

STATEMENT OF BASIS

Holcim (US), Inc.
Theodore, Alabama
Mobile County
Facility No. 503-8026

This proposed Title V Major Source Operating Permit (MSOP) renewal is issued under the provisions of ADEM Admin. Code r. 335-3-16. The above-named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Holcim (US), Inc. (Holcim) was issued its initial MSOP for the Theodore Plant on October 25, 2000. The existing MSOP was issued on November 28, 2016, with an expiration date of November 27, 2021. Per ADEM Admin. Code r. 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of the permit. Based on this rule, application for renewal was due to the Department no later than May 27, 2021, but no earlier than May 27, 2020. The renewal application was received electronically by the Department on May 27, 2021. Additional information was received on May 17, 2022.

The facility is located in Mobile County, which is currently listed as attainment, unclassifiable, or attainment/unclassifiable with all National Ambient Air Quality Standards (NAAQS).

The enforcement and compliance history for the facility can be found at <https://echo.epa.gov/> (Search using Facility ID AL0000000109708026).

RENEWAL NOTES

1. On December 5, 2016, the Department issued a letter stating no permit was required for the operation of a three-bin hopper for loading raw materials onto conveyors prior to drying.
2. On January 11, 2017, the Department issued a letter stating no permit was required for the trial operation of an alternative kiln operating scenario using only one string of the dual-string preheater.
3. On June 12, 2017, the Department issued an Administrative Modification of the MSOP to correct typographical errors.
4. On August 16, 2017, the Department issued a letter stating no permit was required for an extension of the trial period for a single-stream preheater kiln operating scenario.
5. On May 9, 2018, the Department issued Air Permit No. 503-8026-X026, for the operation of the Kiln System under both single-string and dual-string preheater scenarios. The permit was reissued on November 24, 2021, to include the requirements of U.S. EPA Administrative Compliance Order on Consent CAA-04-2021-0103, issued September 15, 2021. These permit requirements were included in this renewal.
6. The facility requested a proviso be added allowing the operational flexibility to combust all non-hazardous secondary materials (NHSM) in the kiln that are not solid wastes pursuant to 40 CFR Part 241, except for periods of startup until the kiln reaches a temperature of 1,200 °F as required in 40 CFR §63.1346(g)(1). This proviso was added in this renewal.
7. The facility requested that the Continuous Opacity Monitoring System (COMS) requirement for the main kiln stack be removed. This requirement is currently cited as a BACT requirement. However, the facility claims this requirement was originally included to meet the requirements of 40 CFR Part 60, Subpart F, per a letter dated January 18, 1989, from the Department to the owner of the facility, and the BACT citation is an error. A COMS is no longer required for kilns by 40 CFR Part 60, Subpart F or any Part 60 or Part 63 Subpart. Instead, a particulate matter (PM) Continuous Parametric Monitoring System (CPMS) is required on the kiln stack by 40 CFR Part 63, Subpart LLL. This request was considered by the Department and denied, and the COMS requirement remains in this renewal.
8. The facility requested to remove the weekly visible emissions (VE) monitoring requirements for non-kiln sources subject to 40 CFR Part 63, Subpart LLL and instead adhere to the VE monitoring requirements of that subpart. This request was considered by the Department and denied on the basis that monthly VE checks were not sufficient to determine if these sources were in compliance with applicable limits.
9. The facility requested to increase the maximum throughput of their alternative non-hazardous fuel shredding process (listed as an insignificant source) from 10 TPH to 15 TPH. Based on an AP-42 emissions factor for PM of 0.061 lb/ton, potential emissions from this source would increase from 2.7 TPY to 4.0 TPY. No further action was required for this change.

10. A 1.5 MMBtu/hr propane-fired heater for the heated alternative fuel system was installed in July 2010 and previously determined to be exempt from air permitting by the Department in a letter dated June 16, 2010. However, the unit is subject to the requirements of 40 CFR Part 63, Subpart DDDDD, so it cannot be listed as an insignificant source. The facility submitted a Notice of Applicability to the Department on December 8, 2017. On December 6, 2022 the Department issued Air Permit No. 503-8026-X027 for this unit. The permit was included in this renewal.

11. The coal mill 40 MMBtu/hr auxiliary heater, originally permitted under Air Permit No. 503-8026-X003 on March 6, 1990, had a sulfur dioxide emissions limit of 29.0 lb/hr during operation based on the combustion of No. 2 fuel oil with a 7 percent sulfur content. The heater now burns natural gas only, and the sulfur dioxide limit was removed in the MSOP renewal issued November 28, 2016.

12. CAM plans for the following emissions points have been added to this renewal:

- Raw and Finish Mill
 - Sources P-26-1 through P-26-28, P-26-10, P-26-13 through P-26-18, P-26-21, P-26-28, and P-41-1 through P-41-6
- Raw Material Unloading
 - Sources P-19-1 through P-19-3
- Raw Material Handling and Storage
 - P-24-1 through P-24-5
- Blending Silos
 - Sources P-28-1 through P-28-3, and P-28-8(a) &(b)
- Clinker Cooler Conveyor
 - Source P-43-1
- Clinker Handling and Storage
 - Sources P-35-1 through P-35-2, and P-35-4 through P-35-9
- Land Cement Silos and Cement Loading
 - P-35-1 through P-35-2, and P-35-4 through P-35-9
- Marine Cement Silos and Cement Loading
 - Sources P-53-1 through P-53-9
- Coal Mill and Coal Silos
 - Source P-95-1

13. The facility made the following changes to the Form 103 list of Insignificant Activities:

- Reduced number of grinding additive storage tanks from five to three.
- Removed a 150,000 gallon on-spec used oil tank (no longer in service).
- Changed one of the two diesel storage tanks to a used oil storage tank.
- Removed the GranCem Handling Operation.

- Changed the non-hazardous fuel shredder from 10 TPH to 15 TPH (see note 9 above).
- Added one 1,000 gallon gasoline storage tank.

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FACILITY DESCRIPTION

Holcim (US) Inc. operates an existing Portland cement manufacturing facility located in Theodore, Mobile County, Alabama. The facility currently holds Major Source Operating Permit (hereinafter “MSOP”) No. 503-8026.

The following are significant sources of air pollution for this facility:

- Area 19: Raw Material Unloading
- Area 24: Raw Material Handling & Storage
- Area 26: Raw Mill & Raw Mill Silos
- Area 28: Kiln Feed Blending & Conveying
- Area 29: Kiln, Clinker Cooler, & Rotary Dryers
- Area 34: Clinker Cooler Conveying
- Area 35: Clinker Handling & Storage
- Area 41: Finish Mills
- Area 51: Land Silos & Loadout
- Area 53: Marine Silos & Loadout
- Area 95: Coal Processing
- Emergency Generator
- 1.5 MMBtu/hr Alternative Fuel Heater

This facility is a major source of particulate matter (PM), nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), and volatile organic compound (VOC) emissions for both Title V and PSD. In addition, the facility is a major source of hazardous air pollutant (HAP) emissions.

The following is a summary of facility-wide potential emissions and the reported 2020 actual emissions:

Pollutant	Potential Emissions (TPY)	2020 Actual Emissions (TPY)
PM	584.7	85.93
PM ₁₀	452.0	62.21
PM _{2.5}	184.2	25.35
SO ₂	118.2	0.82
NO _x	1,901	1,319.0
CO	17,652	513.4
VOC	2,117	26.5
HCl	28.84	4.7

Total HAP	67.22	14.53
GHG (CO ₂ e)	1,742,701	-

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Area 19: Raw Material Unloading

Process Description

This process was originally constructed in 1980. The Theodore Plant does not operate an on-site quarry. All raw materials utilized at this facility arrive by barge, ship, or truck from multiple off-site locations. Raw materials utilized at this facility consist of, but are not limited to, the following: limestone, clay, sand, bottom ash, iron ore, fly ash, gypsum, slag, and imported clinker.

Upon arrival, raw materials are mechanically unloaded by gantry crane and transported through the tower area to either the raw material storage area or the twin rotary dryers. The raw material unloading system consists of sand and clay storage, conveyor belts, drop points, unloading equipment, feed hoppers, apron feeders, scraper, and other equipment. Movement of raw materials is based on production levels.

Area 19 is comprised of the following sources:

Source	Source Description	Control	Emission Point
S-19-01	Drop from Gantry Unloader Clam Shell (East and West) to Dock	Uncontrolled	FUG
S-19-02	Drop from Gantry Unloader Clam Shell (East and West) to Feed Hopper	Uncontrolled	FUG
S-19-03	Drop from Feed Hopper to East Apron Feed Belt	Baghouse	P-19-01
S-19-04	Drop from East Apron Feed Belt to East Limestone Belt	Baghouse	P-19-01
S-19-05	Drop from East and Main Limestone Belt to Limestone Stacker Belt	Uncontrolled	FUG
S-19-06	Drop from East Apron Feed Belt to Main Limestone Belt	Baghouse	P-19-01
S-19-07	Drop from East Apron Feed Belt to West Limestone Belt	Baghouse	P-19-01
S-19-08	Drop from West Limestone Belt to South Coal/Gypsum Transfer Belt	Baghouse	P-19-02
S-19-09	Drop from East Apron Feed Belt to West Coal/Gypsum Transfer Belt	Baghouse	P-19-01
S-19-10	Drop from West Coal/Gypsum Transfer Belt to South Coal/Gypsum Transfer Belt	Baghouse	P-19-02
S-19-11	Drop from West Gantry Feed Hopper to West Apron Feed Belt	Baghouse	P-19-03

Source	Source Description	Control	Emission Point
S-19-12	Drop from West Apron Feed Belt to Main Limestone Belt	Baghouse	P-19-03
S-19-13	Drop from West Apron Feed Belt to West Coal/Gypsum Transfer Belt	Baghouse	P-19-03
S-19-14	Drop from West Apron Feed Belt to West Limestone Belt	Baghouse	P-19-03
S-19-15	Drop from West Apron Feed Belt to East Limestone Belt	Baghouse	P-19-03
S-19-16	Sand Pile	Uncontrolled	FUG
S-19-17	Clay Pile	Uncontrolled	FUG
S-19-18	Drop from Gantry Clam Shell Unloader (West) to No. 1 and No. 2 Bottom Ash Feeder	Uncontrolled	FUG
S-19-19	Drop from No.1 and No.2 Clay Feeder to Clay Belt No.1 and No.2	Uncontrolled	FUG
S-19-20	Drop from Gantry Clam Shell Unloader (East) to No.1 and No.2 Sand Feeder	Uncontrolled	FUG
S-19-21	Material Transfer, Clay/Sand Storage	Uncontrolled	FUG
S-19-22	Material Transfer, Limestone Storage	Uncontrolled	FUG

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Visible Emissions*”.

ADEM Admin. Code r. 335-3-4-.02(1), (3)

- Fugitive sources are subject to ADEM Admin. Code r. 335-3-4-.02, “*Control of Particulate Emissions – Fugitive Dust and Fugitive Emissions*”.

ADEM Admin. Code r. 335-3-4-.04(1)

- Non-fugitive sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “*Control of Particulate Emissions for Process Industries – General*”.

ADEM Admin. Code r. 335-3-14-.04 – Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-19-01	S-19-03	PM
	S-19-04	
	S-19-06	
	S-19-07	
	S-19-09	
P-19-02	S-19-08	PM
	S-19-10	
P-19-03	S-19-11	PM
	S-19-12	
	S-19-13	
	S-19-14	
	S-19-15	

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “Standards of Performance for Portland Cement Plants”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

This area consists of raw material storage and conveyor transfer points. Therefore, these sources are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

This area consists of conveying system transfer points. Therefore, these sources are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions points P-19-1, P-19-2, and P-19-3 are subject to CAM for particulate matter (PM) because the units have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility

may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six minute average.

40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six-minute average:

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.
 - Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – Process Industries - General

- The non-fugitive sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (} P \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (} P < 30 \text{ tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, “*Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]*”

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit No. 503-8026-Z001 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-19-01	S-19-03	PM	0.01 gr/dscf
	S-19-04		
	S-19-06		
	S-19-07		
	S-19-09		
P-19-02	S-19-08	PM	0.01 gr/dscf
	S-19-10		
P-19-03	S-19-11	PM	0.01 gr/dscf
	S-19-12		
	S-19-13		
	S-19-14		
	S-19-15		

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – *Sampling and Testing Methods*

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.

- Instantaneous visible emissions observations (VEO) shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.
 - *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p).
 - *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).
 - In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.

- The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.
- The performance test results must be documented in a test report according to 40 CFR §63.1349(a).
- A test plan must be made available to the Administrator prior to performance testing, if requested.
- The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.

- There are no individual readings greater than 10 percent opacity.
- There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources as outlined below:
 - An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.
 - If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
 - If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
 - If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.

- The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.
- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

- If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
- Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
- If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).
- If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.

- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3), including:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.

- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications, notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) - 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.
 - As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
 - The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include

any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) - 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

40 CFR §64.9 – Reporting and recordkeeping requirements

- The facility must follow the reporting and recordkeeping requirements as specified in this section.

Emissions Summary

Potential emissions from these sources are summarized in the following tables.

Area 19 Potential Emissions (Controlled)

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP (TPY)
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	
P-19-01	S-19-03	1.29	5.63	1.09	4.79	0.39	1.69	1.46E-03
	S-19-04							
	S-19-06							
	S-19-07							
	S-19-09							
P-19-02	S-19-08	1.29	5.63	1.09	4.79	0.39	1.69	1.46E-03
	S-19-10							
P-19-03	S-19-11	1.29	5.63	1.09	4.79	0.39	1.69	1.46E-03
	S-19-12							
	S-19-13							
	S-19-14							
	S-19-15							

Area 19 Potential Emissions (Fugitive)

Sources	PM		PM ₁₀		PM _{2.5}		Total HAP
	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
S-19-01	21.39	93.71	7.50	32.85	1.17	5.11	2.42E-02
S-19-02							
S-19-05							
S-19-16							
S-19-17							
S-19-18							
S-19-19							
S-19-20							
S-19-21							

DRAFT

Area 24: Raw Material Handling and Storage

Process Description

This process was originally constructed in 1980. The raw material handling system includes coal and pet-coke storage, kiln feed raw material storage, cement additive storage, various conveyor belts, diverter chutes, feed hoppers, apron feeders, and other equipment. Movement of raw materials is based on production levels.

Area 24 is comprised of the following sources:

Source	Source Description	Control	Emission Point
S-24-01	Drop from Limestone Belt and Apron Feeder No. 1 and No. 2 to Dryer Feed Belt No. 1 and No. 2	Uncontrolled	FUG
S-24-02	Drop from Vulcan Ship Unloader to Hopper on Limestone Stacker Belt	Uncontrolled	FUG
S-24-03	Hopper on Limestone Stacker Belt to Limestone Stacker Belt	Uncontrolled	FUG
S-24-04	Drop from Limestone Stacker Belt to Limestone Stacker	Uncontrolled	FUG
S-24-05	Active Limestone Storage Pile	Uncontrolled	FUG
S-24-06	Reserve Limestone Storage Pile	Uncontrolled	FUG
S-24-07	Drop to Limestone Reclaimer Belt	Uncontrolled	FUG
S-24-08	Drop from Front-End Loader to North Limestone Hopper/Apron Feeder	Uncontrolled	FUG
S-24-09	Drop to Limestone Feed Belt	Uncontrolled	FUG
S-24-10	Drop from Front-End Loader to South Limestone Hopper/Apron Feeder	Uncontrolled	FUG
S-24-11	Drop to Apron Feeder No. 1 and No. 2	Uncontrolled	FUG
S-24-12	Drop from Dryer No. 1 and No. 2 Feed Belt "A1" and "A2" to Dryer No. 1 and No. 2 Feed Belt "B1" and "B2"	Uncontrolled	FUG
S-24-13	Drop from Coal, Iron Ore, Gypsum, Clinker South Belt to Three-Way Diverter Chute	Baghouse	P-24-01
S-24-14	Drop from Three-Way Diverter Chute to No. 2 Clinker Belt	Baghouse	P-24-01
S-24-15	Drop from Three-Way Diverter Chute to Shuttle Feed Belt	Baghouse	P-24-01

Source	Source Description	Control	Emission Point
S-24-16	Drop from Shuttle Feed Belt to Shuttle Belt	Uncontrolled	FUG
S-24-17	Gypsum Storage	Uncontrolled	FUG
S-24-18	Iron Ore Storage	Uncontrolled	FUG
S-24-19	Coal Storage	Uncontrolled	FUG
S-24-20	Drop from Front-End Loader to Belt Feeder	Uncontrolled	FUG
S-24-21	Drop from Belt Feeder and Gypsum/Iron Ore/Coal Conveyor to Coal/Iron Ore Transfer No. 3 Belt	Uncontrolled	FUG
S-24-22	Drop from Three-Way Diverter Chute to Gypsum/Iron Ore/Coal Conveyor	Baghouse	P-24-02
S-24-23	Drop from Masonry Rock Belt to Gypsum/Iron Ore/Coal Conveyor	Baghouse	P-24-03
S-24-24	Drop from Gypsum/Iron Ore/Coal Conveyor to Gypsum Silo Belt	Baghouse	P-24-04
S-24-25	Drop from Front-End Loader to Belt Feeder	Uncontrolled	FUG
S-24-26	Drop from Belt Feeder to Gypsum Silo Silo Belt	Uncontrolled	FUG
S-24-27	Drop from Coal/Iron Ore Transfer No. 3 Belt to two-way Diverter	Uncontrolled	FUG
S-24-28	Drop from Two-Way Diverter to Bucket Elevator	Uncontrolled	FUG
S-24-29	Drop from Two-Way Diverter to Coal Belt	Uncontrolled	FUG
S-24-30	Drop from Front-End Loader to Belt Feeder	Uncontrolled	FUG
S-24-31	Drop from Belt Feeder to Feed Chute	Baghouse	P-24-05
S-24-32	Reclaim Crusher	Baghouse	P-24-05
S-24-33	Vibrating Screen	Baghouse	P-24-05
S-24-34	Drop from Belt 4-22 to Belt 4-19	Baghouse	P-24-05
S-24-35	Drop from Belt 4-20 to Belt 4-19	Baghouse	P-24-05
S-24-36	Drop from Belt 4-19 to Clinker Storage Shed	Baghouse	P-24-05
S-24-37	Cement Additives Stockpile	Uncontrolled	FUG

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Visible Emissions*”.

ADEM Admin. Code r. 335-3-4-.02(1), (3)

- Fugitive sources are subject to ADEM Admin. Code r. 335-3-4-.02, “*Control of Particulate Emissions – Fugitive Dust and Fugitive Emissions*”.

ADEM Admin. Code r. 335-3-4-.04(1)

- Non-fugitive sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “*Control of Particulate Emissions for Process Industries – General*”.

ADEM Admin. Code r. 335-3-14-.04 – *Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]*

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-24-01	S-24-13	PM
	S-24-14	
	S-24-15	
P-24-02	S-24-22	PM
P-24-03	S-24-23	PM
P-24-04	S-24-24	PM
P-24-05	S-24-31	PM
	S-24-32	
	S-24-33	
	S-24-34	
	S-24-35	
	S-24-36	

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “*Major Source Operating Permits*”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “Standards of Performance for Portland Cement Plants”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

These sources include raw material storage and conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

These sources include conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is

exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions points P-24-1, P-24-2, P-24-3, P-24-4, and P-24-5 are subject to CAM for particulate matter (PM) because the units have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six minute average.

40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six-minute average:

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.

- Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – *Process Industries - General*

- The non-fugitive sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \quad (P \geq 30 \text{ tons/hr})$$

or

$$E = 3.59P^{0.62} \quad (P < 30 \text{ tons/hr})$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, “*Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]*”

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit No. 503-8026-Z002 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-24-01	S-24-13	PM	0.01 gr/dscf
	S-24-14		
	S-24-15		

Emission Point	Source(s) Controlled	Pollutant	Limit
P-24-02	S-24-22	PM	0.01 gr/dscf
P-24-03	S-24-23	PM	0.01 gr/dscf
P-24-04	S-24-24	PM	0.01 gr/dscf
P-24-05	S-24-31	PM	0.01 gr/dscf
	S-24-32		
	S-24-33		
	S-24-34		
	S-24-35		
	S-24-36		

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.

- *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p).
- *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).
 - In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.
 - The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.
 - The performance test results must be documented in a test report according to 40 CFR §63.1349(a).
 - A test plan must be made available to the Administrator prior to performance testing, if requested.
 - The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
 - There are no individual readings greater than 10 percent opacity.
 - There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources as outlined below:

- An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.
- If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
- If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
- After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
- If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.
- After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
- The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.

- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
 - Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).
 - If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must

also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall

be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3), including:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
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January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications, notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) - 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.
 - As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
 - The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) - 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

Emissions Summary

Potential emissions are summarized in the following tables.

Area 24 Potential Emissions (Controlled)

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP (TPY)
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	
P-24-01	S-24-13	1.29	5.63	1.09	4.79	0.39	1.69	1.46E-03
	S-24-14							
	S-24-15							
P-24-02	S-24-22	1.29	5.63	1.09	4.79	0.39	1.69	1.46E-03
P-24-03	S-24-23	0.43	1.88	0.36	1.60	0.13	0.56	4.85E-04
P-24-04	S-24-24	0.77	3.38	0.66	2.87	0.23	1.01	8.73E-04
P-24-05	S-24-31	0.69	3.00	0.58	2.55	0.21	0.90	7.76E-04
	S-24-32							
	S-24-33							
	S-24-34							
	S-24-35							
	S-24-36							

Area 24 Potential Emissions (Fugitive)

Sources	PM		PM10		PM2.5		Total HAP
	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
S-24-01							
S-24-02							
S-24-03							
S-24-04							
S-24-05							
S-24-06							
S-24-07							
S-24-08							
S-24-09							
S-24-10							
S-24-11							
S-24-12							
S-24-16	4.78	20.93	2.13	9.33	1.62	7.08	5.41E-03
S-24-17							
S-24-18							
S-24-19a							
S-24-19b							
S-24-20							
S-24-21							
S-24-25							
S-24-26							
S-24-27							
S-24-28							
S-24-29							
S-24-30							
S-24-37							

Area 26: Raw Mill and Raw Mill Silos

Process Description

This process was originally constructed in 1980. The raw mill and raw mill silos are part of the raw material preparation stage of the cement manufacturing process. Raw materials are transported from the twin rotary dryers to the raw mill building. These materials are then proportioned, ground, and mixed in the raw mill to provide a kiln feed/raw meal with appropriate chemical and physical properties. The milling process is done with a ball mill, hydraulic roll crusher, and related equipment.

Area 26 is comprised of the following sources:

Source	Source Description	Control	Emission Point
S-26-01	Drop from Dryer No. 1 Feed Belt (B-1) to Dryer No. 1 Apron Feeder	Baghouse	P-26-01
S-26-02	Drop from Apron Feeder Belt to Apron Feeder Discharge Chute	Baghouse	P-26-02
S-26-03	Vibrating Screen No. 1	Baghouse	P-26-02
S-26-04	Cone Crusher No. 1	Baghouse	P-26-02
S-26-05	Drop from Cone Crusher No. 1 to Bucket Elevator	Baghouse	P-26-02
S-26-06	Bucket Elevator	Baghouse	P-26-02
S-26-07	Drop from Bucket Elevator to Raw Silo Conveyor	Baghouse	P-26-01
S-26-08	Drop from Dryer No. 2 Feed Belt (B-2) to Dryer No. 2 Apron Feeder	Baghouse	P-26-03
S-26-09	Drop from Apron Feeder Belt to Apron Feeder Discharge Chute	Baghouse	P-26-04
S-26-10	Vibrating Screen No. 2	Baghouse	P-26-04
S-26-11	Cone Crusher No. 2	Baghouse	P-26-04
S-26-12	Drop from Cone Crusher No. 2 to Bucket Elevator	Baghouse	P-26-04
S-26-13	Bucket Elevator	Baghouse	P-26-04
S-26-14	Drop from Bucket Elevator to Raw Silo Conveyor	Baghouse	P-26-03
S-26-15	Drop from Raw Silo Conveyor to the Airslide Distributor	Uncontrolled	FUG
S-26-16	Drop from Pneumatic Pipe to Raw Silo No. 1	Baghouse	P-26-05
		Baghouse	P-26-06

Source	Source Description	Control	Emission Point
		Baghouse	P-26-07
S-26-17	Drop from Pneumatic Pipe to Raw Silo No. 2	Baghouse	P-26-05
		Baghouse	P-26-06
		Baghouse	P-26-07
S-26-18	Drop from Pneumatic Pipe to Raw Silo No. 4	Baghouse	P-26-05
		Baghouse	P-26-06
		Baghouse	P-26-07
S-26-19	Drop from Pneumatic Pipe to Raw Silo No. 5	Baghouse	P-26-05
		Baghouse	P-26-06
		Baghouse	P-26-07
S-26-20	Drop from Pneumatic Pipe to Belt 7-31	Uncontrolled	FUG
S-26-21	Drop from Belt No. 7-31 to Raw Silo No. 3	Baghouse	P-26-05
		Baghouse	P-26-06
		Baghouse	P-26-07
S-26-22	Drop from Pneumatic Pipe to Raw Silo No. 6	Baghouse	P-26-05
		Baghouse	P-26-06
		Baghouse	P-26-07
S-26-27	Drop from Raw Silo No. 1 to screw conveyor (leading to the blending silos)	Uncontrolled	FUG
S-26-28	Drop from Raw Silo No. 2 Weighbelt Feeder to Conveyor Belt	Baghouse	P-26-08
S-26-29	Drop from Raw Silo No. 8 Weighbelt Feeder to Conveyor Belt	Uncontrolled	FUG
S-26-30	Drop from Raw Silos No. 1, No. 2 and No. 3 to Belt 8-45	Baghouse	P-26-09
		Baghouse	P-26-13
S-26-31	Drop from Belt No. 8-45 to Belt No. 8-49	Baghouse	P-26-10
		Baghouse	P-26-12
S-26-32	Drop from Raw Silo No. 3 to Conveyor Belt leading to Finish Silos	Baghouse	P-26-10
		Baghouse	P-26-12
S-26-33	Drop from Raw Silo No. 3 to Weighbelt Feeder	Baghouse	P-26-10
		Baghouse	P-26-12
S-26-34	Drop from Raw Silo No. 4 Weighbelt Feeder to Conveyor Belt	Baghouse	P-26-10
S-26-35	Drop from Raw Silo No. 7 Weighbelt Feeder to Conveyor Belt	Uncontrolled	FUG
S-26-36	Drop from Raw Silo No. 5 Weighbelt Feeder to Conveyor Belt	Baghouse	P-26-12

Source	Source Description	Control	Emission Point
S-26-37a	Drop from Belt No. 8-47 to Belt No. 8-49	Baghouse	P-26-13
S-26-37b	Drop from Raw Silo No. 6 to Pneumatic Conveyor	Baghouse	P-26-13
S-26-38	Bucket Elevator	Baghouse	P-26-14
S-26-39a	Raw Mill	Baghouse	P-26-15
S-26-39b	Grit Separator	Baghouse	P-26-15
S-26-40	Airslide	Baghouse	P-26-15
S-26-41	Airslide from Bucket Elevators to Separator	Baghouse	P-26-15
S-26-42	Air Separator	Baghouse	P-26-17
S-26-43	Impact Flow Meter	Baghouse	P-26-14
S-26-44	Airslide	Baghouse	P-26-14
S-26-45	Airslide	Baghouse	P-26-14
S-26-46	Drop from Two-Way Gate to Belt No. 3-2	Baghouse	P-26-21
S-26-47	Drop from Belt No. 3-2 to Belt No. 3-3	Baghouse	P-26-18
S-26-48	Drop from Belt No. 3-3 to Hydraulic Roll Crusher	Baghouse	P-26-18
S-26-49	Hydraulic Roll Crusher	Baghouse	P-26-18
S-26-50	Hydraulic Roll Crusher to Belt No. 3-9	Baghouse	P-26-18
S-26-51	Drop from Belt No. 3-9 to Bucket Elevator	Baghouse	P-26-21
S-26-52	Bucket Elevator	Baghouse	P-26-21
S-26-53	Drop from Splitter Gate (top of Bucket Elevator) to Belt No. 3-3	Baghouse	P-26-21
S-26-54	Drop from Splitter Gate (top of Bucket Elevator) to Belt No. 3-12	Baghouse	P-26-18
		Baghouse	P-26-21
S-26-55	Drop from Belt No. 3-12 to Feed Hopper	Baghouse	P-26-21
S-26-56	Miscellaneous Raw Mill Equipment	Baghouse	P-26-16
S-26-57	Kiln Dust Airslide	Baghouse	P-26-22
S-26-58	Kiln Dust Airslide	Baghouse	P-26-22
S-26-59	Kiln Dust Airslide	Baghouse	P-26-22
S-26-60	Kiln Dust Collecting Bin	Baghouse	P-26-22
S-26-61	Flyash Airslide	Baghouse	P-26-23
S-26-62	Flyash Airslide	Baghouse	P-26-23

Source	Source Description	Control	Emission Point
S-26-63	Flyash Airslide	Baghouse	P-26-23
S-26-64	Flyash Collecting Bin	Baghouse	P-26-23
S-26-65	Flyash Airslide	Baghouse	P-26-24
S-26-66	Flyash Airslide	Baghouse	P-26-24
S-26-67	Flyash Airslide	Baghouse	P-26-24
S-26-68	Flyash Collecting Bin	Baghouse	P-26-24
S-26-69	Kiln Dust Airslide	Baghouse	P-26-25
S-26-70	Kiln Dust Bin	Baghouse	P-26-25
S-26-71	Flyash Airslide	Baghouse	P-26-26
S-26-72	Flyash Bin	Baghouse	P-26-26
S-26-73	Kiln Dust Airslide	Baghouse	P-26-27
S-26-74	Flyash Airslide	Baghouse	P-26-27
S-26-75	FK Pump	Baghouse	P-26-27
S-26-76	Flyash/Kiln Dust Pneumatic Transfer Line	Baghouse	P-26-28
S-26-77	Bottom Ash and Sand System	Uncontrolled	FUG

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Visible Emissions*”.

ADEM Admin. Code r. 335-3-4-.02(1), (3)

- Fugitive sources are subject to ADEM Admin. Code r. 335-3-4-.02, “*Control of Particulate Emissions – Fugitive Dust and Fugitive Emissions*”.

ADEM Admin. Code r. 335-3-4-.04(1)

- Non-fugitive sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “*Control of Particulate Emissions for Process Industries – General*”.

ADEM Admin. Code r. 335-3-14-.04 – *Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]*

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-26-01	S-26-01	PM
	S-26-07	
P-26-02	S-26-02	PM
	S-26-03	
	S-26-04	
	S-26-05	
	S-26-06	
P-26-03	S-26-08	PM
	S-26-14	
P-26-04	S-26-09	PM
	S-26-10	
	S-26-11	
	S-26-12	
	S-26-13	
P-26-05	S-26-16	PM
	S-26-17	
	S-26-18	
	S-26-19	
	S-26-21	
	S-26-22	
P-26-06	S-26-16	PM
	S-26-17	
	S-26-18	
	S-26-19	
	S-26-21	
P-26-07	S-26-22	PM
	S-26-16	
	S-26-17	
	S-26-18	
	S-26-19	
P-26-07	S-26-21	PM
	S-26-22	
	S-26-16	
P-26-08	S-26-28	PM

Emission Point	Source(s) Controlled	Pollutant
P-26-09	S-26-30	PM
P-26-10	S-26-31	PM
	S-26-32	
	S-26-33	
	S-26-34	
P-26-12	S-26-31	PM
	S-26-32	
	S-26-33	
	S-26-36	
P-26-13	S-26-30	PM
	S-26-37a	
	S-26-37b	
P-26-14	S-26-38	PM
	S-26-43	
	S-26-44	
	S-26-45	
P-26-15	S-26-39a	PM
	S-26-39b	
	S-26-40	
	S-26-41	
P-26-16	S-26-56	PM
P-26-17	S-26-42	PM
P-26-18	S-26-47	PM
	S-26-48	
	S-26-49	
	S-26-50	
	S-26-54	
P-26-21	S-26-46	PM
	S-26-51	
	S-26-52	
	S-26-53	
	S-26-54	
	S-26-55	
P-26-22	S-26-57	PM
	S-26-58	

Emission Point	Source(s) Controlled	Pollutant
P-26-23	S-26-59	PM
	S-26-60	
	S-26-61	
	S-26-62	
	S-26-63	
P-26-24	S-26-64	PM
	S-26-65	
	S-26-66	
	S-26-67	
P-26-25	S-26-68	PM
	S-26-69	
P-26-26	S-26-70	PM
	S-26-71	
P-26-27	S-26-72	PM
	S-26-73	
	S-26-74	
P-26-28	S-26-75	PM
	S-26-76	PM

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “Standards of Performance for Portland Cement Plants”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

Therefore, these sources are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

Therefore, these sources are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions points P-26-1 through P-26-8, P-26-10, P-26-13 through P-26-18, P-26-21, and P-26-28 are subject to CAM for particulate matter (PM) because the units have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six minute average.

40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six-minute average.

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.
 - Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – Process Industries - General

- The non-fugitive sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (} P \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (} P < 30 \text{ tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit No. 503-8026-X004 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-26-01	S-26-01	PM	0.01 gr/dscf
	S-26-07		
P-26-02	S-26-02	PM	0.01 gr/dscf
	S-26-03		
	S-26-04		
	S-26-05		
	S-26-06		
P-26-03	S-26-08	PM	0.01 gr/dscf
	S-26-14		
P-26-04	S-26-09	PM	0.01 gr/dscf
	S-26-10		
	S-26-11		
	S-26-12		
	S-26-13		
P-26-05	S-26-16	PM	0.01 gr/dscf
	S-26-17		
	S-26-18		
	S-26-19		

Emission Point	Source(s) Controlled	Pollutant	Limit
	S-26-21		
	S-26-22		
P-26-06	S-26-16	PM	0.01 gr/dscf
	S-26-17		
	S-26-18		
	S-26-19		
	S-26-21		
	S-26-22		
P-26-07	S-26-16	PM	0.01 gr/dscf
	S-26-17		
	S-26-18		
	S-26-19		
	S-26-21		
	S-26-22		
P-26-08	S-26-28	PM	0.01 gr/dscf
P-26-09	S-26-30	PM	0.01 gr/dscf
P-26-10	S-26-31	PM	0.01 gr/dscf
	S-26-32		
	S-26-33		
	S-26-34		
P-26-12	S-26-31	PM	0.01 gr/dscf
	S-26-32		
	S-26-33		
	S-26-36		
P-26-13	S-26-30	PM	0.01 gr/dscf
	S-26-37a		
	S-26-37b		
P-26-14	S-26-38	PM	0.01 gr/dscf
	S-26-43		
	S-26-44		
	S-26-45		
P-26-15	S-26-39a	PM	0.01 gr/dscf
	S-26-39b		
	S-26-40		
	S-26-41		

Emission Point	Source(s) Controlled	Pollutant	Limit
P-26-16	S-26-56	PM	0.01 gr/dscf
P-26-17	S-26-42	PM	0.01 gr/dscf
P-26-18	S-26-47	PM	0.01 gr/dscf
	S-26-48		
	S-26-49		
	S-26-50		
	S-26-54		
P-26-21	S-26-46	PM	0.01 gr/dscf
	S-26-51		
	S-26-52		
	S-26-53		
	S-26-54		
	S-26-55		
P-26-22	S-26-57	PM	0.01 gr/dscf
	S-26-58		
	S-26-59		
	S-26-60		
P-26-23	S-26-61	PM	0.01 gr/dscf
	S-26-62		
	S-26-63		
	S-26-64		
	S-26-65		
P-26-24	S-26-66	PM	0.01 gr/dscf
	S-26-67		
	S-26-68		
P-26-25	S-26-69	PM	0.01 gr/dscf
	S-26-70		
P-26-26	S-26-71	PM	0.01 gr/dscf
	S-26-72		
P-26-27	S-26-73	PM	0.01 gr/dscf
	S-26-74		
	S-26-75		
P-26-28	S-26-76	PM	0.01 gr/dscf

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.
 - *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p).
 - *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring

value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).

- In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.
 - The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.
 - The performance test results must be documented in a test report according to 40 CFR §63.1349(a).
 - A test plan must be made available to the Administrator prior to performance testing, if requested.
 - The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
 - There are no individual readings greater than 10 percent opacity.
 - There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources as outlined below:
 - An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.
 - If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
 - If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
 - If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within

two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.

- After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
- The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350(f) – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.
- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources (except the raw mill stacks) in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a

monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

- If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
- Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
- If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).
- If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(2)(i)-(iii) – 40 CFR Part 63 Subpart LLL

- The facility must conduct required opacity monitoring of the raw mill sweep and air separator control devices in accordance with the provisions of 40 CFR §63.1350(f)(2)(i)-(iii).
 - The facility must conduct a daily 6-minute visible emissions test of each raw mill sweep and air separator stack in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If any visible emissions are observed during a Method 22 performance test, a follow-up Method 22 test of each stack from which visible emissions were observed must be conducted within 24 hours of the initial test.

- If visible emissions are observed during a follow-up Method 22 performance test, the facility must conduct 30 minutes of opacity observations of each stack from which emissions were observed in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3), including:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications,

notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) - 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.
 - As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
 - The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) - 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

Emissions Summary

Potential emissions from these sources are shown below.

Area 26 Potential Emissions (Controlled)

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
P-26-01	S-26-01	0.79	3.44	0.67	2.92	0.24	1.03	8.89E-04
	S-26-07							
P-26-02	S-26-02	1.03	4.51	0.87	3.83	0.31	1.35	1.16E-03
	S-26-03							
	S-26-04							
	S-26-05							
	S-26-06							
P-26-03	S-26-08	0.79	3.44	0.67	2.92	0.24	1.03	8.89E-04
	S-26-14							
P-26-04	S-26-09	1.03	4.51	0.87	3.83	0.31	1.35	1.16E-03
	S-26-10							
	S-26-11							
	S-26-12							
	S-26-13							
P-26-05	S-26-16	0.91	3.98	0.77	3.38	0.27	1.19	1.03E-03
	S-26-17							
	S-26-18							
	S-26-19							
	S-26-21							
P-26-06	S-26-22	0.91	3.98	0.77	3.38	0.27	1.19	1.03E-03
	S-26-16							
	S-26-17							
	S-26-18							
	S-26-19							
	S-26-21							
P-26-07	S-26-22	0.91	3.98	0.77	3.38	0.27	1.19	1.03E-03
	S-26-16							
	S-26-17							
	S-26-18							
	S-26-19							

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
	S-26-21							
	P-26-22							
P-26-08	S-26-28	0.24	1.05	0.20	0.89	0.07	0.32	2.72E-04
P-26-09	S-26-30	0.13	0.56	0.11	0.48	3.86E-02	0.17	1.46E-04
P-26-10	S-26-31	0.26	1.15	0.22	0.98	0.08	0.35	2.98E-04
	S-26-32							
	S-26-33							
	S-26-34							
P-26-12	S-26-31	0.23	0.99	0.19	0.84	0.07	0.30	2.56E-04
	S-26-32							
	S-26-33							
	S-26-36							
P-26-13	S-26-30	0.47	2.08	0.40	1.77	0.14	0.62	5.38E-04
	S-26-37a							
	S-26-37b							
P-26-14	S-26-38	0.47	2.08	0.40	1.77	0.14	0.62	5.38E-04
	S-26-43							
	S-26-44							
	S-26-45							
P-26-15	S-26-39a	7.28	31.88	6.19	27.10	2.18	9.56	8.24E-03
	S-26-39b							
	S-26-40							
	S-26-41							
P-26-16	S-26-56	1.33	5.82	1.13	4.95	0.40	1.75	1.50E-03
P-26-17	S-26-42	1.17	5.11	0.99	4.34	0.35	1.53	1.32E-03
P-26-18	S-26-47	1.63	7.13	1.38	6.06	0.49	2.14	1.84E-03
	S-26-48							
	S-26-49							
	S-26-50							
	S-26-54							
P-26-21	S-46-46	0.86	3.75	0.73	3.19	0.26	1.13	9.71E-

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP (TPY)
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	
	S-46-51							04
	S-46-52							
	S-46-53							
	S-46-54							
	S-46-55							
P-26-22	S-26-57							3.43E-05
	S-26-58	3.03E-02	0.13	2.57E-02	0.11	9.09E-03	3.98E-02	
	S-26-59							
P-26-23	S-26-60							3.43E-05
	S-26-61							
	S-26-62	3.03E-02	0.13	2.57E-02	0.11	9.09E-03	3.98E-02	
	S-26-63							
P-26-24	S-26-64							3.43E-05
	S-26-65							
	S-26-66	3.03E-02	0.13	2.57E-02	0.11	9.09E-03	3.98E-02	
	S-26-67							
P-26-25	S-26-68							5.14E-05
	S-26-69	4.54E-02	0.20	3.86E-02	0.17	1.36E-02	5.97E-02	
P-26-26	S-26-70							5.14E-05
	S-26-71	4.54E-02	0.20	3.86E-02	0.17	1.36E-02	5.97E-02	
P-26-27	S-26-72							6.86E-05
	S-26-73							
	S-26-74	6.06E-02	0.27	5.15E-02	0.23	1.82E-02	0.08	
P-26-28	S-26-75							3.54E-04
	S-26-76	0.31	1.37	0.27	1.17	0.09	0.41	

Area 26 Potential Emissions (Fugitive)

Sources	PM		PM ₁₀		PM _{2.5}		Total HAP (TPY)
	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	
S-26-15	2.29	10.05	0.80	3.52	0.12	0.53	2.60E-03
S-26-20							
S-26-27							
S-26-29							

S-26-35								
S-26-77a								
S-26-77b								

DRAFT

Area 28: Kiln Feed Blending and Conveying

Process Description

This process was originally constructed in 1980. The kiln feed is transported from the dry raw milling system to the kiln feed blending silos. The blending silos are also part of the raw material preparation stage of the cement manufacturing process. Materials are blended in a series of silos based on production requirements. Kiln feed equipment includes a series of belt bucket elevators, distributor vessels, airlides, diverter gates, pumps, and other related equipment. Once properly blended, the kiln feed is conveyed into the elevated end of the kiln system.

Area 28 is comprised of the following sources:

Source	Source Description	Control	Emission Point
S-28-01	Belt Bucket Elevator No. 1	Baghouse	P-28-01
		Baghouse	P-28-02
S-28-02	Belt Bucket Elevator No. 2	Baghouse	P-28-01
S-28-03	Distributor Vessel for Silos No. 1 and No. 2	Baghouse	P-28-01
S-28-04	Standby Airlift at Top of Blending Silos	Baghouse	P-28-03
S-28-05	Diverter Gate at Top of Blending Silos	Baghouse	P-28-03
S-28-06	Distributor Vessel	Baghouse	P-28-02
S-28-07	Silo No. 1	Baghouse	P-28-04
S-28-08	Silo No. 2	Baghouse	P-28-05
S-28-09	Silo No. 3	Baghouse	P-28-06
S-28-10	Silo No. 4	Baghouse	P-28-07
S-28-11	24-inch Airlide	Baghouse	P-28-08a
S-28-12	Diversion Bins, Silos No. 1 and No. 2	Baghouse	P-28-08a
S-28-13	Diversion Bins, Silos No. 3 and No. 4	Baghouse	P-28-08a
S-28-14	20-inch Airlide	Baghouse	P-28-08a
S-28-15	Belt Bucket Elevator	Baghouse	P-28-08a
S-28-16	Kiln Feed Bin	Baghouse	P-28-08a
S-28-17	FK Pump No. 1 Impact Flow Meter	Baghouse	P-28-08b
S-28-18	FK Pump No. 1 To Preheater String No. 1	Baghouse	P-28-08b
S-28-19	FK Pump No. 2 Impact Flow Meter	Baghouse	P-28-08b
S-28-20	FK Pump No. 2 To Preheater String No. 2	Baghouse	P-28-08b
S-28-21	Standby FK Pump Impact Flow Meter	Baghouse	P-28-08b
S-28-22	Standby F.K. Pump	Baghouse	P-28-08b
S-28-23	Standby Airlift at Bottom of Blending Silos	Baghouse	P-28-09

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Visible Emissions*”.

ADEM Admin. Code r. 335-3-4-.04(1)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “*Control of Particulate Emissions for Process Industries – General*”.

ADEM Admin. Code r. 335-3-14-.04 – *Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]*

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-28-01	S-28-01	PM
	S-28-02	
	S-28-03	
P-28-02	S-28-01	PM
	S-28-06	
P-28-03	S-28-04	PM
P-28-04	S-28-05	PM
	S-28-07	
P-28-05	S-28-08	PM
P-28-06	S-28-09	PM
P-28-07	S-28-10	PM
P-28-08a	S-28-11	PM
	S-28-12	
	S-28-13	
	S-28-14	
	S-28-15	
	S-28-16	
P-28-08b	S-28-17	PM
	S-28-18	

Emission Point	Source(s) Controlled	Pollutant
	S-28-19	
	S-28-20	
	S-28-21	
	S-28-22	
P-28-09	S-28-23	PM

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “*Major Source Operating Permits*”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “*Standards of Performance for Portland Cement Plants*”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

These sources include raw material storage and conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 60, Subpart A, “*General Provisions*”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “*General Provisions*”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

These sources include raw material storage bins and conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions points P-28-1, P-28-2, P-28-3, and P-28-8(a)&(b) are subject to CAM for particulate matter (PM) because the units have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six minute average.

40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six-minute average:

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.
 - Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – *Process Industries - General*

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (} P \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (} P < 30 \text{ tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]"

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit No. 503-8026-X005 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-28-01	S-28-01	PM	0.01 gr/dscf
	S-28-02		
	S-28-03		
P-28-02	S-28-01	PM	0.01 gr/dscf
	S-28-06		
P-28-03	S-28-04	PM	0.01 gr/dscf
P-28-04	S-28-05	PM	0.01 gr/dscf
	S-28-07		
P-28-05	S-28-08	PM	0.01 gr/dscf
P-28-06	S-28-09	PM	0.01 gr/dscf
P-28-07	S-28-10	PM	0.01 gr/dscf
P-28-08a	S-28-11	PM	0.01 gr/dscf
	S-28-12		
	S-28-13		
	S-28-14		
	S-28-15		
	S-28-16		
P-28-08b	S-28-17	PM	0.01 gr/dscf
	S-28-18		
	S-28-19		
	S-28-20		
	S-28-21		
	S-28-22		
P-28-09	S-28-23	PM	0.01 gr/dscf

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.
 - *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by §63.1350(p).
 - *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).

- In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.
- The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.
- The performance test results must be documented in a test report according to 40 CFR §63.1349(a).
- A test plan must be made available to the Administrator prior to performance testing, if requested.
- The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
 - There are no individual readings greater than 10 percent opacity.
 - There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources as outlined below:
 - An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.
 - If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
 - If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
 - If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may

include, but may not be limited to, applying water to the materials being handled within the system.

- After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
- The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.
- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

- If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
- If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
- Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
- If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).
- If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3), including:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;

- Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
- Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications, notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) - 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.

- As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
- The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) - 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

Emissions Summary

Pre-control potential, allowable, and expected PM emissions from each source within this Area are summarized in the following tables. All sources of emissions from this process are controlled.

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
P-28-01	S-28-01	1.29	5.63	1.09	4.79	0.39	1.69	1.46E-03
	S-28-02							
	S-28-03							
P-28-02	S-28-01	1.29	5.63	1.09	4.79	0.39	1.69	1.46E-03
	S-28-06							
P-28-03	S-28-04	1.29	5.63	1.09	4.79	0.39	1.69	1.46E-03
	S-28-05							
P-28-04	S-28-07	0.14	0.60	0.12	0.51	4.11E-02	0.18	1.55E-04
P-28-05	S-28-08	0.14	0.60	0.12	0.51	4.11E-	0.18	1.55E-

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
						02		04
P-28-06	S-28-09	0.14	0.60	0.12	0.51	4.11E-02	0.18	1.55E-04
P-28-07	S-28-10	0.14	0.60	0.12	0.51	4.11E-02	0.18	1.55E-04
P-28-08a	S-28-11	0.69	3.00	0.58	2.55	0.21	0.90	7.76E-04
	S-28-12							
	S-28-13							
	S-28-14							
	S-28-15							
	S-28-16							
P-28-08b	S-28-17	0.44	1.92	0.37	1.63	0.13	0.58	4.97E-04
	S-28-18							
	S-28-19							
	S-28-20							
	S-28-21							
	S-28-22							
P-28-09	S-28-23	0.18	0.81	0.16	0.69	5.53E-02	0.24	2.09E-04

Area 29: Kiln, Clinker Cooler, and Rotary Dryers

Process Description

This process was originally constructed in 1980. Holcim operates a preheater/pre-calciner fry process rotary kiln with the flexibility to operate in a dual string or single string preheater mode depending on market demands.

Kiln feed from the blending system descends by gravity, against a flow of hot gases, from the top of the preheater tower. During this process, the temperature is raised progressively to 1,560° F. As a result, limestone is de-carbonated into lime. At the bottom of the tower, a combustion chamber called a *pre-calciner* provides an additional combustion zone, increasing the overall efficiency of the process. The heat needed to complete the calcining process is provided primarily by fuel directly added to the pre-calciner chamber, and partially by an air stream ducted directly from the clinker cooler (“tertiary air”). After the pre-calcining phase, the material passes into the kiln. Hot gases exiting the preheater are routed back into the twin rotary dryers to facilitate the raw material drying process.

The kiln is comprised of a steel tube lined with firebrick. The tube slopes slightly and slowly rotates on its axis. Raw material exiting the pre-calciner is fed in at the upper end of the kiln. Rotation causes the material, in nearly liquid form, to gradually move downhill to the other end of the kiln. A coal mill pulverizes solid fuel into a fine powder prior to being blown into the opposite end of the kiln, developing a long flame with temperatures exceeding 3,000° F. During this stage, chemical recombination occurs, producing the intermediate product referred to as *clinker*. The clinker, still at 2,600° F, is then discharged from the kiln into the clinker cooler, where ambient air is injected to reduce the temperature to approximately 200° F.

Holcim primarily combusts coal in the kiln system. In addition, the kiln is permitted to combust several alternative fuels including, but not limited to, the following: pet-coke, fuel oil, natural gas, wood byproducts, paper products, tire derived fuel (TDF), grease, oil absorbents, biodiesel byproducts, tab shingles, carbon derived fuels, on- and off-spec used oils, glycols, shredded plastics, and BD Heavies.

Hot gases exiting the rotary dryers, kiln, and cooler system are controlled by two baghouses before exiting at a single stack. A selective non-catalytic reduction (SNCR) system is used to control NO_x emissions. A portion of the kiln exhaust is routed to the coal mill and vented through the coal mill stack (P-95-02). Kiln dust from the baghouses is conveyed to the raw mill silos via a pneumatic system and fed back into the process. The dryers are equipped with a natural gas-fired backup heater with a rated heat input of 0.10 MMBtu/hr that provides supplemental heat for raw material drying when required.

Area 29 is comprised of the following sources:

Source	Source Description	Control Device	Emission Point
S-29-01	Rotary Cement Kiln	Baghouse	P-29-01

Source	Source Description	Control Device	Emission Point
S-29-02	Clinker Cooler	Baghouse	P-29-01
S-29-03	Dryer No. 1	Baghouse	P-29-01
S-29-04	Dryer No. 2	Baghouse	P-29-01

Emissions from these sources (stack P-29-01) as well as the coal mill stack (P-95-02) are monitored as follows:

Pollutant	Compliance Method
Opacity	COMS
Particulate Matter (PM)	Method 5 – 12-Month Testing (both stacks) CPMS (main stack)
Total Hydrocarbons (THC)	CEMS (main stack) Method – 30-Month Testing (coal mill stack)
Dioxins/Furans (D/F)	Method 23 – 30-Month Testing Kiln Baghouse Inlet Temperature Monitor
Mercury (Hg)	CEMS (main stack) Method 29/30B – 12-Month Testing (coal mill stack)
Hydrogen Chloride (HCl)	CEMS (main stack)
Carbon Monoxide (CO)	CEMS (main stack)
Nitrogen Oxides (NO _x)	CEMS (main stack)
Sulfur Dioxide (SO ₂)	CEMS (main stack)
Volatile Organic Compounds (VOC)	CEMS (main stack)

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.

ADEM Admin. Code r. 335-3-16-.05

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.05, “Permit Content”.

ADEM Admin. Code r. 335-3-4-.01

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01, “*Control of Particulate Emissions – Visible Emissions*”.

ADEM Admin. Code r. 335-3-4-.04(1)

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04, “*Control of Particulate Emissions for Process Industries – General*”.

ADEM Admin. Code r. 335-3-4-.11(1)

- The kiln system is subject to ADEM Admin. Code r. 335-3-4-.11, “*Control of Particulate Emissions – Cement Plants*”.

ADEM Admin. Code r. 335-3-8-.01(1)

- The requirements of ADEM Admin. Code r. 335-3-8-.01, “*Control of Nitrogen Oxide Emissions: Standards for Portland Cement Kilns*”, apply only to Portland cement kilns in the Counties of Autauga, Bibb, Blount, Calhoun, Chambers, Cherokee, Chilton, Clay, Cleburne, Colbert, Coosa, Cullman, Dallas, DeKalb, Elmore, Etowah, Fayette, Franklin, Greene, Hale, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Lee, Limestone, Macon, Madison, Marion, Marshall, Morgan, Perry, Pickens, Randolph, Russell, Shelby, St. Clair, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, and Winston. The facility is located in Mobile County, so the kiln is not subject to this rule.

ADEM Admin. Code r. 335-3-14-.04 – *Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]*

- These sources have enforceable SO₂, NO_x, CO, and VOC emissions limits in place in order to prevent them from being subject to this requirement [Anti-PSD].

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each kiln including alkali bypasses and in-line coal mills, except for kilns that burn hazardous waste and are subject to and regulated under 40 CFR Part 63, Subpart EEE; each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant; and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

These sources are subject to this subpart. The kiln, clinker cooler, and alkali bypass all vent to the same stack (P-29-01). A portion of the kiln gases are vented to the coal mill stack (P-95-02).

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR Part 63, Subpart DDDDD, “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters”

- 40 CFR §63.7485 states this subpart applies to industrial, commercial, or institutional boilers or process heaters as defined in 40 CFR §63.7575 located at a major source of HAP.

40 CFR §63.7575 defines a process heater as “an enclosed device using controlled flame, and the unit’s primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials.”

Since combustion gases in the 0.10 MMBtu/hr natural gas-fired dryer backup heater come into direct contact with process materials, it does not meet the definition of process heater. Therefore, it is not subject to the requirements of this subpart.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “Standards of Performance for Portland Cement Plants”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

Therefore, these sources are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

The kiln has potential to emit PM, CO, SO₂, NO_x, and VOC in quantities over the major source limits; however, the kiln only utilizes control devices in order to comply with PM and NO_x emission limits. Therefore, CAM would not apply for CO, SO₂, and VOC.

Per 40 CFR 64.2(b)(1)(vi), the requirements of CAM shall not apply to emission limitations for which a Title V permit specifies a continuous compliance determination method. Because the Title V requires that compliance with the NO_x limit be determined by a continuous emission monitoring system (CEMS), CAM would not apply for NO_x.

Per 40 CFR 64.4(b), the facility is not required to justify the appropriateness of monitoring for the purposes of CAM if said monitoring is “presumptively acceptable”. Per 40 CFR 64.4(b)(4), presumptively acceptable monitoring includes monitoring included for standards exempt from this part pursuant to 40 CFR 64.2(b)(1)(i) or (vi) to the extent such monitoring is applicable to the performance of the control device (and associated capture system). The kiln is subject to a PM limit via NESHAP LLL, which is exempt from CAM per 40 CFR 64.2(b)(1)(i). Therefore, the PM monitoring requirements in NESHAP LLL meet the definition of “presumptively acceptable monitoring”, and the facility complies with the requirements for CAM for PM by complying with the requirements in NESHAP LLL.

Emissions Standards

Carbon Monoxide

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- Carbon monoxide (CO) emissions from the kiln system shall not exceed 17,637 TPY on a twelve (12) month rolling basis, as determined by the certified CO CEMS hourly averages [Anti-PSD, Air Permit No. 503-8026-X021 issued February 4, 2003].

Dioxins/Furans

40 CFR §63.1343(b)(1) – 40 CFR Part 63, Subpart LLL

- The kiln system shall not discharge to the atmosphere dioxins/furans (D/F) emissions in excess of the following during normal operation.
 - 0.2 ng/dscm (TEQ); or
 - 0.40 ng/dscm (TEQ) when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 °C (400 °F) or less.

Hydrogen Chloride

40 CFR §63.1343(b)(1) – 40 CFR Part 63, Subpart LLL

- The kiln system shall not discharge to the atmosphere HCl emissions in excess of 3 ppmvd during normal operation.

Mercury

40 CFR §63.1343(b)(1) – 40 CFR Part 63, Subpart LLL

- The kiln system shall not discharge to the atmosphere Hg emissions in excess of 55 lb/MM tons clinker during normal operation.

Nitrogen Oxides

ADEM Admin. Code r. 335-3-14-.01(1)(g), “General Provisions – Air Permit”

- Nitrogen oxide (NO_x) emissions from the kiln system shall not exceed 1,881 TPY on a twelve (12) month rolling basis, as determined by the certified NO_x CEMS hourly averages [Air Permit No. 503-8026-X026 issued November 24, 2021].

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six minute average. During one six-minute period in any sixty minute period, the facility

may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- The opacity of emissions from these sources shall not exceed twenty (20%) percent, on a six (6) minute average, as determined by the Continuous Opacity Monitoring System (COMS) [BACT, Air Permit No. 503-8026-X006 issued July 17, 1984].

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – Process Industries - General

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “Process Industries – General”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (P} \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (P} < 30 \text{ tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- Particulate matter (PM) emissions from the kiln system shall not exceed 93.0 pounds per hour (lb/hr) [BACT, Air Permit No. 503-8026-X006 issued July 17, 1984].

ADEM Admin. Code r. 335-3-4-.11 – Cement Plants

- Per ADEM Admin. Code r. 335-3-4-.11(4), this regulation requires a particulate limit of 0.30 lb/ton of kiln feed (maximum 2-hour average) from any kiln and 0.10 lb/ton of kiln feed (maximum 2-hour average) from any clinker cooler. Since the kiln and clinker cooler share a stack (P-29-01), the more stringent limit would apply.

40 CFR §60.62(a)(1) - 40 CFR Part 60, Subpart F

- The facility may not discharge into the atmosphere from the kiln any gases that contain PM in excess of 0.30 pounds per ton of feed (dry basis) to the kiln.

40 CFR §60.62(b)(1) - 40 CFR Part 60, Subpart F

- The facility may not discharge into the atmosphere from the clinker cooler any gases that contain PM in excess of 0.10 pounds per ton of feed (dry basis) to the kiln. Since the kiln and clinker cooler share a stack (P-29-01), the more stringent limit would apply.

40 CFR §63.1343(b)(1) – 40 CFR Part 63, Subpart LLL

- The kiln system shall not discharge to the atmosphere particulate matter emissions in excess of 0.07 pounds per ton of clinker during normal operation.

Sulfur Dioxide

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- Sulfur dioxide (SO₂) emissions from the kiln system shall not exceed 118 tons per year (TPY) on a twelve (12) month rolling basis, as determined by the certified SO₂ Continuous Emissions Monitoring System (CEMS) hourly averages [Anti-PSD, Air Permit No. 503-8026-X021 issued January 26, 2005].

Total Hydrocarbons

40 CFR §63.1343(b)(1) – 40 CFR Part 63, Subpart LLL

- The kiln system shall not discharge to the atmosphere total hydrocarbon (THC) emissions in excess of 24 ppmvd (measured as propane) during normal operation. The facility may elect to meet an alternative limit of 12 ppmvd for total organic hazardous air pollutants (OHAP).

Volatile Organic Compounds

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- Volatile organic compound (VOC) emissions from the kiln system shall not exceed 2,116 TPY on a twelve (12) month rolling basis, as determined by the certified VOC CEMS hourly averages [Anti-PSD, Air Permit No. 503-8026-X021 issued February 4, 2003].

Operational

40 CFR §63.1346(a), (b) – 40 CFR Part 63, Subpart LLL

- The kiln must be operated such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) does not exceed the applicable temperature

limits as specified in 40 CFR §63.1349(b)(3)(iv), except during periods of startup and shutdown when the temperature limits may be exceeded by no more than 10 percent.

40 CFR §63.1346(g)(1)-(4) – 40 CFR Part 63, Subpart LLL

- During startup the facility must use any one or combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, synthesis gas (syngas), and ultra-low sulfur diesel (ULSD) until the kiln reaches a temperature of 1,200 degrees Fahrenheit.
- Combustion of the primary kiln fuel may commence once the kiln temperature reaches 1,200 degrees Fahrenheit.
- All dry sorbent and activated carbon systems that control hazardous air pollutants must be turned on and operating at the time the gas stream at the inlet to the baghouse reaches 300 degrees Fahrenheit (five-minute average) during startup. Temperature of the gas stream is to be measured at the inlet of the baghouse every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown.
- The facility must keep records as specified in 40 CFR §63.1355 during periods of startup and shutdown

40 CFR §63.1347(a)(1)-(3) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.
 - Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.
 - Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln raw mill located at the facility at least once per year.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

40 CFR §241.3(d), §241.4 – 40 CFR Part 241

- The Permittee is authorized to burn as fuel non-hazardous secondary materials listed in 40 CFR §241.4 or that meet the non-waste criteria specified in 40 CFR §241.3(d).

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – *Sampling and Testing Methods*

- If testing is required, particulate matter (PM) emissions shall be determined in accordance with Method 5 of 40 CFR Part 60, Appendix A-3.
- If testing is required, sulfur dioxide (SO₂) emissions shall be determined in accordance with Method 6 or 6C of 40 CFR Part 60, Appendix A-4.
- If testing is required, nitrogen oxides (NO_x) emissions shall be determined in accordance with Method 7 or 7E of 40 CFR Part 60, Appendix A-4.
- If testing is required, Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- If testing is required, carbon monoxide (CO) emissions shall be determined in accordance with Method 10 of 40 CFR Part 60, Appendix A-4.
- Instantaneous visible emissions observations (VEO) shall be conducted in accordance with Method 22 40 CFR Part 60, Appendix A-7.
- If testing is required, dioxins/furans (D/F) emissions shall be determined in accordance with Method 23 of 40 CFR Part 60, Appendix A-7.
- If testing is required, volatile organic compound (VOC) and total hydrocarbon (THC) emissions shall be determined in accordance with Method 25A of 40 CFR Part 60, Appendix A-7.
- If testing is required, total organic HAP emissions shall be determined in accordance with Method 320 of 40 CFR Part 63, Appendix A, Method 18 of 40 CFR Part 60, Appendix A, ASTM D6348-03, or a combination thereof.

- If testing is required, hydrogen chloride (HCl) emissions shall be determined in accordance with Method 321 of 40 CFR Part 63, Appendix A.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity and particulate matter standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”, including 40 CFR §63.1348(a), (b), (c), and (d).

Regulation	Description
§63.1348(a)	Initial performance test requirements – use test methods and procedures in §63.1349 and §63.7.
§63.1348(a)(1)	PM compliance – test methods and procedures in §63.1349(b)(1).
§63.1348(a)(3)(i)	D/F compliance – test methods and procedures in §63.1349(b)(3).
§63.1348(a)(3)(ii)	Meet temperature operating limits using test methods and procedures in §63.1349(b)(3)(ii)-(iv).
§63.1348(a)(3)(iii)	Meet ACI operating limits using test methods and procedures in §63.1349(b)(3)(v).
§63.1348(a)(3)(iv)	For ACI, develop carrier gas parameter that meets requirements of §63.1349(b)(3)(vi).
§63.1348(a)(4)(i)	THC compliance – test methods and procedures in §63.1349(b)(4)(i).
§63.1348(a)(4)(ii)	THC compliance using oHAP – test methods and procedures in §63.1349(b)(7).
§63.1348(a)(4)(iii)	Initial THC compliance tests with raw mill on/off.
§63.1348(a)(4)(iv)-(v)	Initial THC compliance using time weighted average total oHAP concentration.
§63.1348(a)(5)(i)-(ii)	Mercury compliance - test methods and procedures in §63.1349(b)(5); operate Hg CEMS or sorbent trap system.
§63.1348(a)(6)(i)-(ii)	HCl compliance - test methods and procedures in §63.1349(b)(6); establish operating parameters for dry scrubbers or operate HCl CEMS
§63.1348(a)(7)(i)-(ii)	Commingled exhaust requirements.
§63.1348(b)	Continuous monitoring requirements – using test methods and

	procedures in §63.1350 and §63.8.
§63.1348(b)(1)(i)-(iv)	General requirements for monitoring and collecting data.
§63.1348(b)(2)	PM compliance – use monitoring methods and procedures in §63.1350(b) and (d).
§63.1348(b)(4)	D/F compliance – use CMS to record temperature per §63.1350(g).
§63.1348(b)(5)(i)-(ii)	Activated carbon injection (ACI) compliance – use CMS to record carbon injection rate per §63.1350(h)(1) and gas parameter per §63.1350(h)(2).
§63.1348(b)(6)(i)-(ii)	THC compliance – use monitoring methods and procedures in §63.1350(i) and (j).
§63.1348(b)(7)(i)-(ii)	Mercury compliance – use monitoring methods and procedures in §63.1350(k); use §63.1348(a)(5) for sorbent trap systems.
§63.1348(b)(8)(i)-(iv)	HCl compliance – use test methods and procedures in §63.1349(b)(6); use monitoring methods in §63.1350(l)(1); for dry sorbent injection use monitoring methods in §63.1350(l)(2); may use SO ₂ CEMS per §63.1350(l)(3) as an alternative for HCl.
§63.1348(b)(9)	Startup and shutdown compliance.
§63.1348(c)(1), (2)(i)-(iv)	Changes in operations.
§63.1348(d)	General duty to minimize emissions.

40 CFR §63.1349 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Performance testing requirements*”, including 40 CFR §63.1349(a), (b), (c), and (d).

Regulation	Description
§63.1349(a)(1)-(10)	Performance test result documentation.
§63.1349(b)(1)(i)-(ix)	PM emissions tests - use Method 5 or 5I for annual emissions tests; use a PM CPMS for continuous monitoring.
§63.1349(b)(3)(i)-(vi)	D/F emissions tests – use Method 23 for emissions tests.
§63.1349(b)(4)(i)-(v)	THC emissions tests – use a CEMS per §63.1350(i); may conduct oHAP testing instead.
§63.1349(b)(5)(i)-(ii)	Mercury emissions tests – use a CEMS or sorbent trap system per §63.1350(k).
§63.1349(b)(6)(i)-(iv)	HCl emissions tests – use Method 321 for emissions tests unless using CEMS; use CMS to monitor sorbent injection rate for dry scrubbers; may use SO ₂ CEMS as alternative.
§63.1349(b)(7)(i)-(xiii)	Total oHAP emissions tests – use Method 320, Method 18, ASTM D6348-03, or a combination for emissions tests every

	30 months; use THC CEMS to meet site-specific operating limit per §63.1350(j).
§63.1349(b)(8)(i)-(x)	HCl emissions tests with SO ₂ monitoring – establish SO ₂ operating limit during HCl testing.
§63.1349(c)	Performance test frequency – D/F, oHAP (if applicable), and HCl (unless using CEMS) tests every 30 months; PM tests every 12 months.
§63.1349(d)	Conduct performance tests under representative conditions.

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- Compliance with the applicable NO_x, CO, VOC and SO₂ emissions limitations shall be determined by CEMS. [Anti-PSD, Air Permit No. 503-8026-X021 issued February 4, 2003, Air Permit No. 503-8026-X026 issued May 9, 2018 and Air Permit 503-8026-X026 reissued November 24, 2021].

ADEM Admin. Code r. 335-3-14-.01(1)(g), “General Provisions – Air Permit”

- In order to demonstrate compliance with the 12-month rolling emission limit for NO_x, the facility shall operate and maintain a NO_x continuous emissions monitoring system (CEMS) and comply with all applicable quality assurance requirements in 40 CFR Part 60, Appendices B and F, for such CEMS. A CEMS shall be the total equipment and software required to sample, condition, analyze, and provide a record of NO_x emission rates. The CEMS must be installed, calibrated, operated, and maintained in accordance with 40 CFR Part 60, Appendix B and Appendix F, and 40 CFR §60.13 [Air Permit No. 503-8026-X026 issued November 24, 2021].
- All emissions from the kiln shall be measured using the NO_x CEMS, including emissions during periods of startup, shut down, and malfunction. During any times that the CEMS is inoperable or otherwise not measuring emissions from the kiln, the facility shall apply the missing data substitution procedures in 40 CFR Part 75, Subpart D [Air Permit No. 503-8026-X026 issued November 24, 2021].
- In order to assure compliance is maintained with the 12-month rolling emission limitation for NO_x of 1,881 tons, the facility shall operate and maintain its selective non-catalytic reduction (SNCR) system, utilizing ammonia-based reagent for the purpose of controlling NO_x emissions. The SNCR shall be operated as necessary to assure compliance with the 12-month rolling emission limitation and in a manner consistent with good engineering practices, including to minimize ammonia slip [Air Permit No. 503-8026-X026 issued November 24, 2021].

Monitoring Requirements

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- The Permittee is required to calibrate, maintain, and operate continuous emissions monitoring systems to measure NO_x, SO₂, CO, and VOC emissions from the stack associated with these sources. Each CEMS shall meet applicable specifications and procedures outlined in 40 CFR Part 60, Appendix B, and shall be certified and maintained in accordance with these procedures. Continued quality assurance shall be demonstrated with the procedures set forth in 40 CFR Part 60, Appendix F [Anti-PSD, Air Permit No. 503-8026-X021 issued February 4, 2003].

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- If the measured six (6) minute average opacity exceeds the applicable opacity standard, as determined by the COMS, corrective action, if necessary, shall be initiated within two (2) hours in order to reduce visible emissions.
- If the measured six (6) minute average opacity exceeds the applicable opacity standard, as determined by the COMS, in excess of five (5%) percent of the total source operating time during any calendar semiannual period, the Department may require additional PM emissions testing to be conducted prior to the next semiannual period.
- If measured SO₂, NO_x, CO, and/or VOC emissions exceed the applicable emissions standard, as determined by the CEMS, in excess of five (5%) percent of the total source operating time during any calendar semiannual period, the Department may require additional emissions testing prior to the next semiannual period.
- Particulate matter emissions tests are to be conducted for this source at an interval not to exceed twelve (12) months.
- When operating under the single string operating scenario, the Permittee is required to inspect and maintain the isolated, not-in-use string of the preheater as needed to ensure the isolated string remains in good operating condition.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. The requirements of this subpart are superseded by more stringent standards elsewhere.

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”, including the requirements in 40 CFR §63.1350(a), (b), (d), (g), (h), (i), (j), (k), (l), (m), (n), (o), and (p):

Regulation	Description
§63.1350(a)(1), (3), (4)	General monitoring requirements.
§63.1350(b)(1)	PM monitoring requirements – use a CPMS to meet a site-specific operating limit; retest and re-establish operating limit within 30 days of exceedance.
§63.1350(d)(1)-(4)	Clinker production monitoring requirements.
§63.1350(g)(1)-(5)	D/F monitoring requirements – use CMS to monitor PMCD inlet temperature.
§63.1350(h)(1)-(2)	Monitoring requirements for sources using sorbent injection – use CMS to monitor carbon injection rate and carrier gas parameter.
§63.1350(i)(1)-(2)	THC monitoring requirements – use CEMS to monitor THC emissions from kiln; use Method 25A testing on bypass/coal mill stacks every 30 months.
§63.1350(j)	Total oHAP monitoring requirements – use CEMS to monitor THC emissions.
§63.1350(k)(1)-(5)	Mercury monitoring requirements – use CEMS or sorbent trap system to monitor Hg emissions; use Method 29 or 30B testing on bypass/coal mill every 11-13 months unless criteria are met for 30-month testing.
§63.1350(l)(1)-(4)	HCl monitoring requirements – use HCl CEMS; if using dry scrubber, may monitor SO ₂ with CMS instead.
§63.1350(m)(1)-(4), (8)	Parameter monitoring requirements for operating limits that require CMS.
§63.1350(n)(1)-(2), (4)-(10)	Continuous flow rate monitoring systems.
§63.1350(o)(1)-(6)	Alternate monitoring requirements approval.
§63.1350(p)(1)-(4)	Development and submittal (upon request) of monitoring plans – requirements for developing a site-specific monitoring plan.

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the causes and quantities of excess emissions and any corrective actions taken to reduce/eliminate said emissions shall be maintained for a period of at least five (5) years from the date of generation and shall be made available to the permitting authority upon request.

- All the original data charts, performance evaluations, calibration checks, adjustment and maintenance records and other information regarding the COMS and CEMS will be maintained in a permanent form suitable for inspection. These records shall be maintained for a period of at least five (5) years from the date of generation and shall be made available to the permitting authority upon request.
- Records of inspections and maintenance performed on the isolated, not-in-use string of the preheater shall be maintained for a period of at least five (5) years from the date of generation and shall be made available to the permitting authority upon request.

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- The Permittee shall maintain a departmentally approved data substitution plan for all CEMS. These data substitution procedures shall adequately account for emissions during periods of monitor downtime. If the Permittee wishes to make changes to the data substitution plan, it must be submitted to and approved by the Department prior to implementation F [Anti-PSD, Air Permit No. 503-8026-X021 issued February 4, 2003].

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “Recordkeeping and reporting requirements”. There are no recordkeeping requirements for these sources under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “Recordkeeping requirements”, including the requirements in 40 CFR §63.1355(a), (b), (c), (e), (f), (g), and (h):

Regulation	Description
§63.1355(a)	Maintain records in an available form for at least 5 years.
§63.1355(b)(1)-(3)	Maintain records of notifications, applicability determinations, and waivers.
§63.1355(c)	Maintain records for CMS per §63.10(c).
§63.1355(e)	Daily clinker production rate records.
§63.1355(f)	Startup and shutdown period records.
§63.1355(g)(1)-(2)	Malfunction period records.
§63.1355(h)	Emissions limit and operating parameter limit exceedance records.

ADEM Admin. Code r. 335-3-14-.01(1)(g), “General Provisions – Air Permit”

- The facility shall maintain the following records on-site for kiln and SNCR operation [Air Permit No. 503-8026-X026 issued November 24, 2021]:
 - Kiln production in tons of clinker and the method under 40 CFR §63.1350(d) used to calculate kiln production;
 - SNCR reagent injection rate;
 - NO_x mass emission rate and lb/ton emission rate;
 - Flue gas volumetric flow rate (daily average in dry actual cubic feet per minute (ACFM));
 - Documentation of any startup, shutdown, or malfunction events and gaps in the data in this paragraph.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - The magnitude of emissions in excess of twenty (20%) percent opacity, computed on six (6) minute averages. Data recorded during periods of opacity monitoring system breakdowns, repairs, calibration checks and zero and span adjustments shall not be included in the data averages.
 - The date and time of commencement and completion of each period of excess opacity.
 - The nature and cause of the excess opacity, if known, and a description of any corrective actions or preventative measures implemented during the reporting period.
 - The date and time identifying each period during which the opacity monitoring system was inoperative, except for zero and span checks, and the nature of any system repairs or adjustments.

- When no excess emissions have occurred and the opacity monitoring system was not inoperative or did not require repairs or adjustments, such information shall be stated in the report.
- Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
- Signature of the responsible official as required by General Permit Proviso No. 9.
- A written report summarizing excess SO₂, NO_x, CO, and VOC emissions from the stack associated with these sources shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	July 31 st
July 1 st through December 31 st	January 31 st

- Each semiannual excess emissions report shall include the following information:
 - The magnitude of SO₂ emissions, as determined by the CEMS, in excess of 118 tons during any consecutive twelve (12) month period.
 - The magnitude of NO_x emissions, as determined by the CEMS, in excess of 2,998 tons during any consecutive twelve (12) month period.
 - The magnitude of CO emissions, as determined by the CEMS, in excess of 17,637 tons during any consecutive twelve (12) month period.
 - The magnitude of VOC emissions, as determined by the CEMS, in excess of 2,116 tons during any consecutive twelve (12) month period.
 - The date and time of commencement and completion of each period of excess emissions.
 - The nature and cause of any excess emissions, if known, and a description of any corrective actions or preventative measures implemented during the reporting period.
 - The date and time identifying each period during which the each emissions monitoring system was inoperative, except for zero and span checks, and the nature of any system repairs or adjustments.

- Data recorded during periods of monitoring system breakdowns, repairs, calibration checks and zero and span adjustments shall not be included in the data averages.
- When no excess emissions have occurred and each emissions monitoring system was not inoperative or did not require repairs or adjustments, such information shall be stated in the report.
- Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
- Signature of the responsible official as required by General Permit Proviso No. 9.
- The Department shall be notified at least 10 days in advance of changes between the single string and dual string preheater operating scenarios.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. The reporting requirements under this subpart are satisfied by the reporting requirements of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”, including the requirements in 40 CFR §63.1353(a) and (b):

Regulation	Description
§63.1353(a)	Part 63, Subpart A notification provisions listed in Table 1.
§63.1353(b)(1)-(6)	Notification requirements per §63.9.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”, including the requirements in 40 CFR §63.1354(a), (b), and (c):

Regulation	Description
§63.1354(a)	Part 63, Subpart A reporting provisions listed in Table 1.
§63.1354(b)(1)-(2), (6), (8), (9), (10), (11), (12)	Reporting requirements per §63.10.
§63.1354(c)	Report failures to meet emissions limits in semiannual reports.

Emissions Summary

Emissions from the kiln, rotary dryers, and cooler are routed to a single main stack. A portion of the kiln exhaust is diverted to the coal mill and vents to the coal mill stack (P-95-02). Emissions pass through a baghouse, which controls particulate matter (PM) emissions. A selective non-catalytic reduction (SNCR) system is used to control NO_x emissions.

Area 29 Potential Emissions

Emission Point	Associated Sources	Pollutant	Emissions	
			lb/hr	TPY
P-29-01	S-29-01 S-29-02 S-29-03 S-29-04	PM	25.21	110.4
		PM ₁₀	21.18	92.77
		PM _{2.5}	11.35	49.70
		PM _{con}	6.15	26.94
		NO _x	429.45	1,881.0
		CO	4,026.7	17,637.0
		SO ₂	26.9	118.0
		VOC	483.1	2,116.0
		D/F	3.18E-06	1.39E-05
		HCl	6.58	28.84
		Pb	1.05E-02	4.61E-02
		Hg	1.11E-02	4.85E-02
		CO _{2e}	392,909	1,720,940

* Emissions from the main kiln stack (P-29-01) include kiln emissions vented to the coal mill stack (P-95-02).

Area 34: Clinker Cooler Conveying

Process Description

This process was originally constructed in 1980. Clinker cooler conveying is part of the post-kiln product cement finishing process. After the clinker is cooled in the clinker cooler, it is conveyed to the finish mills or stored in clinker silos. This process includes vibrating feeders and bucket conveyors.

Area 34 is comprised of the following sources:

Source	Source Description	Control	Emission Point
S-34-01	Bypass System Vibrating Feeder	Baghouse	P-34-01
S-34-02	Bypass System Vibrating Feeder	Baghouse	P-34-01
S-34-03	North Deep Bucket Conveyor	Baghouse	P-34-01
		Baghouse	P-35-01
S-34-04	South Standby Deep Bucket Conveyor	Baghouse	P-34-01
		Baghouse	P-35-02

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Visible Emissions*”.

ADEM Admin. Code r. 335-3-4-.04(1)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “*Control of Particulate Emissions for Process Industries – General*”.

ADEM Admin. Code r. 335-3-14-.04 – Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-34-01	S-34-01	PM
	S-34-02	
	S-34-03	
	S-34-04	

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “Standards of Performance for Portland Cement Plants”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

These sources include conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

These sources include conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions point P-34-1 is subject to CAM for particulate matter (PM) because the unit have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six minute average.

40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six-minute average:

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.
 - Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – *Process Industries - General*

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (} P \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (} P < 30 \text{ tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit No. 503-8026-X010 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-34-01	S-34-01	PM	0.01 gr/dscf
	S-34-02		
	S-34-03		
	S-34-04		

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.

- *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p).
- *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).
 - In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.
 - The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.
 - The performance test results must be documented in a test report according to 40 CFR §63.1349(a).
 - A test plan must be made available to the Administrator prior to performance testing, if requested.
 - The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
 - There are no individual readings greater than 10 percent opacity.
 - There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources as outlined below:

- An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.
- If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
- If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
- After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
- If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.
- After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
- The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.

- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
 - Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).
 - If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must

also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall

be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3), including:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
------------------	----------

January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications, notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) - 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.
 - As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
 - The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) - 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

Emissions Summary

Potential emissions from these sources are shown below.

Area 34 Potential Emissions

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP (TPY)
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	
P-34-01	S-34-01	1.04	4.55	0.87	3.82	0.47	2.05	2.67E-03
	S-34-02							
	S-34-03							
	S-34-04							

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Area 35: Clinker Handling and Storage

Process Description

This process was originally constructed in 1980. Clinker handling and storage are part of the post-kiln product cement finishing process. After the clinker is cooled in the clinker cooler, it is conveyed to the finish mills or stored in clinker silos.

Area 35 is comprised of the following sources:

Source	Source Description	Control	Emission Point
S-35-01	Drag Conveyor No. 1	Baghouse	P-35-01
		Baghouse	P-35-02
S-35-02	Bucket Elevator	Baghouse	P-35-03
S-35-03	Drag Conveyor No. 2	Baghouse	P-35-04
S-35-04	Outer Shell Clinker Silo, North	Baghouse	P-35-04
		Baghouse	P-35-05
S-35-05	Outer Shell Clinker Silo, South	Baghouse	P-35-06
		Baghouse	P-35-07
S-35-06	Gypsum Silo	Baghouse	P-35-06
S-35-07	Cement Grindout Silo	Baghouse	P-35-08
S-35-08	Masonry Rock Silo	Baghouse	P-35-08
S-35-09	Slag Silos	Baghouse	P-35-08
S-35-10	Distribution Box	Baghouse	P-35-09
S-35-11	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-10
S-35-12	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-11
S-35-13	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-12
S-35-14	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-13
S-35-15	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-14
S-35-16	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-11
S-35-17	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-15
S-35-18	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-16

Source	Source Description	Control	Emission Point
S-35-19	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-17
S-35-20	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-18
S-35-21	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-19
S-35-22	Drop Point: Weigh Feeder to FM No. 1 Belt Conveyor	Baghouse	P-35-19
S-35-23	Drop Point: Bobcat Truck to FM No. 1 Bucket Elevator Hopper	Baghouse	P-35-29
S-35-24	Drop Point: FM No. 1 Hopper to FM No. 1 Bucket Elevator	Baghouse	P-35-29
S-35-25	Drop Point: FM No. 1 Bucket Elevator to Reversible Belt	Baghouse	P-35-29
S-35-26	Drop Point: Reversible Belt to FM No. 1 Belt Conveyor	Baghouse	P-35-29
S-35-27	Drop Point: Reversible Belt to FM No. 2 Belt Conveyor	Baghouse	P-35-20
S-35-28	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-20
S-35-29	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-21
S-35-30	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-22
S-35-31	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-23
S-35-32	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-24
S-35-33a	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-25
S-35-33b	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-25
S-35-33c	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-25
S-35-34	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-25
S-35-35	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-26

Source	Source Description	Control	Emission Point
S-35-36	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-27
S-35-37	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-28
S-35-38	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-28
S-35-39	Drop Point: Weigh Feeder to FM No. 2 Belt Conveyor	Baghouse	P-35-27

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “Control of Particulate Emissions – Visible Emissions”.

ADEM Admin. Code r. 335-3-4-.04(1)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “Control of Particulate Emissions for Process Industries – General”.

ADEM Admin. Code r. 335-3-14-.04 – Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-35-01	S-34-03	PM
	S-35-01	
P-35-02	S-34-04	PM
	S-35-01	
P-35-03	S-35-02	PM
P-35-04	S-35-03	PM
	S-35-04	
P-35-05	S-35-04	PM
P-35-06	S-35-05	PM

Emission Point	Source(s) Controlled	Pollutant
	S-35-06	
P-35-07	S-35-05	PM
P-35-08	S-35-07	PM
	S-35-08	
	S-35-09	
P-35-09	S-35-10	PM
P-35-10	S-35-11	PM
P-35-11	S-35-12	PM
	S-35-16	
P-35-12	S-35-13	PM
P-35-13	S-35-14	PM
P-35-14	S-35-15	PM
P-35-15	S-35-17	PM
P-35-16	S-35-18	PM
P-35-17	S-35-19	PM
P-35-18	S-35-20	PM
P-35-19	S-35-21	PM
	S-35-22	
P-35-20	S-35-27	PM
	S-35-28	
P-35-21	S-35-29	PM
P-35-22	S-35-30	PM
P-35-23	S-35-31	PM
P-35-24	S-35-32	PM
P-35-25	S-35-33a	PM
	S-35-33b	
	S-35-33c	
	S-35-34	
P-35-26	S-35-35	PM
P-35-27	S-35-36	PM
	S-35-39	
P-35-28	S-35-37	PM
	S-35-38	
P-35-29	S-35-23	PM
	S-35-24	

Emission Point	Source(s) Controlled	Pollutant
	S-35-25	
	S-35-26	

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “Standards of Performance for Portland Cement Plants”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

These sources include raw material and clinker storage and conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

These sources include raw material and clinker storage bins and conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions points P-35-1 & P-35-2, and P-35-4 though P-35-9, are subject to CAM for particulate matter (PM) because the units have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six minute average.

40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six-minute average:

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.
 - Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – *Process Industries - General*

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (} P \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (} P < 30 \text{ tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]"

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit No. 503-8026-Z011 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-35-01	S-34-03	PM	0.01 gr/dscf
	S-35-01		
P-35-02	S-34-04	PM	0.01 gr/dscf
	S-35-01		
P-35-03	S-35-02	PM	0.01 gr/dscf
P-35-04	S-35-03	PM	0.01 gr/dscf
	S-35-04		
P-35-05	S-35-04	PM	0.01 gr/dscf
P-35-06	S-35-05	PM	0.01 gr/dscf
	S-35-06		
P-35-07	S-35-05	PM	0.01 gr/dscf
P-35-08	S-35-07	PM	0.01 gr/dscf
	S-35-08		
	S-35-09		
P-35-09	S-35-10	PM	0.01 gr/dscf
P-35-10	S-35-11	PM	0.01 gr/dscf
P-35-11	S-35-12	PM	0.01 gr/dscf
	S-35-16		
P-35-12	S-35-13	PM	0.01 gr/dscf
P-35-13	S-35-14	PM	0.01 gr/dscf
P-35-14	S-35-15	PM	0.01 gr/dscf
P-35-15	S-35-17	PM	0.01 gr/dscf
P-35-16	S-35-18	PM	0.01 gr/dscf
P-35-17	S-35-19	PM	0.01 gr/dscf
P-35-18	S-35-20	PM	0.01 gr/dscf
P-35-19	S-35-21	PM	0.01 gr/dscf
	S-35-22		
P-35-20	S-35-27	PM	0.01 gr/dscf
	S-35-28		
P-35-21	S-35-29	PM	0.01 gr/dscf
P-35-22	S-35-30	PM	0.01 gr/dscf

Emission Point	Source(s) Controlled	Pollutant	Limit
P-35-23	S-35-31	PM	0.01 gr/dscf
P-35-24	S-35-32	PM	0.01 gr/dscf
P-35-25	S-35-33a	PM	0.01 gr/dscf
	S-35-33b		
	S-35-33c		
	S-35-34		
P-35-26	S-35-35	PM	0.01 gr/dscf
P-35-27	S-35-36	PM	0.01 gr/dscf
	S-35-39		
P-35-28	S-35-37	PM	0.01 gr/dscf
	S-35-38		
P-35-29	S-35-23	PM	0.01 gr/dscf
	S-35-24		
	S-35-25		
	S-35-26		

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.
 - *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p).
 - *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).
 - In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.
 - The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.
 - The performance test results must be documented in a test report according to 40 CFR §63.1349(a).
 - A test plan must be made available to the Administrator prior to performance testing, if requested.

- The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
 - There are no individual readings greater than 10 percent opacity.
 - There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources as outlined below:
 - An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.
 - If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
 - If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
 - If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
 - The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.
- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
 - Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located

within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).

- If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3), including:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications, notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) - 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.
 - As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
 - The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) - 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

Emissions Summary

Pre-control potential, allowable, and expected PM emissions from each source within this Area are summarized in the following tables. All sources of emissions from this process are controlled.

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
P-35-01	S-34-03	0.93	4.05	0.78	3.41	0.42	1.82	2.38E-03
	S-35-01							
P-35-02	S-34-04	0.93	4.05	0.78	3.41	0.42	1.82	2.38E-03
	S-35-01							
P-35-03	S-35-02	0.22	0.98	0.19	0.82	0.10	0.44	5.73E-04
P-35-04	S-35-03	1.16	5.07	0.97	4.26	0.52	2.28	2.97E-03
	S-35-04							
P-35-05	S-35-04	1.16	5.07	0.97	4.26	0.52	2.28	2.97E-03
P-35-06	S-35-05	0.96	4.20	0.81	3.53	0.43	1.89	2.47E-03
	S-35-06							
P-35-07	S-35-05	0.96	4.20	0.81	3.53	0.43	1.89	2.47E-03
P-35-08	S-35-07	1.08	4.73	0.91	3.97	0.49	2.13	2.78E-03
	S-35-08							
	S-35-09							
P-35-09	S-35-10	0.56	2.44	0.47	2.05	0.25	1.10	1.43E-03
P-35-10	S-35-11	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-11	S-35-12	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
	S-35-16							
P-35-12	S-35-13	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-13	S-35-14	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-14	S-35-15	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-15	S-35-17	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05

P-35-16	S-35-18	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-17	S-35-19	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-18	S-35-20	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-19	S-35-21	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
	S-35-22							
P-35-20	S-35-27	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
	S-35-28							
P-35-21	S-35-29	2.57E-02	0.11	2.16E-02	9.46E-02	1.16E-02	5.07E-02	6.61E-05
P-35-22	S-35-30	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-23	S-35-31	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-24	S-35-32	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-25	S-35-33a	2.57E-02	0.11	2.16E-02	9.46E-02	1.16E-02	5.07E-02	6.61E-05
	S-35-33b							
	S-35-33c							
	S-35-34							
P-35-26	S-35-35	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
P-35-27	S-35-36	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
	S-35-39							
P-35-28	S-35-37	1.29E-02	5.63E-02	1.08E-02	4.73E-02	5.79E-03	2.53E-02	3.31E-05
	S-35-38							
P-35-29	S-35-23	1.95E-02	8.56E-02	1.64E-02	7.19E-02	8.79E-03	3.85E-02	5.02E-05
	S-35-24							
	S-35-25							
	S-35-26							

Process Description

Cooled clinker is conveyed to one of two finish mills where it is ground with gypsum and slag into fine-powdered cement. In addition, grinding aids and other additives are introduced into the mill in order to achieve the desired quality specifications. Each finish mill is a horizontal rotary ball mill. The powdered materials pass through a separator, which is used to divide fine particles from coarse particles. Coarse particles are returned to the finish mills for further processing. Fine particles are pneumatically conveyed to cement silos for storage and shipping.

Finish Mills No. 1 and No. 2 were originally constructed in 1980. Particulate matter emissions are controlled from various handling and transfer points by baghouses.

Area 41 is comprised of the following sources:

Source ID	Source Description	Control	Emission Point
S-41-01	Finish Mill No. 1	Baghouse	P-41-01
S-41-02	Bucket Elevator	Baghouse	P-41-01
S-41-03	Bucket Elevator	Baghouse	P-41-01
S-41-04	High Efficiency Separator	Baghouse	P-41-02
S-41-05	Drop from Belt Conveyor to Finish Mill No. 1	Baghouse	P-41-03
S-41-06	16-inch Airslide to Cooler Dust Collector	Baghouse	P-41-03
S-41-07	16-inch Airslide to FK Pump	Baghouse	P-41-03
S-41-08	FK Pump No. 1	Baghouse	P-41-03
S-41-09	Standby FK Pump	Baghouse	P-41-03
		Baghouse	P-41-04
S-41-10	FK Pump No. 2	Baghouse	P-41-04
S-41-11	Drop from Belt Conveyor to Finish Mill No. 2	Baghouse	P-41-04
S-41-12	16-inch Airslide to Finish Mill No. 2	Baghouse	P-41-04
S-41-13	Bucket Elevator	Baghouse	P-41-05
S-41-14	Bucket Elevator	Baghouse	P-41-05
S-41-15	Finish Mill No. 2	Baghouse	P-41-05
S-41-16	High Efficiency Separator	Baghouse	P-41-06

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “Control of Particulate Emissions – Visible Emissions”.

ADEM Admin. Code r. 335-3-4-.04(1)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “Control of Particulate Emissions for Process Industries – General”.

ADEM Admin. Code r. 335-3-14-.04 – Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]

- The following sources have enforceable limits in place in order to avoid being subject to this requirement [Anti-PSD].

Emission Point	Source(s) Controlled	Pollutant
P-41-01	S-41-01	PM
	S-41-02	
	S-41-03	
P-41-02	S-41-04	PM
P-41-03	S-41-05	PM
	S-41-06	
	S-41-07	
	S-41-08	
	S-41-09	
P-41-04	S-41-09	PM
	S-41-10	
	S-41-11	
P-41-05	S-41-12	PM
	S-41-13	
	S-41-14	
P-41-05	S-41-15	PM
	S-41-16	
P-41-06	S-41-16	PM

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “Standards of Performance for Portland Cement Plants”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

These sources include finish mill systems and conveyor transfer points. Therefore, they are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

These sources include finish mills and conveying system transfer points. Therefore, they are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is

exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions points P-41-1 through P-41-6, are subject to CAM for particulate matter (PM) because the units have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent.

40 CFR §63.1343(b)(1) & 40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent.

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.

- Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – Process Industries - General

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (} P \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (} P < 30 \text{ tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- The following sources are subject to particulate matter (PM) emissions limits [Anti-PSD, Air Permit Nos. 503-8026-Z008 & Z009 issued August 30, 1995]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-41-01	S-41-01	PM	1.371 lb/hr; 0.01 gr/dscf
	S-41-02		
	S-41-03		
P-41-02	S-41-04	PM	8.239 lb/hr; 0.009 gr/dscf
P-41-03	S-41-05	PM	0.343 lb/hr; 0.01 gr/dscf
	S-41-06		
	S-41-07		
	S-41-08		
P-41-04	S-41-09	PM	0.343 lb/hr;

Emission Point	Source(s) Controlled	Pollutant	Limit
	S-41-10		0.01 gr/dscf
	S-41-11		
	S-41-12		
P-41-05	S-41-13	PM	1.371 lb/hr; 0.01 gr/dscf
	S-41-14		
	S-41-15		
P-41-06	S-41-16	PM	8.239 lb/hr; 0.009 gr/dscf

Compliance and Performance Test Methods and Procedures:

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.
 - *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p).

- *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).
 - In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.
 - The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.
 - The performance test results must be documented in a test report according to 40 CFR §63.1349(a).
 - A test plan must be made available to the Administrator prior to performance testing, if requested.
 - The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and

good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of 40 CFR §63.1349(b)(2)(i) and (ii) apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
 - There are no individual readings greater than 10 percent opacity.
 - There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources (except the finish mills) as outlined below:
 - An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.

- If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
- If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
- After corrective action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
- If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.
- After corrective action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
- The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350(f) – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.

- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources (except the finish mill stacks) in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
 - Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).
 - If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must

also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(2)(i)-(iii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of the mill sweep and air separator control devices in accordance with the provisions of 40 CFR §63.1350(f)(2)(i)-(iii).
 - The facility must conduct a daily 6-minute visible emissions test of each finish mill sweep and air separator stack in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If any visible emissions are observed during a Method 22 performance test, a follow-up Method 22 test of each stack from which visible emissions were observed must be conducted within 24 hours of the initial test.
 - If visible emissions are observed during a follow-up Method 22 performance test, the facility must conduct 30 minutes of opacity observations in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3); and:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated.
 - Copy of every visible emissions observation report generated during the reporting period.
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required.
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9.
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A, that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications, notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A, that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.
 - As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
 - The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) – 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

Emissions Summary

Potential emissions from these sources are shown below.

Area 41 Potential Emissions

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
P-41-01	S-41-01	1.38	6.04	1.16	5.07	7.24E-02	0.32	3.56E-03
	S-41-02							
	S-41-03							
P-41-02	S-41-04	8.22	35.99	6.90	30.23	0.43	1.89	2.12E-02
P-41-03	S-41-05	0.34	1.50	0.29	1.26	1.79E-02	7.85E-02	8.81E-04
	S-41-06							
	S-41-07							
	S-41-08							
	S-41-09							
P-41-04	S-41-09	0.34	1.50	0.29	1.26	1.79E-02	7.85E-02	8.81E-04
	S-41-10							
	S-41-11							
	S-41-12							
P-41-05	S-41-13	1.38	6.04	1.16	5.07	7.24E-02	0.32	3.56E-03
	S-41-14							
	S-41-15							
P-41-06	S-41-16	8.22	35.99	6.90	30.23	0.43	1.89	2.12E-02

Area 51: Land Silos and Loadout

Process Description

This process was originally constructed in 1980. Powdered cement from the finish mills is pneumatically conveyed to storage silos where it is prepared for shipping. The land silos consist of nine silos and four interstice silos and are equipped with a conveying system for supplying cement to packing machines for bagged cement. Cement product is shipped in bulk via truck or rail car. All bagged cement is shipped off-site in customer owned trucks.

Area 51 is comprised of the following sources:

Source	Source Description	Control	Emission Point
S-51-01	Cement Silos No. 1 through No. 13, Excluding Silo No. 8	Baghouse	P-51-01
		Baghouse	P-51-02
S-51-02	Concrete Silo No. 8, Masonry	Baghouse	P-51-03
S-51-03	Truck Scale, North Loading Bay	Baghouse	P-51-04
S-51-04	Retractable Loading Spout, Center Bay	Baghouse	P-51-05
S-51-05	Truck and Railroad Scale, South Loading Bay	Baghouse	P-51-06
S-51-06	Rotary Cut off Valve, FK Pump No. 1	Baghouse	P-51-12
S-51-07	Rotary Cut off Valve, FK Pump No. 2	Baghouse	P-51-07
S-51-08	9" Screw Conveyor, Spill Hopper	Baghouse	P-51-08
S-51-09	Bucket Elevator	Baghouse	P-51-08
S-51-10	Scalping Screen	Baghouse	P-51-08
S-51-11	Rotary Packer	Baghouse	P-51-08
S-51-12	Cement Storage Bin, Type #1 or Masonry	Baghouse	P-51-08
		Baghouse	P-51-09
S-51-13	Cement Storage Bin, Type #1	Baghouse	P-51-10
		Baghouse	P-51-11
S-51-14	Scalping Screen	Baghouse	P-51-11
S-51-15	Bucket Elevator	Baghouse	P-51-11
S-51-16	Rotary Packer	Baghouse	P-51-11

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “Control of Particulate Emissions – Visible Emissions”.

ADEM Admin. Code r. 335-3-4-.04(1)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “Control of Particulate Emissions for Process Industries – General”.

ADEM Admin. Code r. 335-3-14-.04 – Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-51-01	S-51-01	PM
P-51-02	S-51-01	PM
P-51-03	S-51-02	PM
P-51-04	S-51-03	PM
P-51-05	S-51-04	PM
P-51-06	S-51-05	PM
P-51-07	S-51-07	PM
P-51-08	S-51-08	PM
	S-51-09	
	S-51-10	
	S-51-11	
	S-51-12	
P-51-09	S-51-12	PM
P-51-10	S-51-13	PM
P-51-11	S-51-13	PM
	S-51-14	
	S-51-15	
	S-51-16	
P-51-12	S-51-06	PM

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “Standards of Performance for Portland Cement Plants”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

These sources include finished product storage, conveyor transfer points, and bulk loading systems. Therefore, they are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

These sources include finished product storage bins, conveyor transfer points, and bulk loading systems. Therefore, they are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is

exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions points P-51-1 through P-51-3, and P-51-8 through P-51-11 are subject to CAM for particulate matter (PM) because the units have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six minute average.

40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six-minute average:

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.

- Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – *Process Industries - General*

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \quad (P \geq 30 \text{ tons/hr})$$

or

$$E = 3.59P^{0.62} \quad (P < 30 \text{ tons/hr})$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, “*Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]*”

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit Nos. 503-8026-Z014 & Z015 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-51-01	S-51-01	PM	0.01 gr/dscf
P-51-02	S-51-01	PM	0.01 gr/dscf
P-51-03	S-51-02	PM	0.01 gr/dscf

Emission Point	Source(s) Controlled	Pollutant	Limit
P-51-04	S-51-03	PM	0.01 gr/dscf
P-51-05	S-51-04	PM	0.01 gr/dscf
P-51-06	S-51-05	PM	0.01 gr/dscf
P-51-07	S-51-07	PM	0.01 gr/dscf
P-51-08	S-51-08	PM	0.01 gr/dscf
	S-51-09		
	S-51-10		
	S-51-11		
	S-51-12		
P-51-09	S-51-12	PM	0.01 gr/dscf
P-51-10	S-51-13	PM	0.01 gr/dscf
P-51-11	S-51-13	PM	0.01 gr/dscf
	S-51-14		
	S-51-15		
	S-51-16		
P-51-12	S-51-06	PM	0.01 gr/dscf

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Test methods and procedures*”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.
 - *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p).
 - *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).
 - In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.
 - The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.
 - The performance test results must be documented in a test report according to 40 CFR §63.1349(a).

- A test plan must be made available to the Administrator prior to performance testing, if requested.
- The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
 - There are no individual readings greater than 10 percent opacity.
 - There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources as outlined below:
 - An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.
 - If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
 - If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
 - If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
 - The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.
- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
 - Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

- If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).
- If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Cod-e r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3), including:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications, notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) - 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.
 - As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
 - The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) - 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to

minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

Emissions Summary

Potential emissions from these sources are shown below.

Area 51 Potential Emissions

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(TPY)
P-51-01	S-51-01	0.86	3.75	0.72	3.15	0.39	1.69	2.21E-03
P-51-02	S-51-01	0.86	3.75	0.72	3.15	0.39	1.69	2.21E-03
P-51-03	S-51-02	0.86	3.75	0.72	3.15	0.39	1.69	2.21E-03
P-51-04	S-51-03	0.22	0.98	0.19	0.82	0.10	0.44	5.75E-04
P-51-05	S-51-04	0.22	0.98	0.19	0.82	0.10	0.44	5.75E-04
P-51-06	S-51-05	0.22	0.98	0.19	0.82	0.10	0.44	5.75E-04
P-51-07	S-51-07	0.13	0.56	0.11	0.47	5.79E-02	0.25	3.32E-04
P-51-08	S-51-08	0.60	2.63	0.50	2.21	0.27	1.18	1.55E-03
	S-51-09							
	S-51-10							
	S-51-11							
P-51-09	S-51-12	0.51	2.25	0.43	1.89	0.23	1.01	1.33E-03
P-51-10	S-51-13	0.51	2.25	0.43	1.89	0.23	1.01	1.33E-03
P-51-11	S-51-13	0.60	2.63	0.50	2.21	0.27	1.18	1.55E-03
	S-51-14							
	S-51-15							
	S-51-16							
P-51-12	S-51-06	0.13	0.56	0.11	0.47	5.79E-02	0.25	3.32E-04

Area 53: Marine Silos and Loadout

Process Description

This process was originally constructed in 1980. Powdered cement from the finish mills is pneumatically conveyed to storage silos where it is prepared for shipping. The marine silos consist of six silos each equipped with a barge loadout assembly. Cement product is shipped in bulk via barge.

Area 53 is comprised of the following sources:

Source	Source Description	Control	Emission Point
S-53-01	Masonry Concrete Silo No. 11	Baghouse	P-53-01
S-53-02	Cement Silos No. 12 through No. 16	Baghouse	P-53-02
		Baghouse	P-53-03
S-53-03	Silo No. 11 Loading Spout Assembly	Baghouse	P-53-04
S-53-04	Silo No. 12 Loading Spout Assembly	Baghouse	P-53-05
S-53-05	Silo No. 13 Loading Spout Assembly	Baghouse	P-53-06
S-53-06	Silo No. 14 Loading Spout Assembly	Baghouse	P-53-07
S-53-07	Silo No. 15 Loading Spout Assembly	Baghouse	P-53-08
S-53-08	Silo No. 16 Loading Spout Assembly	Baghouse	P-53-09

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Visible Emissions*”.

ADEM Admin. Code r. 335-3-4-.04(1)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “*Control of Particulate Emissions for Process Industries – General*”.

ADEM Admin. Code r. 335-3-14-.04 – Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-53-01	S-53-01	PM
P-53-02	S-53-02	PM
P-53-03	S-53-02	PM
P-53-04	S-53-03	PM
P-53-05	S-53-04	PM
P-53-06	S-53-05	PM
P-53-07	S-53-06	PM
P-53-08	S-53-07	PM
P-53-09	S-53-08	PM

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “*Major Source Operating Permits*”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart F, “*Standards of Performance for Portland Cement Plants*”

- 40 CFR §60.60(a) and (b) state this subpart applies to each kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer point, and bagging and bulk loading and unloading system that was constructed or modified after August 17, 1971, at a Portland cement plant.

These sources include finished product storage, conveyor transfer points, and bulk loading systems. Therefore, they are subject to this subpart.

40 CFR Part 60, Subpart A, “*General Provisions*”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “*General Provisions*”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each clinker cooler, raw mill, finish mill, raw material dryer, and open clinker storage pile at any Portland cement plant and each raw material, clinker, or finished product storage bin, conveying system transfer

point, and bagging and bulk loading and unloading system at a Portland cement plant that is a major source of HAPs.

These sources include finished product storage bins, conveyor transfer points, and bulk loading systems. Therefore, they are subject to this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Emissions points P-53-1 through P-53-9 are subject to CAM for particulate matter (PM) because the units have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.62(c) - 40 CFR Part 60, Subpart F

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six minute average.

40 CFR §63.1345 – 40 CFR Part 63, Subpart LLL

- These sources may not discharge into the atmosphere any gases which exhibit opacity in excess of 10 percent based on a six-minute average:

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.
 - Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL & 40 CFR §60.62(d) - 40 CFR Part 60, Subpart F

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – *Process Industries - General*

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (} P \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (P < 30 tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit Nos. 503-8026-Z016 & Z017 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-53-01	S-53-01	PM	0.01 gr/dscf
P-53-02	S-53-02	PM	0.01 gr/dscf
P-53-03	S-53-02	PM	0.01 gr/dscf
P-53-04	S-53-03	PM	0.01 gr/dscf
P-53-05	S-53-04	PM	0.01 gr/dscf
P-53-06	S-53-05	PM	0.01 gr/dscf
P-53-07	S-53-06	PM	0.01 gr/dscf
P-53-08	S-53-07	PM	0.01 gr/dscf
P-53-09	S-53-08	PM	0.01 gr/dscf

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.64(a), (b), (d) – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “Test methods and procedures”, concerning demonstrating compliance with opacity standards and submitting stack test reports.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*”.

40 CFR §63.1348(b)(1), (3) – 40 CFR Part 63, Subpart LLL

- *Continuous monitoring requirements:* The facility must demonstrate compliance with the emissions standards and operating limits of 40 CFR Part 63, Subpart LLL by using the performance test methods and procedures in 40 CFR §63.1350 and 40 CFR §63.8 for each affected source.
 - *General requirements:* The facility must monitor and collect data according to 40 CFR §63.1350 and the site-specific monitoring plan required by 40 CFR §63.1350(p).
 - *Opacity compliance:* The facility must demonstrate continuous compliance with the opacity emissions standard under 40 CFR §63.1345 by using the monitoring methods and procedures in 40 CFR §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. The facility must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

40 CFR §63.1348(c)(1), (2) – 40 CFR Part 63, Subpart LLL

- *Changes in operations:*
 - If the facility plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR Part 63, Subpart LLL, the source must conduct a performance test as specified in 40 CFR §63.1349(b).
 - In preparation for and while conducting a performance test required in 40 CFR §63.1349(b), the facility may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 40 CFR §63.1348(c)(2)(i) through (c)(2)(iv) are met. The facility must submit temperature and other monitoring data that are recorded during the pretest operations.
- The facility must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under 40 CFR §63.1348(c)(1) of this section, including when the planned operational change period would begin.

- The performance test results must be documented in a test report according to 40 CFR §63.1349(a).
- A test plan must be made available to the Administrator prior to performance testing, if requested.
- The performance test must be completed within 360 hours after the planned operational change period begins.

40 CFR §63.1348(d) – 40 CFR Part 63, Subpart LLL

- *General duty to minimize emissions:* At all times the facility must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, under 40 CFR Part 63, Subpart LLL in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.1349(a) – 40 CFR Part 63, Subpart LLL

- The facility must document performance test results in complete test reports that contain the information required by 40 CFR §63.1349(a)(1)-(10), as well as other relevant information. As described in 40 CFR §63.7(c)(2)(i), the facility must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing.

40 CFR §63.1349(b)(2) – 40 CFR Part 63, Subpart LLL

- *Opacity tests:* For opacity limitations under 40 CFR Part 63, Subpart LLL, the facility must conduct opacity tests in accordance with Method 9 of 40 CFR Part 60, Appendix A-4. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
 - There are no individual readings greater than 10 percent opacity.
 - There are no more than three readings of 10 percent for the first 1-hour period.

40 CFR §63.1349(e) – 40 CFR Part 63, Subpart LLL

- *Conditions of performance tests:* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the facility must make

available to the Administrator such records as may be necessary to determine the conditions of performance tests.

Monitoring Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility must conduct opacity monitoring for these sources as outlined below:
 - An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.
 - If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
 - If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
 - If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.
 - After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
 - The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.63 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Monitoring of operations*”. There are no specific monitoring requirements for these units under this subpart.

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*”.

40 CFR §63.1350(a)(1), (4) – 40 CFR Part 63, Subpart LLL

- The facility must demonstrate compliance with 40 CFR Part 63, Subpart LLL on a continuous basis by meeting the requirements of 40 CFR §63.1350, “*Monitoring requirements*”.
- Any instance where the facility fails to comply with the continuous monitoring requirements of this section is a violation.

40 CFR §63.1350(f)(1)(i)-(vii) – 40 CFR Part 63, Subpart LLL

- The facility must conduct required opacity monitoring of each of these sources in accordance with the provisions of 40 CFR §63.1350(f)(1)(i)-(vii).
 - The facility must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60 while the source is in operation.
 - If no visible emissions are observed in six consecutive monthly tests for any affected source, the facility may decrease the frequency of performance testing from monthly to semiannually for that source. If visible emissions are observed during any semiannual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If no visible emissions are observed during the semiannual test for any affected source, the facility may decrease the frequency of performance testing from semiannually to annually for that source. If visible emissions are observed during any annual test, the facility must resume performance testing of that source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - If visible emissions are observed during any Method 22 performance test, the facility must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of Appendix A-4 to 40 CFR Part 60. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.
 - Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and

maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

- If any partially enclosed or unenclosed conveying system transfer point is located in a building, the facility must conduct a Method 22 performance test according to 40 CFR §63.1350(f)(1)(i)-(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350(f)(1)(vii).
- If visible emissions from a building are monitored, the requirements of 40 CFR §63.1350(f)(1)(i)-(iv) apply to the monitoring of the building, and the facility must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

40 CFR §63.1350(f)(3) – 40 CFR Part 63, Subpart LLL

- If visible emissions are observed during any Method 22 visible emissions test, the facility must initiate, within one hour, the corrective actions specified in the O&M plan as required in 40 CFR §63.1347.

40 CFR §63.1350(o) – 40 CFR Part 63, Subpart LLL

- *Alternate monitoring requirements approval:* The facility may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 CFR Part 63, Subpart LLL subject to the provisions of 40 CFR §63.1350(o)(1) through (6).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*”.

40 CFR §63.1355(a) – 40 CFR Part 63, Subpart LLL

- The facility shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63, Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

40 CFR §63.1355(b)(1), (2) - 40 CFR Part 63, Subpart LLL

- The facility shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3), including:
 - All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9.
 - All records of applicability determination, including supporting analyses.

40 CFR §63.1355(g)(1), (2) – 40 CFR Part 63, Subpart LLL

- The facility must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
- The facility must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

40 CFR §63.1355(h) – 40 CFR Part 63, Subpart LLL

- For each exceedance from an emissions standard, the facility must keep records of the date, duration, and description of each exceedance and the specific actions taken for each

exceedance including inspections, corrective actions, and repeat performance tests and the results of those actions.

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.65 – 40 CFR Part 60, Subpart F

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart F, “*Recordkeeping and reporting requirements*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*”.

40 CFR §63.1353(a) – 40 CFR Part 63, Subpart LLL

- The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1353(b) – 40 CFR Part 63, Subpart LLL

- The facility shall comply with the notification requirements of 40 CFR §63.9 as outlined in 40 CFR §63.1353(b)(1) through (6). These requirements concern initial notifications, notification of performance tests, notification of opacity and visible emissions observations, and notification of compliance status.

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- These sources are subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Reporting requirements*”.

40 CFR §63.1354(a) – 40 CFR Part 63, Subpart LLL

- The reporting provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to these sources are listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR §63.1354(b)(1), (b)(2), (b)(9)(v) - 40 CFR Part 63, Subpart LLL

- The facility shall comply with the reporting requirements specified in 40 CFR §63.10 of 40 CFR Part 63, Subpart A as follows:
 - As required by 40 CFR §63.10(d)(2), the facility shall report the results of performance tests as part of the notification of compliance status.
 - As required by 40 CFR §63.10(d)(3), the facility shall report the opacity results from tests required by 40 CFR §63.1349.
 - The facility shall submit an excess emissions and summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The reports must contain the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1347.

40 CFR §63.1354(c) - 40 CFR Part 63, Subpart LLL

- For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the facility must report the failure in the semiannual compliance report required by 40 CFR §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected

source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR §63.1348(d), including actions taken to correct a malfunction.

Emissions Summary

Potential emissions from these sources are shown below.

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP (TPY)
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	
P-53-01	S-53-01	1.29	5.63	1.08	4.73	0.58	2.53	3.32E-03
P-53-02	S-53-02	1.29	5.63	1.08	4.73	0.58	2.53	3.32E-03
P-53-03	S-53-02	1.29	5.63	1.08	4.73	0.58	2.53	3.32E-03
P-53-04	S-53-03	0.34	1.50	0.29	1.26	0.15	0.68	8.84E-04
P-53-05	S-53-04	0.34	1.50	0.29	1.26	0.15	0.68	8.84E-04
P-53-06	S-53-05	0.34	1.50	0.29	1.26	0.15	0.68	8.84E-04
P-53-07	S-53-06	0.34	1.50	0.29	1.26	0.15	0.68	8.84E-04
P-53-08	S-53-07	0.34	1.50	0.29	1.26	0.15	0.68	8.84E-04
P-53-09	S-53-08	0.34	1.50	0.29	1.26	0.15	0.68	8.84E-04

Area 95: Coal Processing

Process Description

This process was originally constructed in 1980. The facility operates a pulverized coal mill and coal silo to store and prepare coal/pet-coke for combustion in the kiln. Coal/pet-coke is finely ground and dried with a heated air stream diverted from the kiln system. The air stream transports coal out of the mill into a cyclone, which separates air from coal particles for injection into the kiln. In addition, the coal mill is equipped with a 40 MMBtu/hr natural gas-fired auxiliary heater to provide supplemental heat as required for material drying. Exhaust from the cyclone is divided; part returning to the coal mill and part entering the kiln. A portion of the kiln exhaust is diverted to the coal mill and exits through the coal mill stack (P-95-02).

Area 95 is comprised of the following sources:

Source ID	Source Description	Control	Emission Point
S-95-01	Drop Point: Belt Conveyor to Coal Silo	Baghouse	P-95-01
S-95-02	Coal Silo Agitator	Baghouse	P-95-01
S-95-03	Pulverized Coal Mill	Baghouse	P-95-02
S-95-04	Pulverized Coal Bin	Baghouse	P-95-03
S-95-05	Coal FK Pump	Baghouse	P-95-04
S-95-06	Coal FK Pump	Baghouse	P-95-05
S-95-07	Coal FK Pump	Baghouse	P-95-06

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-16-.03

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”.

ADEM Admin. Code r. 335-3-4-.01(1)(a), (b)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.01(1), “Control of Particulate Emissions – Visible Emissions”.

ADEM Admin. Code r. 335-3-4-.04(1)

- These sources are subject to ADEM Admin. Code r. 335-3-4-.04(1), “Control of Particulate Emissions for Process Industries – General”.

ADEM Admin. Code r. 335-3-14-.04 – Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration Permitting (PSD)]

- The following sources have enforceable limits in place in order to comply with this requirement [BACT].

Emission Point	Source(s) Controlled	Pollutant
P-95-01	S-95-01	PM
	S-95-02	
P-95-02	S-95-03	PM
P-95-03	S-95-04	PM
P-95-04	S-95-05	PM
P-95-05	S-95-06	PM
P-95-06	S-95-07	PM

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart Y, “Standards of Performance for Coal Preparation and Processing Plants”

- 40 CFR §60.250(a) and (b) state the following:

“The provisions of this subpart apply to affected facilities in coal preparation and processing plants that process more than 181 Mg (200 tons) per day.”

“The provisions in §60.251, 60.252(a), 60.253(a), 60.254(a), 60.255(a), and 60.256(a) of this subpart are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after October 27, 1974, and on or before April 28, 2008: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage, transfer, and loading systems.”

According to 40 CFR §60.251, *coal processing and conveying equipment* is defined as any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery (including breakers, crushers, screens, and conveyor belts); *coal storage system* means any facility used to store coal except for open storage piles; *thermal dryer* means any facility in which the moisture content of bituminous coal is reduced by contact with a heated gas stream which is exhausted to the atmosphere; and *transfer and loading system* means any facility used to transfer and load coal for shipment.

Therefore, these sources are subject to this subpart.

40 CFR Part 60, Subpart A, “General Provisions”

- These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart A, “General Provisions”.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart LLL, “National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry”

- 40 CFR §63.1340(a) and (b) state this subpart applies to each kiln including alkali bypasses and inline coal mills.

Therefore, the inline coal mill is subject to this subpart. Since a portion of the kiln exhaust is diverted to the coal mill and exits through the coal mill stack, combined emissions from the kiln (P-29-01) and coal mill (P-95-02) stacks are subject to the limits of this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- The coal mill is subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.

40 CFR Part 63, Subpart DDDDD, “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters”

- 40 CFR §63.7485 states this subpart applies to industrial, commercial, or institutional boilers or process heaters as defined in 40 CFR §63.7575 located at a major source of HAP.

40 CFR §63.7575 defines a process heater as “an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials.”

Since combustion gases in the 40 MMBtu/hr natural gas-fired auxiliary heater for the coal mill come into direct contact with process materials, it does not meet the definition of process heater. Therefore, it is not subject to the requirements of this subpart.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

Sources S-95-01 and 02 (P-95-01) would meet these criteria, so CAM would be required.

Emissions points P-95-1 is subject to CAM for particulate matter (PM) because the unit have pre-controlled potential emissions greater than the major source threshold, are subject to an emissions limit for PM, and use a control device to achieve compliance with the applicable emission limit.

Sources S-95-04 through 06 would not meet these criteria, so CAM would not be required. These sources, although their emissions are routed through a control device (baghouse), do not have pre-controlled potential emissions above the major source threshold so CAM would not apply.

Emissions Standards

40 CFR §63.1343(a), (b) – 40 CFR Part 63, Subpart LLL

- Combined emissions from the kiln stack (P-29-01) and the coal mill stack (P-95-02) are subject to the emissions limits of 40 CFR Part 63, Subpart LLL.

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

40 CFR §60.252(a)(2) - 40 CFR Part 60, Subpart Y

- The facility shall not cause to be discharged into the atmosphere from the thermal dryer (P-95-02) any gases which exhibit twenty percent (20%) opacity or greater.

40 CFR §60.254(a) - 40 CFR Part 60, Subpart Y

- The facility may not discharge into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal gases which exhibit twenty percent (20%) opacity or greater based on a six-minute average.

Operational

40 CFR §63.1347(a) – 40 CFR Part 63, Subpart LLL

- There shall be a written operations and maintenance (O&M) plan that includes the following information for each source subject to 40 CFR Part 63, Subpart LLL:
 - Procedures for the proper operation and maintenance of each source and air pollution control device in order to meet the applicable emissions limits and operating limits. The O&M plan must address periods of startup and shutdown.
 - Corrective actions to be taken when required by 40 CFR §63.1350(f)(3) during Method 22 visible emissions tests.

40 CFR §63.1347(b) – 40 CFR Part 63, Subpart LLL

- Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR Part 63, Subpart LLL is a violation of the standard.

40 CFR §63.1356 – 40 CFR Part 63, Subpart LLL

- If an affected source subject to this subpart has a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once it is in compliance with the most stringent emissions limit or requirement, it is not subject to the less stringent requirement. Until it is in compliance with the more stringent limit, the less stringent limit continues to apply.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.04(1) – Process Industries - General

- These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), “*Process Industries – General*”, which states the allowable emissions from each unit shall not exceed that which is calculated using the process weight equations as defined in ADEM Admin. Code r. 335-3-4-.04(1):

$$E = 17.31P^{0.16} \text{ (} P \geq 30 \text{ tons/hr)}$$

or

$$E = 3.59P^{0.62} \text{ (} P < 30 \text{ tons/hr)}$$

Where:

E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-14-.04, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]"

- The following sources are subject to particulate matter (PM) emissions limits [BACT, Air Permit No. 503-8026-Z003 issued July 17, 1984]:

Emission Point	Source(s) Controlled	Pollutant	Limit
P-95-01	S-95-01	PM	0.01 gr/dscf
	S-95-02		
P-95-02	S-95-03	PM	21.1 lb/hr
P-95-03	S-95-04	PM	0.01 gr/dscf
P-95-04	S-95-05	PM	0.01 gr/dscf
P-95-05	S-95-06	PM	0.01 gr/dscf
P-95-06	S-95-07	PM	0.01 gr/dscf

40 CFR §60.252(a)(1) - 40 CFR Part 60, Subpart Y

- The facility shall not cause to be discharged into the atmosphere from the thermal dryer (coal mill stack, P-95-02) any gases which contain PM in excess of 0.070 g/dscm (0.031 grains per dry standard cubic feet (gr/dscf)).

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM) emissions.
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 22 of 40 CFR Part 60, Appendix A-7, shall be used to determine the presence of fugitive emissions.

40 CFR §60.257(a), (b) – 40 CFR Part 60, Subpart Y

- These sources are subject to the applicable requirements outlined in 40 CFR Part 60, Subpart Y, “*Test methods and procedures*”. There are no specific testing requirements for these sources under this subpart.

40 CFR §63.1348 – 40 CFR Part 63, Subpart LLL

- The combined kiln and coal mill exhaust is subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Compliance requirements*” (see Area 29: Kiln System).

40 CFR §63.1349 – 40 CFR Part 63, Subpart LLL

- The combined kiln and coal mill exhaust is subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Performance testing requirements*” (see Area 29: Kiln System).

40 CFR §63.1349(b)(1)(viii) – 40 CFR Part 63, Subpart LLL

- The main kiln exhaust and inline coal mill must be tested simultaneously and the combined emission rate of PM from the kiln and inline coal mill must be computed for each run using Equation 8 of 40 CFR §63.1349(b)(1)(viii).

40 CFR §63.1349(b)(7)(v) – 40 CFR Part 63, Subpart LLL

- If the facility elects to conduct a performance test to determine total organic HAP (oHAP) emissions per the procedures of 40 CFR §63.1349(b)(7), the facility is required to measure oHAP at the coal mill inlet or outlet. The facility must then calculate a flow weighted average oHAP concentration for all emission sources including the inline coal mill.

Monitoring Requirements

ADEM Admin. Code r. 335-3-14-.04, “*Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]*”

- A solids flow monitor shall be installed and maintained on the coal mill baghouse stack (P-95-02) that shall set off an associated alarm system during baghouse malfunctions [BACT, Air Permit No. 503-8026-Z003 issued July 17, 1984]:

ADEM Admin. Code r. 335-3-16-.05(c)(1) – *Permit Content – Monitoring and Recordkeeping Requirements*

- The facility must conduct opacity monitoring for these units as outlined below:
 - An instantaneous visible emissions observation shall be conducted at least weekly during daylight hours while the affected source is in operation.

- If any observed instantaneous visible emissions exceed ten (10%) percent opacity, a six (6) minute visible emissions observation (VEO) shall be conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A-4, within one (1) hour of the initial observation, unless the source is immediately shut down.
- If any visible emissions in excess of ten (10%) percent opacity are observed during the initial instantaneous visible emissions observation, corrective action shall be initiated within two (2) hours.
- After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in order to ensure that visible emissions have been reduced.
- If, during any VEO performed in accordance with Method 9, the six (6) minute average opacity exceeds ten (10%) percent, corrective action shall be initiated within two (2) hours of the observation to reduce the emissions. Corrective action may include, but may not be limited to, applying water to the materials being handled within the system.
- After correction action has been completed, a follow-up instantaneous visible emissions observation shall be conducted in accordance with Method 22 of 40 CFR Part 60, Appendix A-7, in order to ensure that visible emissions have been reduced.
- The Department shall be notified within twenty-four (24) hours of any VEO, performed in accordance with Method 9, in which the six (6) minute average opacity exceeds ten (10%) percent.

40 CFR §60.255 – 40 CFR Part 60, Subpart Y

- These sources are subject to 40 CFR Part 60, Subpart Y, “*Performance tests and other compliance requirements*”. There are no specific testing requirements for these units under this subpart.

40 CFR §60.256 – 40 CFR Part 60, Subpart Y

- These sources are subject to 40 CFR Part 60, Subpart Y, “*Continuous monitoring requirements*”.

40 CFR §60.256(a)(1)(i), (2) – 40 CFR Part 60, Subpart Y

- The facility shall install, calibrate, maintain, and continuously operate a monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within ± 1.7 °C (± 3 °F).

- The temperature monitoring device is to be recalibrated annually in accordance with procedures under 40 CFR §60.13(b).

40 CFR §63.1350 – 40 CFR Part 63, Subpart LLL

- The combine kiln and coal mill exhaust is subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Monitoring requirements*” (see Area 29: Kiln System).

40 CFR §63.1350(i)(2) – 40 CFR Part 63, Subpart LLL

- THC performance tests on the coal mill stack must be conducted using Method 25A in Appendix A to 40 CFR Part 60 and repeated every 30 months.

40 CFR §63.1350(k)(5) – 40 CFR Part 63, Subpart LLL

- The facility must account for the mercury emitted from the coal mill stack by following the procedures in 40 CFR §63.1350(k)(5)(i) through (iv). Performance tests should be conducted annually, within 11 to 13 months after the previous performance test. If the conditions of 40 CFR §63.1350(k)(5)(iv) are met, the frequency of performance testing may be reduced to once every 30 months (see Appendix A).

Recordkeeping Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- Records of the observation date, time, emission point designation, emission point operation mode, name of the observer, observed opacity, and any corrective actions taken during each visible emissions check, observation, and follow-up check shall be kept in a form suitable for inspection for a period of at least 5 years from the date of generation.
- If a visible emissions observation utilizing Method 9 is required, the results shall be documented using an EPA Method 9 visible emissions observation form, or a similar form approved by the Department.

40 CFR §60.258 – 40 CFR Part 60, Subpart Y

- These sources are subject to 40 CFR Part 60, Subpart Y, “*Reporting and recordkeeping*”. There are no specific recordkeeping requirements for these units under this subpart.

40 CFR §63.1355 – 40 CFR Part 63, Subpart LLL

- The combined kiln and coal mill exhaust is subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Recordkeeping requirements*” (see Area 29: Kiln System).

Reporting Requirements

ADEM Admin. Code r. 335-3-16-.05(c)(3) – Permit Content – Monitoring and Recordkeeping Requirements

- A semiannual monitoring report shall be submitted to the Department according to the following schedule:

Reporting Period	Due Date
January 1 st through June 30 th	August 29 th
July 1 st through December 31 st	March 1 st

- Each semiannual report shall contain the following information:
 - Detailed description of every instance in which the observed six-minute average visible emissions were equal to or greater than the applicable opacity standard, to include the date, time, cause of the visible emissions, observed opacity, and any corrective action initiated;
 - Copy of every visible emissions observation report generated during the reporting period;
 - Statement certifying that all required monitoring, recordkeeping, and reporting requirements were accomplished as required;
 - Statement of certification of truth, accuracy, and completeness as described in General Permit Proviso No. 9; and
 - Signature of the responsible official as required by General Permit Proviso No. 9.

40 CFR §60.258 – 40 CFR Part 60, Subpart Y

- These sources are subject to 40 CFR Part 60, Subpart Y, “*Reporting and recordkeeping*”. There are no specific reporting requirements for these units under this subpart.

40 CFR §63.1353 – 40 CFR Part 63, Subpart LLL

- The combined kiln and coal mill exhaust is subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “*Notification requirements*” (see Area 29: Kiln System).

40 CFR §63.1354 – 40 CFR Part 63, Subpart LLL

- The combined kiln and coal mill exhaust is subject to the applicable requirements outlined in 40 CFR Part 63, Subpart LLL, “Reporting requirements” (see Area 29: Kiln System).

Emissions Summary

Potential emissions from these sources are shown below.

Area 95 Potential Emissions

Emission Point(s)	Associated Source(s)	PM		PM ₁₀		PM _{2.5}		Total HAP (TPY)
		(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	
P-95-01	S-95-01	0.34	1.50	0.29	1.26	0.14	0.60	2.54E-04
	S-95-02							
P-95-02*	S-95-03	-	-	-	-	-	-	-
P-95-03	S-95-04	5.44E-02	0.24	4.57E-02	0.20	2.17E-02	0.09	4.04E-05
P-95-04	S-95-05	2.68E-02	0.12	2.25E-02	9.87E-02	1.07E-02	4.68E-02	1.99E-05
P-95-05	S-95-06	2.68E-02	0.12	2.25E-02	9.87E-02	1.07E-02	4.68E-02	1.99E-05
P-95-06	S-95-07	2.68E-02	0.12	2.25E-02	9.87E-02	1.07E-02	4.68E-02	1.99E-05

* Emissions from the coal mill stack (P-95-02) are included in the potential emissions from the main kiln stack (P-29-01).

Coal Mill Auxiliary Heater Potential Emissions

Emission Point(s)	Pollutant	Emissions	
		(lb/hr)	(TPY)
Coal Mill Auxiliary Heater	PM	7.45E-02	0.33
	PM _{con}	0.22	0.98
	PM ₁₀	0.30	1.31
	PM _{2.5}	0.30	1.31
	CO	3.29	14.43
	NO _x	3.92	17.18
	SO ₂	2.35E-02	0.10
	VOC	0.22	0.94
	HAP	7.41E-02	0.32
	CO _{2e}	4,733.85	20,734

Process Description

The kiln is equipped with a diesel-fired compression ignition (CI) emergency generator engine with a maximum brake horsepower of 201 hp. The engine is a 1978 model year installed in 1981.

Source ID	Source Description	Control	Emission Point
EG-1	Kiln Emergency CI Engine	Uncontrolled	EG-1

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-16-.03

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “*Major Source Operating Permits*”.

ADEM Admin. Code r. 335-3-4-.01(1)

- This source is subject to ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Visible Emissions*”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart III – “*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*”

- Per 40 CFR §60.4200, this subpart applies to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) that commence construction, modification, or reconstruction after July 11, 2005. The engine commenced construction in 1981 and has not been modified or reconstructed. Therefore, it is not an affected source under this subpart.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart ZZZZ, “*National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*”

- Per 40 CFR §63.6585, this subpart applies to owners or operators of any stationary reciprocating internal combustion engines (RICE) located at area or major sources of HAP emissions. The engine is a stationary RICE located at a major source of HAP emissions. Therefore, it is an affected source subject to this subpart.

Per 40 CFR §63.6590(a)(1)(ii), an existing stationary RICE is defined as:

For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

Therefore, the engine is an existing stationary RICE under this subpart.

Per 40 CFR §63.6675, *emergency stationary RICE* is defined as:

... any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.*
- (2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).*
- (3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(4)(i) or (ii).*

This engine is operated as an emergency stationary RICE.

40 CFR Part 63, Subpart A, “General Provisions”

- Per 40 CFR §63.6665 and ADEM Admin. Code r. 335-3-11-.06(1), the engine is subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 8 of 40 CFR Part 63, Subpart ZZZZ.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

This unit does not use a control device to achieve compliance with a limit, nor does it have the potential to emit a regulated air pollutant greater than the amount required for the unit to be classified as a major source. Therefore, it is not subject to CAM.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

Operational

40 CFR §63.6625(h), §63.6602 & Table 2c – 40 CFR Part 63, Subpart ZZZZ

- During periods of startup, the facility shall minimize the engine’s time spent at idle and minimize the engine’s startup time at startup to a period needed for appropriate and safe loading of the engines, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

40 CFR §63.6605(b) – 40 CFR Part 63, Subpart ZZZZ

- At all times the facility must operate and maintain the engine, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the facility to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to,

monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.6625(e), §63.6640(a), & Table 6 – 40 CFR Part 63, Subpart ZZZZ

- The facility shall comply with the work practices requirement by:
 - Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
 - Developing and following a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

40 CFR §63.6640(f)(1)-(3) – 40 CFR Part 63, Subpart ZZZZ

- The facility must operate the emergency stationary RICE according to the requirements in 40 CFR §63.6640(f)(1) through (3). In order for the engine to be considered emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR §63.6640(f)(1) through (3), is prohibited. If the facility does not operate the engine according to the requirements in 40 CFR §63.6640(f)(1) through (3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
 - There is no time limit on the use of emergency stationary RICE in emergency situations.
 - The facility may operate emergency stationary RICE for any combination of the purposes specified in 40 CFR §63.6640(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR §63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
 - Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

- Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM).
- Method 6 or 6A of 40 CFR Part 60, Appendix A-4, shall be used in the determination of sulfur dioxide (SO₂).
- Method 7 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of nitrogen oxide (NO_x).
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 10 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of carbon monoxide (CO).
- Method 25A of 40 CFR Part 60, Appendix A-7, shall be used in the determination of total hydrocarbons (THC).
- Method 320 or 323 of 40 CFR Part 63, Appendix A, shall be used in the determination of formaldehyde.

Monitoring Requirements

40 CFR §63.6625(f) – 40 CFR Part 63, Subpart ZZZZ & ADEM Admin. Code r. 335-3-16-.05(c)(1) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility shall install and operate a non-resettable hour meter on the engine.

40 CFR §63.6602 & Table 2c – 40 CFR Part 63, Subpart ZZZZ

- The engine shall meet the following requirements, except during periods of startup:
 - Change oil and filter every 500 hours of operation or annually, whichever comes first;

- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

40 CFR §63.6625(i) – 40 CFR Part 63, Subpart ZZZZ

- The facility has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2c to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

Recordkeeping Requirements

40 CFR §63.6655(e) – 40 CFR Part 63, Subpart ZZZZ & ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility shall keep records of the maintenance conducted on the engine in order to demonstrate that they operated and maintained the stationary RICE and after-treatment control device (if any) according to the maintenance plan or the manufacturer’s emission-related operation and maintenance instructions.

40 CFR §63.6655(f) – 40 CFR Part 63, Subpart ZZZZ & ADEM Admin. Code r. 335-3-16-.05(c)(2) – Permit Content – Monitoring and Recordkeeping Requirements

- The facility shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The facility must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in 40 CFR §63.6640(f)(4)(ii), the facility must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

40 CFR §63.6660(a)-(c) – 40 CFR Part 63, Subpart ZZZZ

- Records must be in a form suitable and readily available for expeditious review according to 40 CFR §63.10(b)(1). The facility must keep each record readily accessible in hard copy or electronic form for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

Reporting Requirements

- There are no specific reporting requirements for this unit other than those described in General Permit Proviso Nos. 12 and 21.

Emissions Summary

Potential emissions from this source are shown below.

Emergency Engine Potential Emissions

Emission Point(s)	Pollutant	Emissions	
		(lb/hr)	(TPY)
EG-1	PM	0.44	0.11
	PM ₁₀	0.44	0.11
	PM _{2.5}	0.44	0.11
	CO	1.34	0.33
	NO _x	6.20	1.55
	SO ₂	0.41	0.10
	VOC	0.49	0.12
	HAP	5.45E-03	1.36E-03
	CO _{2e}	231.54	57.88

1.5 MMBtu/hr Propane Process Heater

Process Description

The facility operates a 1.5 MMBtu/hr propane-fired process heater to heat liquid alternative fuels. The heater was installed in July 2010.

Regulatory Applicability

State Implementation Plan (SIP) Regulations

ADEM Admin. Code r. 335-3-16-.03

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, “*Major Source Operating Permits*”.

ADEM Admin. Code r. 335-3-4-.01(1)

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Visible Emissions*”.

ADEM Admin. Code r. 335-3-4-.03(1)

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), “*Control of Particulate Emissions – Fuel Burning Equipment*”.

ADEM Admin. Code r. 335-3-5-.01

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-5-.01(1), “*Control of Sulfur Compound Emissions – Fuel Combustion*”.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart Dc – “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”

- Per 40 CFR §60.40c, this subpart applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). Therefore, the 1.5 MMBtu/hr process is not an affected source under this subpart.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart DDDDD, “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Process Heaters”

- Per 40 CFR §63.7485, this subpart applies to owners or operators of an industrial, commercial, or institutional boiler or process heater as defined in 40 CFR §63.7575 that is located at, or is part of, a major source of HAP. Therefore, the process heater is an affected source subject to this subpart.

Per 40 CFR §63.7480(b), a boiler or process heater is new if the facility commenced construction of the boiler or process heater after June 4, 2010, and met the applicability criteria at the time construction commenced. Therefore, the process heater is a new source under this subpart.

40 CFR Part 63, Subpart A, “General Provisions”

- Per 40 CFR §63.7565 and ADEM Admin. Code r. 335-3-11-.06(1), the process heater is subject to the applicable requirements of 40 CFR Part 63, Subpart A, “General Provisions”, as listed in Table 10 of 40 CFR Part 63, Subpart DDDDD.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

- As stated in 40 CFR §64.2(a)(1), (2), and (3), any pollutant-specific emissions unit at a major source must implement CAM if the following conditions are met:

“The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section; the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are 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.”

This unit does not use a control device to achieve compliance with a limit, nor does it have the potential to emit a regulated air pollutant greater than the amount required for the unit to be classified as a major source. Therefore, it is not subject to CAM.

Emissions Standards

Opacity

ADEM Admin. Code r. 335-3-4-.01 – Visible Emissions

- According to ADEM Admin. Code r. 335-3-4-.01(1)(a)-(b), this facility shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six

minute average. During one six-minute period in any sixty minute period, the facility may emit particulate of an opacity no greater than forty percent (40%). If visible emissions are observed, the opacity should be determined using Method 9 of 40 CFR Part 60, Appendix A-4.

Particulate Matter

ADEM Admin. Code r. 335-3-4-.03 – Fuel Burning Equipment

- According to ADEM Admin. Code r. 335-3-4-.03(1), this facility shall not cause or permit the emission of particulate matter from fuel-burning equipment in a Class 1 County in excess of 0.5 lb/MMBtu.

Sulfur Dioxide

ADEM Admin. Code r. 335-3-5-.01 – Fuel Combustion

- According to ADEM Admin. Code r. 335-3-5-.01(1)(a), this facility shall not cause or permit the operation of a fuel burning installation in such a manner that sulfur oxides, measured as sulfur dioxide, are emitted in excess of 1.8 pounds per million BTU heat input.

Operational

40 CFR §63.7500(a)(1), Table 3, 40 CFR §63.7500(d) – 40 CFR Part 63, Subpart DDDDD

- The Permittee must meet the applicable work practice standards in Table 3 of 40 CFR Part 63, Subpart DDDDD. Per 40 CFR §63.7500(d) and Table 3 to 40 CFR Part 63, Subpart DDDDD, the Permittee must conduct a tune-up of the process heater every 5 years as specified in 40 CFR §63.7540.

40 CFR §63.7500(a)(3) – 40 CFR Part 63, Subpart DDDDD

- At all times, the Permittee must operate and maintain the process heater, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

40 CFR §63.7505(a) – 40 CFR Part 63, Subpart DDDDD

- The Permittee must be in compliance with the emission limits, work practice standards, and operating limits in 40 CFR Part 63, Subpart DDDDD. These emission and operating

limits apply at all times the affected unit is operating except for the periods noted in 40 CFR §63.7500(f).

Compliance and Performance Test Methods and Procedures

ADEM Admin. Code r. 335-3-1-.05 – Sampling and Testing Methods

- Method 5 of 40 CFR Part 60, Appendix A-3, shall be used in the determination of particulate matter (PM).
- Method 6 or 6A of 40 CFR Part 60, Appendix A-4, shall be used in the determination of sulfur dioxide (SO₂).
- Method 7 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of nitrogen oxide (NO_x).
- Method 9 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of opacity.
- Method 10 of 40 CFR Part 60, Appendix A-4, shall be used in the determination of carbon monoxide (CO).
- Method 25A of 40 CFR Part 60, Appendix A-7, shall be used in the determination of total hydrocarbons (THC).
- Method 320 or 323 of 40 CFR Part 63, Appendix A, shall be used in the determination of formaldehyde.

Monitoring Requirements

40 CFR §63.7510(g) – 40 CFR Part 63, Subpart DDDDD

- The Permittee must demonstrate compliance with the applicable work practice standards in Table 3 to 40 CFR Part 63, Subpart DDDDD within the 5-year schedule as specified in 40 CFR §63.7515(d) following the initial compliance date specified in 40 CFR §63.7495(a). Thereafter, the Permittee is required to complete the 5-year tune-up as specified in 40 CFR §63.7515(d).

40 CFR §63.7515(d) – 40 CFR Part 63, Subpart DDDDD

- The Permittee must conduct a 5-year performance tune-up according to 40 CFR §63.7540(a)(12). Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. The first 5-year tune-up was conducted on March 13, 2019..

40 CFR §63.7515(g), 40 CFR §63.7540(a)(13) – 40 CFR Part 63, Subpart DDDDD

- If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

Recordkeeping Requirements

40 CFR §63.7555(a)(1) – 40 CFR Part 63, Subpart DDDDD

- The Permittee must keep a copy of each notification and report submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or compliance report submitted, according to the requirements in 40 CFR §63.10(b)(2)(xiv).

40 CFR §63.7560(a), (b), (c) – 40 CFR Part 63, Subpart DDDDD

- Records must be in a form suitable and readily available for expeditious review, according to 40 CFR §63.10(b)(1). As specified in 40 CFR §63.10(b)(1), the Permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR §63.10(b)(1). The Permittee can keep the records off site for the remaining 3 years.

Reporting Requirements

40 CFR §63.7545(a) – 40 CFR Part 63, Subpart DDDDD

- The Permittee must submit to the Administrator all of the notifications in 40 CFR §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply by the dates specified.

40 CFR §63.7550(b)(1)-(4) – 40 CFR Part 63, Subpart DDDDD

- The Permittee must submit a 5-year compliance report as specified in 40 CFR §63.7550(b)(1) through (4).
 - The first compliance report must cover the period beginning on the compliance date that is specified for the process heater in 40 CFR §63.7495 and ending on December 31 within 5 years after the compliance date.
 - The first compliance report must be submitted no later than January 31.
 - 5-year compliance reports must cover the 5-year period from January 1 to December 31.
 - Each subsequent 5-year compliance report must be submitted no later than January 31.

40 CFR §63.7550(c)(1), Table 9 – 40 CFR Part 63, Subpart DDDDD

- The Permittee must submit a compliance report with the information in 40 CFR §63.7550(c)(5)(i) through (iii), (xiv), and (xvii).

40 CFR §63.7550(h) – 40 CFR Part 63, Subpart DDDDD

- The Permittee must submit the compliance report according to the procedures specified in 40 CFR §63.7550(h)(3).

Emissions Summary

Potential emissions from this source are shown below.

1.5 MMBtu/hr Heater Potential Emissions

Emission Point(s)	Pollutant	Emissions	
		(lb/hr)	(TPY)
1.5 MMBtu/hr Heater	PM	1.15E-02	5.03E-02
	PM ₁₀	1.15E-02	5.03E-02
	PM _{2.5}	1.15E-02	5.03E-02
	CO	0.12	0.54
	NO _x	0.21	0.93
	SO ₂	8.85E-04	3.88E-03
	VOC	1.64E-02	7.18E-02
	HAP	2.78E-03	1.22E-02
	CO _{2e}	209	917

ENVIRONMENTAL JUSTICE

The Department utilized the EJSCREEN environmental justice (EJ) screening and mapping tool and the Justice 40 screening and mapping tool to perform an analysis of the area around the facility. Please refer to Appendix A.

DRAFT

RECOMMENDATION

Based on the above analysis and pending the outcome of the 30-day public comment period and 45-day EPA comment period, I recommend that the Department issue the renewal to MSOP No. 503-8026.

J. Douglas Hallford
Industrial Minerals Section
Air Division

Date

DRAFT

DRAFT

Appendix A

EJSCREEN and Justice 40 Results

DRAFT

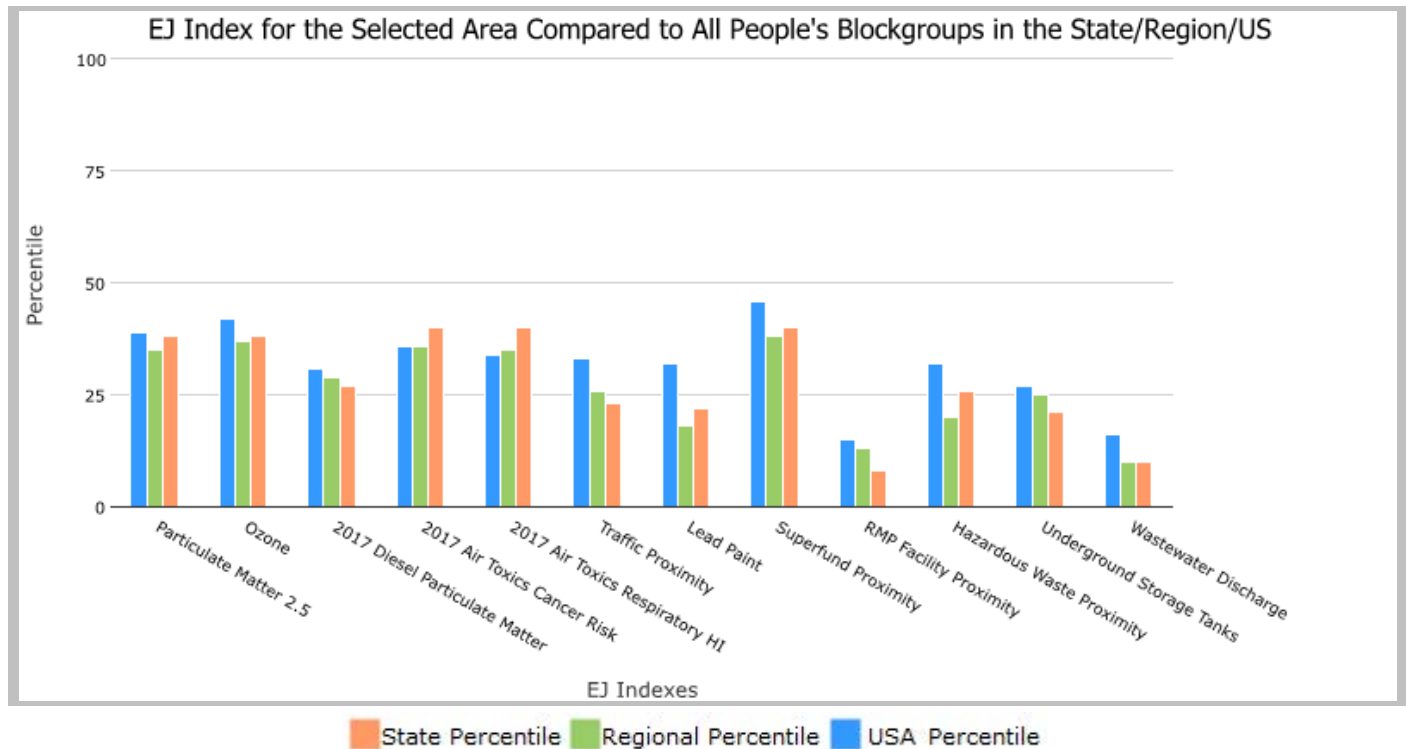
1 mile Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 511

Input Area (sq. miles): 3.14

Holcim Inc

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
Environmental Justice Indexes			
EJ Index for Particulate Matter 2.5	38	35	39
EJ Index for Ozone	38	37	42
EJ Index for 2017 Diesel Particulate Matter*	27	29	31
EJ Index for 2017 Air Toxics Cancer Risk*	40	36	36
EJ Index for 2017 Air Toxics Respiratory HI*	40	35	34
EJ Index for Traffic Proximity	23	26	33
EJ Index for Lead Paint	22	18	32
EJ Index for Superfund Proximity	40	38	46
EJ Index for RMP Facility Proximity	8	13	15
EJ Index for Hazardous Waste Proximity	26	20	32
EJ Index for Underground Storage Tanks	21	25	27
EJ Index for Wastewater Discharge	10	10	16



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJScreen Report (Version 2.0)

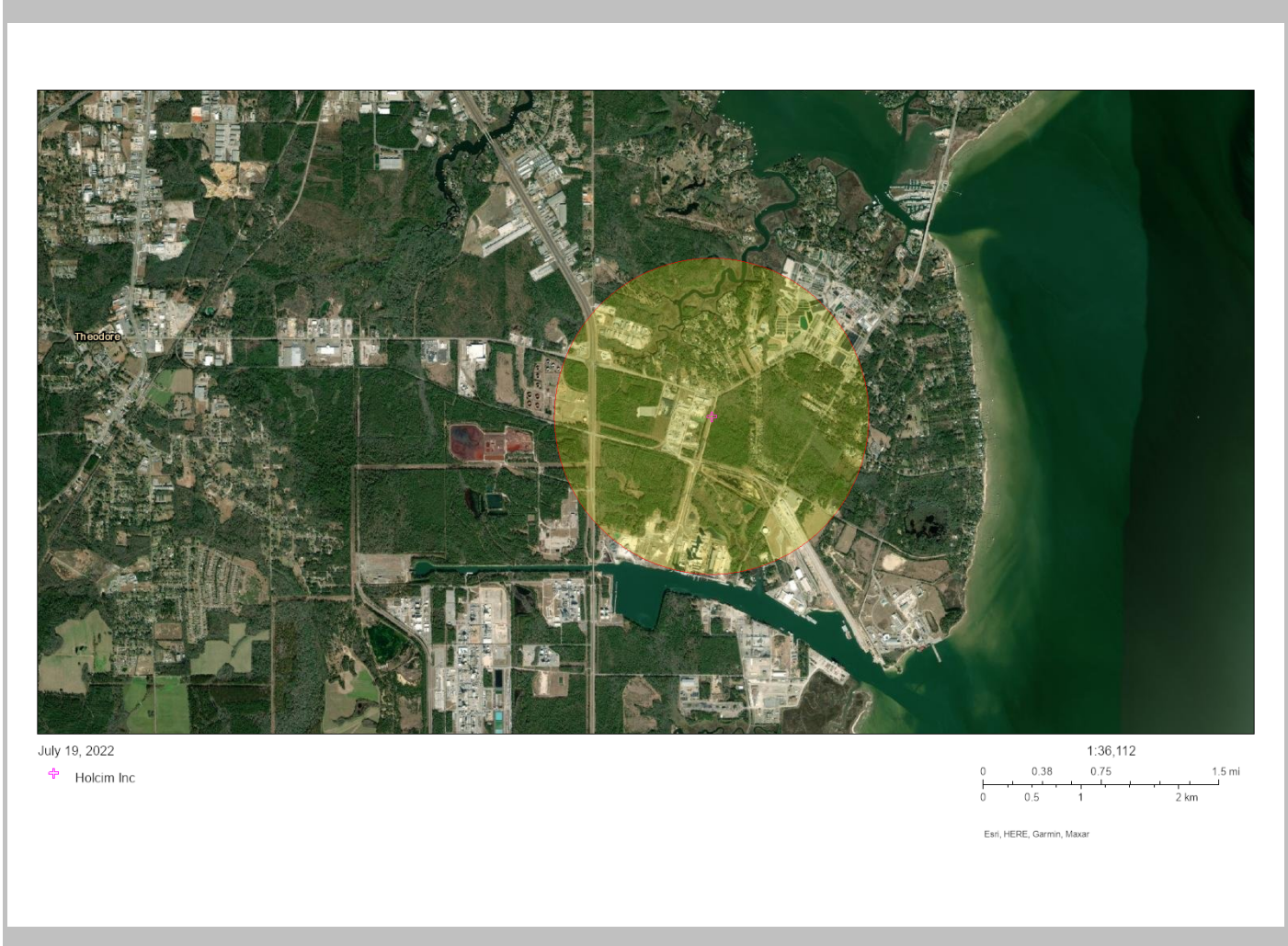


1 mile Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 511

Input Area (sq. miles): 3.14

Holcim Inc



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJScreen Report (Version 2.0)



1 mile Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 511

Input Area (sq. miles): 3.14

Holcim Inc

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Pollution and Sources							
Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$)	8.77	8.9	40	8.18	73	8.74	54
Ozone (ppb)	38.3	39.1	43	37.9	49	42.6	23
2017 Diesel Particulate Matter* ($\mu\text{g}/\text{m}^3$)	0.276	0.216	74	0.261	60-70th	0.295	50-60th
2017 Air Toxics Cancer Risk* (lifetime risk per million)	30	34	55	31	80-90th	29	80-90th
2017 Air Toxics Respiratory HI*	0.4	0.47	38	0.4	70-80th	0.36	80-90th
Traffic Proximity (daily traffic count/distance to road)	130	230	61	430	49	710	39
Lead Paint (% Pre-1960 Housing)	0.15	0.18	61	0.15	68	0.28	47
Superfund Proximity (site count/km distance)	0.024	0.054	35	0.083	37	0.13	21
RMP Facility Proximity (facility count/km distance)	0.91	0.41	86	0.6	79	0.75	73
Hazardous Waste Proximity (facility count/km distance)	0.47	0.83	54	0.62	67	2.2	43
Underground Storage Tanks (count/km ²)	1	1.7	61	3.5	49	3.9	46
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.017	0.42	80	0.45	84	12	73
Socioeconomic Indicators							
Demographic Index	23%	36%	32	37%	30	36%	37
People of Color	14%	34%	30	39%	25	40%	28
Low Income	32%	37%	42	35%	47	31%	56
Unemployment Rate	7%	6%	70	6%	72	5%	74
Linguistically Isolated	1%	1%	73	3%	53	5%	46
Less Than High School Education	15%	14%	61	13%	67	12%	70
Under Age 5	4%	6%	33	6%	33	6%	32
Over Age 64	20%	17%	72	17%	72	16%	75

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

For additional information, see: www.epa.gov/environmentaljustice

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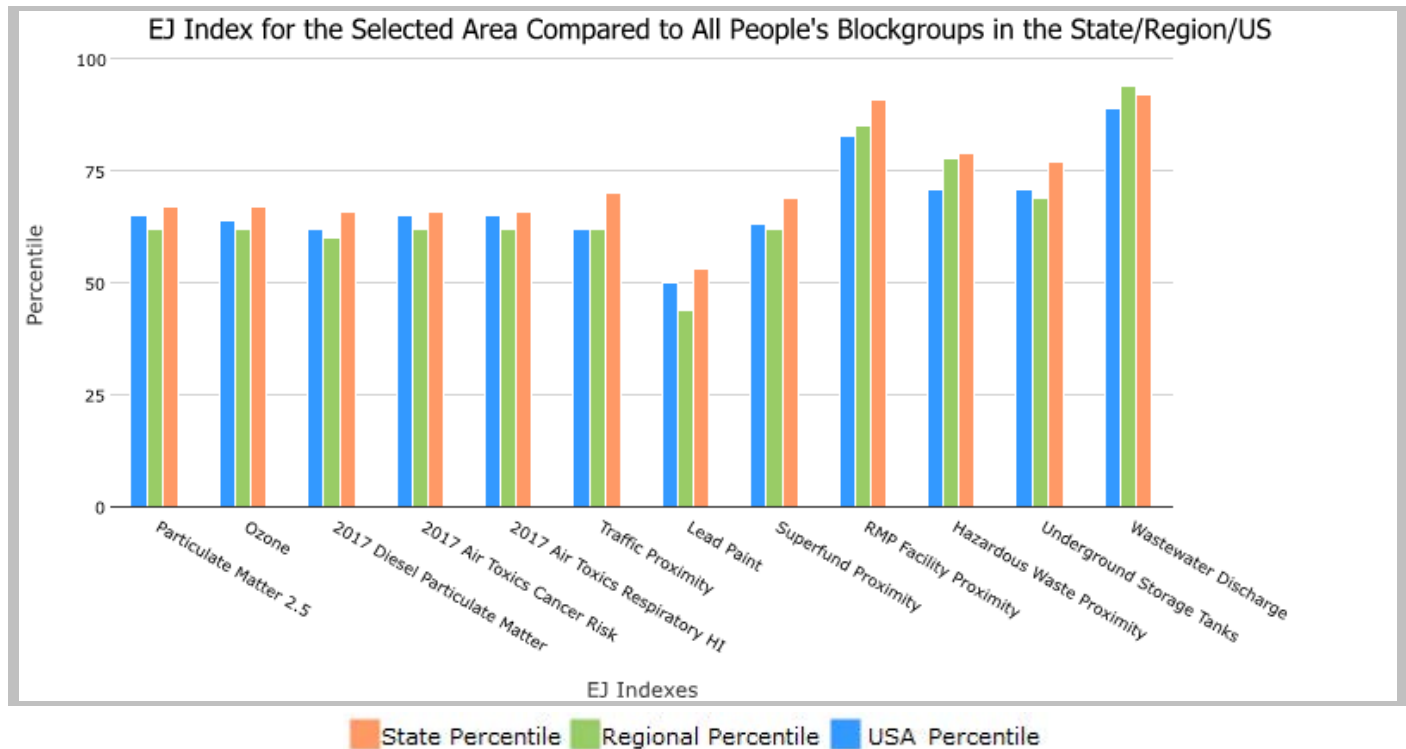
3 miles Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 4,232

Input Area (sq. miles): 28.27

Holcim Inc

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
Environmental Justice Indexes			
EJ Index for Particulate Matter 2.5	67	62	65
EJ Index for Ozone	67	62	64
EJ Index for 2017 Diesel Particulate Matter*	66	60	62
EJ Index for 2017 Air Toxics Cancer Risk*	66	62	65
EJ Index for 2017 Air Toxics Respiratory HI*	66	62	65
EJ Index for Traffic Proximity	70	62	62
EJ Index for Lead Paint	53	44	50
EJ Index for Superfund Proximity	69	62	63
EJ Index for RMP Facility Proximity	91	85	83
EJ Index for Hazardous Waste Proximity	79	78	71
EJ Index for Underground Storage Tanks	77	69	71
EJ Index for Wastewater Discharge	92	94	89



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJScreen Report (Version 2.0)

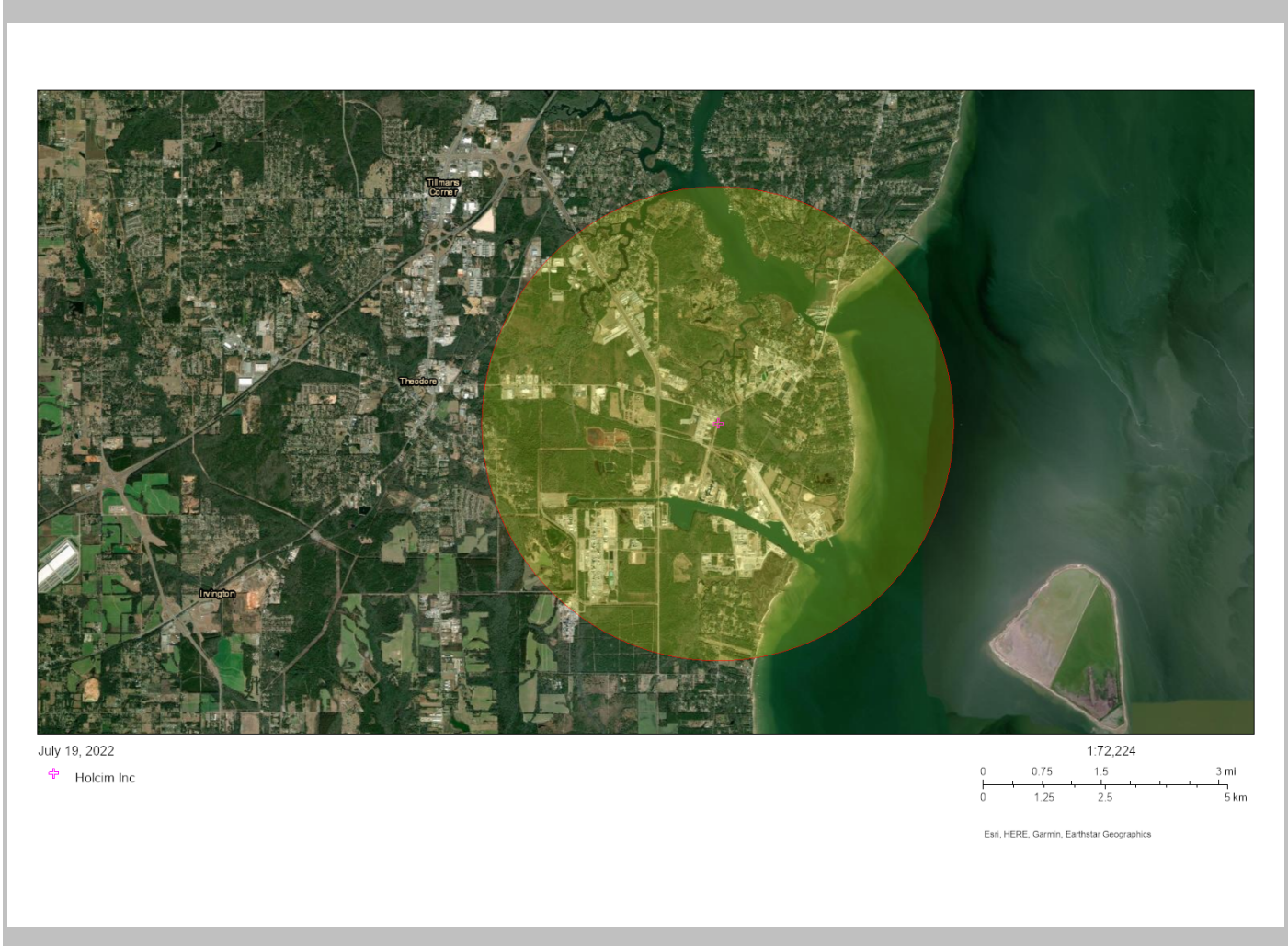


3 miles Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 4,232

Input Area (sq. miles): 28.27

Holcim Inc



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	3

EJScreen Report (Version 2.0)



3 miles Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 4,232

Input Area (sq. miles): 28.27

Holcim Inc

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Pollution and Sources							
Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$)	8.73	8.9	38	8.18	72	8.74	53
Ozone (ppb)	38.4	39.1	44	37.9	50	42.6	23
2017 Diesel Particulate Matter* ($\mu\text{g}/\text{m}^3$)	0.243	0.216	68	0.261	50-60th	0.295	50-60th
2017 Air Toxics Cancer Risk* (lifetime risk per million)	30	34	55	31	80-90th	29	80-90th
2017 Air Toxics Respiratory HI*	0.4	0.47	38	0.4	70-80th	0.36	80-90th
Traffic Proximity (daily traffic count/distance to road)	110	230	56	430	45	710	35
Lead Paint (% Pre-1960 Housing)	0.16	0.18	63	0.15	69	0.28	48
Superfund Proximity (site count/km distance)	0.025	0.054	36	0.083	38	0.13	22
RMP Facility Proximity (facility count/km distance)	1.2	0.41	90	0.6	84	0.75	80
Hazardous Waste Proximity (facility count/km distance)	0.55	0.83	57	0.62	70	2.2	45
Underground Storage Tanks (count/km ²)	1.1	1.7	63	3.5	50	3.9	47
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.044	0.42	87	0.45	88	12	79
Socioeconomic Indicators							
Demographic Index	35%	36%	58	37%	54	36%	57
People of Color	29%	34%	54	39%	46	40%	47
Low Income	41%	37%	59	35%	63	31%	70
Unemployment Rate	9%	6%	76	6%	79	5%	81
Linguistically Isolated	1%	1%	73	3%	53	5%	47
Less Than High School Education	15%	14%	60	13%	66	12%	70
Under Age 5	6%	6%	56	6%	56	6%	54
Over Age 64	20%	17%	70	17%	70	16%	73

*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

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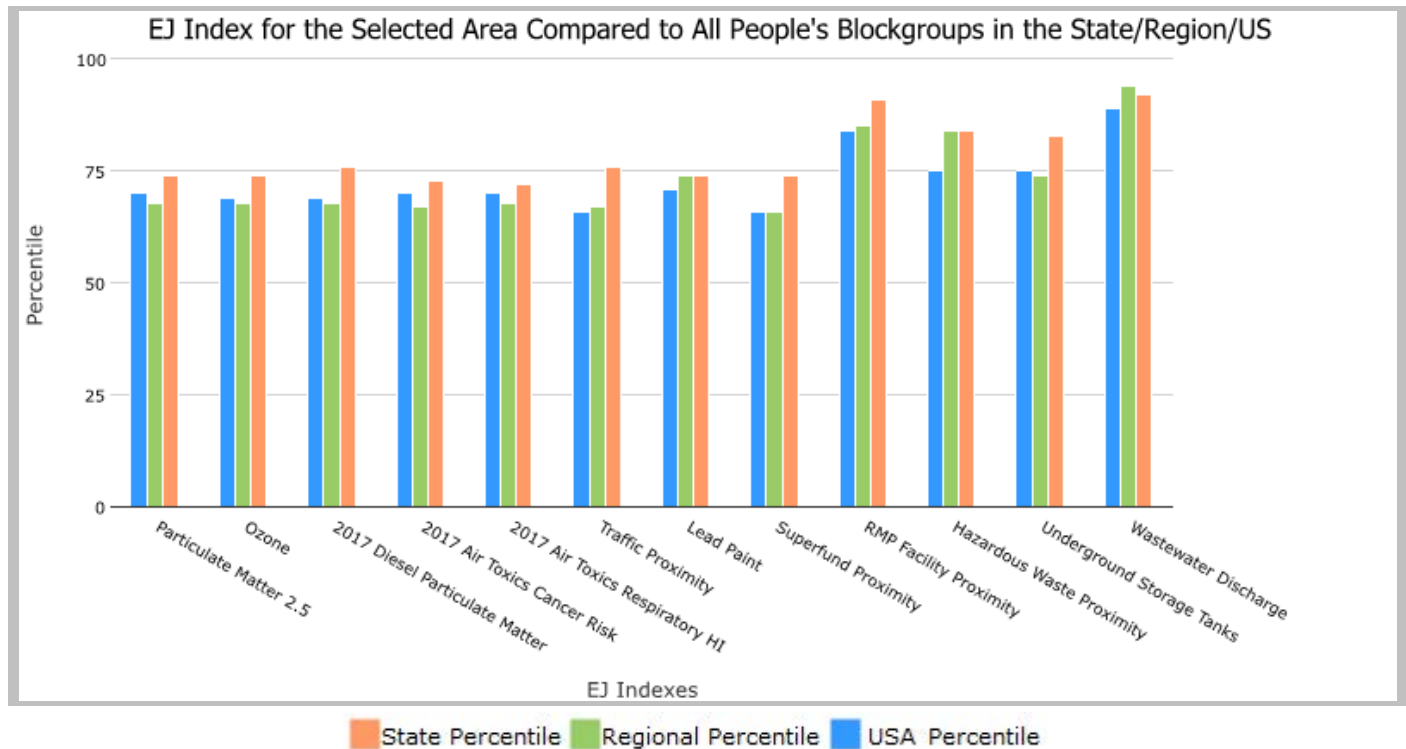
5 miles Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 22,125

Input Area (sq. miles): 78.53

Holcim Inc (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
Environmental Justice Indexes			
EJ Index for Particulate Matter 2.5	74	68	70
EJ Index for Ozone	74	68	69
EJ Index for 2017 Diesel Particulate Matter*	76	68	69
EJ Index for 2017 Air Toxics Cancer Risk*	73	67	70
EJ Index for 2017 Air Toxics Respiratory HI*	72	68	70
EJ Index for Traffic Proximity	76	67	66
EJ Index for Lead Paint	74	74	71
EJ Index for Superfund Proximity	74	66	66
EJ Index for RMP Facility Proximity	91	85	84
EJ Index for Hazardous Waste Proximity	84	84	75
EJ Index for Underground Storage Tanks	83	74	75
EJ Index for Wastewater Discharge	92	94	89



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJScreen Report (Version 2.0)

5 miles Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 22,125

Input Area (sq. miles): 78.53

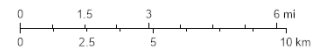
Holcim Inc (The study area contains 1 blockgroup(s) with zero population.)



July 19, 2022

✚ Holcim Inc

1:144,448



Esri, HERE, Garmin, Earthstar Geographics

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	5

EJScreen Report (Version 2.0)



5 miles Ring Centered at 30.547580,-88.110909, ALABAMA, EPA Region 4

Approximate Population: 22,125

Input Area (sq. miles): 78.53

Holcim Inc (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Pollution and Sources							
Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$)	8.78	8.9	40	8.18	73	8.74	54
Ozone (ppb)	38.3	39.1	43	37.9	49	42.6	23
2017 Diesel Particulate Matter* ($\mu\text{g}/\text{m}^3$)	0.252	0.216	70	0.261	50-60th	0.295	50-60th
2017 Air Toxics Cancer Risk* (lifetime risk per million)	30	34	55	31	80-90th	29	80-90th
2017 Air Toxics Respiratory HI*	0.4	0.47	39	0.4	70-80th	0.36	80-90th
Traffic Proximity (daily traffic count/distance to road)	170	230	68	430	55	710	44
Lead Paint (% Pre-1960 Housing)	0.14	0.18	58	0.15	66	0.28	45
Superfund Proximity (site count/km distance)	0.025	0.054	38	0.083	39	0.13	23
RMP Facility Proximity (facility count/km distance)	0.8	0.41	84	0.6	76	0.75	70
Hazardous Waste Proximity (facility count/km distance)	0.79	0.83	64	0.62	76	2.2	52
Underground Storage Tanks (count/km ²)	2.2	1.7	75	3.5	63	3.9	60
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.022	0.42	82	0.45	85	12	75
Socioeconomic Indicators							
Demographic Index	43%	36%	70	37%	65	36%	66
People of Color	41%	34%	67	39%	59	40%	58
Low Income	45%	37%	66	35%	69	31%	75
Unemployment Rate	5%	6%	57	6%	58	5%	60
Linguistically Isolated	1%	1%	73	3%	53	5%	47
Less Than High School Education	13%	14%	51	13%	58	12%	63
Under Age 5	7%	6%	65	6%	67	6%	65
Over Age 64	18%	17%	61	17%	63	16%	66

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

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Theodore, AL

48
AK
HI
PR
GU
AS
MP
VI

Tract information
 Number: 01097007103
 County: Mobile County
 State: Alabama
 Population: 3,130

Tract demographics
 Race / Ethnicity ([show](#))
 Age ([show](#))

Identified as disadvantaged?
NO

This tract is not considered disadvantaged. It does not meet any burden thresholds **OR** at least one associated socioeconomic threshold.

[Send feedback](#)

Climate change +

Energy +

Health +

Housing +

Legacy pollution +

Transportation +