

**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 108591**

I. INTRODUCTION

This Class I air quality permit renewal is for the continued operation of the Lhoist of North America Inc.'s Douglas Lime Plant. Permit No. 108591 renews and supersedes Permit No. 81660.

The facility's potential to emit of the following pollutants are greater than major source thresholds: particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), nitrogen oxides (NO_x), and carbon monoxide (CO) as identified in Arizona Administrative Code (A.A.C) R18-2-101.76. Therefore, a Class I permit is required for this facility in accordance with A.A.C. R18-2-302.B.1.a.

Permit No. 81660 had an expiration date of October 15, 2025, and the application for this permit renewal was submitted on April 2, 2025. This submission met the permit condition requiring that a complete and timely application be submitted by the Permittee at least six (6) months, but no earlier than eighteen (18) months, prior to the expiration date of the current permit.

A. Company Information

Facility Name: Douglas Plant
Mailing Address: 4753 W. Paul Spur Road, Douglas, Arizona 85607
Facility Location: 4753 W. Paul Spur Road, Douglas, Arizona 85607

B. Attainment Classification

The facility is located in the Paul Spur area of Cochise County. The area is designated as nonattainment for Particulate Matter with an aerodynamic diameter of less than 10 microns (PM_{10}), and unclassified for all criteria air pollutants.

II. PROCESS DESCRIPTION

A. This facility manufactures lime from limestone. The limestone processing plant consists of a quarry and a crushing and screening plant. This part of the process produces crushed and sized limestone for the lime manufacturing operation and for other local uses. The lime manufacturing operation consists of three kilns and a number of other pieces of equipment for handling limestone, solid fuel and kiln lime product.

B. Kiln Description and Control Technology

1. Kiln 1

Kiln 1, manufactured by Kennedy Van Saun, is a gravity feed type kiln equipped with a stone preheater. The kiln has the capability of being fired with natural gas, coal, petroleum coke, or any combination of these fuels. Kiln 1 has a diameter of 10 feet, a length of 150 feet, and has a daily production capacity of 200 short tons of quicklime. Particulate emissions from the kiln are controlled with the use of a cyclone and a Rexnord gravel-bed dust collector.

2. Kiln 2

Kiln 2, a gravity feed rotary kiln manufactured by Traylor, was installed in December 1970. This kiln has the capability of being fired with natural gas, coal, petroleum coke, on-specification used oil, or any combination of such fuels. The kiln has a diameter of ten feet and a length of 300 feet, and has a daily capacity of 550 short tons of quicklime. The kiln is controlled by a baghouse (DC-356)

3. Kiln 3

Kiln 3 is a twin shaft vertical kiln, fired with natural gas and/or oil, which was manufactured by Maerz and installed in 1979. The kiln has a production rate of 460 short tons of quicklime per day. The kiln operates in a continuous mode and utilizes kiln gases to preheat the raw feed stone. The limestone placed into the top of the kiln heats up and changes into quicklime as it travels vertically down the kiln. Lime is discharged from the shafts by internal material support tables at the bottom of the kiln. Product cooling air and combustion air are generated by positive displacement blowers. Particulate emissions are controlled with a Ducon wet scrubber.

C. Alternative Operating Scenarios

1. Alternative Operating Scenario 1 – (AOS-1)

Under AOS-1, the Permittee will suspend quarry, crushing, and kiln operations. All process equipment not in operation will be maintained in good operating order which will require periodic, temporary operation to perform maintenance. This maintenance will involve mechanical operation of the equipment without any process material.

The lime handling systems for Kilns 1, 2, and 3 will be used as a transfer terminal under AOS-1. Process rates for the lime handling will be 400 tons per day and 50,000 tons per year.

2. Alternative Operating Scenario 2 – (AOS-2)

Under AOS-2, all daily operations at the quarry and lime plant will be in “Care and Maintenance” mode. During this operating scenario, all

equipment will be maintained in good operating order which will require periodic, temporary operation to perform maintenance. This maintenance will involve mechanical operation of the equipment, but without any process material.

Mobile traffic will consist of security personnel patrolling the plant site 8 to 12 times per day, U.S. Border Patrol and maintenance personnel occasionally traveling to various locations within the plant.

3. Alternative Operating Scenario 3 – (AOS-3)

AOS-3 entails the startup and operation of one or more process areas. For any given process area that is brought into operation, all initial monitoring and recordkeeping as originally required under normal operations will be followed to demonstrate compliance with the applicable requirements for each process area.

III. CURRENT OPERATING STATUS

On January 16, 2009, Lhoist North America notified ADEQ that operations at the Douglas Plant had been suspended due to market conditions. On June 9, 2020, the company informed ADEQ that the facility was operating in AOS-2. As of the date of this permit renewal application, the facility continues to operate under AOS-2 in which the quarry, crushing, and kiln operations are suspended. No changes to the current operating status have occurred since issuance of the previous permit.

IV. COMPLIANCE HISTORY

A. Physical Inspections and Report Reviews

During the previous permit term, the facility had five (5) physical inspections and submitted ten (10) compliance certifications. No violations or deficiencies were identified during the physical inspections or report reviews.

B. Performance Tests

No performance tests were conducted during the permit term because the facility remained in Alternative Operating Scenario-2 and production operations were suspended. Therefore, applicable performance testing requirements were not triggered.

V. EMISSIONS

The facility's potential to emit (PTE) was calculated based on EPA's Compilation of Air Pollution Emission Factors (AP-42 Sections 1.1, 1.3, 1.4, 3.3, 11.2.3 (4th Edition of AP-42), 11.9, 11.19.2, 13.2.1, 13.2.2, 13.2.4, 13.2.5, 11.17), performance test results, and calculation methodologies contained in 40 CFR 98, Subpart C.

The facility has a potential-to-emit (PTE) more than the major source thresholds of PM₁₀, PM_{2.5}, SO₂, NO_x and CO. The facility's PTE is provided in Table 1 below:

Table 1: Potential to Emit (tpy)

Pollutant	Previous PTE	Change in PTE	Current PTE	Permitting Exemption Threshold	Significant Thresholds	Minor NSR Triggered?
NO _x	456.32	0.00 *	456.32	20	40	No
PM ₁₀	834.42	+5.21 *	839.63	7.5	15	No
PM _{2.5}	315.11	+0.21	315.32	5	10	No
CO	275.16	0.00	275.16	50	100	No
SO ₂	4420.66	0.00	4420.66	20	40	No
VOCs	10.90	0.00	10.90	20	40	No
Pb	0.00	0.00	0.00	0.3	0.6	No
HAPs	15.21	+0.28	15.49	N/A	10 (single)/ 25 (combined)	No
GHG (CO ₂ e)	253470.00	-1620.40 *	251849.60	--	75,000	N/A

* The increase in PM₁₀, and PM_{2.5} emissions and the decrease in GHG emissions are attributable to updated emission factors used during this permit renewal. No physical or operational changes have occurred at the facility.

I. MINOR NEW SOURCE REVIEW (NSR)

Minor new source review is required if the emissions of any physical change or change in the method of an operation of an emission unit or stationary source results in an increase in emissions of any regulated minor NSR pollutant by an amount equal to or greater than the permitting exemption threshold (PET). As shown in Table 1 above, the emission increases resulting from this renewal are below the PET and thus, minor NSR is not triggered at this time.

II. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations and verification as to why that standard applies. The table also contains a discussion of any regulations the emission unit is exempt from.

Table 2: Applicable Regulations

Unit	Control Device	Rule	Discussion
Limestone Processing Plant: Primary Crusher 102 Secondary Crusher 106	DC-120 DC-121	A.A.C R-18-2-702(B); A.A.C R-18-2-720(B)	These standards are applicable to Existing Lime Manufacturing Plants. The crushers processes limestone, and were manufactured prior to August 31, 1983. Therefore, they are subject to A.A.C R-18-2-720.
Secondary Screen 110 Primary Screen 104	DC-122 Enclosure	A.A.C. R18-2-702(B); A.A.C. R18-2-720(B) Paul Spur State Implementation Plan (PSSIP) 6.4	These screens were installed after August 31, 1983, the applicability date for New Source Performance Standards (NSPS) Subpart OOO. However, the screens were replaced on a like-for-like basis and are exempt from NSPS Subpart OOO pursuant to 40 CFR 60.670(d)(1). PSSIP 6.4 remains applicable to all screens.
#1 Secondary Screen #2 Secondary Screen #3 Secondary Screen	Enclosures	A.A.C. R18-2-702(B) PSSIP 6.4	These screens process limestone, and were manufactured prior to August 31, 1983. Therefore, they are subject to A.A.C. R-18-2-702(B). PSSIP 6.4 requires all screens to be enclosed.
Solid Fuel Handling System: #4 Fuel Bin #4 Solid Fuel Mill	N/A	A.A.C. R18-2-702(B); A.A.C. R18-2-716(B) PSSIP 6.1	These units were built after October 24, 1974. However, they cannot process more than 200 tons per day of solid fuel. Therefore, they are not subject to NSPS Subpart Y. PSSIP 6.1 is applicable to conveyor belt transfer points.

Unit	Control Device	Rule	Discussion
Coal Hopper 503-1 Coal Hopper 503-2 Weigh Feeder 504 Weigh Feeder 505 Crusher 506 Solid Fuel Belt 507 Solid Fuel Bin 508 Solid Fuel Bin 515 Weigh Belt 516 Solid Fuel Mill 517	N/A	NSPS 40 CFR Part 60 Subpart Y PSSIP 6.1	These emission units were built after October 24, 1974, and can process more than 200 tons per day of solid fuel. Therefore, they are subject to NSPS Subpart Y. PSSIP 6.1 is applicable to conveyor belt transfer points.
Kiln 1 System: Preheater Screen 211	Enclosures and Spray Bars	A.A.C. R18-2-702(B); A.A.C. R18-2-720(B) PSSIP 6.4	These screens were installed after August 31, 1983, the applicability date for New Source Performance Standards (NSPS) Subpart OOO. However, the screens were replaced on a like-for-like basis and are exempt from NSPS Subpart OOO pursuant to 40 CFR 60.670(d)(1). PSSIP 6.4 remains applicable to all screens.
Kiln 1	Gravel Bed Filter 309/Cyclone 307	A.A.C. R18-2-720(B) & (F); A.A.C. R18-2-702(B) Permit 0368-93 Attachment A Condition X(A)(1) Kiln 1 is also subject to Compliance Assurance Monitoring (CAM) 40 CFR Part 64	Kiln 1 was installed in 1967, prior to the NSPS Subpart HH applicability date of May 3, 1977. Therefore, NSPS Subpart HH does not apply and the kiln is subject to A.A.C. R18-2-720 for existing lime manufacturing plants. PSSIP 6.5 requires the installation and operation of a dust transfer and storage system associated with the existing Kiln 1 Dust Collector. Permit 0368-93, Attachment A, Condition X(A)(1) establishes a five percent opacity limit for damper seal operations.
Kiln 1 Pug Mill	N/A	A.A.C. R18-2-702(B); A.A.C. R18-2-730(A)	This equipment is applicable to unclassified existing sources.

Unit	Control Device	Rule	Discussion
BC 403	DC-403	A.A.C. R18-2-702(B); A.A.C. R18-2-730(A)	This equipment is applicable to unclassified existing sources.
Dust Bin BN-320	DC-321	Installation Permit 1233 Attachment B Condition (II)(B)(2)	Installation Permit 1233, Attachment B, Condition (II)(B)(2) establishes a ten percent opacity limit for Dust Bin BN-320.
Kiln 2 System: Kiln 2 Scalping Screen 224	Enclosures	NSPS 40 CFR Part 60 Subpart OOO PSSIP 6.4	The Scalping Screen was installed in 1995. The screen is an affected facility as defined by 40 CFR 60.670. PSSIP 6.4 remains applicable to all screens.
Kiln 2	DC-356	A.A.C. R18-2-720(B); A.A.C. R18-2-720(F) Permit 0368-93 Attachment A Condition IX(A)(2) Installation Permit 1233 Attachment B Condition IV (1) PSSIP 6.5 Kiln 2 is also subject to Compliance Assurance Monitoring (CAM) 40 CFR Part 64	Kiln 2 was installed in 1970, which is before the NSPS Subpart HH trigger date of May 3, 1977. Therefore, NSPS Subpart HH does not apply and the kiln is subject to A.A.C. R18-2-720 for existing lime manufacturing plants PSSIP 6.5 is applicable to the dust transfer and storage system for Kiln 2 baghouse.

Unit	Control Device	Rule	Discussion
Kiln 2 Product Cooler Reject Belt 227 BC 404 Kiln 2 Dust Bin T-410 Bin	DC-228 DC-404 DC-524 DC-508	A.A.C. R18-2-702(B); A.A.C. R18-2-730(A) Permit 1001154	These units are unclassified existing sources.
Kiln 2 Pug Mill	N/A	A.A.C. R18-2-702(B); A.A.C. R18-2-730(A) Installation Permit 1233 Attachment A Condition III and Attachment B Condition III(A)	The unit is unclassified existing source.
Kilns 1 and 2 Lime Handling System: Rotary Lime Crusher R-405 Bin 401 Bin 402 Screw 434 Bin 403 Bin 405 BC 483 Spout 483 BC 486 Spout 486 BC 433 BC 485 BC 481	DC-401 DC-402 DC-406 DC-431 DC-481 DC-482 DC-483 DC-485 DC-486 DC-487	A.A.C. R18-2-702(B); A.A.C. R18-2-730(A) Permit 1001605 Permit 1000376 Installation Permit 1222	The crusher processes lime. Therefore, NSPS Subpart OOO, A.A.C. R18-2-720, and A.A.C. R18-2-722, which apply to limestone processing operations, are not applicable to these units.
Roll Crusher R-451(Sealed Control) Hammermill R-452 Bin 406 and seals Spout 403 Drop Points into Trucks from Bins 401, 402, 403, 404, 405, 406, 407 Loading Sleeves/Enclosures)	Seals Enclosures loading sleeves	A.A.C. R18-2-702(B); A.A.C. R18-2-730(A)	The crusher and hammermill process lime. Therefore, NSPS Subpart OOO, A.A.C. R18-2-720, and A.A.C. R18-2-722, which apply to limestone processing operations, are not applicable to these units.

Unit	Control Device	Rule	Discussion
Kiln 3 System: Kiln 3 Stone Screen and Stone Bin	Enclosures and DC-241	A.A.C. R18-2-702(B); A.A.C. R18-2-722(B) PSSIP 6.4	The Stone Screen was installed in 1980. This is prior to the NSPS Subpart OOO applicability date of August 31, 1983. Therefore, they are subject to A.A.C. R18-2-722. PSSIP 6.4 remains applicable to screens.
Kiln 3	Wet Scrubber and DC-600	A.A.C. R18-2-720(B) and (D); A.A.C. R18-2-702(B) EPA Installation Permit issued on August 31, 1978, Condition VIII(B) Permit 0368-93 Attachment A Conditions IX(A)(2) and X(A)(1) PSSIP 6.4 Kiln 3 is also subject to Compliance Assurance Monitoring (CAM) 40 CFR Part 64	Kiln 3 is a vertical kiln. Therefore, it is not subject to NSPS Subpart HH which is applicable only to rotary kilns. A.A.C. R18-2-720 is applicable to vertical kilns.
Kiln 3 Lime Crusher	DC-776	A.A.C. R18-2-702(B); A.A.C. R18-2-730(A)	The crusher process lime. Therefore, NSPS Subpart OOO, A.A.C. R18-2-720, and A.A.C. R18-2-722, which apply to limestone processing operations, are not applicable to these units.

Unit	Control Device	Rule	Discussion
Kiln Discharge Reject Conveyor Product Conveyor Large Bin Kiln 3 Lime Screen Dust Blend System Bin Truck Loadout Rail Loadout	DC-730 DC-779 DC-850 DC-851 DC-852 DC-853 DC-854	A.A.C. R18-2-702(B); A.A.C. R18-2-730(A) PSSIP 6.4 Permit 1001154	These are unclassified existing sources. PSSIP 6.4 requires all screens to be enclosed.
Diesel K1 Pony Motor Diesel K2 Pony Motor	N/A	A.A.C. R18-2-719 NESHAP 40 CFR 63 Subpart ZZZZ	These standards are applicable to existing stationary rotating machinery. These engines were constructed before June 12, 2006, and are located at an area source of HAPs. Therefore, they are subject to National Emissions Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ.
Gasoline Storage Tank (Insignificant)	N/A	A.A.C. R18-2-710	These standards are applicable to storage vessels for petroleum liquids.
Gasoline Dispensing facilities (GDFs)	N/A	NESHAP 40 CFR 63 Subpart CCCCCC	The facility operates gasoline dispensing facilities (GDFs) located an area source of HAPs. Therefore, the GDFs are subject to NESHAP 40 CFR 63 Subpart CCCCCC.
Fugitive dust sources	Water Trucks, Dust Suppressants	A.A.C. R18-2 Article 6; A.A.C. R18-2-702	These standards are applicable to all fugitive dust sources at the facility.
Abrasive Blasting	Wet Blasting; Dust Collectors; Other Approved Methods	A.A.C. R-18-2-702 A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.

Unit	Control Device	Rule	Discussion
Spray Painting	Enclosures	A.A.C. R18-2-702; A.A.C. R-18-2-727	These standards are applicable to any spray painting operation.
Demolition/Renovation	N/A	A.A.C. R18-2-1101.A.12	This standard is applicable to any asbestos related demolition or renovation operations.

III. PREVIOUS PERMIT REVISIONS AND CONDITIONS

A. Previous Permit Revisions

No permit revisions were made to Permit No. 81660.

B. Changes to Current Renewal

Table 3 addresses the changes made to the sections and conditions from Permit No. 81660:

Table 3: Previous Permit Conditions

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "A"		X		General Provisions: Revised to represent the most recent template language
Att. "B" Section I		X		Facility Wide Requirements: Revised to represent the most recent template language
Att. "B" Section IV.B.1		X		Solid Fuel Handling System Subject to NSPS Y Requirements: Removed citations 40 CFR 60.652 (c) and 60.254(b)(2), The affected emission units commenced construction prior to April 28, 2008. Therefore, 40 CFR 60.254(a) is applicable.
Att. "B" Section V.B.2 and 3		X		Kiln 1 and Kiln 2 System Requirements: Added citation to 40 CFR 279.11 to identify the regulatory basis for the used oil specification limits; Revised the citation to A.A.C R18-2-306(A)(2) for the monitoring and record-keeping requirements associated with used oil analysis.
Att. "B" Section IX.C.2		X		Internal Combustion Engines Requirements: Revised operating requirements to represent the updated federal rules; Added recordkeeping requirements for applicable oil analysis.

Section No.	Determination			Comments
	Added	Revised	Deleted	
and C.4.c				
Att. "B" Section X.A	X			Gas Storage Tanks Requirements: Added applicability section.
Att. "C"		X		Equipment List: Revised to reflect the most recent equipment operating at the facility and to include equipment information provided.

IV. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Table 4 contains an inclusive but not an exhaustive list of the monitoring, recordkeeping and reporting requirements prescribed by the air quality permit. The table below is intended to provide insight to the public for how the facility is required to demonstrate compliance with the emission limits in the permit. Records are required be kept for a minimum of 5 years as outlined in Section XII of Attachment “A” of the permit.

Table 4: Permit No. 108591

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Crushing and Screening Plant	Opacity	20% Opacity	Conduct visible emissions observations once every two weeks.	Record the results of any observations, and any corrective action taken.	Submit excess emissions and deviation reports if applicable.
	PM	PM limit pursuant to A.A.C. R- 18-2-720(B) equation.	Install, calibrate, maintain and operate monitoring devices to determine daily process weight.	Maintain records of daily process weight data.	Submit excess emissions and deviation reports if applicable
Kiln 1 and Kiln 2 System	Opacity	20% Opacity	Continuous opacity (COM) monitoring and Conduct biweekly visible emissions observations.	Maintain COMS calibration and opacity monitoring records.	Submit excess emissions and deviation reports if applicable.
	PM	PM limit pursuant to A.A.C. R- 18-2-720(B) equation.	Conduct annual performance testing.	Maintain performance test records for monitoring.	Report test results. Submit excess emissions and deviations reports if applicable.

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Kiln 1 and Kiln 2 Lime Storage and Truck Loadout	PM/Opacity	20% Opacity; PM limit pursuant to A.A.C. R- 18- 2-720(B) equation	Conduct visible emissions observations once every two weeks.	Record the results of any observations, and any corrective action taken.	Submit excess emissions and deviation reports if applicable.
Kiln 3 System	Opacity	20% Opacity	Conduct biweekly visible emissions observations and annual opacity perform testing.	Maintain opacity observation records and performance test records.	Report test results. Submit excess emissions and deviations reports if applicable.
	PM	PM limit pursuant to A.A.C. R- 18- 2- 720(B)/730(A) equations.	Monitor and records wet scrubber differential pressure and water flow rate; conduct monthly control device monitoring and maintenance; conduct annual PM performance testing.	Maintain scrubber monitoring, calibration and maintenance records; Maintain performance test records for monitoring.	Report test results. Submit excess emissions and deviations reports if applicable.
Internal Combustion Engines (K1 and K2 Motors)	PM/Opacity	40% Opacity; PM limit pursuant to A.A.C. R- 18- 2-719(C) equation.	Conduct monthly visible emissions observations and annual opacity perform testing.	Maintain opacity observation records and performance test records.	Submit excess emissions and deviations reports if applicable.

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
	SO ₂	1.0 lb/MMBtu	N/A	Keep records of fuel sulfur content documentation.	Report any daily period which the sulfur content exceeds 0.8% by weight.
	HAP _s	N/A	N/A	Maintain records of maintenance, oil analysis results (if applicable), malfunctions and corrective actions taken.	Submit excess emissions and deviations reports if applicable.
Gasoline Dispensing facilities (GDFs)	VOCs	N/A	N/A	Maintain a monthly log of the throughput for each gasoline dispensing facility.	Submit excess emissions and deviations reports if applicable.
Solid Fuel Handling System (Non-NSPS Y)	PM	20% Opacity; PM limit pursuant to A.A.C. R- 18-2-716(B) equation.	Conduct visible biweekly emissions observations.	Record the results of any observations, and any corrective action taken.	Submit excess emissions and deviation reports if applicable.
Solid Fuel Handling System (NSPS Y)	PM	20% Opacity	Conduct visible biweekly emissions observations.	Record the results of any observations, and any corrective action taken.	Submit excess emissions and deviation reports if applicable.
Fugitive Dust	PM	40% Opacity	A Method 9 observer is required to conduct a monthly survey of visible emissions.	Record of the dates and types of dust control measures employed, and if applicable, the results of any Method 9 observations, and any	N/A

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
				corrective action taken to lower the opacity of any excess emissions.	
Abrasive Blasting	PM	20% Opacity	N/A	Record the date, duration and pollution control measures of any abrasive blasting project.	N/A
Spray Painting	VOC	20% Opacity Control 96% of the overspray	N/A	Maintain records of the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.	N/A
Demolition/ Renovation	Asbestos	N/A	N/A	Maintain records of all asbestos related demolition or renovation projects including the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents	N/A

V. COMPLIANCE ASSURANCE MONITORING (CAM)

The CAM rule applies to pollutant-specific emission units (PSEU) at a major Title V source if the unit meets all of the following criteria:

- A. The unit is subject to an emission limit or standard for the applicable regulated air pollutant;
- B. The unit uses a control device to achieve compliance with the emission limit or standard; and
- C. The unit has "potential pre-control device emissions" of the applicable regulated air pollutant equal to or greater than 100% of the amount (tons/year) required for a source to be classified as a major source. "Potential pre-control device emissions" means potential to emit (PTE, as defined in Title V) except emissions reductions achieved by the applicable control device are not taken into account.

The general purpose of monitoring required by the CAM rule is to assure compliance with emission standards by ensuring that control devices meet and maintain the assumed control efficiencies. Compliance is ensured through requiring monitoring of the operation and maintenance of the control equipment and, if applicable, operating conditions of the pollutant-specific emissions unit. For the PSEUs that have post control potential to emit equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source, for each parameter monitored, the facility shall collect four or more data values equally spaced over each hour. Such units are defined as "large" PSEUs. For all other PSEUs ("small" PSEUs), the monitoring shall include some data collection at least once per 24-hour period.

Kiln 1, Kiln 2 and Kiln 3 are subject to Compliance Assurance Monitoring (CAM) requirements under 40 CFR Part 64. The CAM-Applicability and associated control device are summarized in table 7 below:

Table 5: CAM Applicable Units

S. No.	Equipment	Process #	Control Device
1	Kiln 1	Kiln 1	Gravel Bed Filter
2	Kiln 2	Kiln 2	Baghouse
3	Kiln 3	Kiln 3	Wet Scrubber

B. Monitoring Approach

The facility uses control devices for controlling the emissions of particulate matter (both PM and PM₁₀) emissions from Kiln1, Kiln 2 and Kiln 3. The monitoring approach for these devices is detailed below.

Table 6: Monitoring Approach for CAM Applicable Units

Indicator	Monitoring Approach
Kiln 1: Opacity; Gravel Bed Filter Inspection and Maintenance Program.	Visible emissions observations and implementation of the gravel bed filter inspection and maintenance program.
Kiln 2: Opacity; Baghouse Inspection and Maintenance Program.	Visible emissions observations and implementation of the baghouse inspection and maintenance program.
Kiln 3: Wet Scrubber Differential Pressure; Wet Scrubber Water Flow Rate; Wet Scrubber Inspection and Maintenance Program.	Monitoring of wet scrubber differential pressure and water flow rate, and implementation of the wet scrubber inspection and maintenance program.

VI. INSIGNIFICANT AND TRIVIAL ACTIVITIES

The insignificant and trivial activities associated with the Douglas Lime Plant are presented in Table 9:

Equipment/Activity	Insignificant or Trivial	Reference
Petroleum product storage tanks containing the following substances, provided the applicant lists and identifies the contents of each tank with a volume of 350 gallons or more and provides threshold values for throughput or capacity or both for each such tank: diesel fuels and fuel oil in storage tanks with capacity of 40,000 gallons or less, lubricating oil, transformer oil, and used oil.	Insignificant	A.A.C. R18-2-101.69.a.i
Gasoline storage tanks with a capacity of 10,000 gallons or less.	Insignificant	A.A.C. R18-2-101.69.a.ii
Storage and piping of natural gas, butane, propane, or liquified petroleum gas, provided the applicant lists and identifies the contents of	Insignificant	A.A.C. R18-2-101.69.a.iii

Equipment/Activity	Insignificant or Trivial	Reference
each stationary storage vessel with a volume of 350 gallons or more and provides threshold values for throughput or capacity or both for each such vessel.		
Piping of fuel oils, used oil and transformer oil provided the applicant includes a system description.	Insignificant	A.A.C. R18-2-101.69.a.iv
Storage and handling of drums or other transportable containers where the containers are sealed during storage, and covered during loading and unloading, including containers of waste and used oil.	Insignificant	A.A.C. R18-2-101.69.a.v
Storage tanks containing exclusively soaps, detergents, waxes, greases, aqueous salt solutions, aqueous solutions of acids that are not regulated air pollutants, and aqueous caustic solutions.	Insignificant	A.A.C. R18-2-101.69.a.vi
Electrical transformer oil pumping, cleaning, filtering, drying and the reinstallation of oil back into transformers.	Insignificant	A.A.C. R18-2-101.69.a.vii
Internal combustion engine-driven compressors, internal combustion engine-driven electrical generator sets, and internal combustion engine-driven water pumps used for less than 500 hours per calendar year for emergency replacement or standby service.	Insignificant	A.A.C. R18-2-101.69.b
Low Emitting Processes: i. Batch mixers with rated capacity of 5 cubic feet or less. ii. Wet sand and gravel production facilities that obtain material from	Insignificant	A.A.C. R18-2-101.69.c

Equipment/Activity	Insignificant or Trivial	Reference
<p>subterranean and subaqueous beds, whose production rate is 200 tons/hour or less, and who's permanent in-plant roads are paved and cleaned to control dust. This does not include activities in emissions units which are used to crush or grind any nonmetallic minerals.</p> <p>iii. Powder coating operations.</p> <p>iv. Equipment using water, water and soap or detergent, or a suspension of abrasives in water for purposes of cleaning or finishing.</p> <p>v. Blast-cleaning equipment using a suspension of abrasive in water and any exhaust system or collector serving them exclusively.</p> <p>vi. Plastic pipe welding.</p>		
<p>Site Maintenance:</p> <p>i. Housekeeping activities and associated products used for cleaning purposes, including collecting spilled and accumulated materials at the source, including operation of fixed vacuum cleaning systems specifically for such purposes.</p> <p>ii. Sanding of streets and roads to abate traffic hazards caused by ice and snow.</p> <p>iii. Street and parking lot striping.</p> <p>iv. Architectural painting and associated surface preparation for maintenance purposes at industrial or commercial facilities.</p>	Insignificant	A.A.C. R18-2-101.69.d
Non-commercial (in-house)	Insignificant	A.A.C. R18-2-101.69.e.i

Equipment/Activity	Insignificant or Trivial	Reference
experimental, analytical laboratory equipment, which is bench scale in nature, including quality control/quality assurance laboratories supporting a stationary source and research and development laboratories.		
Individual sampling points, analyzers, and process instrumentation, whose operation may result in emissions but that are not regulated as emission units.	Insignificant and Trivial	A.A.C. R18-2-101.69.e.ii and A.A.C. R18-2-101.147.f.vii
General office activities, such as paper shredding, copying, photographic activities, pencil sharpening, and blueprinting, but not to include incineration.	Insignificant and Trivial	A.A.C. R18-2-101.69.f.i and A.A.C. R18-2-101.147.d.v
Use of consumer products, including hazardous substances where the product is used at a source in the same manner as normal consumer use.	Insignificant and Trivial	A.A.C. R18-2-101.68.f.ii and A.A.C. R18-2-101.147.d.ix
Activities directly used in the diagnosis and treatment of disease, injury or other medical condition.	Insignificant and Trivial	A.A.C. R18-2-101.69.f.iii and A.A.C. R18-2-101.147.d.x
Miscellaneous Activities: i. Installation and operation of potable, process and wastewater observation wells, including drilling, pumping, filtering apparatus. ii. Transformer vents.	Insignificant	A.A.C. R18-2-101.69.g
Combustion emissions from propulsion of mobile sources.	Trivial	A.A.C. R18-2-101.147.a.i
Portable electrical generators that can be moved by hand from one location to another.	Trivial	A.A.C. R18-2-101.147.a.iii
Electric motors.	Trivial	A.A.C. R18-2-101.147.b

Equipment/Activity	Insignificant or Trivial	Reference
Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP.	Trivial	A.A.C. R18-2-101.147.e.i
Chemical storage associated with water and wastewater treatment where the water is treated for consumption and/or use within the permitted facility.	Trivial	A.A.C. R18-2-101.147.e.iii
Storage cabinets for flammable products.	Trivial	A.A.C. R18-2-101.147.e.v.b
Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities that do not result in emission of HAP metals.	Trivial	A.A.C. R18-2-101.147.b.iii
Air compressors and pneumatically operated equipment, including hand Tools.	Trivial	A.A.C. R18-2-101.147.b.v
Batteries and battery charging stations.	Trivial	A.A.C. R18-2-101.147.b.vi
Equipment used for surface coating, painting, dipping, or spraying operations, except those that emit VOC or HAPs.	Trivial	A.A.C. R18-2-101.147.b.x
Process water filtration systems and demineralizers.	Trivial	A.A.C. R18-2-101.147.b.xv
Demineralized water tanks and demineralizer vents.	Trivial	A.A.C. R18-2-101.147.b.xvi
Steam vents and safety relief valves.	Trivial	A.A.C. R18-2-101.147.b.xix
Steam leaks.	Trivial	A.A.C. R18-2-101. 147.b.xx
Steam cleaning operations and steam sterilizers.	Trivial	A.A.C. R18-2-101. 147.b.xxi
Use of vacuum trucks and high-pressure washer/cleaning equipment within the facility boundaries for cleanup and transfer of liquids and slurried solids to	Trivial	A.A.C. R18-2-101. 147.b.xxii

Equipment/Activity	Insignificant or Trivial	Reference
waste water treatment units or conveyances.		
Equipment using water, water and soap or detergent, or a suspension of abrasives in water for purposes of cleaning or finishing.	Trivial	A.A.C. R18-2-101. 147.b.xxiii
Electric motors.	Trivial	A.A.C. R18-2-101. 147.b.xxiv
Plant and building maintenance and upkeep activities, including grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots.	Trivial	A.A.C. R18-2-101. 147.c.i
Repair or maintenance shop activities.	Trivial	A.A.C. R18-2-101. 147.c.ii
Janitorial services and consumer use of janitorial products.	Trivial	A.A.C. R18-2-101. 147.c.iii
Landscaping activities.	Trivial	A.A.C. R18-2-101. 147.c.iv
Routine calibration and maintenance of laboratory equipment or other analytical instruments.	Trivial	A.A.C. R18-2-101. 147.c.v
Air-conditioning units used for human comfort that do not have applicable requirements under Title VI of the Act.	Trivial	A.A.C. R18-2-101. 147.d.i
Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing, industrial or commercial process.	Trivial	A.A.C. R18-2-101. 147.d.ii

Equipment/Activity	Insignificant or Trivial	Reference
Tobacco smoking rooms and areas.	Trivial	A.A.C. R18-2-101. 147.d.iii
Non-commercial food preparation.	Trivial	A.A.C. R18-2-101. 147.d.iv
Laundry activities.	Trivial	A.A.C. R18-2-101.147.d.vi
Bathroom and toilet vent emissions.	Trivial	A.A.C. R18-2-101.147.d.vii
Other storage tanks, vessels, and containers holding or storing liquid substances that do not emit any VOC or HAP.	Trivial	A.A.C. R18-2-101.147.e.i
Storage cabinets for flammable products.	Trivial	A.A.C. R18-2-101.147.e.v
Natural gas pressure regulator vents.	Trivial	A.A.C. R18-2-101.147.e.vi
Vents from continuous emissions monitors and other analyzers.	Trivial	A.A.C. R18-2-101.147.f.i
Bench scale lab equipment used exclusively for chemical and physical analysis.	Trivial	A.A.C. R18-2-101.147.f.ii
Equipment used for quality control, quality assurance, or inspection purposes, including sampling equipment used to withdraw materials for analysis.	Trivial	A.A.C. R18-2-101.147.f.iii

VII. AREA SOURCE STATUS FOR HAZARDOUS AIR POLLUTANTS (HAP_s)

On January 5, 2004, EPA promulgated the National Emissions Standard for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) 63 Subpart AAAAA for the lime manufacturing source category. The Final NESHAP regulates hazardous air pollutant (HAP) emissions from all new and existing lime manufacturing plants that are major sources for HAPs.

Lhoist North America conducted hydrogen chloride (HCl) emission testing for Kiln #2 at the Douglas Lime Plant. Based on this test the HCl emission from Kiln #2 was 7.02 tpy. Based on this result and HCl testing at kilns similar to Kiln #1 and Kiln #3 in other states, it is expected that the Douglas Lime Plant is an area source for HAPs.

In order to confirm that the Douglas Lime Plant is an area source of HAPs, it is necessary to test Kiln #1 and Kiln #3 for HCl emissions. Reactivating the kilns to solely test for HCl

emissions would require significant expenditures. Consequently, EPA addressed this issue by providing state agencies with the discretion to determine whether testing of all kilns at a lime plant is necessary in order to demonstrate that a plant is an area source (40 CFR Part 63.7142(c)).

Based upon this EPA guidance, ADEQ is allowing Lhoist North America to postpone testing of the Kiln #1 and Kiln #3 for HCl until the kilns are reactivated.

VIII. LEARNING SITE EVALUTATION

In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department is required to conduct an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools in the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

This permit renewal will not result in an increase in emissions above permitting exemption thresholds and thus, it is exempt from a learning sites evaluation.

IX. ENVIRONMENTAL JUSTICE ANALYSIS

The EPA (Environmental Protection Agency) defines Environmental Justice (EJ) to include the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The goal of completing an EJ assessment in permitting is to provide an opportunity for overburdened populations or communities to allow for meaningful participation in the permitting process. Overburdened is used to describe the minority, low-income, tribal and indigenous populations or communities that potentially experience disproportionate environmental harms and risks due to exposures or cumulative impacts or greater vulnerability to environmental hazards.

This renewal will not result in an increase in emissions above permitting exemption thresholds and thus, it will not result in any additional impacts.

X. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
A.R.S.	Arizona Revised Statutes
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂ e	CO ₂ Equivalent Basis
EPA	Environmental Protection Agency
GHG	Greenhouse Gases
HAPs	Hazardous Air Pollutants
hp	Horsepower
NO _x	Nitrogen Oxides
NESHAP	National Emission Standards for Hazardous Air Pollutants

NSPS New Source Performance Standards
Pb..... Lead
PM..... Particulate Matter
PM10..... Particulate Matter Less Than 10 μm Nominal Aerodynamic Diameter
PM2.5..... Particulate Matter less Than 2.5 μm Nominal Aerodynamic Diameter
psia Pounds per square Inch (absolute)
PTE Potential to Emit
PSSIP..... State Implementation Plan for the Paul Spur Group I Area
SO₂..... Sulfur Dioxide Significant Impact Levels
tpy Tons per Year
VOCs..... Volatile Organic Compounds

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