range of 0.5 to 1.5 percent.

This kiln will also include a dynamic classifier for finer grinding of the coal and coke and a multi-channel burner, which allows improved fuel and air mixing. Both of these features prevent the formation of excessively high temperature zones.

SO₂ controls are inherently built into lime kilns. The lime dust generated in the kiln acts as a dry scrubbing medium for SO₂ control. The residence time of the SO₂ and lime mixture also controls the amount of SO₂ removed. The residence time is controlled largely by the point in the kiln at which calcination occurs. In Kiln 3, calcination will typically occur early in the system while in the preheater. This provides more residence time than kilns without a preheater. Additionally, wet scrubbing or dry scrubbing with a dust collector can be added.

1. Wet scrubbing using a caustic agent such as pulverized limestone can achieve SO₂ removal efficiencies of 90 percent as a stand-alone unit. When combined with the natural SO₂ removal of the kiln, an overall removal efficiency of 99 percent could be obtained. A stand-alone unit would cost \$4,198 per ton of SO₂ removed. However, adverse environmental impacts of wet scrubbing are incurred in treating and disposing of the large volume of used wet caustic mixture. The \$/ton figure does not include the cost of a wastewater treatment plant.
2. Dry scrubbing using a dust collector will be evaluated on Kiln 3 for PM₁₀ control, but will also behave as a control device for SO₂. The activity of the removal mechanism is low in the dust collector as compared to the inside the kiln and preheater, but the contact of the gas and lime dust filter cake formed in the dust collector will provide additional SO₂ removal. In a test on a similar lime kiln and dust collector, an average control efficiency of 95.7 percent was obtained.

In evaluating PM controls, dust collectors have the highest control efficiency and lowest opacity of any of the PM control options. Dust collectors remove pollutant from the exhaust gas by drawing the dust-laden air through a bank of filter tubes or bags suspended in a housing. A filter “cake” composed of the removed particulate builds up. Periodically, the cake is removed through physical mechanisms (e.g., a blast of compressed air from the clean side, shaking the bag, etc.) which cause the cake to fall. The dust is then collected in a hopper and eventually removed.

CO controls include thermal oxidation, catalytic incineration, excess air, and proper kiln design and operation.

1. Thermal oxidation reduces CO emissions by supplying adequate heat and sufficient oxygen to ensure that the CO is converted to CO₂. Thermal oxidation requires temperature of 1,500° F to achieve 95% conversion of CO to CO₂. Because the PM present in the kiln flue gas exit stream plugs and fouls the thermal oxidation equipment, the system must be placed downstream of the baghouse. The flue gas would have to be heated from the baghouse outlet temperature to the operating temperature. This would require a series of heat exchangers as well as a gas-fired furnace. The capital and operating expense for thermal oxidation is \$11,233 per ton of CO removed. Additionally, the formation of NO_x from the gas-fired furnace poses an adverse environmental impact. Furthermore, this technology is not listed in the RBLC database for lime kilns.
2. Catalytic incineration is a system designed so that combustion gases pass over a catalyst where the CO is converted into CO₂. The catalyst would be poisoned by the lime dust and the SO₂ generated from coal combustion. The average cost is \$9,073 per ton of CO removed.

3. Excess air in the kiln would reduce CO emissions by oxidizing CO to CO₂. However, excess air can affect lime product quality and fuel efficiency. Additionally, adding excess air to either the kiln or the preheater would cause a large increase in the NO_x emissions from the kiln. Furthermore, this technology is not listed in the RBLC database for lime kilns.
4. A properly designed and operated kiln effectively functions as a thermal oxidizer. CO formation is minimized when the kiln temperature and excess oxygen availability is adequate for complete combustion.

Step five is selecting the BACT. For the lime kiln, a dust collector and proper kiln design and operation were chosen.

BACT Analysis for Other Particulate Sources

The first step is identifying possible control technologies. The following table lists the strategies available for Particulate Emitting Sources

Source Type	Possible Control Technologies
Limestone Handling and Processing (SN-31Q and SN-35Q)	Dust Collectors Water Sprays Enclosures
Solid Fuel Handling and Processing (SN-33Q and SN-34Q)	Dust Collectors Water Sprays Enclosures
Lime Handling and Processing (SN-32Q, SN-36Q, SN-37Q, SN-38Q, and SN-39Q)	Dust Collectors Water Sprays Enclosures

The second step is to eliminate technically infeasible options. For the Solid Fuel and Lime Handling processes, water sprays were eliminated. Water sprays on the solid fuel handling points downstream of the fuel storage piles are considered technically infeasible because water will decrease the effectiveness of the coal and coke as fuel. Water sprays are also infeasible on the lime handling points because lime and water reacts exothermically when in contact.

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Step three is the ranking of the remaining control technologies by effectiveness. The following table lists the strategies available for the Lime Kiln in order of control effectiveness:

Source Type	Possible Control Technologies	Potential Control Efficiency
Limestone Handling and Processing (SN-31Q and SN-35Q)	Dust Collectors Water Sprays Enclosures	99.0% 90.0% 85.0%
Solid Fuel Handling and Processing (SN-33Q and SN-34Q)	Dust Collectors Enclosures	99.0% 85.0%
Lime Handling and Processing (SN-32Q, SN-36Q, SN-37Q, SN-38Q, and SN-39Q)	Dust Collectors Enclosures	99.0% 85.0%

The fourth step in the BACT analysis is a top-down evaluation of the control options on the basis of economic, energy, and environmental considerations. Arkansas Lime has considered three types of particulate generating sources: limestone handling and processing, solid fuel handling and processing, and lime handling and processing.

1. A limited number of limestone handling and processing points will be constructed with Kiln 3. The slight vacuum at the kiln preheater opening and the water sprays upstream will preclude excess emissions from these drop points.
2. The only new or physically modified coal/coke handling points will be downstream of the coal and coke piles. As mentioned, water sprays are technically infeasible. Dust collectors and enclosures will be used for particulate control.
3. Enclosures will be used to minimize water contact with the lime. For loadouts, dust collectors and dustless loading spouts will be used to minimize emissions and product loss.

Step five is selecting the BACT. For the particulate generating sources, dust collectors, enclosures, and water spray where appropriate were chosen.

BACT Summary

The following table lists the BACT Limits and Determinations for Kiln 3 (SN-30Q)

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.10 lb/ton of Stone Feed	Baghouse-type Dust Collector
SO ₂	4% by Weight Sulfur in Fuel on a Daily Basis and 3% by Weight Sulfur in Fuel on a 30-Day Rolling Average	Natural Dry Scrubbing In Kiln and Baghouse
CO	3.0 lb of CO per Ton of Lime Produced on a 30-Day Rolling Average	Proper Kiln Design and Operation
NO _x	3.5 lb NO _x per Ton of Lime Produced on a 30-Day Rolling Average	Proper Kiln Design and Operation

The following table summarizes the BACT selection for particulate sources:

BACT Selection for Particulate Sources		
Source Type	BACT Limit	BACT Determination
Limestone Handling and Processing SN-31Q and SN-35Q	Opacity Limits of 20% for SN-31Q and 10% for SN-35Q	Water Sprays (upstream)
Solid Fuel Handling and Processing SN-33Q and SN-34Q	0.015 gr/dscf for SN-33Q for TSP and PM ₁₀ and Opacity Limits of 5% for SN-33Q and 20% for SN-34Q	Proper Design, Enclosure, and Dust Collector for SN-33Q
Lime Handling and Processing SN-32Q, SN-36Q, SN-37Q, SN-38Q, and SN-39Q	0.010 gr/dscf for SN-32Q 0.015 gr/dscf for SN-36Q, SN-37Q, SN-38Q, and SN-39Q for TSP and PM ₁₀ and Opacity Limits of 5% for SN-32Q, SN-36Q, SN-37Q, SN-38Q, and SN-39Q	Dust Collectors

Ambient Air Impact Analysis

An air dispersion modeling analysis is a required part of a PSD permit application. The air dispersion modeling analysis is used to demonstrate that the emissions resulting from a proposed modification will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or surpass a PSD increment. The USEPA requires that PSD modeling be performed in two stages: the significance analysis and the full impact analysis. The full impact analysis is further divided into the NAAQS and PSD Increment analyses.

Two levels of air quality dispersion model sophistication exist: screening and refined. Screening models may be used to eliminate more extensive modeling in either the significance phase or the full impact phase. Screening models produce conservative estimates of ambient impacts in order to ensure the maximum ambient concentrations will not be underestimated. If the resulting estimates from a screening model indicate an adverse impact to the NAAQS or PSD Increment, a refined model and/or refined emissions assumptions must be used. For this application, Arkansas Lime used ISCST3 and CTSCREEN models.

Significance Analysis

In the significance analysis, all proposed net emissions increases and decreases associated with the permit application are evaluated to determine whether they will have a significant impact upon the area surrounding the facility. The U.S. EPA requires completion of a full impact analysis in the area defined by the Radius of Significant Impact (ROI) for any pollutant with modeled ambient impacts exceeding an applicable Modeling Significance Level (MSL). In addition, if a maximum ambient impact exceeds a monitoring De Minimis Concentration, PSD ambient monitoring requirements must also be addressed for that pollutant.

The results of the Significance Analysis are summarized in the following table:

PSD Significance Analysis					
Pollutant	Averaging Period	Model Used	Maximum Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Modeling Significant Level ($\mu\text{g}/\text{m}^3$)	Monitoring De Minimis Concentration ($\mu\text{g}/\text{m}_3$)
PM ₁₀	24-Hour	ISCST3	21.3	5.0	10.0
	Annual	ISCST3	2.27	1.0	N/A
SO ₂	3-Hour	ISCST3	24.0	25.0	N/A
		CTSCREEN	33.3	25.0	
	24-Hour	ISCST3	7.68	5.0	13.0
		CTSCREEN	7.14	5.0	

PSD Significance Analysis					
Pollutant	Averaging Period	Model Used	Maximum Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Modeling Significant Level ($\mu\text{g}/\text{m}^3$)	Monitoring De Minimis Concentration ($\mu\text{g}/\text{m}^3$)
	Annual	ISCST3	0.51	1.0	N/A
		CTSCREEN	1.43	1.0	
CO	1-Hour	ISCST3	261.0	2,000.0	N/A
		CTSCREEN	269.0	2,000.0	
	8-Hour	ISCST3	87.4	500.0	575.0
		CTSCREEN	269.0	500.0	
NO ₂	Annual	ISCST3	1.45	1.0	14.0
		CTSCREEN	2.91	1.0	

As shown in the table above, a full impact analysis (including NAAQS and PSD Increment analysis) for PM₁₀, SO₂, and NO₂ is required. CO emissions were below the significance levels and require no further analysis.

The output data files of the remaining pollutants were examined to determine the furthest receptor from the plant with a modeled concentration that exceeds the annual-average MSL. This was done to determine the ROI for that pollutant. The results of that study and a summary of which pollutants require Pre-Construction Monitoring is in the following table:

Pollutant	ROI (km)	Pre-Construction Monitoring Required?
PM ₁₀	2.04	YES*
SO ₂	2.72	YES*
NO ₂	6.85	No

* Please see Ambient Monitoring Section on Page 25.

Full Impact Analysis

If the emissions of a particular pollutant associated with the proposed project are shown to have a significant impact, a full impact analysis is required for that pollutant. For this air quality analysis, PM₁₀, SO₂, and NO_x have impacts above an applicable MSL.

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A full impact analysis requires that all sources within 50 kilometers of the RIO be considered in the modeling analysis. An inventory of sources surrounding Arkansas Lime was prepared based on ADEQ’s air permitting and compliance records.

NAAQS Analysis

The NAAQS are maximum concentrations ceilings measured in terms of the total concentration of a pollutant in the atmosphere. Primary NAAQS define the “levels of air quality which the U.S. EPA judges are necessary, with an adequate margin of safety, to protect the public health.” Secondary NAAQS define the levels that “protect the public welfare from any known or anticipated adverse effects of a pollutant.”

To perform the NAAQS analysis, post-project PM₁₀, SO₂, and NO_x potential emissions rates for the Arkansas Lime facility are modeled. To estimate total PM₁₀, SO₂, and NO₂ ambient concentrations, the modeled impacts from Arkansas Lime and all other facilities located within 50 kilometers of the RIOs are added to the background concentration. SO₂ and NO₂ background concentrations were measured at monitors located at Arkansas Eastman’s Batesville facility. PM₁₀ background concentrations are based on measurements taken at ADEQ’s PM₁₀ monitor located in Searcy.

Background Concentrations		
Pollutant	Averaging Period	Background Concentration (µg/m ³)
PM ₁₀	24-Hour	44.8
	Annual	22.4
SO ₂	Highest, Second High 3-Hour	144.0
	Highest, Second High 24-Hour	86.4
	Highest Annual	10.5
NO ₂	Annual	5.6

The results of the NAAQS Analysis are summarized in the following table:

NAAQS Analysis					
Pollutant	Averaging Period	Model Used	Maximum Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Total Concentration ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
PM ₁₀	Highest 24-Hour	ISCST3	51.30	96.10	150.00
	Highest Annual	ISCST3	8.24	30.60	50.00
SO ₂	Highest, Second High 3-Hour	ISCST3	150.00	294.00	1,300.00
		CTSCREEN	385.00	529.00	
	Highest, Second High 24-Hour	ISCST3	26.70	113.00	365.00
		CTSCREEN	82.50	169.00	
	Highest Annual	ISCST3	2.97	13.60	80.00
		CTSCREEN	16.50	27.00	
NO ₂	Highest Annual	ISCST3	4.91	10.50	100.00
		CTSCREEN	7.69	13.30	

As shown in the table above, all pollutants pass NAAQS modeling.

PSD Increment Analysis

The PSD regulations were enacted primarily to “prevent deterioration” of air quality in areas of the country where the air quality was better than the NAAQS. To achieve this goal, the U.S. EPA has established PSD Increments for PM₁₀, SO₂, and NO₂. Currently, the PM₁₀ PSD Increments have replaced those previously established for PM. The PSD Increments are the maximum allowable increases in ambient concentrations above a baseline concentration for a pollutant. Significant deterioration is said to have occurred if the change in emissions occurring since the applicable baseline date results in an off-property impact greater than the PSD Increment. Based on the results of the significance analysis, the PM₁₀, SO₂, and NO₂ PSD Increments are required to be considered for this air quality analysis.

The results of the PSD Increment Analysis are summarized in the following table:

PSD Increment Analysis					
Pollutant	Averaging Period	Model Used	Maximum Modeled Concentration ($\mu\text{g}/\text{m}^3$)	PSD Increment ($\mu\text{g}/\text{m}^3$)	Percent of Increment
PM ₁₀	Highest 24-Hour	ISCST3	28.7	30	95.7%
	Highest Annual	ISCST3	5.8		17.0
SO ₂	Highest, Second High 3-Hour	ISCST3	86.0	512.0	16.8%
		CTSCREEN	165.0		32.3%
	Highest, Second High 24-Hour	ISCST3	21.6	91.0	23.7%
		CTSCREEN	35.4		38.9%
	Highest Annual	ISCST3	2.38	20.0	11.9%
		CTSCREEN	7.08		35.4%
NO ₂	Highest Annual	ISCST3	4.46	25.0	17.8%
		CTSCREEN	7.69		30.8%

As shown in the table above, all pollutants are under the available PSD increment.

The air quality analysis indicates that the kiln project may consume more than 50% of the available 24-hour PM₁₀ PSD Increment. Therefore, a discussion of the effect on economic and industrial development in the area is required by Regulation 19.9.4(c) of Regulation #19.

The maximum 24-hour average PM₁₀ PSD Increment impact occurs on Arkansas Lime's property next to the public road that divides the quarry site into East and West sections. Additionally, Arkansas Lime is located in a rural area several miles from the city of Batesville. The terrain near the plant is generally unsuitable for industrial development. Any new industrial facilities or other development would be closer to Batesville and would not have any appreciable impacts at the locations of Arkansas Lime's maximum PM₁₀ Increment impacts. Therefore, Arkansas Lime does not predict any detrimental effect on industrial or economic development in the Batesville area.

Ambient Monitoring

PSD monitoring is used to establish background air quality concentrations in the vicinity of proposed sources. Background levels are important in determining whether the air quality will be approaching or exceeding the NAAQS. The U.S. EPA's Monitoring De Minimis Concentrations establish the ambient impact levels for which a facility would need to address pre-construction ambient air quality monitoring. If a proposed ambient impact exceeds an applicable Monitoring De Minimis Concentration, the applicant must demonstrate that adequate monitoring data are presently available or submit a plan outlining an alternative monitoring strategy.

The PM₁₀ and SO₂ significance analysis maximum impacts are greater than the applicable Monitoring De Minimis Concentration. Thus, preconstruction monitoring requirements must be addressed for PM₁₀ and SO₂.

Section 2.4 of the Ambient Monitoring Guidelines for PSD allows the use of existing representative air quality data in place of installing expensive monitoring equipment. EPA has defined three cases when existing monitoring data can be used. Case 1 states that:

“If the proposed source or modification will be constructed in an area that is generally free from the impact of other point sources and area sources associated with human activities, then monitoring data from a “regional” site may be used as representative data. Such a site could be out of the maximum impact area, but must be similar in nature to the impact area. This site would be characteristic of air quality across a broad region including that in which the proposed source or modification is located.”

The area around Arkansas Lime is sparsely populated with little developed land. Based on the lack of development in the area and the high quality of data from ADEQ's ambient monitoring network, Case 1 is clearly appropriate, and representative air quality data can be used in lieu of on-site data.

Arkansas Lime will use ambient PM₁₀ data from ADEQ's Searcy, Arkansas, monitor to satisfy the PSD preconstruction monitoring requirements for PM₁₀. Arkansas Lime will also use SO₂ data from the Arkansas Eastman monitor to fulfill the preconstruction monitoring for SO₂.

Class I Area Impact Analysis

The nearest Class 1 areas are the Upper Buffalo National Wilderness Area (located approximately 155 kilometers west of Arkansas Lime) and the Hercules-Glades Wilderness area (located approximately 141 km northwest of Arkansas Lime). In a letter dated October 4, 2004, the United States Department of Agriculture (USDA) Forest Service (FS) requested the ADEQ to require Arkansas Lime to supplement the submitted Class I area analysis with a CALPUFF dispersion modeling analysis to address potential impacts from the proposed Kiln 3. There are two principal air quality impacts considered for Class I areas: PSD Increments and Air Quality Related Values (AQRV).

The first tier modeling analysis considers the emissions increases associated with the proposed Kiln 3 project only in order to determine whether the proposed project's emissions will have a significant contribution to Class I Increment consumption. If modeled impacts from the proposed project do not exceed any significant impact levels, an analysis of the cumulative impacts from the proposed facility and regional sources together is not necessary. A summary of the Class I PSD Increment and significance levels for NO₂, SO₂, and PM₁₀ is as follows:

Class I PSD Increment Levels For Upper Buffalo Area			
Pollutant	Averaging Period	Maximum Modeled Impact ($\mu\text{g}/\text{m}^3$)	Class I Significance Level ($\mu\text{g}/\text{m}^3$)
PM ₁₀	24-Hour	0.0190	0.3
	Annual	0.000607	0.2
SO ₂	3-Hour	0.643	1.0
	24-Hour	0.158	0.2
	Annual	0.00594	0.1
NO ₂	Annual	0.00368	0.1

Class I PSD Increment Levels For Hercules-Glades Area			
Pollutant	Averaging Period	Maximum Modeled Impact ($\mu\text{g}/\text{m}^3$)	Class I Significance Level ($\mu\text{g}/\text{m}^3$)
PM ₁₀	24-Hour	0.0198	0.3
	Annual	0.000692	0.2
SO ₂	3-Hour	0.708	1.0
	24-Hour	0.165	0.2
	Annual	0.00685	0.1
NO ₂	Annual	0.00429	0.1

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For the Class I AQRV analysis, with the exception of visibility, the Clean Air Act and PSD regulations do not define AQRV, do not provide procedures for defining AQRV, and do not provide criteria to determine critical pollutant loadings at which an adverse impact on AQRV would occur. The Federal Land Managers FLAG Phase I report defines the following:

Air Quality Related Value – A resource, as identified by the FLM for one or more Federal Areas, that may be adversely impacted by a change in air quality. The resource may include visibility or a specific scenic, cultural, physical, biological, ecological, or recreational resource identified by the FLM for a particular Area.

Adverse Impact on Air Quality Related Values – A deleterious effect on any AQRC defined by the FLM, resulting from the emissions of a proposed sources or modification, that interferes with the management, protection, preservation, or enjoyment of the AQRV.

AQRV indicators typically identified by FLM include visibility degradation and nitrogen and sulfur deposition.

Regional haze is measured using the light extinction coefficient b_{ext} . To determine a change in regional haze, the percentage change of the light extinction coefficient is evaluated. The FLAG guidance general level of concern for the percentage change is 5%. The results of the CALPUFF modeling are in the following table:

Visibility Impacts Using Regional Haze			
Class I Area	Modeled Year	Max. 24-hour Avg. Light Extinction Change (Δb_{ext}) (%)	Number of Days with $b_{ext} > 5\%$
Upper Buffalo	1991	9.9	1 (01/03/91)
	1992	4.8	0
	1993	4.2	0
	1994	4.5	0
	1995	5.1	1 (11/18/95)
Hercules-Glades	1991	10.1	1 (01/03/91)
	1992	4.5	0
	1993	4.0	0
	1994	4.5	0
	1995	4.9	0

Arkansas Lime believes the results of the study on 1/03/91 and 11/18/95 were anomalies and are statistically insignificant. The extinction change for both areas predicted on January 3, 1991, is more than nine standard deviations greater than that analysis's average extinction change for 1991. The extinction change on November 18, 1995, for the Upper Buffalo area is more than six standard deviations above the 1995 average.

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Based on the results of the modeling analyses and the naturally occurring visibility impairment present on January 3, 1991, and November 18, 1995, Arkansas Lime contends that at no time do the modeled emissions from the proposed Kiln 3 project cause adverse impacts to the visibility in the Upper Buffalo and Hercules-Glades Class I areas.

In the deposition analysis, the project's contribution to the deposition of chemical species in the Class I areas are evaluated against values set by the FLM. The objective of the deposition analysis is to demonstrate that emissions from the proposed project would not increase total deposition beyond a deposition assessment threshold (DAT) for either sulfate or nitrate. FLM guidance for assessment of deposition impacts suggests that an appropriate DAT for both sulfur and nitrogen is 0.005 kg/ha/yr each. The results of the modeling are in the following table:

Deposition Impacts			
Class I Area	Modeled Year	Average Sulfur Flux (kg/ha/yr)	Average Nitrogen Flux (kg/ha/yr)
Upper Buffalo	1991	0.00312	0.00208
	1992	0.00282	0.00188
	1993	0.00266	0.00158
	1994	0.00331	0.00208
	1995	0.00259	0.00139
Hercules-Glades	1991	0.00330	0.00216
	1992	0.00303	0.00207
	1993	0.00287	0.00166
	1994	0.00349	0.00218
	1995	0.00271	0.00145

As shown in the table, the average flux for both sulfur and nitrogen for each year was below the DAT value of 0.005 kg/ha/yr. Therefore, Arkansas Lime's proposed project will not cause adverse deposition at the Upper Buffalo and Hercules-Glades Class I areas.

Additional Impacts Review

An additional impact analysis is completed based on existing air quality, the quantity of emissions, and the sensitivity of local soils, vegetation, and visibility in the project's area of impact. The additional impact analysis consists of three parts: (1) growth, (2) soils and vegetation impacts, and (3) visibility impairment.

Growth Analysis

The purpose of the growth analysis is to predict and quantify how much new growth is likely to occur to support the source or modification under review and to estimate the emissions that will result from that associated growth. First, an assessment is made regarding the amount of residential growth the modified source will bring to the area. This depends on the size of the available work force, the number of new employees, and the availability of housing in the area.

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Associated commercial and industrial growth consists of new sources providing goods and services to the new employees and to the modified source itself. Once these anticipated growth effects have been considered, an estimate of the air pollutant emissions that would likely result from this associated growth is made.

The proposed project is expected to add less than 10 additional employees. Thus, any industrial, commercial, and residential growth will be small. No appreciable increase in emissions is expected as a result of any growth that might be associated with the proposed project.

Soil and Vegetation Analysis

The analysis of air pollution impacts on soils and vegetation is based on an inventory of the soils and vegetation types found in the impact area. This inventory includes all vegetation of any commercial or recreational significance. For most types of soil and vegetation, ambient concentrations of criteria pollutants below the secondary NAAQS will not result in harmful effects.

Arkansas Lime is located near Batesville in western Independence County. A General Soil Map for Independence County was compiled by the United States Department of Agriculture Soil Conservation Service in 1981. Soil types near the plant include: Clarksville-Gepp, Linker-Sidon, Lily-Clarksville, Newnata-Moko, Wideman-Sturki, and Egarn-Arrington. Vegetation in the vicinity of the plant is mainly timber and grass. Along the nearby White River, soybean, corn, and some rice are grown in addition to the hay and timber nearer to the plant.

No sensitive aspects of the soil and vegetation in the area surrounding the plant have been identified. Consequently, the secondary NAAQS are used as an indicator of potentially adverse impacts.

Visibility Analysis

EPA prescribes the use of its Workbook for Plume visual Impact Screening and Analysis for conducting a visibility impairment analysis. Three levels of screening procedures are outlined. If the criteria for the first, most conservative, screening level are met, no further analysis is required.

The VISCREEN model is recommended for the first level screen. If calculated values from the VISCREEN model are greater than the standardized screening values, the emissions are judged to have the potential for visibility impairment. If the potential for visibility impairment is indicated, the next level analysis is required.

The results of the level 1 visibility analysis are below the standardized screening criteria, thus no additional analysis is required. The VISCREEN model indicates that no visibility impairment will result from the modifications.

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Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective December 19, 2004
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective September 26, 2002
40 CFR 60 Subpart Y, New Source Performance Standards for Coal Preparation Plants
40 CFR 60 Subpart HH, New Source Performance Standards for Lime Manufacturing Plants
40 CFR 60 Subpart OOO, New Source Performance Standards for Non Metallic Mineral Processing Plants
40 CFR 63 Subpart AAAAA, National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants
40 CFR 64, Compliance Assurance Monitoring
40 CFR 52, Prevention of Significant Deterioration

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

Emission Summary

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	93.61	222.37
		PM ₁₀	56.6	172.7
		SO ₂	134.7	425.1
		VOC	10.5	43.0
		CO	258.7	1,030.3
		NO _x	301.6	1,202.1
HAPs		HCl	24.00	105.12
SN	Description	Pollutant	lb/hr	tpy
01Q	Primary Crusher	PM	0.43	1.05
		PM ₁₀	0.3	0.5
02Q	Secondary Crusher	PM	0.31	1.02
		PM ₁₀	0.2	0.5
03Q	Triple Deck Screen	PM	1.06	2.97
		PM ₁₀	0.5	1.5
04Q	Limestone Piles	PM	1.06	3.29
		PM ₁₀	0.6	1.7
05Q	Railcar Loadout	PM	0.10	0.10
		PM ₁₀	0.1	0.1
06Q	Unpaved Quarry Haul Roads	PM	39.10	40.60
		PM ₁₀	11.1	11.6
07Q	Conveyor Transfer Points	PM	8.20	19.80
		PM ₁₀	3.9	9.4
08Q	Top Bench Screen	Source Never Installed.		
09Q	PLS/Ag-Lime Screen	PM	0.53	0.73
		PM ₁₀	0.3	0.4
10Q	Kiln Feed Screen	PM	0.30	1.21
		PM ₁₀	0.2	0.6

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
11Q	Rotary Kiln 1	PM	6.90	27.40
		PM ₁₀	6.9	27.4
		SO ₂	44.8	141.6
		VOC	3.4	14.2
		CO	85.9	342.2
		NO _x	100.2	399.3
		HCl	8.00	35.04
12aQ	Kiln-Dust Bin Vent Dust Collector	PM	0.30	0.20
		PM ₁₀	0.3	0.2
12bQ	Kiln-Dust Loadout Dust Collector	PM	0.20	0.20
		PM ₁₀	0.2	0.2
13Q	#1 Lime Discharge (Nuisance Dust Collector)	PM	0.30	1.20
		PM ₁₀	0.3	1.2
14Q	Lime Product Silo Dust Collector	PM	0.20	0.90
		PM ₁₀	0.2	0.9
15Q	Lime Screen/Storage Dust Collector	PM	1.80	7.90
		PM ₁₀	1.8	7.9
16Q	Lime Loadout Dust Collector	PM	0.20	0.80
		PM ₁₀	0.2	0.8
17Q	Off-Spec Lime Loadout/Bin Vent	PM	0.20	0.50
		PM ₁₀	0.2	0.5
18Q	Lime Loadout to Railcars	PM	0.20	0.80
		PM ₁₀	0.2	0.8
19Q	Coal/Coke Rail Dump	PM	0.54	0.38
		PM ₁₀	0.3	0.2
20a/bQ	Coal/Coke Storage Piles	PM	0.1	0.30
		PM ₁₀	0.1	0.2
21Q	Coal/Coke Transfer Points	PM	0.10	0.30
		PM ₁₀	0.1	0.2
22Q	Ag-Lime Loadout to Truck	PM	0.10	0.10
		PM ₁₀	0.1	0.1
23Q	New Ag-Lime Plant Truck Top-Off System Fugitives (Was SN-28P; Moved to Quarry in 2000)	Source Removed.		

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
24Q	Rotary Kiln 2	PM	5.80	22.90
		PM ₁₀	5.8	22.9
		SO ₂	44.8	141.6
		VOC	3.4	14.2
		CO	85.9	342.2
		NO _x	100.2	399.3
		HCl	8.00	35.04
25Q	#2 Lime Discharge (Nuisance Dust Collector)	PM	0.30	1.20
		PM ₁₀	0.3	1.2
26Q	#1 and #2 Coal/Coke Bin Vents	PM	0.30	1.20
		PM ₁₀	0.3	1.2
27Q	Kiln Feed Belt into #2 Kiln Surge Bin	PM	1.10	0.10
		PM ₁₀	0.1	0.1
28Q	#1 and #2 Coal/Coke Transfer Points	PM	0.10	0.10
		PM ₁₀	0.1	0.1
29Q	Paved Quarry/Kiln Area Roads	PM	0.58	0.43
		PM ₁₀	0.2	0.1
30Q	Rotary Lime Kiln 3	PM	5.80	22.90
		PM ₁₀	5.8	22.9
		SO ₂	44.8	141.6
		VOC	3.4	14.2
		CO	85.9	342.2
		NO _x	100.2	399.3
		HCl	8.00	35.04
31Q	Transfer Points to Extended RKFS Pile	PM	0.90	1.60
		PM ₁₀	0.5	0.8
32Q	#3 Lime Discharge (Nuisance Dust Collector)	PM	0.30	1.20
		PM ₁₀	0.3	1.2
33Q	#3 Coal/Coke Bin Vent	PM	0.20	0.60
		PM ₁₀	0.2	0.6
34Q	#3 Coal/Coke Transfer Point	PM	0.10	0.10
		PM ₁₀	0.1	0.1
35Q	Kiln Feed Belt into #3 Kiln Surge Bin	PM	0.10	0.10
		PM ₁₀	0.1	0.1
36Q	Lime Storage Silo Dust Collector	PM	0.90	4.00
		PM ₁₀	0.9	4.0
37Q	Lime Storage Silo Dust Collector	PM	0.90	4.00
		PM ₁₀	0.9	4.0

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
38Q	Lime Loadout Dust Collector	PM	0.20	0.80
		PM ₁₀	0.2	0.8
39Q	Lime Loadout Dust Collector	PM	0.20	0.80
		PM ₁₀	0.2	0.8
40Q	LKD Truck Loading	PM	0.40	0.60
		PM ₁₀	0.2	0.3
41Q	LKD Truck Dumping	PM	0.40	0.60
		PM ₁₀	0.2	0.3
01P	Limestone Drop Points	PM	0.53	1.35
		PM ₁₀	0.3	0.7
02P	Stockpile Fugitives	Source Removed.		
03P	Vertical Kiln #1	Source Removed.		
04P	Vertical Kiln #2	Source Removed.		
05P	Vertical Kiln #3	Source Removed.		
06P	Vertical Kiln #4	Source Removed.		
07P	Vertical Kiln #5	Source Removed.		
08P	Vertical Kiln #6	Source Removed.		
09P	Lime Crusher and Conveyor Points	Source Removed.		
10P	Hydrator #1	Source Removed.		
11P	Hydrator #2	Source Removed.		
12P	Hydrate Separator System Dust Collector	PM	1.90	8.20
		PM ₁₀	1.9	8.2
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.4	1.5
		NO _x	0.4	1.8
13P	Hydrate Storage Tank Loadout	PM	0.30	1.00
		PM ₁₀	0.3	1.0
14P	Hydrated Lime Bagging Operations	PM	0.80	3.30
		PM ₁₀	0.8	3.3
15P	Rice Lime Screen & Crusher	PM	0.10	0.20
		PM ₁₀	0.1	0.2

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
16P	Lime Storage Tank Loadouts	PM	0.40	1.80
		PM ₁₀	0.4	1.8
17P	PLS Screening Operations	Source Removed.		
18P	Stone and Roller Mill Plant #1	PM	2.70	11.50
		PM ₁₀	2.7	11.5
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.3	1.1
		NO _x	0.3	1.2
19P	Stone and Roller Mill Plant #2	PM	1.80	7.80
		PM ₁₀	1.8	7.8
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.3	1.1
		NO _x	0.3	1.2
20P	PLS Screening Operations	PM	0.67	2.94
		PM ₁₀	0.4	1.4
21P	Loadout of 270/280 Product	Source Removed		
22P	Loadout of 140 Product Silo	Source Removed.		
23P	Loadout of 106 Product Silo	Source Removed.		
24P	PLS Bagging Operations	PM	0.40	1.70
		PM ₁₀	0.4	1.7
25aP	Portable Ag-Lime Plant Dust Collector	Source Removed.		
25bP	Portable Ag-Lime Plant Fugitives	Source Removed.		
26P	Paved PLS/Lime Plant Roads	PM	1.60	1.20
		PM ₁₀	0.4	0.3
27P	New Ag-Lime Plant Fugitives	Source Removed.		
28P	Ag-Lime Plant Truck Top-Off System Fugitives	Source Removed.		
29P	Hydrate Storage Dust Collector	PM	0.20	0.80
		PM ₁₀	0.2	0.8
30P	Consolidated PLS Loadout Bin Vent	PM	0.40	1.50
		PM ₁₀	0.4	1.5

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
31P	New Consolidated PLS Truck Loadout	This source vents back into the loadout bin		
33P	Consolidated PLS 140 Railcar Drop-Out	PM	0.20	0.80
		PM ₁₀	0.2	0.8
34P	Consolidated PLS 270 Railcar Drop-Out	PM	0.20	0.80
		PM ₁₀	0.2	0.8
35P	Quicklime Fines Rail Unloading Pit	PM	0.40	1.70
		PM ₁₀	0.4	1.7
36P	Modified PLS Products Loading Station	PM	0.20	0.80
		PM ₁₀	0.2	0.8
41P	Portable Undersize Stone Crusher	This source was never installed		
42P	Undersize Stone Conveyors and Drop Points	Source Removed.		
43P	Kiln Feed/Undersize Stone Screen	Source Removed.		

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SECTION III: PERMIT HISTORY

Operations at what is now known as Arkansas Lime Company began in 1925.

Permit 45-A was issued to Rangeaire Corporation, Batesville, White Lime Division, on August 18, 1970. This permit allowed for the installation of one Sly 12-A Dynaclone and associated equipment.

Permit 45-AR-1 was issued on February 1, 1971, to allow for the installation of two Western Precipitation Turbalaire Scrubbers and associated equipment.

Permit 45-AR-2 was issued on July 24, 1979, to allow for the installation of several baghouses. Three baghouses were installed to control emissions from crushing, bagging, screening, and storage operations. A fourth baghouse was installed as a place for trucks to discard dust at before receiving shipments.

Permit 45-AR-3 was issued to Arkansas Lime Company, formerly known as Rangeaire Corporation, Batesville, White Lime Division, on April 22, 1987. This permit allowed for the installation of a new stone and rolling mill. A new baghouse on the old stone and rolling mill was also permitted.

Permit 45-AR-4 was issued on July 25, 1990, to allow for modifications to the hydrated lime process. It was stated in this permit that the emissions were not increasing from the rates set forth in 45-AR-3.

Permit 45-AR-5 was issued to Arkansas Lime Company -- Lime Plant on July 30, 1996. With this permit, the quarry and the lime plant began to operate under separate permits. The quarry is now operating under permit #1698-A. Permit 45-AR-5, which quantified annual emissions for the first time for this facility, set maximum emission rates at 405.6 tons per year of particulate matter, 0.8 tons per year of sulfur dioxide, 1.4 tons per year of volatile organic compounds (VOC), 1315.0 tons per year of carbon monoxide, and 43.0 tons per year of oxides of nitrogen.

Permit 1698-A was issued to Arkansas Lime Company for its quarry operations on July 11, 1996.

Permit 45-AOP-R0 was issued to Arkansas Lime Company -- Lime Plant on February 17, 1998. This was the first operating permit issued to Arkansas Lime Company under Regulation 26. Permitted emissions of volatile organic compounds increased to 2.6 tpy while the permitted emissions of particulate matter decreased to 374.3 tpy with this permit. No physical changes or changes in the method of operation were allowed under this permit.

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Permit 45-AOP-R1 was issued to Arkansas Lime Company on September 14, 1999, and was administratively amended on October 21, 1999. (The administrative amendment was done to correct the effective dates of the permit on the title page of the permit.) This permit allowed for the installation of a new 625 ton per day rotary kiln at the quarry which replaced the six vertical kilns located at the lime plant. Several new sources were installed as a result of the new kiln and others were removed and/or replaced at both the quarry and the lime plant. The modifications caused significant net emissions increases in sulfur dioxide (226.0 tons per year) and oxides of nitrogen (395.0 tons per year). As a result, Arkansas Lime submitted a PSD permit application addressing the modifications taking place, including a BACT analysis and an ambient air impact analysis. The PSD section of this permit is included in Appendix F.

Permit 0045-AOP-2 was issued to Arkansas Lime Company on May 18, 2000. This permit was to install a second 625 tpd rotary lime kiln at its quarry near Batesville. Due to the installation of the new kiln, Arkansas Lime also proposed to install a new lime product cooler, a new lime product silo dust collector, a new limestone conveyor belt, and a new conveyor belt at the coal/coke preparation plant. The net emission increases of total suspended particulate, particulate matter with a diameter less than 10 microns, sulfur dioxide, and oxides of nitrogen exceeded the PSD Significant Increases. The PSD Significant Increase Level for carbon monoxide was not exceeded although there is a net emission increase of this pollutant. Permitted emissions of VOCs also increased. The PSD section of this permit is included in Appendix G.

Permit 0045-AOP-2 was Administratively Amended on May 8, 2001. This amendment removed references to the Top Bench Screen (SN-08Q), Feed Hopper, Conveyor, and Top-Off Bin (SN-23Q), and the Lime Crusher and Conveyor Point (SN-09P).

SECTION IV: SPECIFIC CONDITIONS

**SN-01Q and SN-02Q
Primary and Secondary Crusher**

Source Description

The primary crusher has been designated as source SN-01Q while the secondary crusher has been designated as source SN-02Q. Both of these crushers were replaced in 2000.

The crushers are both subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. Water sprays are the only type of control equipment associated with these sources.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #5 and #7 and equipment limitations. [§19.501 et seq. of Regulation #19, effective December 19, 2004 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
01Q	PM ₁₀	0.3	0.5
02Q	PM ₁₀	0.2	0.5

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #5 and #7 and equipment limitations. [§18.801 of Regulation #18, effective February 15, 1999, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	Tpy
01Q	PM	0.43	1.05
02Q	PM	0.31	1.02

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3. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
01Q	15%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(c), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E
02Q	15%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(c), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

4. The permittee shall conduct weekly observations of the opacity from sources SN-01Q and SN-02Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
5. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Limestone per consecutive 12 month period
01Q	1,700,000
02Q	1,640,000

6. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #5. The permittee shall update these records by the fifteenth day of the month following the month. The permittee shall keep these records onsite, and make them available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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7. The permittee shall maintain and operate water sprays at sources SN-01Q and SN-02Q in order to reduce fugitive emissions. [§18.1104 of Regulation #18, §19.303 of Regulation #19, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

8. Sources SN-01Q and SN-02Q are subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. A copy of Subpart OOO can be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the requirements found in Specific Condition #3 and Plantwide Conditions #7 through #12. [40 CFR §60.670 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-03Q, SN-09Q, & SN-10Q
Quarry Limestone Screens**

Source Description

The triple deck screen (SN-03Q) replaced the old quarry screen in 2000. The PLS/AG-Lime Screen (SN-09Q) and the Kiln Feed Screen (SN-10Q) were installed in 2000.

These sources are subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. Water sprays are the only control equipment associated with these screens.

Specific Conditions

9. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #13 and #15 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
03Q	PM ₁₀	0.5	1.5
09Q	PM ₁₀	0.3	0.4
10Q	PM ₁₀	0.2	0.6

10. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #13 and #15 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
03Q	PM	1.06	2.97
09Q	PM	0.53	0.73
10Q	PM	0.30	1.21

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11. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
03Q	10%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(b), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E
09Q	10%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(b), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E
10Q	10%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(b), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

12. The permittee shall conduct weekly observations of the opacity from sources SN-03Q, SN-09Q, and SN-10Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
13. The permittee shall not exceed the following process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Limestone per consecutive 12 month period
03Q	3,362,000
09Q	822,000
10Q	1,368,750

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14. The permittee shall maintain records of the amounts of limestone processed at sources SN-03Q, SN-09Q, and SN-10Q in order to demonstrate compliance with Specific Condition #13 which may be used by the Department for enforcement purposes. These records shall be updated by the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
15. The permittee shall maintain and operate water sprays at sources SN-09Q, and SN-10Q as necessary in order to reduce fugitive emissions. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and/or A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
16. Sources SN-03Q, SN-09Q, and SN-10Q are subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. A copy of Subpart OOO can be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Condition #11 and Plantwide Conditions #7 through #12. [40 CFR §60.670 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-04Q
 Limestone Piles**

Source Description

The Limestone Piles have been designated as source SN-04Q. Source SN-04Q was originally installed prior to 1960. New piles were made in 2000 and 2005.

Specific Conditions

17. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #21 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.6	1.7

18. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #21 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	1.06	3.29

19. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
04Q	20%	§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E

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20. The permittee shall conduct daily observations of the opacity from source SN-04Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

21. The permittee shall maintain and operate water sprays at source SN-04Q as necessary in order to reduce fugitive emissions. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-05Q
 Railcar Loadout**

Source Description

Limestone from the roller mill feed surge stockpile is loaded out via railcar and transported to the lime plant. Water sprays are the only controls associated with this source. This source was replaced in 2000.

Specific Conditions

22. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #26 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.1	0.1

23. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #26 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.10

24. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
05Q	20%	§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E

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25. The permittee shall conduct daily observations of the opacity from source SN-05Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
26. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Number of Railcars Loaded per consecutive 12 month period
05Q	19,700

27. The permittee shall maintain records of the number of Railcars loaded out at SN-05Q in order to demonstrate compliance with Specific Condition #26 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-06Q and SN-29Q
 Quarry Haul Roads**

Source Description

A new loadout road was added to the existing roads in 2000. The only controls associated with the quarry haul roads are water sprays. The unpaved haul roads have been designated as source SN-06Q and consist of the roads leading down to the quarry bottom. The paved haul roads have been designated as source SN-29Q and will consist of the roads around the lime kilns and storage areas.

Specific Conditions

28. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #30 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
06Q	PM ₁₀	11.1	11.6
29Q	PM ₁₀	0.2	0.1

29. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #30 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
06Q	PM	39.10	40.60
29Q	PM	0.58	0.43

30. The permittee shall water the haul roads as necessary in order to reduce fugitive emissions. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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**SN-07Q
Conveyor Transfer Points**

Source Description

The Conveyor Transfer Points have been designated as source SN-07Q. Source SN-07Q was originally installed prior to 1970, but was modified in 2000.

Source SN-07Q is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants and 40 CFR Part 63, Subpart AAAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

Specific Conditions

31. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #35 and #37 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	3.9	9.4

32. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #35 and #37 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	8.20	19.80

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33. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
07Q	10%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(b), 40 CFR §63.7080 Table 1, Item 7, 40 CFR §63.7080 Table 3, Item 4, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

34. The permittee shall conduct weekly observations of the opacity from source SN-07Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

35. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Limestone per consecutive 12 month period
07Q	23,448,000

36. The permittee shall maintain records of the amount of limestone processed at SN-07Q in order to demonstrate compliance with Specific Condition #35 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

37. The permittee shall maintain and operate water sprays at source SN-07Q as necessary in order to reduce fugitive emissions. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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38. Source SN-07Q is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants upon replacement. A copy of Subpart OOO may be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Conditions #33 and Plantwide Conditions #7 through #12. [40 CFR §60.670 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
39. Source SN-07Q is subject to the provisions of 40 CFR Part 63, Subpart AAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants. A copy of Subpart AAAAA has been included in Appendix D of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #33 and #40 and Plantwide Conditions #13 through #15. [40 CFR §63.7080 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
40. Source SN-07Q has been defined as an existing processed stone handling (PSH) operation because construction or reconstruction began before December 20, 2002. [§19.304 of Regulation #19 and 40 CFR §63.7082(b)]

**SN-11Q
 Rotary Lime Kiln 1**

Source Description

Construction on this rotary lime kiln began in late 1999. The fuels for this kiln are a blend of coal and coke with natural gas. The permittee may use 100% natural gas at times when it is necessary to produce a low sulfur lime product. Particulate matter emissions are controlled through the use of a baghouse. Sulfur dioxide emissions are controlled through dry scrubbing which occurs naturally in the lime kiln and at the filter cake on the baghouse. No other control equipment is associated with this lime kiln.

This source is subject to 40 CFR Part 60, Subpart HH - Standards of Performance for Lime Manufacturing Plants, 40 CFR Part 63, Subpart AAAAA - National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants, and PSD.

The following table lists the BACT Limits and Determinations for this source:

Pollutant	BACT Limit	BACT Determination
SO ₂	4% by Weight Sulfur in Fuel on a Daily Basis and 3% by Weight Sulfur in Fuel on a 30-Day Rolling Average	Natural Dry Scrubbing In Kiln and Baghouse
NO _x	3.5 lb NO _x per Ton of Lime Produced on a 30-Day Rolling Average	Proper Kiln Design and Operation

Specific Conditions

41. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #46, #48, #52, #54, #62, and #76 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	6.9	27.4
VOC	3.4	14.2
CO	85.9	342.2

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42. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #46, #48, #52, #71, and #73 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19, and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
SO ₂	44.8	141.6
NO _x	100.2	399.3

43. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #46, #48, #52, #54, and #62 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	6.90	27.40
HCl	8.00	35.04

44. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
11Q	15%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.342(a)(2), 40 CFR §63.7080 Table 2, Item 1, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

45. The owner or operator of a facility that is subject to the provisions of this subpart shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from the rotary lime kiln. The span of this system shall be set at 40% opacity. [§19.304 and §19.703 of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR §60.343(a), 40 CFR §63.7113(g), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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46. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Coal and/or Coke per consecutive 12 month period
11Q	47,254

47. The permittee shall maintain records of the amount of coal and coke fired in the lime kiln in order to demonstrate compliance with Specific Condition #46 and which may be used by the Department for enforcement purposes. These records shall be updated daily, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19, and 40 CFR Part 52, Subpart E]

48. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Lime per day
11Q	687.0

49. The permittee shall maintain daily records of the lime produced in order to demonstrate compliance with Specific Condition #48 and which may be used by the Department for enforcement purposes. These records shall be updated daily, kept on site, and made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
50. The permittee shall obtain a manufacturer's certification of the ash mineral analysis of the coal in order to demonstrate that any possible emissions of Hazardous Air Pollutants (HAPs) are below the de minimis levels. A new certification shall be obtained each time that coal is obtained from a different mine. This certification shall be kept on site and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
51. All required tests shall be conducted while firing coal and/or coke. All required tests shall also be conducted in accordance with Plantwide Condition #3. [§19.702 and §19.901 et seq. of Regulation #19, and 40 CFR Part 52, Subpart E]
52. The permittee shall use only coal, coke, or pipeline quality natural gas to fire the rotary lime kiln. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

PM/PM₁₀ & Opacity Conditions

NSPS Subpart HH

53. Source SN-11Q is subject to the provisions of 40 CFR Part 60, Subpart HH - Standards of Performance for Lime Manufacturing Plants. A copy of Subpart HH has been included in Appendix B of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #54 through #58. [40 CFR §60.340(a) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
54. On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any rotary lime kiln any gases which contain particulate matter in excess of 0.30 kilogram per megagram (0.60 lb/ton) of stone feed. This testing was performed in April, 2001. [§19.304 and §19.501 et seq. of Regulation #19, 40 CFR §60.342(a)(1), and 40 CFR Part 52, Subpart E]
55. The owner or operator shall determine compliance with the particulate matter standards in Specific Condition #54 as follows: [§19.304 and §19.703 of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR §63.344(b)(1) through (4), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- a. The emission rate (E) of particulate matter shall be computed for each run using the following equation:
- $$E = (Cs Qsd)/PK$$
- where:
- E = emission rate of particulate matter, kg/Mg (lb/ton) of stone feed
Cs = concentration of particulate matter, g/dscm (g/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 (453.6g/lb)
- b. Method 5 and 202 shall be used at negative pressure fabric filters and other types of control devices and Method 5D shall be used at positive-pressure fabric filters to determine the particulate matter concentration (Cs) and the volumetric flow rate of the effluent gas (Qsd). The sampling time and the sample volume for each run shall be at least 60 minutes and 0.9 dscm (31.8 dscf).
- c. The monitoring device of §60.343(d) (Specific Condition #56) shall be used to determine the stone feed rate (P) for each run.
- d. Method 9 and the procedures in §60.11 shall be used to determine opacity.

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56. For the purpose of conducting a performance test under §60.8, the owner or operator of any lime manufacturing plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate a device for measuring the mass rate of stone feed to the affected rotary lime kiln. The measuring device used must be accurate to within + or - 5 percent of the mass rate over its operating range. The permittee shall continue to maintain and operate this device after the initial performance test has been completed. [§19.304 and §19.703 of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR §60.343(d), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
57. For the purpose of reports required under §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 subject to paragraph (a) of this subpart is greater than 15 percent. [§19.304 of Regulation #19 and 40 CFR §60.343(e)]
58. In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). [§19.304 and §19.702 of Regulation #19, 40 CFR Part 52, Subpart E, and 40 CFR §60.344(a)]

MACT AAAAA (Kiln 1 is not subject to Specific Condition 62-70 until January 5, 2007)

59. Source SN-11Q is subject to the provisions of 40 CFR Part 63, Subpart AAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants. A copy of Subpart AAAAA has been included in Appendix D of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #60 through #70 and Plantwide Conditions #13 through #15. [40 CFR §63.7080 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
60. Source SN-11Q has been defined as an existing lime kiln because construction or reconstruction began before December 20, 2002. [§19.304 of Regulation #19 and 40 CFR §63.7082(e)]
61. Because SN-11Q has been defined as an existing source, the permittee must comply with the limitations set forth in Specific Conditions #61 through #70 by January 5, 2007. [§19.304 of Regulation #19 and 40 CFR §63.7083(b)]
62. Particulate emissions from SN-11Q shall not exceed 0.12 lbs per ton of stone fed. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 1, Item 1]

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63. The owner or operator shall determine compliance with the particulate matter standards in Specific Condition #62 as follows: [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 3, Item 1]
- a. The emission rate (E) of particulate matter shall be computed for each run using the following equation:
- $$E = (Cs Qsd)/PK$$
- where:
- E = emission rate of particulate matter, kg/Mg (lb/ton) of stone feed
Cs = concentration of particulate matter, g/dscm (g/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 (453.6g/lb)
- b. Method 5 shall be used at negative pressure fabric filters and other types of control devices and Method 5D shall be used at positive-pressure fabric filters to determine the particulate matter concentration (Cs) and the volumetric flow rate of the effluent gas (Qsd). The sampling time and the sample volume for each run shall be at least 60 minutes and 0.9 dscm (31.8 dscf).
- c. The monitoring device of Specific Condition #56 shall be used to determine the stone feed rate (P) for each run.
64. The permittee shall maintain a fabric filter on SN-11Q such that the opacity requirement of 15% is not exceeded on a 6-minute block average. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 2, Item 1]
65. For each emission unit equipped with an add-on air pollution control device, the permittee 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. [§19.304 of Regulation #19 and 40 CFR §63.7113(f)]

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66. For each COMS used to monitor an add-on air pollution control device, the permittee must meet the following requirements: [§19.304 of Regulation #19 and 40 CFR §63.7113(g)]
 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 – 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.
67. The permittee shall collect COMS data at a frequency of at least once every 15 seconds. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 5, Item 4(a)(ii)]
68. The permittee shall implement the written Operations, Maintenance, and Monitoring (OM&M) plan submitted with this permit application. Any subsequent changes to the plan must be submitted for review and approval. [§19.304 of Regulation #19 and 40 CFR §63.7100(d)]
69. Rotary Lime Kiln 1 (SN-11Q) must vent captured emissions through a closed system. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 2, Item 6a]
70. Rotary Lime Kiln 1 (SN-11Q) must operate each capture/collection system according to procedures in the OM&M plan. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 2, Item 6b]

SO₂ Conditions

71. The sulfur content of the fuel mix used to fire the kiln shall not exceed 4% by weight on a daily basis as fired in the kiln and shall not exceed 3% on a rolling 30-day average. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
72. The permittee shall obtain manufacturer's certification of the sulfur content of each shipment of the coal/coke mix or conduct tests of each shipment of fuel to determine the sulfur content and shall perform any necessary calculations in order to demonstrate compliance with Specific Condition #71 and which may be used by the Department for enforcement purposes. These records shall be updated daily, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

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NO_x

73. Emissions of oxides of nitrogen shall not exceed 3.5 lbs per ton of lime produced on a 30-day rolling average. [§19.501 et seq. and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
74. The permittee shall test source SN-11Q for oxides of nitrogen using EPA Reference Method 7E. The permittee shall notify the Department at least 30 days in advance of the tests taking place and shall repeat these tests annually. [§19.702 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]
75. The permittee shall demonstrate compliance with the NO_x emissions limit in Specific Condition #73 for source SN-11Q by continuously monitoring the oxygen content of the kiln gases according to the following conditions: [§19.703 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
 - a. The permittee shall install, calibrate, maintain, and operate a continuous oxygen monitor in the exhaust end, but before the preheater, of source SN-11Q. The permittee shall operate the oxygen monitor in accordance with the QA/QC practices listed in Specific Conditions #75e through #75h.
 - b. The permittee shall operate the kiln at all times, except during startup, shutdown, and malfunction, such that the 30-day rolling average kiln gas percent oxygen (%O₂) content (measured at the oxygen monitor) is less than or equal to 0.93%.
 - c. The permittee shall use this oxygen monitor to demonstrate compliance with the maximum %O₂ kiln gas limit established by Specific Condition #75b. The permittee shall use the data from the continuous oxygen monitor (to predict the NO_x emission rate), along with lime production records, to demonstrate compliance with Specific Condition #73.
 - d. The permittee shall measure at least four, evenly spaced %O₂ values every hour that the kiln is in operation and use the hourly data to develop a 24-hour average for each day. Each daily average shall be used to determine the actual rolling 30-day average for comparison to the limit established by Specific Condition #75b.
 - e. The oxygen monitor shall meet a minimum frequency of monitor operation of 95% up-time.
 - f. Source SN-11Q shall comply with the limit in Specific Condition #75b by meeting a minimum frequency of 95% compliance on a 30-day rolling average.

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- g. The permittee shall conduct calibration and zero-span checks of the O₂ monitor when the cells are replaced and every four weeks following installation per the manufacturer's recommended calibration procedures.
- h. Within 14 days prior to the annual kiln performance stack tests, a kiln gas sample from the O₂ monitor shall be split and analyzed by a certified, third-party O₂ analyzer. The relative accuracy (RA) of the O₂ monitor shall be determined by this split sample and the RA estimation method in 40 CFR 60, Appendix B, Performance Draft Specification 2. The RA of the O₂ monitor shall be no greater than 20%. Results of the RA calculation shall be included with the performance test report.
- i. Monitor up-time, monitor calibration checks, the %O₂ rolling 30-day average values, and any deviations from the rolling 30-day O₂ limit shall be recorded daily, kept on-site, and made available to Department personnel upon request. A report including the total monitor up-time, kiln operating time, 30-day rolling average %O₂ values, and percent compliance shall be submitted to the Department in accordance with General Provision #7.

CO

- 76. The permittee shall test source SN-11Q for carbon monoxide using EPA Reference Method 10. The permittee shall notify the Department at least 30 days in advance of the tests taking place and shall repeat these tests annually. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 77. The permittee shall demonstrate compliance with the CO emissions limits in Specific Condition #41 for source SN-11Q by continuously monitoring the oxygen content of the kiln gases according to the following conditions: [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
 - a. The permittee shall operate the kiln at all times, except during startup, shutdown, and malfunction, such that the 30-day rolling average kiln gas percent oxygen (%O₂) content (measured at the oxygen monitor) is not less than 0.60%.
 - b. The permittee shall use the oxygen monitor required by Specific Condition #75a to demonstrate compliance with the minimum %O₂ kiln gas limit established by Specific Condition #77a. The permittee shall operate the oxygen monitor in accordance with Specific Conditions #75e through #75i.
 - c. The permittee shall measure at least four, evenly spaced %O₂ values every hour that the kiln is in operation and use the hourly data to develop a 24-hour average for each day. Each daily average shall be used to determine the actual rolling 30-day average for comparison to the limit established by Specific Condition #77a.

**SN-12Qa, SN-12b, & SN-13Q
 Kiln-Dust Bin Vent Dust Collectors and #1 Lime Discharge (Nuisance Dust Collector)**

Source Description

The lime dust collected by the baghouse on the lime kiln is sold off site. The emissions generated by the kiln-dust bin vent are controlled through fabric-filter type dust collectors which have been designated as source SN-12aQ and SN-12bQ. Also included in the emission rates for source SN-12aQ and SN-12bQ are the emissions generated by the bin loadout.

After the limestone has been calcined in the kiln, it is sent to the lime product cooler. Emissions from the lime product cooler are controlled through the use of a fabric filter which has been designated as source SN-13Q.

Source SN-13Q is subject to CAM for particulate emissions. Daily opacity observations are the method used to demonstrate compliance.

Specific Conditions

78. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #83 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
12aQ	PM ₁₀	0.3	0.2
12bQ	PM ₁₀	0.2	0.2
13Q	PM ₁₀	0.3	1.2

79. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #83 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
12aQ	PM	0.30	0.20
12bQ	PM	0.20	0.20
13Q	PM	0.30	1.20

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80. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
12a&bQ	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
13Q	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

81. The permittee shall conduct weekly observations of the opacity from source SN-12Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]
82. The permittee shall conduct daily observations of the opacity from source SN-13Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18, 40 CFR 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]
83. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Hours per consecutive 12 month period
12a&bQ	1,460

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84. The permittee shall maintain records of the hours of operation of loading out from the bin associated with SN-12Q in order to demonstrate compliance with Specific Condition #83 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-14Q & SN-15Q
Lime Product Silo Dust Collector and Screen/Storage Dust Collector**

Source Description

After the lime has been cooled in the product cooler, it is transferred to the lime product silo. Emissions from this silo are controlled through the use of a fabric filter type dust collector which has been designated as source SN-14Q.

Emissions generated by the lime screen and crusher are controlled through the use of a dust collector. This source has been designated as SN-15Q.

Source SN-15Q is subject to CAM for particulate emissions. Daily opacity observations are the method used to demonstrate compliance.

Specific Conditions

85. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
14Q	PM ₁₀	0.2	0.9
15Q	PM ₁₀	1.8	7.9

86. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
14Q	PM	0.20	0.90
15Q	PM	1.80	7.90

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87. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
14Q	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
15Q	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

88. The permittee shall conduct weekly observations of the opacity from source SN-14Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
89. The permittee shall conduct daily observations of the opacity from source SN-15Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18, 40 CFR 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]

**SN-16Q, SN-17Q, & SN-18Q
Lime Loadout Dust Collector, Off Spec Lime Loadout/Bin Vent, and
Lime Loadout to Railcars**

Source Description

Source SN-16Q controls emissions generated by the truck loadout of quicklime, source SN-17Q controls emissions generated by the truck loadout of off-spec lime, and source SN-18Q controls emissions generated by the rail loadout of quicklime sales and transfer. All of these sources use fabric filter type dust collectors.

Specific Conditions

90. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #94 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
16Q	PM ₁₀	0.2	0.8
17Q	PM ₁₀	0.2	0.5
18Q	PM ₁₀	0.2	0.8

91. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #94 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
16Q	PM	0.20	0.80
17Q	PM	0.20	0.50
18Q	PM	0.20	0.80

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92. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
16Q	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
17Q	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
18Q	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

93. The permittee shall conduct weekly observations of the opacity from sources SN-16Q, SN-17Q, and SN-18Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]
94. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Lime per consecutive 12 month period
17Q	456,250

95. The permittee shall maintain records of the lime throughput at source SN-17Q in order to demonstrate compliance with Specific Condition #94 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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**SN-19Q, SN-20Q, & SN-21Q
Coal/Coke Preparation Plant**

Source Description

Source SN-19Q is the Coal/Coke Rail Dump. Source SN-20Q consists of the Coal and Coke Storage Piles. Source SN-21Q consists of the Coal/Coke Conveyor Transfer Points. No control equipment is associated with the other sources at the coal/coke preparation plant.

Compliance with these emission rates will be demonstrated through the limit on the amount of coal and coke that the permittee is allowed to fire in the rotary lime kilns. The Department recognizes that source SN-21Q will be handling some of the coal and coke more than one time. However, since the permittee will not be buying significantly more coal and coke than will be burned in the lime kilns, no additional record keeping will be required for source SN-21Q. The coal preparation plant also consists of coal processing and storage operations (as defined in 40 CFR §60.251). No emissions are expected from these sources due to their design. However, the permittee will be required to test these sources as required under 40 CFR, Part 60.

Due to the additional coal being handled, the coal/coke preparation plant will now be subject to the requirements of 40 CFR Part 60, Subpart Y - Standards of Performance for Coal Preparation Plants.

Specific Conditions

96. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #100 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
19Q	PM ₁₀	0.3	0.2
20a/bQ	PM ₁₀	0.1	0.2
21Q	PM ₁₀	0.1	0.2

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97. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #100 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
19Q	PM	0.54	0.38
20Q	PM	0.10	0.30
21Q	PM	0.10	0.30

98. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
19Q	20%	§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E
20Q	20%	§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E
21Q	20%	§19.304 and §19.503 of Regulation #19 40 CFR §60.252(c), and 40 CFR Part 52, Subpart E

99. The permittee shall conduct daily observations of the opacity from sources SN-19Q, SN-20Q, and SN-21Q, and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]

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100. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Coal/Coke per consecutive 12 month period
19Q	141,759

101. The permittee shall maintain records of the coal/coke throughput at source SN-19Q in order to demonstrate compliance with Specific Condition #100 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
102. Source SN-21Q as well as the coal processing and storage operations (other than the open storage piles) are subject to the applicable provisions of 40 CFR Part 60, Subpart Y - Standards of Performance for Coal Preparation Plants due to the size of the coal preparation plant and its date of installation. A copy of Subpart Y has been included in Appendix A of this permit. The applicable provisions of this subpart include, but are not necessarily limited to, the items contained in Specific Conditions #103 through #104. [40 CFR §60.250(a) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
103. In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). [§19.304 of Regulation #19 and 40 CFR §60.254(a)]
104. The owner or operator shall determine compliance with the opacity standards using EPA Reference Method 9 and the procedures in §60.11. [§19.304 of Regulation #19 and 40 CFR §60.254(b)(2)]

**SN-22Q
 Ag-Lime Loadout to Truck**

Source Description

The Ag-Lime truck loadout operations have been designated as source SN-22Q. No control equipment is associated with this source.

Specific Conditions

105. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #109 and #111 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.1	0.1

106. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #109 and #111 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.10

107. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
22Q	20%	§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E

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108. The permittee shall conduct daily observations of the opacity from source SN-22Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]
109. The permittee shall not exceed the following process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Tons of limestone products (including but not limited to Ag-Lime) per consecutive 12 month period
22Q	100,000

110. The permittee shall maintain records of the amounts of limestone products (including but not limited to Ag-Lime) processed at SN-22Q in order to demonstrate compliance with Specific Condition #109 and which may be used by the Department for enforcement purposes. These records shall be updated by the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19 and 40 CFR Part 52, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
111. The permittee shall operate sufficient water sprays upstream of source SN-22Q as necessary in order to reduce fugitive emissions from these sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-24Q
 Rotary Lime Kiln 2**

Source Description

Construction on this rotary lime kiln was in the fall of 2003. The fuels for this kiln will be a blend of coal and coke with natural gas. The permittee may use 100% natural gas when it is necessary to produce a low sulfur lime product. Particulate matter emissions are controlled through the use of a baghouse. Sulfur dioxide emissions are controlled through dry scrubbing which occurs naturally in the lime kiln and at the filter cake on the baghouse. No other control equipment is associated with this lime kiln.

This source is subject to 40 CFR Part 60, Subpart HH - Standards of Performance for Lime Manufacturing Plants, 40 CFR Part 63, Subpart AAAAA - National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants, and PSD.

The following table lists the BACT Limits and Determinations for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.015 gr/dscf 15% Opacity	Baghouse-type Dust Collector
SO ₂	4% by Weight Sulfur in Fuel on a Daily Basis and 3% by Weight Sulfur in Fuel on a 30-Day Rolling Average	Natural Dry Scrubbing In Kiln and Baghouse
NO _x	3.5 lb NO _x per Ton of Lime Produced on a 30-Day Rolling Average	Proper Kiln Design and Operation

Specific Conditions

112. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #116, #117, #119, #123, #133, #141, and #144, and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	5.8	22.9
PM	5.80	22.90
SO ₂	44.8	141.6
NO _x	100.2	399.3

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113. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #116, #117, #119, and #146 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	3.4	14.2
CO	85.9	342.2

114. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #117 and #119 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
HCl	8.00	35.04

115. All required tests shall be conducted while firing coal and/or coke. All required tests shall also be conducted in accordance with Plantwide Condition 3. [§19.702 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

116. The permittee shall use only coal, coke, or pipeline quality natural gas to fire the rotary lime kiln. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

117. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Coal and/or Coke per consecutive 12 month period
24Q	47,254

118. The permittee shall maintain records of the amount of coal and coke fired in the lime kiln in order to demonstrate compliance with Specific Condition #117 and which may be used by the Department for enforcement purposes. These records shall be updated daily, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

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119. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Limestone per day
24Q	687.0

120. The permittee shall maintain daily records of the lime produced in order to demonstrate compliance with Specific Condition #119 and which may be used by the Department for enforcement purposes. These records shall be updated daily, kept on site, and made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. [§19.705 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]
121. The permittee shall obtain a manufacturer's certification of the ash mineral analysis of the coal in order to demonstrate that any possible emissions of Hazardous Air Pollutants (HAPs) are below the de minimis levels. A new certification shall be obtained each time that coal is obtained from a different mine. This certification shall be kept on site and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

PM/PM₁₀ & Opacity

122. Particulate matter emissions from source SN-24Q shall not exceed 0.015 grains per dry standard cubic foot of air. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]
123. The permittee shall annually test source SN-24Q for particulate matter using EPA Reference Method 5 and 202 in order to demonstrate compliance with the pound per hour emission limit set forth in Specific Condition #112 and the grain loading factor set forth in Specific Condition #122. All tests shall take place in accordance with the plantwide conditions of this permit. [§19.702 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

NSPS Subpart HH

124. Source SN-24Q is subject to the provisions of 40 CFR Part 60, Subpart HH - Standards of Performance for Lime Manufacturing Plants. A copy of Subpart HH has been included in Appendix B of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #125 through #129. [40 CFR §60.340(a) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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125. For the purpose of conducting a performance test under §60.8, the owner or operator of any lime manufacturing plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate a device for measuring the mass rate of stone feed to the affected rotary lime kiln. The measuring device used must be accurate to within + or - 5 percent of the mass rate over its operating range. The permittee shall continue to maintain and operate this device after the initial performance test has been completed. This testing was performed in April, 2004. [§19.304 and §19.703 of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR §60.343(d), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

126. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
24Q	15%	§18.501 of Regulation #18, §19.304 and §19.901 et seq. of Regulation #19 40 CFR §60.342(a)(2), 40 CFR §63.7080 Table 2, Item 1, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

127. The owner or operator of a facility that is subject to the provisions of this subpart shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from the rotary lime kiln. The span of this system shall be set at 40 percent opacity. [§19.304 and §19.703 of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR §60.343(a), 40 CFR §63.7113(g), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

128. For the purpose of reports required under §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 subject to paragraph (a) of this subpart is greater than 15 percent. [§19.304 of Regulation #19 and 40 CFR §60.343(e)]

129. In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). [§19.304 and §19.702 of Regulation #19, 40 CFR Part 52, Subpart E, and 40 CFR §60.344(a)]

MACT AAAAA

130. Source SN-24Q is subject to the provisions of 40 CFR Part 63, Subpart AAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants. A copy of Subpart AAAAA has been included in Appendix D of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #126, #131 through #140 and Plantwide Conditions #13 through #15. [40 CFR §63.7080 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
131. Source SN-24Q has been defined as a new lime kiln because construction or reconstruction began after December 20, 2002. [§19.304 of Regulation #19 and 40 CFR §63.7082(b)]
132. Particulate emissions from SN-24Q shall not exceed 0.10 lbs per ton of stone fed. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 1, Item 3]
133. The owner or operator shall determine compliance with the particulate matter standards in Specific Condition #132 as follows: [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 3, Item 1]
- a. The emission rate (E) of particulate matter shall be computed for each run using the following equation:
- $$E = (Cs Qsd)/PK$$
- where:
- E = emission rate of particulate matter, kg/Mg (lb/ton) of stone feed
Cs = concentration of particulate matter, g/dscm (g/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 (453.6g/lb)
- b. Method 5 shall be used at negative pressure fabric filters and other types of control devices and Method 5D shall be used at positive-pressure fabric filters to determine the particulate matter concentration (Cs) and the volumetric flow rate of the effluent gas (Qsd). The sampling time and the sample volume for each run shall be at least 60 minutes and 0.9 dscm (31.8 dscf).
- c. The monitoring device of Specific Condition #125 shall be used to determine the stone feed rate (P) for each run.
134. The permittee shall maintain a fabric filter on SN-24Q such that the opacity requirement of 15% is not exceeded on a 6-minute block average. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 2, Item 1]

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135. For Rotary Lime Kiln 2 (SN-24Q), the permittee 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. [§19.304 of Regulation #19 and 40 CFR §63.7113(f)]
136. For each COMS used to monitor an add-on air pollution control device, the permittee must meet the following requirements: [§19.304 of Regulation #19 and 40 CFR §63.7113(g)]
 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 – 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.
137. The permittee shall collect COMS data at a frequency of at least once every 15 seconds. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 5, Item 4(a)(ii)]
138. The permittee shall implement the written Operations, Maintenance, and Monitoring (OM&M) plan submitted with this permit application. Any subsequent changes to the plan must be submitted for review and approval. [§19.304 of Regulation #19 and 40 CFR §63.7100(d)]
139. Rotary Lime Kiln 2 (SN-24Q) must vent captured emissions through a closed system. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 2, Item 6a]
140. Rotary Lime Kiln 2 (SN-24Q) must operate each capture/collection system according to procedures in the OM&M plan. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 2, Item 6b]

SO₂

141. The sulfur content of the fuel mix used to fire the kiln shall not exceed 4% by weight on a daily basis as fired in the kiln and shall not exceed 3% on a rolling 30-day average. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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142. The permittee shall obtain manufacturer's certification of the sulfur content of each shipment of the coal/coke mix or conduct tests of each shipment of fuel to determine the sulfur content and shall perform any necessary calculations in order to demonstrate compliance with Specific Condition #141 and which may be used by the Department for enforcement purposes. These records shall be updated daily, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

NO_x

143. Emissions of oxides of nitrogen shall not exceed 3.5 lbs per ton of lime produced on a 30-day rolling average. [§19.501 et seq. and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

144. The permittee shall test source SN-24Q for oxides of nitrogen using EPA Reference Method 7E. The permittee shall notify the Department at least 30 days in advance of the tests taking place and shall repeat these tests annually. [§19.702 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

145. The permittee shall demonstrate compliance with the NO_x emissions limit in Specific Condition #143 for source SN-24Q by continuously monitoring the oxygen content of the kiln gases according to the following conditions: [§19.703 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

- a. The permittee shall install, calibrate, maintain, and operate a continuous oxygen monitor in the exhaust end, but before the preheater, of source SN-24Q. The permittee shall operate the oxygen monitor in accordance with the QA/QC practices listed in Specific Conditions #145e through #145h.
- b. The permittee shall operate the kiln at all times, except during startup, shutdown, and malfunction, such that the 30-day rolling average kiln gas percent oxygen (%O₂) content (measured at the oxygen monitor) is less than or equal to 0.93%.
- c. The permittee shall use this oxygen monitor to demonstrate compliance with the maximum %O₂ kiln gas limit established by the testing required by Specific Condition #144. The permittee shall use the data from the continuous oxygen monitor (to predict the NO_x emission rate), along with lime production records, to demonstrate compliance with Specific Condition #143.
- d. The permittee shall measure at least four, evenly spaced %O₂ values every hour that the kiln is in operation and use the hourly data to develop a 24-hour average for each day. Each daily average shall be used to determine the actual rolling 30-day average for comparison to the limit established by Specific Condition #145b

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- e. The oxygen monitor shall meet a minimum frequency of monitor operation of 95% up-time.
- f. Source SN-24Q shall comply with the limit in Specific Condition #145b by meeting a minimum frequency of 95% compliance on a 30-day rolling average.
- g. The permittee shall conduct calibration and zero-span checks of the O₂ monitor when the cells are replaced and every four weeks following installation per the manufacturer's recommended calibration procedures.
- h. Within 14 days prior to the annual kiln performance stack tests, a kiln gas sample from the O₂ monitor shall be split and analyzed by a certified, third-party O₂ analyzer. The relative accuracy (RA) of the O₂ monitor shall be determined by this split sample and the RA estimation method in 40 CFR 60, Appendix B, Performance Draft Specification 2. The RA of the O₂ monitor shall be no greater than 20%. Results of the RA calculation shall be included with the performance test report.
- i. Monitor up-time, monitor calibration checks, the %O₂ rolling 30-day average values, and any deviations from the rolling 30-day O₂ limit shall be recorded daily, kept on-site, and made available to Department personnel upon request. A report including the total monitor up-time, kiln operating time, 30-day rolling average %O₂ values, and percent compliance shall be submitted to the Department

CO

- 146. The permittee shall test source SN-24Q for carbon monoxide using EPA Reference Method 10. The permittee shall notify the Department at least 30 days in advance of the tests taking place and shall repeat these tests annually. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]
- 147. The permittee shall demonstrate compliance with the CO emissions limits in Specific Condition #113 for source SN-24Q by continuously monitoring the oxygen content of the kiln gases according to the following conditions: [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
 - a. The permittee shall operate the kiln at all times, except during startup, shutdown, and malfunction, such that the 30-day rolling average kiln gas percent oxygen (%O₂) content (measured at the oxygen monitor) is not less than 0.60%.
 - b. The permittee shall use the oxygen monitor required by Specific Condition #145a to demonstrate compliance with the minimum %O₂ kiln gas limit established by Specific Condition #147a. The permittee shall operate the oxygen monitor in accordance with Specific Conditions #145e through #145i.

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- c. The permittee shall measure at least four, evenly spaced %O₂ values every hour that the kiln is in operation and use the hourly data to develop a 24-hour average for each day. Each daily average shall be used to determine the actual rolling 30-day average for comparison to the limit established by Specific Condition #147a.

SN-25Q
#2 Lime Discharge (Nuisance Dust Collector)

Source Description

After the limestone has been calcined in the #2 Rotary Lime Kiln, it is sent to the #2 Lime Product Cooler. Emissions from this source are controlled through the use of a dust collector.

This source is subject to PSD and CAM for particulate emissions. Daily opacity observations are the method used to demonstrate CAM.

The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.015 gr/dscf 5% Opacity	Baghouse-type Dust Collector

Specific Conditions

148. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #151 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.3	1.2
PM	0.30	1.20

149. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
25Q	5%	§18.501 of Regulation #18, §19.901 et seq. of Regulation #19, §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, and A.C.A.

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150. The permittee shall conduct daily observations of the opacity from source SN-25Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18, 40 CFR 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]

151. Particulate matter emissions from source SN-25Q shall not exceed 0.015 grains per dry standard cubic foot of air. Compliance with this condition will be demonstrated by equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

**SN-26Q
 #1 and #2 Coal/Coke Bin Vents**

Source Description

The Coal Bin Vents were last modified in 2004.

This source is subject to PSD. The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.015 gr/dscf 5% Opacity	Baghouse-type Dust Collector

Specific Conditions

152. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #155 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.3	1.2
PM	0.30	1.20

153. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
26Q	5%	§18.501 of Regulation #18, §19.901 et seq. of Regulation #19, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52

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154. The permittee shall conduct weekly observations of the opacity from sources SN-26Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]

155. Particulate matter emissions from source SN-26Q shall not exceed 0.015 grains per dry standard cubic foot of air. Compliance with this condition will be demonstrated by equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

**SN-27Q
 Kiln Feed Belt into #2 Kiln Surge Bin**

Source Description

This source was installed in 2003.

This source is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR Part 63, Subpart AAAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants, and PSD.

The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	10% Opacity	Water Spray Upstream and Surge Bin Vacuum

Specific Conditions

156. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #159 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19, and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.10	0.10
PM ₁₀	0.1	0.1

157. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
27Q	10%	§18.501 of Regulation #18, §19.304 and §19.901 et seq. of Regulation #19 40 CFR §60.672(b), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

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158. The permittee shall conduct weekly observations of the opacity from source SN-27Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

159. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Limestone per consecutive 12 month period
27Q	450,000

160. The permittee shall maintain records of the limestone throughput at source SN-27Q in order to demonstrate compliance with Specific Condition #159 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

161. Source SN-27Q is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. A copy of Subpart OOO may be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Conditions #157 and Plantwide Conditions #7 through #12. [40 CFR §60.670 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

162. Source SN-27Q is subject to the provisions of 40 CFR Part 63, Subpart AAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants. A copy of Subpart AAAAA has been included in Appendix D of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #157 and #163 and Plantwide Conditions #13 through #15. [40 CFR §63.7080 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

163. Source SN-27Q has been defined as a new processed stone handling (PSH) operation because construction or reconstruction began after December 20, 2002. [§19.304 of Regulation #19 and 40 CFR §63.7082(c)]

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**SN-28Q
 #1 and #2 Coal/Coke Transfer Points**

Source Description

Source SN-28Q, which was subject to PSD review for the Kiln 2 permit (R2 permit), is the emissions from the transfer of coal/coke from the Incline Belt into the diverter chute leading to the #1 and #2 Fuel Bins (also called the Coal/Coke Bins).

Compliance with these emission rates will be demonstrated through the limit on the amount of coal and coke that the permittee is allowed to fire in the rotary lime kilns. The Department recognizes that source SN-28Q will be handling some of the coal and coke more than one time. However, since the permittee will not be buying significantly more coal and coke than will be burned in the lime kilns, no additional record keeping will be required for source SN-28Q.

Due to the additional coal being handled, the coal/coke preparation plant will now be subject to the requirements of 40 CFR Part 60, Subpart Y - Standards of Performance for Coal Preparation Plants. This source is also subject to PSD.

The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	20% Opacity	Non-Point Source

Specific Conditions

164. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. and §19.901 of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
28Q	PM	0.10	0.10
	PM ₁₀	0.1	0.1

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165. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
28Q	20%	§19.304, §19.503, and §19.901 of Regulation #19 40 CFR §60.252(c), and 40 CFR Part 52, Subpart E

166. The permittee shall conduct daily observations of the opacity from source SN-28Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]
167. Source SN-28Q is subject to the applicable provisions of 40 CFR Part 60, Subpart Y - Standards of Performance for Coal Preparation Plants due to the size of the coal preparation plant and its date of installation. A copy of Subpart Y has been included in Appendix A of this permit. The applicable provisions of this subpart include, but are not necessarily limited to, the items contained in Specific Conditions #165, #168, and #169. [40 CFR §60.250(a) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
168. In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). [§19.304 of Regulation #19 and 40 CFR §60.254(a)]
169. The owner or operator shall determine compliance with the opacity standards using EPA Reference Method 9 and the procedures in §60.11. [§19.304 of Regulation #19 and 40 CFR §60.254(b)(2)]

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**SN-30Q
 Rotary Lime Kiln 3**

Source Description

Construction on this rotary lime kiln will begin after permit issuance. The fuels for this kiln will be a blend of coal and coke with natural gas. The permittee may use 100% natural gas when it is necessary to produce a low sulfur lime product. Particulate matter emissions will be controlled through the use of a baghouse. Sulfur dioxide emissions will be controlled through dry scrubbing which occurs naturally in the lime kiln and at the filter cake on the baghouse. No other control equipment is associated with this lime kiln.

This source is subject to 40 CFR Part 60, Subpart HH - Standards of Performance for Lime Manufacturing Plants, 40 CFR Part 63, Subpart AAAAA - National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants, PSD, and CAM.

The following table lists the BACT Limits and Determinations for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.10 lb/ton of Stone Feed 15% Opacity	Baghouse-type Dust Collector type Dust Collector
SO ₂	4% by Weight Sulfur in Fuel on a Daily Basis and 3% by Weight Sulfur in Fuel on a 30-Day Rolling Average	Natural Dry Scrubbing In Kiln and Baghouse
CO	3.0 lb of CO per Ton of Lime Produced on a 30-Day Rolling Average	Proper Kiln Design and Operation
NO _x	3.5 lb NO _x per Ton of Lime Produced on a 30-Day Rolling Average	Proper Kiln Design and Operation

Specific Conditions

170. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #174, #175, #177, #180, #181, #191, #199, #202, and #206 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	5.8	22.9
PM	5.80	22.90
SO ₂	44.8	141.6
CO	85.9	342.2
NO _x	100.2	399.3

171. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #174, #175, #177, and #204 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	3.4	14.2

172. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #175 and #177 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
HCl	8.00	35.04

173. All required tests shall be conducted while firing coal and/or coke. All required tests shall also be conducted in accordance with Plantwide Condition #3. [§19.702 and §19.901 et seq. of Regulation #19, and 40 CFR Part 52, Subpart E]

174. The permittee shall use only coal, coke, or pipeline quality natural gas to fire the rotary lime kiln. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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175. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Coal and/or Coke per consecutive 12 month period
30Q	47,254

176. The permittee shall maintain records of the amount of coal and coke fired in the lime kiln in order to demonstrate compliance with Specific Condition #175 and which may be used by the Department for enforcement purposes. These records shall be updated daily, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19, and 40 CFR Part 52, Subpart E]

177. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Lime per day
30Q	687.0

178. The permittee shall maintain daily records of the lime produced in order to demonstrate compliance with Specific Condition #177 and which may be used by the Department for enforcement purposes. These records shall be updated daily, kept on site, and made available to Department personnel upon request. An annual total and each month's individual data shall be submitted to the Department in accordance with General Provision 7. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

179. The permittee shall obtain a manufacturer's certification of the ash mineral analysis of the coal in order to demonstrate that any possible emissions of Hazardous Air Pollutants (HAPs) are below the de minimis levels. A new certification shall be obtained each time that coal is obtained from a different mine. This certification shall be kept on site and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

PM/PM₁₀ & Opacity Conditions

180. Particulate matter emissions from source SN-30Q shall not exceed 0.10 lb/ton of stone feed. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

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181. The permittee shall annually test source SN-30Q for particulate matter using EPA Reference Method 5 and 202 in order to demonstrate compliance with the pound per hour emission limit set forth in Specific Condition #170 and the pound per ton limit set forth in Specific Condition #180. All tests shall take place in accordance with the plantwide conditions of this permit. [§19.702 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

NSPS HH

182. Source SN-11Q is subject to the provisions of 40 CFR Part 60, Subpart HH - Standards of Performance for Lime Manufacturing Plants. A copy of Subpart HH has been included in Appendix B of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #183 through #187. [40 CFR §60.340(a) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

183. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
30Q	15%	§18.501 of Regulation #18, §19.304 and §19.901 et. seq. of Regulation #19 40 CFR §60.342(a)(2), 40 CFR §63.7080 Table 2, Item 1, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

184. The owner or operator of a facility that is subject to the provisions of this subpart shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the opacity of a representative portion of the gases discharged into the atmosphere from the rotary lime kiln. The span of this system shall be set at 40 percent opacity. [§19.304 and §19.703 of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR §60.343(a), 40 CFR §63.7113(g), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

185. For the purpose of conducting a performance test under §60.8, the owner or operator of any lime manufacturing plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate a device for measuring the mass rate of stone feed to the affected rotary lime kiln. The measuring device used must be accurate to within + or - 5 percent of the mass rate over its operating range. The permittee shall continue to maintain and operate this device after the initial performance test has been completed. [§19.304 and §19.703 of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR §60.343(d), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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186. For the purpose of reports required under §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 subject to paragraph (a) of this subpart is greater than 15 percent. [§19.304 of Regulation #19 and 40 CFR §60.343(e)]
187. In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). [§19.304 and §19.702 of Regulation #19, 40 CFR Part 52, Subpart E, and 40 CFR §60.344(a)]

MACT AAAAA

188. Source SN-30Q is subject to the provisions of 40 CFR Part 63, Subpart AAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants. A copy of Subpart AAAAA has been included in Appendix D of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #183, #189 through #198 and Plantwide Conditions #13 through #15. [40 CFR §63.7080 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
189. Source SN-30Q has been defined as a new lime kiln because construction or reconstruction began after December 20, 2002. [§19.304 of Regulation #19 and 40 CFR §63.7082(b)]
190. Particulate emissions from SN-30Q shall not exceed 0.10 lbs per ton of stone fed. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 1, Item 3]
191. The owner or operator shall determine compliance with the particulate matter standards in Specific Condition #190 as follows: [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 3, Item 1]
- a. The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = (C_s Q_{sd})/PK$$

where:

- E = emission rate of particulate matter, kg/Mg (lb/ton) of stone feed
C_s = concentration of particulate matter, g/dscm (g/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 (453.6g/lb)

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- b. Method 5 shall be used at negative pressure fabric filters and other types of control devices and Method 5D shall be used at positive-pressure fabric filters to determine the particulate matter concentration (Cs) and the volumetric flow rate of the effluent gas (Qsd). The sampling time and the sample volume for each run shall be at least 60 minutes and 0.9 dscm (31.8 dscf).
 - c. The monitoring device of Specific Condition #185 shall be used to determine the stone feed rate (P) for each run.
192. The permittee shall maintain a fabric filter on SN-30Q such that the opacity requirement of 15% is not exceeded on a 6-minute block average. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 2, Item 1]
193. For Rotary Lime Kiln 3 (SN-30Q), the permittee 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. [§19.304 of Regulation #19 and 40 CFR §63.7113(f)]
194. For each COMS used to monitor an add-on air pollution control device, the permittee must meet the following requirements: [§19.304 of Regulation #19 and 40 CFR §63.7113(g)]
- 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 – 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.
195. The permittee shall collect COMS data at a frequency of at least once every 15 seconds. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 5, Item 4(a)(ii)]
196. The permittee shall implement the written Operations, Maintenance, and Monitoring (OM&M) plan submitted with this permit application. Any subsequent changes to the plan must be submitted for review and approval. [§19.304 of Regulation #19 and 40 CFR §63.7100(d)]
197. Rotary Lime Kiln 3 (SN-30Q) must vent captured emissions through a closed system. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 2, Item 6a]

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198. Rotary Lime Kiln 3 (SN-30Q) must operate each capture/collection system according to procedures in the OM&M plan. [§19.304 of Regulation #19 and 40 CFR §63.7180 Table 2, Item 6b]

SO₂

199. The sulfur content of the fuel mix used to fire the kiln shall not exceed 4% by weight on a daily basis as fired in the kiln and shall not exceed 3% on a rolling 30-day average. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
200. The permittee shall obtain manufacturer's certification of the sulfur content of each shipment of the coal/coke mix or conduct tests of each shipment of fuel to determine the sulfur content and shall perform any necessary calculations in order to demonstrate compliance with Specific Condition #199 and which may be used by the Department for enforcement purposes. These records shall be updated daily, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

NO_x

201. Emissions of oxides of nitrogen shall not exceed 3.5 lbs per ton of lime produced on a 30-day rolling average. [§19.501 et seq. and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
202. The permittee shall test source SN-30Q for oxides of nitrogen using EPA Reference Method 7E. The permittee shall notify the Department at least 30 days in advance of the tests taking place and shall repeat these tests annually. [§19.702 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]
203. The permittee shall demonstrate compliance with the NO_x emissions limit in Specific Condition #201 for source SN-30Q by continuously monitoring the oxygen content of the kiln gases according to the following conditions: [§19.703 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- a. The permittee shall install, calibrate, maintain, and operate a continuous oxygen monitor in the exhaust end, but before the preheater, of source SN-30Q. The permittee shall operate the oxygen monitor in accordance with the QA/QC practices listed in Specific Conditions #203e through #203h.
 - b. The permittee shall operate the kiln at all times, except during startup, shutdown, and malfunction, such that the 30-day rolling average kiln gas percent oxygen (%O₂) content (measured at the oxygen monitor) is less than or equal to 0.93%.

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- c. The permittee shall use this oxygen monitor to demonstrate compliance with the maximum %O₂ kiln gas limit established by the testing required by Specific Condition #202. The permittee shall use the data from the continuous oxygen monitor (to predict the NO_x emission rate), along with lime production records, to demonstrate compliance with Specific Condition #201.
- d. The permittee shall measure at least four, evenly spaced %O₂ values every hour that the kiln is in operation and use the hourly data to develop a 24-hour average for each day. Each daily average shall be used to determine the actual rolling 30-day average for comparison to the limit established by Specific Condition #203b
- e. The oxygen monitor shall meet a minimum frequency of monitor operation of 95% up-time.
- f. Source SN-30Q shall comply with the limit in Specific Condition #203b by meeting a minimum frequency of 95% compliance on a 30-day rolling average.
- g. The permittee shall conduct calibration and zero-span checks of the O₂ monitor when the cells are replaced and every four weeks following installation per the manufacturer's recommended calibration procedures.
- h. Within 14 days prior to the annual kiln performance stack tests, a kiln gas sample from the O₂ monitor shall be split and analyzed by a certified, third-party O₂ analyzer. The relative accuracy (RA) of the O₂ monitor shall be determined by this split sample and the RA estimation method in 40 CFR 60, Appendix B, Performance Draft Specification 2. The RA of the O₂ monitor shall be no greater than 20%. Results of the RA calculation shall be included with the performance test report.
- i. Monitor up-time, monitor calibration checks, the %O₂ rolling 30-day average values, and any deviations from the rolling 30-day O₂ limit shall be recorded daily, kept on-site, and made available to Department personnel upon request. A report including the total monitor up-time, kiln operating time, 30-day rolling average %O₂ values, and percent compliance shall be submitted to the Department in accordance with General Provision #7.

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VOC

204. The permittee shall test the rotary lime kiln for volatile organic compounds using EPA Reference Method 25A within 60 days of achieving maximum production but no later than 180 days after initial start-up. Using the results of this test, the permittee shall correlate the VOC emissions to the solid fuel usage rate. Compliance with the VOC emission rates will be demonstrated through the coal and coke usage limits. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]

CO

205. Emissions of CO shall not exceed 3.0 lbs per ton of lime produced on a 30-day rolling average. [§19.501 et seq. and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
206. The permittee shall test source SN-11Q for carbon monoxide using EPA Reference Method 10. The permittee shall notify the Department at least 30 days in advance of the tests taking place and shall repeat these tests annually. [§19.702 of Regulation #19 and 40 CFR Part 52, Subpart E]
207. The permittee shall demonstrate compliance with the CO emissions limits in Specific Condition #205 for source SN-30Q by continuously monitoring the oxygen content of the kiln gases according to the following conditions: [§19.703 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- a. The permittee shall operate the kiln at all times, except during startup, shutdown, and malfunction, such that the 30-day rolling average kiln gas percent oxygen (%O₂) content (measured at the oxygen monitor) is not less than 0.60%.
 - b. The permittee shall use the oxygen monitor required by Specific Condition #203a to demonstrate compliance with the minimum %O₂ kiln gas limit established by Specific Condition #207a. The permittee shall operate the oxygen monitor in accordance with Specific Conditions #203e through #203i.
 - c. The permittee shall measure at least four, evenly spaced %O₂ values every hour that the kiln is in operation and use the hourly data to develop a 24-hour average for each day. Each daily average shall be used to determine the actual rolling 30-day average for comparison to the limit established by Specific Condition #207a.

**SN-31Q
 Transfer Points to Extended RKFS Pile**

Source Description

This source will be constructed after permit issuance.

Source SN-31Q is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants and PSD.

The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	20% Opacity	Water Sprays (upstream)

Specific Conditions

208. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #211 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.90	1.60
PM ₁₀	0.5	0.8

209. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
31Q	20%	§19.304, §19.503, and §19.901 et seq. of Regulation #19 40 CFR §60.252(c), and 40 CFR Part 52, Subpart E

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210. The permittee shall conduct daily observations of the opacity from sources SN-31Q, and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]
211. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Limestone per consecutive 12 month period
31Q	1,100,000

212. The permittee shall maintain records of the limestone throughput at source SN-31Q in order to demonstrate compliance with Specific Condition #211 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]
213. Source SN-31Q is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants upon replacement. A copy of Subpart OOO may be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Condition #209 and Plantwide Conditions #7 through #12. [40 CFR §60.670 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-32Q
#3 Lime Discharge (Nuisance Dust Collector)

Source Description

After the limestone has been calcined in the #3 Rotary Lime Kiln, it is sent to the #3 Lime Product Cooler. Emissions from this source are controlled through the use of a dust collector.

This source is subject to PSD and CAM for particulate emissions. Daily opacity observations are the method used to demonstrate CAM.

The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.010 gr/dscf 5% Opacity	Baghouse-type Dust Collector

Specific Conditions

214. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #217 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.30	1.20
PM ₁₀	0.3	1.2

215. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
32Q	5%	§18.501 of Regulation #18, §19.304 et seq. of Regulation #19, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52

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216. The permittee shall conduct daily observations of the opacity from source SN-32Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18, 40 CFR 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]

217. Particulate matter emissions from source SN-32Q shall not exceed 0.015 grains per dry standard cubic foot of air. Compliance with this condition will be demonstrated by equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

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**SN-33Q
 #3 Coal/Coke Bin Vent**

Source Description

This source will be installed after permit issuance.

This source is subject to PSD. The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.015 gr/dscf 5% Opacity	Baghouse-type Dust Collector

Specific Conditions

218. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #221 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.20	0.60
PM ₁₀	0.2	0.6

219. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
33Q	5%	§18.501 of Regulation #18, §19.901 et seq. of Regulation #19 A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

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220. The permittee shall conduct weekly observations of the opacity from sources SN-26Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]

221. Particulate matter emissions from source SN-33Q shall not exceed 0.015 grains per dry standard cubic foot of air. Compliance with this condition will be demonstrated by equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

**SN-34Q
 #3 Coal/Coke Transfer Point**

Source Description

This source will be installed after permit issuance.

The #3 Coal Transfer Point is subject to PSD. The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	20% Opacity	Non-Point Source

Specific Conditions

222. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #175 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.10	0.10
PM ₁₀	0.1	0.1

223. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
34Q	20%	§19.304, §19.503, and §19.901 et seq. of Regulation #19 40 CFR §60.252(c), and 40 CFR Part 52, Subpart E

224. The permittee shall conduct daily observations of the opacity from sources SN-34Q, and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E]

**SN-35Q
 Kiln Feed Belt into No. 3 Kiln Surge Bin**

Source Description

This source will be installed after permit issuance.

Source SN-35 is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR Part 63, Subpart AAAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants, and PSD.

The following table lists the BACT Limit and Determination for this source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	10% Opacity	Water Sprays (upstream)

Specific Conditions

225. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #228 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM	0.10	0.10
PM ₁₀	0.1	0.1

226. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
35Q	10%	§18.501 of Regulation #18, §19.304 and §19.901 et seq. of Regulation #19 40 CFR §60.672(b), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

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227. The permittee shall conduct weekly observations of the opacity from source SN-35Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

228. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§19.705 and §19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Limestone per consecutive 12 month period
35Q	450,000

229. The permittee shall maintain records of the limestone throughput at source SN-35Q in order to demonstrate compliance with Specific Condition #228 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§19.705 and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

230. Source SN-35Q is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants upon replacement. A copy of Subpart OOO may be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Condition #226 and Plantwide Conditions #7 through #12. [40 CFR §60.670 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

231. Source SN-27Q is subject to the provisions of 40 CFR Part 63, Subpart AAAAA – National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Plants. A copy of Subpart AAAAA has been included in Appendix D of this permit. The applicable provisions of this subpart include, but are not limited to, the items found in Specific Conditions #226 and #232 and Plantwide Conditions #13 through #15. [40 CFR §63.7080 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

232. Source SN-27Q has been defined as a new processed stone handling (PSH) operation because construction or reconstruction began after December 20, 2002. [§19.304 of Regulation #19 and 40 CFR §63.7082(c)]

**SN-36Q & SN-37Q
 Lime Storage Silo Dust Collectors**

Source Description

These sources will be installed after permit issuance.

The Lime Storage Silo Dust Collectors are subject to PSD. The following table lists the BACT Limit and Determination for each source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.015 gr/dscf 5% Opacity	Baghouse-type Dust Collector

Specific Conditions

233. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #236 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
36Q	PM	0.90	4.00
	PM ₁₀	0.9	4.0
37Q	PM	0.90	4.00
	PM ₁₀	0.9	4.0

234. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
36Q	5%	§18.501 of Regulation #18, §19.901 et seq. of Regulation #19, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

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Source	Limit	Regulatory Citation
37Q	5%	§18.501 of Regulation #18, §19.901 et seq. of Regulation #19, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

235. The permittee shall conduct weekly observations of the opacity from sources SN-36Q and SN-37Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]
236. Particulate matter emissions from source SN-36Q and SN-37Q shall not exceed 0.015 grains per dry standard cubic foot of air for each source. Compliance with this condition will be demonstrated by equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

**SN-38Q & SN-39Q
 Lime Loadout Dust Collector**

Source Description

These sources will be installed after permit issuance.

The Lime Loadout Dust Collectors are subject to PSD. The following table lists the BACT Limit and Determination for each source:

Pollutant	BACT Limit	BACT Determination
TSP and PM ₁₀	0.015 gr/dscf 5% Opacity	Baghouse-type Dust Collector

Specific Conditions

237. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #240 and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
38Q	PM	0.20	0.80
	PM ₁₀	0.2	0.8
39Q	PM	0.20	0.80
	PM ₁₀	0.2	0.8

238. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
38Q	5%	§18.501 of Regulation #18, §19.901 et seq. of Regulation #19, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

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Source	Limit	Regulatory Citation
39Q	5%	§18.501 of Regulation #18, §19.901 et seq. of Regulation #19, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

239. The permittee shall conduct weekly observations of the opacity from sources SN-38Q and SN-39Q and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]
240. Particulate matter emissions from source SN-38Q and SN-39Q shall not exceed 0.015 grains per dry standard cubic foot of air for each source. Compliance with this condition will be demonstrated by equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

**SN-40Q
LKD Truck Loading**

Source Description

This source is where trucks are loaded for transfer to the quarry pile.

Specific Conditions

241. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.2	0.3

242. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.40	0.60

**SN-41Q
LKD Truck Dumping**

Source Description

Source SN-41Q is the site where trucks from SN-40Q are dumped into a quarry pile.

Specific Conditions

243. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.2	0.3

244. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.40	0.60

**SN-01P
 Limestone Drop Points**

Source Description

Currently, this source consists of four conveyor transfer or drop points located at the PLS plant portion of this facility.

This source is subject to the provisions of 40 CFR Part 60, Subpart OOO - Standards of Performance for Non-Metallic Mineral Processing Plants. Water sprays are the only controls associated with this source.

Specific Conditions

245. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #249 and #251 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.3	0.7

246. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #249 and #251 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.53	1.35

247. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
01P	10%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(b), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

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248. The permittee shall conduct weekly observations of the opacity from source SN-01P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

249. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Limestone per consecutive 12 month period
01P	432,000

250. The permittee shall maintain records of the amount of limestone processed at SN-01P in order to demonstrate compliance with Specific Condition #250 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

251. The permittee shall operate water sprays in order to reduce fugitive emissions from the conveyor transfer points comprising source SN-01P. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

252. Source SN-01P is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. A copy of Subpart OOO may be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Condition #247 and Plantwide Conditions #7 through #12.

**SN-12P, SN-13P, SN-14P, & SN-29P
Hydrated Lime System**

Source Description

Quicklime is reacted with water to form hydrated lime which is a soft powder. Emissions from sources SN-10 and SN-11 have been routed through the baghouse located at source SN-12. Previously, emissions from source SN-10 and SN-11 were controlled through the use of wet scrubbers.

The Hydrate Separator System Dust Collector (SN-12P) was installed in 1998. Source SN-12 is equipped with a natural gas fired heater.

The Hydrate Storage Tank Loadout (SN-13P) is a fabric filter type dust collector which controls emissions generated by the hydrate sales loadout. The Hydrated Lime Bagging Operations (SN-14P) is a fabric filter type dust collector which controls emissions generated by the hydrate bagging operations. The Hydrate Storage Dust Collector (SN-29P) is a fabric filter type dust collector which controls emissions generated by the hydrate storage tank.

Source SN-12Q is subject to CAM for particulate emissions. Daily opacity observations are the method used to demonstrate CAM.

Specific Conditions

253. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #257 and #260 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
12P	PM ₁₀	1.9	8.2
	SO ₂	0.1	0.1
	VOC	0.1	0.2
	CO	0.4	1.5
	NO _x	0.4	1.8
13P	PM ₁₀	0.3	1.0
14P	PM ₁₀	0.8	3.3
29P	PM ₁₀	0.2	0.8

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254. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #257 and #260 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
12P	PM	1.90	8.20
13P	PM	0.30	1.00
14P	PM	0.80	3.30
29P	PM	0.20	0.80

255. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
12P	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
13P	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
14P	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
29P	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

256. The permittee shall conduct weekly observations of the opacity from sources SN-13P, SN-14P, and SN29P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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257. The permittee shall conduct daily observations of the opacity from source SN-12P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18, 40 CFR 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
258. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Bagged Hydrated Lime per consecutive 12 month period
14P	70,080

259. The permittee shall maintain records of the amount of lime processed at SN-14P in order to demonstrate compliance with Specific Condition #258 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
260. Pipeline quality natural gas shall be the only fuel used to fire the heater located at source SN-12P. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-15P & SN-16P
Rice Lime Screen & Crusher and Lime Storage Tank Loadouts**

Source Description

The Rice Lime Screen & Crusher (SN-15P) is a fabric filter type dust collector which controls emissions generated by the rice lime screen. The Lime Storage Tank Loadouts (SN-16P) is a fabric filter type dust collector which controls emissions generated by the truck loadout of quicklime sales.

Specific Conditions

261. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #265 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
15P	PM ₁₀	0.1	0.2
16P	PM ₁₀	0.4	1.8

262. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #265 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
15P	PM	0.10	0.20
16P	PM	0.40	1.80

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263. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
15P	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
16P	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

264. The permittee shall conduct weekly observations of the opacity from sources SN-15P and SN-16P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]

265. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Lime per consecutive 12 month period
15P	350,400

266. The permittee shall maintain records of the amount of lime processed at SN-15P in order to demonstrate compliance with Specific Condition #265 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-18P & SN-19P
 Stone and Roller Mill Plants #1 and #2**

Source Description

The two roller mills are nearly identical. These systems rely on air circulation to remove the ground limestone from the mill and also rely on baghouses for the control of particulate matter emissions. The two roller mills are also both fired by natural gas.

Source SN-19P is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. Both sources SN-18P and SN-19P are subject to CAM for particulate emissions. Daily opacity observations are the method used to demonstrate CAM.

Specific Conditions

267. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #271 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
18P	PM ₁₀	2.7	11.5
	SO ₂	0.1	0.1
	VOC	0.1	0.1
	CO	0.3	1.1
	NO _x	0.3	1.2
19P	PM ₁₀	1.8	7.8
	SO ₂	0.1	0.1
	VOC	0.1	0.1
	CO	0.3	1.1
	NO _x	0.3	1.2

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268. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #271 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
18P	PM	2.70	11.50
19P	PM	1.80	7.80

269. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
18P	5%	§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E
19P	5%	§18.501 of Regulation #18, 40 CFR §60.672(c), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

270. The permittee shall conduct daily observations of the opacity from sources SN-18P and SN-19P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18, 40 CFR 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
271. The permittee shall use only pipeline quality natural gas to fire sources SN-18P and SN-19P. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
272. Source SN-19Q is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants upon replacement. A copy of Subpart OOO may be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Condition #269 and Plantwide Conditions #7 through #12. [40 CFR §60.670 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-20P & SN-24P
 PLS Screening Operations and PLS Bagging Operations**

Source Description

The PLS screening operations have been designated as source SN-20P. These operations take place inside a partially enclosed building which has flexible strips on the openings in order to reduce emissions. The PLS bagging operations have been designated as source SN-24P. These operations also take place inside a partially enclosed building.

Specific Conditions

273. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #278 and #280 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
20P	PM ₁₀	0.4	1.4
24P	PM ₁₀	0.4	1.7

274. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #278 and #280 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
20P	PM	0.67	2.94
24P	PM	0.40	1.70

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275. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
20P	20%	§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E
24P	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

276. The permittee shall conduct daily observations of the opacity from source SN-20P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

277. The permittee shall conduct weekly observations of the opacity from source SN-24P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

278. The permittee shall not exceed the process rates set forth in the following table at the designated sources. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Tons of Pulverized Limestone per consecutive 12 month period
20P	262,800
24P	35,040

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279. The permittee shall maintain records of the amount of Pulverized Limestone (PLS) processed at SN-20P and SN-24P in order to demonstrate compliance with Specific Condition #278 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the fifteenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

280. The permittee shall maintain flexible strips (canvas or plastic) at the building(s) partially enclosing sources SN-20P and SN-24P. [§19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-26P
Paved PLS/Lime Plant Roads

Source Descriptions

The plant roads were paved in 2002.

Specific Conditions

281. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.4	0.3

282. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	1.60	1.20

**SN-30P, SN-31P, SN-32P, SN-33P, & SN-34P
 Consolidated PLS Truck Loadouts and Railcar Drop-Outs**

Source Description

Source SN-30P controls the emissions generated by the new consolidated PLS loadout bin vent. Source SN-31P controls the emissions generated by new consolidated PLS truck loadout and will vent back into the loadout bin. Source SN-33P controls the emissions generated by the consolidated PLS 140 railcar drop-out. Source SN-34P controls the emissions generated by the consolidated PLS 270 railcar drop-out.

These sources are subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. All of these sources use fabric-filter type dust collectors to control the emissions.

Specific Conditions

283. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

SN	Pollutant	lb/hr	tpy
30P	PM ₁₀	0.4	1.5
31P	vents back into the loadout bin		
33P	PM ₁₀	0.2	0.8
34P	PM ₁₀	0.2	0.8

284. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Pollutant	lb/hr	tpy
30P	PM	0.40	1.50
31P	vents back into the loadout bin		
33P	PM	0.20	0.80
34P	PM	0.20	0.80

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285. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
30P	7%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(f), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E
33P	10%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(b), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E
34P	10%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(b), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

286. The permittee shall conduct weekly observations of the opacity from sources SN-30P, SN-33P, and SN-34P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]

287. Sources SN-30P, SN-33P, and SN-34P are subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. A copy of Subpart OOO may be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Condition #285 and Plantwide Conditions #7 through #12.

**SN-35P
 Quicklime Fines Rail Unloading Pit**

Source Description

Emissions are generated by the unloading of railcars containing lime.

Specific Conditions

288. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.4	1.7

289. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.40	1.70

290. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
35P	20%	§19.503 of Regulation #19 and 40 CFR Part 52, Subpart E

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291. The permittee shall conduct daily observations of the opacity from source SN-35P and SN-34P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]]

SN-36P
Modified PLS Products Loading Station

Source Description

The Modified PLS Products Loading Station includes a new classifier along with a new screw conveyor extension. Source SN-36P will be installed in the Roller Mill #2 system. This change is not related to the proposed Kiln 3 PSD project. This project is located in the “old Lime plant” portion of the facility and not the quarry site where the kilns are located. The new classifier will allow production of PLS products with size characteristics different than the products currently produced. A loading chute with a slide gate and loading spout will also be installed at the end of the screw conveyor extension to allow truck or railcar loading of modified PLS products.

Source SN-36P is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants.

Specific Conditions

292. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM ₁₀	0.2	0.8

293. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.20	0.80

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294. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
36P	7%	§18.501 of Regulation #18, §19.304 of Regulation #19 40 CFR §60.672(a)(2), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E

295. The permittee shall conduct weekly observations of the opacity from source SN-36P and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
296. Source SN-36P is subject to 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. A copy of Subpart OOO may be found in Appendix C of this permit. The requirements of this subpart include, but are not limited to, the items found in Specific Condition #294 and Plantwide Conditions #7 through #12.

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SECTION V: COMPLIANCE PLAN AND SCHEDULE

Arkansas Lime Company will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19, §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19, §19.410(B) and 40 CFR Part 52, Subpart E]
3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
4. The permittee must provide: [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
 - a. Sampling ports adequate for applicable test methods;
 - b. Safe sampling platforms;
 - c. Safe access to sampling platforms; and
 - d. Utilities for sampling and testing equipment.
5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

NSPS Subpart OOO

7. In conducting the performance tests required in 40 CFR §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section. [§19.304 of Regulation #19 and 40 CFR §60.675(a)]
8. In determining the compliance with the particulate matter standards in §60.672(c) for Crushers (SN-01Q and SN-02Q), the owner or operator shall use Method 9 and the procedures in 40 CFR §60.11, with the following additions: [§19.304 of Regulation #19 and 40 CFR §60.675(c)(1)]
 - a. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).
 - b. 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, Section 2.1) must be followed.
 - c. For affected facilities using wet dust suppression for particulate matter, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not considered to be a visible emission. When a water mist of this nature is present, the observation of the emissions is to be made at a point in the plume where the mist is no longer visible.
9. When determining compliance with the fugitive emission standard for any crusher at which a capture system is not used as described under 40 CFR §60.672(c) of this subpart, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply: [§19.304 of Regulation #19 and 40 CFR §60.675(c)(4)]
 - a. There are no individual opacity readings greater than 15 percent opacity; and
 - b. There are no more than 3 readings of 15 percent for the 1-hour period.
10. When determining compliance with the fugitive emissions standard for any transfer point on belt conveyors (SN-03Q, SN-07Q, SN-09Q, SN-10Q, SN-31Q, SN-01P, SN-30P, SN-33P, and SN-34P), the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply: [§19.304 of Regulation #19 and 40 CFR §60.675(c)(3)]
 - a. There are no individual readings greater than 10 percent opacity; and
 - b. There are no more than 3 readings of 10 percent for the 1-hour period.

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11. If any conveyor transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each affected facility must comply with the emission limits in paragraph §60.672(b), or the building enclosing the affected facility or facilities must comply with the following emission limits: [§19.304 and §19.503 of Regulation #19, 40 CFR Part 52, Subpart E, and 40 CFR §60.672(e)]
 - a. No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive except emissions from a vent as defined in §60.671.
 - b. No owner or operator shall cause to be discharged into the atmosphere from any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility emissions which exceed the stack emissions limits in paragraph (a) of this section.
12. 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 CFR §60.672 of this subpart, including reports of opacity observations made using Method 9 to demonstrate compliance with §60.672(b). [§19.304 of Regulation #19 and 40 CFR §60.676(f)]

MACT AAAAA

13. The permittee shall conduct all performance tests as required in Table 4 of 40 CFR part 63, Subpart AAAAA. Subsequent performance tests are to be repeated every 5 years. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 4]
14. The permittee shall submit all reports as required in Table 7 of 40 CFR part 63, Subpart AAAAA. Source SN-11Q is considered and existing source and is not subject to this requirement until January 5, 2007. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 7]
15. The permittee shall comply with all General Provisions to 40 CFR Part 63 as required in Table 8 of 40 CFR part 63, Subpart AAAAA. This includes the preparation of a Startup, Shutdown, and Malfunction Plan as required by §63.6(e)(3). Source SN-11Q is considered and existing source and is not subject to this requirement until January 5, 2007. [§19.304 of Regulation #19 and 40 CFR §63.7080 Table 8]

Title VI Provisions

16. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]
 - a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
 - b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
 - d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

17. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]
 - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
 - c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. (“MVAC like appliance” as defined at §82.152)
 - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

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

19. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

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The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

20. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G.

Permit Shield

21. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in the following table of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated August 2004.

Applicable Regulations

Source No.	Regulation	Description
01Q, 02Q, 03Q, 07Q, 09Q, 10Q, 27Q, 31Q, 35Q, 36Q, 01P, 19P, 30P, 33P, 34P, and 36P	40 CFR 60, Subpart OOO	New Source Performance Standards for Non Metallic Mineral Processing Plants
11Q, 24Q, and 30Q	40 CFR 60, Subpart HH	New Source Performance Standards for Lime Manufacturing Plants
21Q, 28Q, and Coal systems	40 CFR 60, Subpart Y	New Source Performance Standards for Coal Preparation Plants
07Q, 11Q, 24Q, 27Q, 30Q, and 35Q	40 CFR 63, Subpart AAAAA	National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants
11Q, 24Q, 25Q, 26Q, 27Q, 28Q, 30Q through 39Q	40 CFR 52	Prevention of Significant Deterioration

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Source No.	Regulation	Description
11Q, 13Q, 15Q, 24Q, 25Q, 32Q, 12P, 18P, and 19P	40 CFR 64	Compliance Assurance Monitoring

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated August 2004.

Inapplicable Regulations

Source No.	Regulation	Description
None Listed		

SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated August 2004.

Description	Category
Emergency Limestone Stockpile	A-13
Lime Cooler Rejects Discharge	A-13
Dribble Chute	A-13
LKD Stockpile in Quarry	A-13
Railcar Cleanout	A-13
Hydrate Rejects Stockpile	A-13
Hydrate Rejects Dumping	A-13
Blast Hole Drilling	A-13
Quarry Blasting	A-13

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]
2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), effective September 26, 2002]
3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26, §26.406]
4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26, §26.701(A)(2)]
5. The permittee must maintain the following records of monitoring information as required by this permit. [40 CFR 70.6(a)(3)(ii)(A) and Regulation 26, §26.701(C)(2)]
 - a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses performed;
 - c. The company or entity performing the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample,

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measurement, report, or application. 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 this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26, §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 C.F.R. 70.6(a)(3)(iii)(A) and Regulation 26, §26.701(C)(3)(a)]

Arkansas Department of Environmental Quality
Air Division
ATTN: Compliance Inspector Supervisor
Post Office Box 8913
Little Rock, AR 72219

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
 - a. For all upset conditions (as defined in Regulation 19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
 - i. The facility name and location
 - ii. The process unit or emission source deviating from the permit limit,
 - iii. The permit limit, including the identification of pollutants, from which deviation occurs,
 - iv. The date and time the deviation started,
 - v. The duration of the deviation,
 - vi. The average emissions during the deviation,
 - vii. The probable cause of such deviations,
 - viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
 - ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The

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permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

- b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Regulation 19, §19.601 and §19.602, Regulation 26, §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26, §26.701(E), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26, §26.701(F)(1)]
11. 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 to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26, §26.701(F)(2)]
12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26, §26.701(F)(3)]
13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26, §26.701(F)(4)]
14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director

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- along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26, §26.701(F)(5)]
15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26, §26.701(G)]
 16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26, §26.701(H)]
 17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26, §26.701(I)(1)]
 18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26, §26.702(A) and (B)]
 19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26, §26.703(A)]
 20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26, §26.703(B)]
 - a. Enter upon the permittee's premises where the permitted 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 required under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.
 21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also

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submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26, §26.703(E)(3)]

- a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The compliance status;
 - c. Whether compliance was continuous or intermittent;
 - d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit;
 - e. and Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.
22. Nothing in this permit will alter or affect the following: [Regulation 26, §26.704(C)]
- a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
 - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act or,
 - d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.
23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

APPENDIX A

40 CFR 60 Subpart Y,
New Source Performance Standards for Coal Preparation Plants

APPENDIX B

40 CFR 60 Subpart HH,
New Source Performance Standards for Lime Manufacturing Plants

APPENDIX C

40 CFR 60 Subpart OOO,
New Source Performance Standards for Non Metallic Mineral Processing Plants

APPENDIX D

40 CFR 63 Subpart AAAAA,
National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

APPENDIX E

CEM Standards

APPENDIX F

PSD Information for Permit 0045-AOP-R1

APPENDIX G

PSD Information for Permit 0045-AOP-R2

