DRAFT/PROPOSED

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **April 30, 2025**

TO: Phillip Fielder, P.E., Chief Engineer

THROUGH: Rick Groshong, Compliance and Enforcement Manager

THROUGH: Eric L. Milligan, P.E., Engineering Manager, Engineering Section

THROUGH: Ryan Buntyn, P.E., New Source Permits Section

FROM: David Schutz, P.E., New Source Permits Section

SUBJECT: Evaluation of Part 70 Renewal Application No. **2016-0458-TVR**
Tulsa Cement, LLC d/b/a Central Plains Cement Company
Tulsa Cement Plant (SIC 3241/NAICS 327310)
AQD Facility ID: 166
Latitude 36.19293°, Longitude -95.8151°
Section 22, Township 20N, Range 14E; Tulsa, Rogers County
Physical Address: 2609 N 145th E Ave, Tulsa, OK 74116

SECTION I. INTRODUCTION

Tulsa Cement, LLC (TC) has submitted an application for a Title V renewal permit for their Portland Cement facility located in Rogers County. TC currently operates under Permit No. 98-174-TV (M-24) which was issued on August 2, 2017 and Permit No. 98-174-C (M-22) which was issued on February 13, 2017. The applicant has made several requests in addition to the renewal application, which are outlined and discussed in Section IV of the permit memorandum.

The facility is an existing PSD major stationary source and an area source of HAP emissions.

SECTION II. FACILITY DESCRIPTION

Tulsa Cement operates two dry process Portland cement manufacturing kilns at the Tulsa facility. The operations involved in the manufacture of cement include raw material quarrying, crushing, drying, grinding, blending, clinker production in the kilns, finish grinding, and packaging. The facility is permitted to burn coal, coke, natural gas, approved fuel quality waste (FQW), and alternate non-hazardous materials as fuel in each of the rotary kilns. The primary raw materials are obtained from the on-site quarries and are comprised of limestone and shale. The rotary kilns produce clinker at a combined maximum permitted rate of 96 short tons per hour. The exhaust gas from each kiln is routed through its own baghouse and stack before entering the ambient air.

Cement manufacturing involves chemical and physical processing of raw materials. The raw materials used include sources of calcium, silica, alumina, and iron. These are the components necessary for the manufacture of the cement chemicals (dicalcium silicate, tricalcium silicate, tricalcium aluminate, and tetra-calcium alumino-ferrite). The facility also uses other raw materials that contain the necessary chemical properties for the manufacture of cement. The alternate materials are obtained from on-site and off-site sources and include, but are not limited to, silica, alumina, and iron bearing materials and other non-hazardous waste materials. The raw feed is prepared for use in the kiln system by sizing, grinding, and blending the various raw materials to produce the necessary mix for quality clinker production. The carbonate source, limestone, is mined on-site, crushed in the primary/secondary crushing system, and then moved by conveyor belt to the raw material storage. The limestone and other raw materials, including iron ore and sand, are dried in the raw mill, prior to introduction into the rotary kilns. The prepared raw feed is introduced to the kiln system at the end opposite to the combustion zone. The raw feed travels in a countercurrent direction to the heated air flow through the kiln. As the raw material passes through the kiln, it is dried, calcined (the conversion of calcium carbonate to calcium oxide), and finally heated to the fusion temperature (approximately 2,700°F), at which point clinker is produced. Clinker is discharged to the clinker cooler where it is cooled to approximately 250°F and then conveyed to bulk storage. From storage, clinker is sent to the finish mill; blended with gypsum, limestone, cement kiln dust (CKD) and/or slag; and finely ground to make cement.

Collocated Facility

Systech Environmental Corporation (Systech) operates a FQW facility that supplies FQW to Tulsa Cement. The FQW is managed by Systech. Systech operates a fully permitted hazardous waste management facility within the TC facility site. Systech's primary responsibility is to receive, process, and store liquid FQW prior to introduction into the TC cement kilns. The boundary between the TC and Systech properties forms the basis for determining whether a particular piece of equipment and source of emissions is considered to belong to TC or Systech and in which permit application it should be addressed. Systech's FQW receiving and storage facility is located northwest of the Tulsa Cement kilns. The Systech waste management units consist of a tanker truck receiving bay and two 180,000-gallon tanks. The FQW is received in bulk by tanker trucks which are unloaded directly into the storage tanks. Piping, ancillary equipment, and associated controls are utilized to transfer FQW from the storage tanks at Systech to the kilns at TC.

SECTION III. PERMIT HISTORY

Permits	Date Issued	Description
74-197-C	1/20/1975	Initial construction of coal-fired cement kiln
74-197-O	5/4/1978	Authorized the facility to operate a handling and firing system to burn coal in addition to commercial grade natural gas.
74-197-O (M-1)	2/1/1995	Authorized the facility to burn a blend of coal and petroleum coke. Testing results indicated that, even at comparable production rates, there was a distinct reduction of emissions with a coal/coke fuel blend compared to a 100% coal fuel.

Permits	Date Issued	Description
74-197-O (M-2)	7/5/1995	Authorized the facility to modify a production limitation of the permit without a resultant increase of emissions due to improved emissions control.
95-290-C	12/19/1995	Authorized the construction of a new cement finish mill; Clinker Cooler(s) were modified in order to increase heat transfer efficiency.
74-197-C (M-3)	11/7/1997	Authorized the facility to burn alternate non-hazardous fuels as substitutes for coal only, a coal/coke blend, or natural gas without a resultant increase of emissions. This permit required an extensive program of pre-qualification, testing, and recordkeeping to confirm that each fuel accepted for burning in the kiln will not exceed the applicable maximum acceptable ambient concentration (MAAC) level. Ambient air impacts were modeled and determined to be within the applicable standards.
95-290-O	4/9/1998	Authorized the operation of a new cement finish mill, which began full operation on December 18, 1997. The new finish mill has a rated capacity of 63 TPH. The total clinker production limitation (96 TPH) for the plant was not modified. The resultant increase of particulate emissions was offset by a reduction of emissions from the clinker cooler system.
98-174-C (M-3)	11/8/2004	Initial construction of a new 300-ton fly ash silo (EP-60) which will receive fly ash from truck or rail and store the material prior to sending to Finish Mill #1 and #2.
98-174-C (M-4)	6/20/2005	Initial construction to add two new clinker additive silo(s) and pneumatic transfer system (EP-61 and EP-62).
98-174-C (M-5)	6/20/2005	Initial construction to add a new clinker conveyor (EP-63 and EP-64).
98-174-C (M-6)	9/2/2005	Initial construction to add a new transfer conveyor (EP-65) which will receive and transport a new product called NewCem (produced offsite) from railcars to trucks. The mobile conveyer system is powered by a diesel engine (EP-66).
98-174-C (M-8)	11/29/2005	Initial construction to add a new transfer conveyor.
98-174-C (M-9)	3/19/2007	Initial construction of new screener (EP-82) and 74-Hp diesel engine (EP-81).
98-174-TV	11/20/2007	Initial Title V operating permit.

Permits	Date Issued	Description
98-174-TV (M-11)	6/1/2009	To incorporate the installation of a new fan and bags in the baghouse that controls emissions from the primary raw materials crusher (EP01 of EUG1). This project more than doubles the actual cubic feet per minute (acfm) air flow, and therefore particulate (PM) emissions, through the baghouse. Modify the measurement approach for the Compliance Assurance Monitoring (CAM) plan in Specific Condition #5 of the original Title V (Permit No. 98-174-TV) from "Opacity shall be monitored using a continuous opacity monitor" to the language shown in the condition for this permit. Modify Specific Condition 1.A. of the original Title V (Permit No. 98-174-TV) to include language indicating that compliance with the existing lb/hr SO_2 emission limits on EUGs 5A and 5B (Kilns 1 and 2) are to be based on 1, 3, and 24-hour average bases.
98-174-C (M-13)	1/3/2011	Authorization to utilize Fuel Quality Waste (FQW) in the cement kilns and construction of hazardous waste management facility (Systech) adjacent to Tulsa Cement's facility.
98-174-C (M-16)	12/18/2013	Incorporate requirements to install SNCR on both cement kiln(s) into a federally enforceable construction permit as required by the consent decree (CD).
98-174-C (M-18)	12/18/2013	Incorporate SO_2 emission limits on both cement kiln(s) into a federally enforceable construction permit as required by the consent decree (CD).
98-174-TV (M-14)	Consolidated Issuance with Permit No. 98-174-TV (M-21)	Authorize operation of a temporary coal crusher
98-174-TV (M-17)		Authorize existing baghouse improvements on rotary kiln(s) #1 and #2
98-174-TV (M-19)		Authorize replacement of baghouse on rotary kiln #1
98-174-TV (M-20)		Incorporate Permit No. 98-174-C (M-13) requirements
98-174-TV (M-21)	1/14/2015	Authorize installation of a new raw material stacking and reclaiming system (EP-90)
98-174-C (M-22)	2/13/2017	Incorporate NO_X emission limits on both cement kiln(s) into a federally enforceable construction permit as required by the consent decree (CD).
98-174-TV (M-24)	8/2/2017	Authorize installation of two (2) mini conveyors as a quality improvement for limestone spillage around the raw material crusher.

Permits	Date Issued	Description
98-174-TV (M-25)	Consolidated Issuance with Permit No. 2016-0458-TVR	Authorize replacement of burners on both cement kiln(s).
98-174-TV (M-26)		The proposed project includes constructing a multi-hopper system upstream of the stacker-reclaimer.
98-174-TV (M-27)		The proposed project includes constructing a new storage silo for storage of cement kiln dust (CKD). Tulsa cement intends to pneumatically load cement kiln dust (CKD) into the storage silo for load out by rail.
98-174-TV (M-28)		Add CKD and limestone at Finish Mill No. 3

SECTION IV. REQUESTED CHANGES

The following requests were made as part of the permit application. DEQ's response to each request has been *italicized.*

(1.) Update the new applicable requirements for emission units 211 (EP-03), 221 (EP-04), 601 (EP-16), 602 (EP-17) as imparted by the revisions to 40 CFR Part 63, Subpart LLL effective September 9, 2015.

AQD has updated all applicable state and federal regulations for this facility, including 40 CFR Part 63, Subpart LLL.

(2.) Add reduced frequency for visibility observations similar to the reduced VE allowed under NESHAP Subpart LLL for Grandfathered EU, and EUG 1, 1A, 2A, 7C, 9A, 11, and 12B.

Per the applicant's request, these changes were incorporated into the permit.

(3.) The 80-hp diesel engine (water pump #1) historically listed under EUG 15 as EP-66 has been removed from site and the facility has requested in the renewal application that it be removed from the permit.

Per the applicant's request, EP-66, along with any references to it, have been removed from the permit.

(4.) The facility is establishing "area" source status, i.e., demonstrating that it was not a major source of HAPs. Stack testing on the kilns, the primary sources of HAPs, and revised HAP emissions (based on actual counts of fugitive leakage components) , show combined HAP emissions below major source levels. Based on the updated review and the current underlying requirements of the Title V permit, the facility qualifies as an area source of HAPs.

In addition, DEQ has made the following notable changes during this renewal:

(1.) TC subsequently submitted permit applications for projects unrelated to this renewal but that will be authorized with the renewal permit contingent on public, state, and EPA review. Permit Application No. 98-174-TV (M-25) was submitted on April 19, 2019, for a project

regarding burner replacements on each of the rotary kilns; Permit Application No. 98-174-TV (M-26) was submitted on August 21, 2019, for a project to install a new multi hopper system; Permit Application No. 98-174-TV (M-27) was submitted on June 8, 2020, for a project to install a new cement kiln dust (CKD) storage silo; and Permit Application No. 98-174-TV (M-28) was submitted on September 23, 2021, for a project to add limestone and Cement Kiln Dust (CKD) to Finish Mill No. 3. The application for each of the projects discussed above have been individually determined to be Tier I based on the request for modification of an operating permit at an existing Part 70 source that will result in a minor modification. Each of the projects have also been evaluated for PSD applicability, including the potential for project aggregation. The PSD evaluation for each project is presented below (PSD Review).

(2.) Where emission units represent multiple emission points and are routed to a common control device (i.e., exhausted from the same emission point), the Subchapter 19 emission limits assigned now reflect a single limit based on the combined throughput in the specific conditions.

(3.) Corrected an error to the emission limit assigned to EP-01 (from 29.90 lb/hr to 3.82 lb/hr) on the basis that the previous emission limit represented the annual emissions expected from the unit (in TPY).

(4.) Incorporated correct applicable requirements for emission units EP-01 and EP-02 to reflect standards for systems with capture systems as specified by 40 CFR Part 60, Subpart OOO.

(5.) Revised the two (2) emissions limits assigned to EUG 1B into one (1) emission limit. A separate emission limit was assigned to EP-91 and EP-92 in the previous permit (0.26 TPY/each). This was erroneous since the 0.51 TPY represents the total from both conveyors and a transfer point. Therefore, it is revised to reflect one (1) emission limit for all sources.

(6.) EP-55, EP-56, and EP-43 post-date the grandfathered status and should be considered permitted units. These units have been moved to the "permitted" section of the Specific Conditions.

(7.) Addition of 40 CFR Part 63, Subpart CCCCCC as an applicable standard. Since the facility has established "area" source status, this regulation is becoming applicable.

(8.) Removed the compliance condition for EP-63 and EP-64. These units have been decommissioned and dismantled.

(9.) Incorporated the manufacturer baghouse ratings and maximum design flowrates of all control devices as Table 1, Appendix B of the Specific Conditions. Previously, the Specific Conditions contained a reference for compliance to be demonstrated by not exceeding the manufacturer baghouse ratings and maximum design flowrates as documented in the memorandum of the permit. The summarization of these rates contained in Table 1, Appendix B of the Specific Conditions is intended to clarify the requirements.

SECTION V. PSD REVIEW

This section includes four (4) separate PSD evaluations for the project(s) applied for in separate permit applications (Permit Applications No. 98-174-TV (M-25), 98-174-TV (M-26), 98-174-TV (M-27), and 98-174-TV (M-28)) after the renewal application was submitted. The intent is to authorize and consolidate the issuance of all the projects within the Title V renewal.

Permit Application	Description	Date Received	Start of Construction
98-174-TV (M-25)	Kiln Burner Replacement Project	4/19/2019	1/1/2020
98-174-TV (M-26)	New Multi-Hopper System	8/21/2019	3/13/2020
98-174-TV (M-27)	New Storage Silo	6/8/2020	TBD
98-174-TV (M-28)	Addition of Limestone and Cement Kiln Dust (CKD) to Finish Mill No. 3	9/23/2021	8/26/2022

Since the facility is a PSD major source and multiple projects have been submitted within the same year, project aggregation has been addressed using the 2018 EPA aggregation policy, which references the 2009 Federal Register preamble pages 2377-2380, as the basis for determining if the project(s) applied for warrant aggregation. The EPA's 2009 New Source Review (NSR) Aggregation Action called for aggregation of nominally separate activities when they are "substantially related." Because there is no technical or economic relationship between the four modifications, these projects were determined to not be "substantially related" and the emissions from the four separate projects do not need to be aggregated for new source review.

(1). Permit No. 98-174-TV (M-25) – Kiln Burner Replacement Project

A project is not a major modification if it does not cause a significant emissions increase. A significant emission increase of a regulated NSR pollutant will occur if the sum of emissions increases for each emission unit equals or exceeds the significant emission rate (SER) for that pollutant. For each EU, the emission increases are based on the difference between the potential-to-emit (PTE) or "projected actual emissions" (PAE) and the "baseline actual emissions" (BAE). Existing EU may use either their PAE or PTE to determine if a significant emission increase of a regulated NSR pollutant will result from a proposed project. Owners or operators who use the PTE are not subject to the recordkeeping requirements of OAC 252:100-8-36.2(c). New emissions units must use their PTE and BAE are equal to zero.

Tulsa Cement used the BAE to PAE method for Kiln #1 and Kiln #2 which are considered existing emission units for PSD evaluation purposes. The associated emission increases (AEI) for upstream and downstream equipment were also included as part of this evaluation.

The emission increases from the project are below the SER for all regulated air pollutants.

PSD Analysis Summary for Project M-25, Tons/year

Pollutant	BAE	PAE	CHA	PEI	Threshold	Trigger
PM	264.43	461.64	439.67	21.97	25	No
PM_{10}	144.00	316.01	303.51	12.50	15	No

Pollutant	BAE	PAE	CHA	PEI	Threshold	Trigger
$PM_{2.5}$	15.47	99.84	98.02	9.42	10	No
Lead	0.004	0.451	0.443	0.01	0.6	No
VOC	8.07	9.52	9.34	0.18	40	No
CO	138.97	351.38	278.41	72.98	100	No
SO_2	154.76	247.16	209.23	37.93	40	No
NO_x	1,335.71	2,176.98	2,136.99	39.99	40	No
GHG	566,411	643,169	568,947	74,222	75,000	No

A. Emission Increases from Kilns

i. Baseline Actual Emissions

BAE has been determined from data reported to the Air Quality Division (AQD) in the annual emissions inventory (EI) submitted for Reporting Years 2009 through 2018. Pursuant to 40 CFR §52.21, when a project involves multiple emissions units, only one consecutive 24-month period may be used to determine the BAE for all the emissions units being changed. The specific years used for each pollutant are listed in the following table.

Summary of the 2-Year Periods Used in BAE Average

Pollutant	Period
PM	2014-2015
PM_{10}	2014-2015
$PM_{2.5}$	2014-2015
Lead	2014-2015
VOC	2014-2015
CO	2016-2017
SO_2	2011-2012
NO_X	2013-2014
GHG	2016-2017

Further adjustments (including downward adjustments for SO_2 and NOx emissions prior to 2014) have been made to the data for which justification was provided in the application submittal and which is not repeated here. Kiln operation during that period occurred prior to the consent decree that established the current respective limits for Kiln 1 and Kiln 2. No downward adjustments were required for any other regulated pollutant.

ii. Projected Actual Emissions

To determine PAE, Tulsa Cement projected clinker production based on the permitted throughput and an annual capacity factor. The emission increases that are a direct result of the burner replacement project, which cannot be excluded from PAE, were based on the Project Clinker Increases and the emission factors on a lb/ton clinker basis. It was conservatively assumed that the burner replacement will provide an additional 4 days of kiln operating time by extending the kiln brick life. Additionally, due to better flame control, it was estimated each kiln could produce an additional 5 tons of clinker per day.

Project emission increases consider both kilns' operational capabilities following the change and the historical annual utilization rate and available information regarding the emission unit's likely post change capacity utilization rate. Demonstrated emission factors for each kiln on a lb/ton clinker basis were calculated by dividing annual emissions by the annual clinker production for each year.

PAE estimates in this analysis were calculated using the average emission factor demonstrated during the 10-year lookback period. This includes SO_2 and NO_X emission factors that were calculated from downward adjusted emissions. This approach was used for all pollutants except NO_X since a NO_X control technology was installed that impacts data prior to 2013. For NO_X, an average emission factor was derived from 2013-2018 following installation of the SNCR. The replacement burners are planned to fire the same fuels that are currently utilized by Tulsa Cement. The pre- and post-project emission factors are equivalent. There are no expected impacts on the post-project emission factors. Using the average emission factor during the 10-year lookback period for all pollutants except NO_X and the average NO_X emission factor since the installation of the SNCR is therefore considered representative as these are the factors that have been demonstrated. The average emission factors are summarized in the application submittal. PAE for each kiln was determined by multiplying the projected clinker production by the emission factors discussed above. PAE for Kiln 1 and Kiln 2 are summarized below.

B. Associated Emissions Increases (AEI)

As the facility is projecting increased clinker production from the burner replacement project due to an increase in up-time, the AEI for upstream and downstream equipment is also included as part of the evaluation.

i. Baseline Actual Emissions (BAE)

Tulsa Cement has determined BAE separately for each associated emission unit on a pollutant-by-pollutant basis. BAE has been determined from data reported to the AQD in the annual EI submitted for Reporting Years 2009 through 2018. The same years were used for AEI as for the kilns.

ii. Projected Actual Emissions (PAE)

It was conservatively assumed that the burner replacement will provide an additional four (4) days (or 96 hours) of kiln operating time per kiln by extending the kiln brick life. It can therefore be reasoned that upstream and downstream equipment shared between Kiln 1 and Kiln 2 will operate for an additional eight (8) days (or 192 hours) to accommodate the increased kiln uptime. Upstream and downstream equipment that are used only for Kiln 1 or Kiln 2 are estimated to operate for an additional four (4) days (or 96 hours) to accommodate the increased kiln uptime.

With the exception of EP-20, EP-27, and EP-90, PM emissions are estimated from permitted emission factors and max rated fan flows. PM emissions from EP-20, EP-27, and EP-90 are estimated from emission factors in Section 13.2.4 of AP-42 (11/06). NO_x, VOC, CO, SO_2, and CO_2 emissions are estimated from emission factors in Section 1.4 of AP-42 (07/98).

(2). Permit Application No. 98-174-TV (M-26) – New Multi-Hopper System

A. Emission Increases from Multi-Hopper

The proposed project includes constructing a multi-hopper system upstream of the stacker-reclaimer. The new multi-hopper system has three (3) bins (alumina, iron, and silica) each with a 20 ton-capacity. Raw materials are loaded into the multi-hopper bins by front end loaders and fed from each bin to three (3) feed conveyors (3'x 10') which then transfers the raw materials to one (1) common gathering conveyor (3'x 45'). The common gathering conveyor will transfer raw materials to the existing production belt. Each feeder belt has a maximum rated capacity of 250 TPH and the common gathering conveyor has a maximum rated capacity of 800 TPH.

Tulsa Cement is using the BAE to PTE method for the new multi-hopper system which is considered a new emission unit for PSD evaluation purposes. The existing stacker reclaimer has been identified to be an associated emission unit for which the associated emission increases are included as part of this evaluation. As the proposed project involves both existing and new emission units, emissions from the proposed project are calculated based upon the "hybrid test" pursuant to OAC 252:100-8-30(b)(5). Under this test, the project emission increase is calculated as the sum of the increases from new and existing associated emission units.

The emission increase from the project is below the significance levels for all regulated pollutants.

PSD Analysis Summary for Project M-26, Tons/year

Pollutant	BAE	PTE	AEI	Result	Threshold	Trigger
PM	0	14.41	0	14.41	25	No
PM_{10}	0	6.81	0	6.81	15	No
$PM_{2.5}$	0	1.03	0	1.03	10	No

i. Baseline Actual Emissions

The new Multi-Hopper system is a new unit and BAE are equal to zero.

ii. Potential to Emit (PTE)

The PTE calculations for the Multi-Hopper system were made with several conservative assumptions, the most critical of which is the maximum throughput for each emission point. The Multi-Hopper system will handle approximately 10% or less of the total raw

mix processed by the facility. The facility has a combined clinker production limit of 96 tons of clinker per hour or 840,960 tons per year. A 1.75 kiln feed to clinker ratio can be used to calculate the total amount of raw mix that would be required to achieve maximum allowable clinker production, or 1,471,680 tons per year of raw mix. The Multi-Hopper system is therefore only expected to handle less than 150,000 tons per year of raw mix. The PTE was determined from the maximum capacity of the triple- hopper system without considering any physical operational constraints. Emissions factors were derived from AP-42 (11/06), Section 13.2.4.

New Multi-Hopper System Raw Mix Throughput and Emission Factors

EU	Description	Maximum Throughput		Emission Factor (lb/ton)		
		TPH	TPY	PM	PM_{10}	$PM_{2.5}$
EP-93	Transfer to Hopper 1	250	2,190,000	1.80E-03	5.10E-04	7.72E-05
	Transfer to Hopper 2	250	2,190,000			
	Transfer to Hopper 3	250	2,190,000			
	Transfer from Hopper 1 to Feeder Belt 1	250	2,190,000			
	Transfer from Hopper 2 to Feeder Belt 2	250	2,190,000			
	Transfer from Hopper 3 to Feeder Belt 3	250	2,190,000			
	Transfer from Feeder Belt 1 to Common Gathering Belt	250	2,190,000			
	Transfer from Feeder Belt 2 to Common Gathering Belt	250	2,190,000			
	Transfer from Feeder Belt 3 to Common Gathering Belt	250	2,190,000			
	Transfer from Common Gathering Belt to Existing Production Belt	800	7,008,000			

New Multi-Hopper System Potential to Emit (PTE)

EU	Hourly Emissions (lb/hr)			Annual Emissions (TPY)		
	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
EP-93	0.27	0.13	0.02	1.18	0.56	0.08
	0.27	0.13	0.02	1.18	0.56	0.08
	0.27	0.13	0.02	1.18	0.56	0.08
	0.27	0.13	0.02	1.18	0.56	0.08
	0.27	0.13	0.02	1.18	0.56	0.08
	0.27	0.13	0.02	1.18	0.56	0.08
	0.27	0.13	0.02	1.18	0.56	0.08
	0.27	0.13	0.02	1.18	0.56	0.08
	0.27	0.13	0.02	1.18	0.56	0.08
	0.86	0.41	0.06	3.78	1.79	0.27
Totals	**3.29**	**1.56**	**0.24**	**14.43**	**6.81**	**1.03**

B. Associated Emission Increases (AEI)

There are no associated emission increases since this is a stand-alone unit with no upstream/downstream effects.

(3). Permit Application No. 98-174-TV (M-27) – New Storage Silo

The proposed project includes constructing a new storage silo for storage of CKD. Tulsa cement intends to pneumatically load CKD into the storage silo for load out to rail cars. The new silo has a storage capacity of 1,400 ft^3 with an inherent dust collector device designed for product recovery. The dust collector has a rated air flow of 2,200 cfm and an exhaust concentration of 0.25 gr/acf.

Tulsa Cement is using the BAE to PTE method for the new CKD storage silo. BAE equals to zero for a new emission unit.

For calculation of PTE, Tulsa Cement contends that the dust collector is inherent to the process and has provided justification in the application to support this claim based on the three (3) criteria listed in the EPA Guidance Document, "Criteria for Determining Whether Equipment is Air Pollution Control Equipment or Process Equipment (11/27/1995)". The answers to these questions suggest that equipment should be considered as an inherent part of the process, and therefore the effect of the equipment or practices can be taken into account in calculating potential emissions regardless of whether enforceable limitations are in effect. Therefore, the PTE calculation of PM emissions from CKD storage and handling are based on the dust collectors rated capacity of 2,200 cfm and an exhaust concentration of 0.025 gr/acf (after passing through the dust collector).

The emission increase from the project is below the significance levels for all regulated pollutants.

PSD Analysis Summary for Project M-27, Tons/year

Pollutant	BAE	PTE	Result	Threshold	Trigger
PM	0	2.06	2.06	25	No
PM_{10}	0	1.9	1.9	15	No
$PM_{2.5}$	0	0.93	0.93	10	No

(4). Permit Application No. 98-174-TV (M-28) – Addition of Limestone and Cement Kiln Dust (CKD) to Finish Mill No. 3

The project involved adding limestone and CKD to Finish Mill No. 3. The limestone will be added using an existing feed bin and conveyor belt system, while the CKD will be conveyed pneumatically from the CKD silo designated EP-94. Finish Mill No. 3 is controlled by a baghouse. A newer, higher-limestone product is being made. The limestone will come from either the existing plant operations or purchased from an outside supplier.

The proposed system is at the tail end of the process; the existing kilns, clinker systems, and equipment for preparing kiln feeds are not affected. The finish mills have additional grinding capacity and is not clinker limited and therefore the PSD analysis does not include an upstream analysis. There is a separation of processes between the kilns and the finish mills. The clinker produced in the kilns is not directly fed into the finish mills. There is adequate storage following the kiln systems and prior to the finish mill which allows them to operate independent of each other for extended periods of time. The clinker can be stored, processed, or processed with other materials and operation of finish mills. Therefore, operation of the kilns and production of clinker does not directly affect the finish mills.

The lesser of Demand Growth Emissions (DGE) or Capable-of-Accommodating (COA) were subtracted from the PAE. COA was determined from taking into account the maximum hours of operation of the units during the baseline period.

Facility-Wide Project Emission Increases

Pollutant	PAE TPY	BAE TPY	DGE Emissions TPY	PAE-(BAE+DGE) TPY	PSD SERs TPY
PM	110.90	100.32	102.76	8.14	25
PM_{10}	55.45	50.16	51.38	4.07	15
$PM_{2.5}$	49.90	45.14	46.24	3.66	10

Emissions changes resulting from the project are below PSD Significant Emission Rates for all pollutants.

SECTION VI. EQUIPMENT

Emission units are organized into emission unit groups (EUGs) as shown below.

EUG 1 – Raw Material Crushing and Transfer

EU ID	Point ID	Description	Commenced Construction	Commenced Modification	CD ID	Equipment ID
101	EP-01	Primary Crusher D/C, 2 Impactors, 4 Transfer Points	1961	2008[(1)]	CD-01	02-18-118
102	EP-02	Junction House D/C	1961	2014[(2)]	CD-02	02-18-120

[(1)] Modification under §60.14(a) was determined to have occurred in 2008 and authorized in Permit No. 98-174-TV (M-11).

[(2)] Modification under §60.14(a) was determined to have occurred in 2014 with the project involving EP-90.

EUG 1A – Raw Material Transfer

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
82	EP-82	Raw Material Screening System	2007	--	--
90	EP-90	Stacker-Reclaimer System	2014	--	--
93	EP-93	Multi-Hopper System	2019	--	--

EUG 1B – Mini Belt Conveyors

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
110	EP-91	Mini Conveyor #1	2017	--	--
111	EP-92	Mini Conveyor #1	2017	--	--

EUG 2A – Raw Mills #1 and #2

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
211	EP-03	Raw Mill #1 D/C	1961	CD-03	03-18-122
212	EP-03	Raw Mill #1 FK Pump Hoppers	1961	CD-03	02-18-125
213	EP-03	Raw Mill #1 Weigh Meters, Feed Belt System	1961	CD-03	02-18-125
221	EP-04	Raw Mill #2 D/C	1964	CD-04	03-18-223

EUG 2B – Raw Mills #1 and #2 Auxiliary Equipment

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
222	EP-04	Raw Mill #2 FK Pump Hoppers	1964	CD-04	02-18-226
223	EP-04	Raw Mill #2 Weigh Meters, Feed Belt System	1964		

EUG 3 – Raw Blending and Raw Silos

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
301	EP-07	Blend Silos #1 and #2	1961	CD-07	03-18-352
302	EP-10	Raw Silos (South)	1961	CD-10	NS (1)
303	EP-11	Raw Silo (North)	1961	CD-11	NS

(1) NS = Not Specified

EUG 3A – Clinker Additive Silos

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
1203	EP-61	Clinker Additive Silo	2005	NS	NS
1204	EP-62	Clinker Additive Silo	2005	NS	NS

EUG 4A – Kiln Feed Pump(s) #1, #2, #3

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
401	EP-08	Kiln Feed Pump(s) #1, #2, #3	1961	CD-08	03-18-341

EUG 4B – Kiln Feed X-Pump D/C

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
402	EP-09	Kiln Feed X-Pump D/C	1961	CD-09	03-18-301

EUG 4C – Kiln Feed System(s)

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
403	EP-12	Kiln #1 Feed D/C	1961	CD-12	05-16-123
404	EP-13	Kiln #2 Feed D/C	1964	CD-13	05-18-218

EUG 5A – Kiln #1 System

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
501	EP-14	Kiln #1 D/C	1961	CD-14	05-38-101

EUG 5B – Kiln #2 System

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
502	EP-15	Kiln #2 D/C	1964	CD-15	05-38-201

EUG 6A – Clinker Cooler System(s)

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
601	EP-16	Clinker Cooler #1 D/C	1961, 1995(1)	CD-16	05-18-146
602	EP-17	Clinker Cooler #2 D/C	1964, 1997(1)	CD-17	05-18-244

(1) Clinker Cooler #1 and #2 were originally constructed in 1961 and 1964. In 1995 and 1997, the facility reduced airflow through the clinker coolers. The units have not triggered modification or reconstruction status for purposes of NSPS as defined in §60.14(a).

EUG 6B – Clinker Handling

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
603, 604	EP-57	#3 Hot Belt D/C & #4 Hot Belt D/C	1961	CD-57	05-18-316
606	EP-57	Clinker Storage D/C	1961	CD-57	05-18-320
605	EP-20	Transfer to clinker storage (clinker belts)	1961, 2016(1)	CD-19	NS

(1) Modification under §60.14(a) occurred in 2016.

EUG 6C – Feed Hopper and Stockpile Conveyor

These units have been removed.

EUG 7 – Finish Mill(s) #1, #2, and #3

EU ID	Point ID	Description	Commenced Construction	CD ID	Equipment ID
703	EP-21	Finish Mill #1 Separator D/C	1961	CD-21	07-18-119
702	EP-22	Finish Mill #1 Discharge D/C	1961	CD-22	07-18-116
706	EP-24	Finish Mill #2 Separator D/C	1964	CD-24	07-18-219
705	EP-26	Finish Mill #2 Discharge D/C	1964	CD-26	07-18-216
701	EP-23	Finish Mill #1 Auxiliary D/C	1961	CD-23	07-18-124
704	EP-25	Finish Mill #2 Auxiliary D/C	1964	CD-25	07-18-224
707	EP-52	Finish Mill #3 Transport D/C	1997	CD-52	NS
708	EP-50	Finish Mill #3 Discharge D/C	1997	CD-50	NS
709, 711	EP-51	Finish Mill #3 South Nuisance D/C	1997	CD-51	NS
710	EP-49	Finish Mill #3 Separator D/C	1997	CD-49	NS
712	EP-53	Finish Mill #3 North Nuisance D/C	1997	CD-53	NS

EUG 8 – Rail Loading

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
811	EP-48	Silo 8 Rail Loading Spout D/C	1961	CD-48	08-18-143
812	EP-47	Silo 10 Rail Loading Spout D/C	1961	CD-47	08-18-137
813	EP-46	Silo 12 Rail Loading Spout D/C	1961	CD-46	08-18-132
814	EP-45	Silo 14 Rail Loading Spout D/C	1961	CD-45	08-18-127
815	EP-44	Silo 16 Rail Loading Spout D/C	1961	CD-44	08-18-121

EUG 9 – Truck Loading

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
901	EP-41	West Truck Loading Spout D/C	1961	CD-41	08-18-214
902	EP-40	East Truck Loading Spout D/C	1961	CD-40	08-18-215
65	EP-65	NewCem Conveyor No. 1	2005	CD-54	NS

EUG 10 - Packhouse

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
1001	EP-29	Packing System #1 D/C	1961	CD-29	09-18-124
1002	EP-30	Packing System #2/2A D/C	1961	CD-30	09-18-125
1003	EP-32	Packing System #3 D/C	1961	CD-32	09-18-126
1004	EP-33	Packing System #4 D/C	1961	CD-33	09-18-127
1005	EP-31	Packhouse Bag Cleaner D/C	1961	CD-31	09-18-181

EUG 11 – Coal/Coke Handling

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
1101	EP-27	Coal/Coke Unloading D/C	Pre-10/27/1974, 2016(1)	CD-27	41-18-309
1102, 1103	EP-28	Coal/Coke Crusher D/C	Pre-10/27/1974	CD-28	41-18-310
1104	EP-55	Coal Silo #1 D/C	1982	CD-55	NS
1105	EP-56	Coal Silo #2 D/C	1982	CD-56	NS

(1) Modification under §60.14(a) could have occurred in 2016 and is currently under review.

EUG 12 – Dust Handling

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
1202	EP-42	Dust Unloading D/C	1961	CD-42	05-18-338

EUG 12A – Dust Handling

EU ID	Point ID	Description	Construction Date	CD ID	Equipment ID
1201	EP-43	T-10 Dust Silo D/C	1994	CD-43	07-18-338
1202	EP-60	Fly Ash Silo D/C	2004	CD-60	NS
94	EP-94	Cement Kiln Dust (CDK) Silo D/C	2019	(1)	NA

(1) EP-94 is equipped with a dust collector device designed for product recovery and has been determined to be inherent to the process equipment (silo) based on the applicant's responses to the criteria listed in the EPA Guidance Document, "Criteria for Determining Whether Equipment is Air Pollution Control Equipment or

Process Equipment (11/27/1995)". Therefore, the PTE calculation of PM emissions from CKD storage and handling are calculated based on the dust collectors rated capacity of 2,200 cfm and an exhaust concentration of 0.025 gr/acf (after passing through the dust collector).

EUG 13/13A– Rail and Truck Loading

EU ID	Point ID	Description	Commenced Construction	CD ID	Equipment ID
1301	EP-34	Rail Silo #7 D/C	1961	CD-34	08-18-140
1310	EP-35	Rail Loading Silo #16 (East) D/C	1961	CD-35	08-18-101
1309	EP-36	Rail Loading Silo #15 (West) D/C	1961	CD-36	08-18-102
1311, 1312	EP-37	Truck Loading/Middle Cement Silo D/C	1961	CD-37	08-18-201
1314, 1316, 1319, 1320	EP-38	Truck Loading/Silo #2, #4, #6, #6A (East) D/C	1961	CD-38	08-18-212
1313, 1315, 1317, 1318	EP-39	Truck Loading/Silo #1, #3, #5, #5A (West) D/C	1961	CD-39	08-18-213

EUG 14 – Plant Fugitive Sources

EU ID	Point ID	Description	Commenced Construction	CD ID
1401	NP01	Unpaved roads	1961	None
1402	NP02	Stockpiles, crane storage	1961	None
1403	NP03	Paved roads	1961	None
1404	NP04	Heavy equipment travel	1961	None
1405	NP05	Quarry operations	1961	None

EUG 15 – Stationary Engine

EU ID	Point ID	Description	Commenced Construction	CD ID
83	EP-83	1,232-hp Diesel Emergency Generator	1995	None

EUG 16 Vehicle Fuel Storage Tanks

EU ID	Point ID	Contents	Capacity		Construction Date
			Barrels	Gallons	
TK-1	TK-1	Diesel	440	18,500	2013
TK-4	TK-4	Gasoline	95	4,000	2013

SECTION VII. EMISSIONS

The statement of basis for each emission estimate is presented in this section for informational purposes only. In order to address each emission unit(s) applicability under CAM, the statement of basis for the uncontrolled emission estimates are also included in this section. Many of the emissions points are "batch drop" using factors from AP-42 (11/06), Section 13.2.4. Those factors depend on wind speed, which, for enclosed processes, should be very low; emissions factors will be conservative.

EUG 1 Raw Material Crushing and Transfer

Emissions of PM from the Primary Crusher D/C, 2 Impactors, and 4 Transfer Points are routed to one (1) pulse-jet baghouse. Note that the hourly emissions consider a higher outlet concentration rating (0.025 gr/acf) in the derivation of the lb/hr estimate than the applicable NSPS Subpart OOO emission standard of 0.014 grain/acf.

Emissions of $PM/PM_{10}/PM_{2.5}$ from EP-02 are routed to one (1) baghouse rated at 0.005 gr/acf. Note that the hourly emissions from EP-02 are permitted at a lower rating than the NSPS Subpart OOO emission standard of 0.014 grain/acf.

EU ID	Point ID	Description	CD ID	Process Rate
101	EP-01	Primary Crusher D/C, 2 Impactors, 4 Transfer Points	CD-01(1)	800 TPH 31,850 ACFM
102	EP-02	Junction House D/C	CD-02(2)	800 TPH, 10,000 ACFM

(1) Note that in 2008, the baghouse system controlling emissions from EP-01 was upgraded. The flow rate was increased from 14,400 acfm to 31,850 acfm. At the time, Applicability Determination No. 98-174-AD (M-10) took into account the increased air flow in the upgraded system and concluded that a modification under §60.14(a) had occurred. Thus, making the unit subject to requirements under NSPS Subpart OOO. Permit No. 98-174-TV (M-11) incorporated the change in regulatory status for EP-01.

(2) The junction house (EP-02) was determined to have been modified with the stacker reclaimer project authorized in Permit No. 98-174-TV (M-21) issued on January 14, 2015.

Point ID	Description	Uncontrolled Emission Factor (lb/ton)	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions	
			lb/hr	TPY	lb/hr	TPY
EP-01	Primary Crusher D/C	PM: 5.4E-03 [1] PM_{10}: 2.4E-03 [1] $PM_{2.5}$: 3.63E-04 [2]	4.32/1.92/0.29	18.92/8.41/1.27	6.82 [3]	29.9 [3]
	2 Impactors	PM: 5.4E-03 [1] PM_{10}: 2.4E-03 [1] $PM_{2.5}$: 3.63E-04 [2]	4.32/1.92/0.29	18.92/8.41/1.27		
	4 Transfer Points	PM: 3.00E-03 [4] PM_{10}: 1.10E-03 [4] $PM_{2.5}$: 1.67E-04 [2]	2.40/0.88/0.13	10.51/3.85/0.58		
EP-02	Junction House D/C	PM: 3.00E-03 [4] PM_{10}: 1.10E-03 [4] $PM_{2.5}$: 1.67E-04 [2]	2.40/0.88/0.13	10.51/3.85/0.58	0.43 [5]	1.88 [5]

(1) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for tertiary crushing.

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.

(3) Based on 0.025 gr/acf x 31,850 acfm.

(4) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for conveyor transfer point(s).

(5) Controlled emissions are estimated from the maximum air flowrate to the control device (10,000 acfm) and control device rated outlet concentration (0.005 gr/acf).

EUG 1A – Raw Material Transfer

EP-90 consists of twelve (12) transfer points, EP-93 consists of ten (10) transfer points.

EU ID	Point ID	Description	CD ID	Process Rate
82	EP-82	Raw Material Screening System	None	600 TPH 143,000 TPY (1)
90	EP-90	Stacker-Reclaimer System (x 12)	None	238 TPH 2,000,000 TPY
93	EP-93	Multi-Hopper System (x 10)	None	250 TPH 2,190,000 TPY (2)

(1) Based on rates as listed in Permit No. 98-174-C (M-9).
(2) Based on rates applied for in Permit Application No. 98-174-TV (M-26).

Point ID	Uncontrolled Emission Factor (lb/ton)	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions	
		lb/hr	TPY	lb/hr	TPY
EP-82	PM: 2.5E-02 [1] PM_{10}: 8.7E-03 [1] $PM_{2.5}$: 1.67E-04 [2]	15.00/5.22/0.79	1.79/0.62/0.09	4.56	19.97
EP-90	See Table Below	58.02	253.41	2.37	10.23
EP-93	PM: 1.08E-03 [3] PM_{10}: 5.10E-04 $PM_{2.5}$: 7.72E-05	3.29/1.56/0.24	14.41/6.82/1.03	3.29/1.56/0.24	14.41/6.82/1.03

(1) Emission factors for PM/PM_{10} are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for screening (uncontrolled).
(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.
(3) Emission factors derived from AP-42 (11/06), Section 13.2.4, using 6.8% moisture and 10.2 mph wind speed.

Transfer point emissions associated with EP-90 are based on emission factors from Section 13.2.4 of AP-42 (1/96) and manufacture vender data. See the memorandum of Permit No. 98-174-TV (M-21) for details. Controlled emissions (EP-90) of PM are estimated to be 1.98 lb/hr and 8.32 TPY, PM_{10} is estimated to be 0.94 lb/hr and 3.94 tpy, and $PM_{2.5}$ is estimated to be 0.14 lb/hr and 0.60 TPY.

Point ID	Description	Emission Factor (lb/ton)	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions	
			lb/hr	TPY	lb/hr	TPY
EP-90	Filter at new tripper and diverter gate	See Note 1 PM: 0.0030 PM_{10}: 0.0011 $PM_{2.5}$: 0.0002	0.71/0.26/0.04	3.0/1.10/0.17	0.51	2.25
	Reclaim hopper	PM: 1.08E-03 PM_{10}: 5.1E-04 $PM_{2.5}$: 7.72E-05	0.26/0.12/0.02	1.08/0.51/0.08	0.06/0.03/<0.01(2)	0.27/0.13/0.02(2)
	Additive feeder		0.26/0.12/0.02	1.08/0.51/0.08	0.06/0.03/<0.01(2)	0.27/0.13/0.02(2)
	Drop to raw feed pile		0.26/0.12/0.02	1.08/0.51/0.08	0.25/0.12/0.02	1.08/0.51/0.08
	Drop to raw feed pile		0.26/0.12/0.02	1.08/0.51/0.08	0.25/0.12/0.02	1.08/0.51/0.08

Point ID	Description	Emission Factor (lb/ton)	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions	
			lb/hr	TPY	lb/hr	TPY
	Bridge reclaimer		0.26/0.12/0.02	1.08/0.51/0.08	0.25/0.12/0.02	1.08/0.51/0.08
	Raw feed piles	373.12 acres PM_{10}: 2.13 lb/acre/day $PM_{2.5}$: 0.852 lb/acre/day	1.70/0.80/0.12	7.44/3.52/0.53	1.70/0.80/0.12	7.44/3.52/0.53
	Drop to raw material reclaim belt	PM: 1.08E-03 PM_{10}: 5.1E-04 $PM_{2.5}$: 7.72E-05	0.26/0.12/0.02	1.08/0.51/0.08	0.25/0.12/0.02	1.08/0.51/0.08
	Back-ups reclaim hopper		0.26/0.12/0.02	1.08/0.51/0.08	0.25/0.12/0.02	1.08/0.51/0.08
	Back-ups reclaim hopper transfer		0.26/0.12/0.02	1.08/0.51/0.08	0.25/0.12/0.02	1.08/0.51/0.08
	Reclaim hopper		0.26/0.12/0.02	1.08/0.51/0.08	0.13/0.06/0.01[(3)]	0.54/0.26/0.04[(3)]
	Transfer to reclaim belt		0.26/0.12/0.02	1.08/0.51/0.08	0.06/0.03/<0.01[(2)]	0.27/0.13/0.02[(2)]

[(1)] The facility has assumed a baghouse control efficiency of 99% and -uncontrolled emission factors from Section 11.19.2 (8/04) Table 11.19.2-2 Emission Factors for Crushed Stone Processing Operations, Conveyor Transfer Point, was used in estimation.
[(2)] Control inside building estimated to be 75%.
[(3)] Control inside building estimated to be 50%.

EUG 1B – Mini Belt Conveyors

PTE has been estimated using the emission factors for limestone contained in the table(s) below. The process rates are based on limestone shoveled at a rate of 75 lbs per minute at a maximum estimated weight of 15 lbs per shovel scoop. These parameters are provided from the Canadian Center for Occupational Health and Safety guidance for continuous shoveling applications. Each conveyor has a maximum material handling capability of 72 TPH. Based on the shoveling rate and conveyor specifications, the conveyors could process 32 laborers shoveling at a rate of 5 scoops per minute such that they would not get overloaded. However, the maximum number of laborers shoveling is limited by the physical space surrounding the mini conveyors and the number of workers the facility could assign to shoveling the material, which is identified to be 4 laborers.

EU ID	Point ID	Description	Commenced Construction	CD ID	Process Rate
110	EP-91	Mini Conveyor #1	2017	None	72 TPH 78,840 TPY
111	EP-92	Mini Conveyor #2	2017	None	72 TPH 78,840 TPY

Type	Emission Factors				Source
	PM	PM_{10}	$PM_{2.5}$	Units	
Transfer Points (3)	4.38E-03	2.07E-03	3.14E-04	lb/ton	AP-42 (11/06), Section 13.2.4

Note: The emission factors used for this modification are for limestone material with a moisture content of 2.5% and 10.2 mph (enclosed process).

Description of Transfer Points	Hourly Emissions (lb/hr)			Annual Emissions (TPY)		
	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
Transfer from ground to conveyor hopper	0.32	0.15	0.02	0.17	0.08	0.01
Transfer from new conveyor #1 to new conveyor #2	0.32	0.15	0.02	0.17	0.08	0.01
Transfer from new conveyor #2 to existing production belt	0.32	0.15	0.02	0.17	0.08	0.01
Totals	**0.95**	**0.45**	**0.07**	**0.52**	**0.24**	**0.03**

EUG 2A and EUG 2B – Raw Mill(s) Raw Mills #1 and #2 Auxiliary Equipment

Emissions from each raw mill are routed to baghouse(s) rated at an exhaust concentration of 0.025 gr/acf. Permitted rates are based on the controlled emissions and maximum hourly process rates operating continuously.

Note that these units are subject to NESHAP Subpart LLL which includes a THC limit at the raw mills which is a surrogate limit for organic HAP emissions. TC has not provided the maximum expected hourly or TPY estimates of HAP(s); however, for permitting purposes potential emissions of HAPs from the raw mills have been estimated from the federally enforceable emission limit (during normal operation) of 24 ppmvd THC (measured as propane) measure on a 30-day operating day average basis, and work practices contained in §63.1348(b)(9) during periods of startup and shutdown. Therefore, DEQ has estimated potential emissions of organic HAPs from the surrogate HAP limit specified in NESHAP Subpart LLL.

EU ID	Point ID	Description	CD ID	Process Rate
211	EP-03	Raw Mill #1 D/C	CD-03	25 MMBTUH 115 TPH 36,000 ACFM
212	EP-03	Raw Mill #1 FK Pump Hoppers		
213	EP-03	Raw Mill #1 Weigh Meters, Feed Belt System		
221	EP-04	Raw Mill #2 D/C	CD-04	25 MMBTUH 115 TPH 36,000 ACFM
222	EP-04	Raw Mill #2 FK Pump Hoppers		
223	EP-04	Raw Mill #2 Weigh Meters, Feed Belt System		

Potential Emissions (Each Raw Mill EU211 and EU221)

Pollutant	Uncontrolled Emission Factor(s)	Units	Source	Potential Emissions		Controlled Emissions [4]	
				lb/hr	TPY	lb/hr	TPY
NO_x	0.10	lb/MMBTU	Section 1.4 of AP-42 (07/98)	2.50	10.95	2.50	10.95
CO	0.084	lb/MMBTU		2.10	9.20	2.10	9.20
VOC	0.0055 [1]	lb/MMBTU		0.14	0.60	0.14	0.60
SO_2	0.0006	lb/MMBTU		0.02	0.07	0.02	0.07
PM_{10}	0.0074 [1]	lb/MMBTU		0.19	0.82	0.19	0.82
$PM_{2.5}$	0.0074 [1]	lb/MMBTU		0.19	0.82	0.19	0.82
THC	24 [2]	ppmvd	NESHAP Subpart LLL	4.80	21.03	4.80	21.03
PM	PM 0.039 lb/ton PM_{10} 0.015 lb/ton $PM_{2.5}$ 0.002 lb/ton [3]			4.49	19.64	7.71	33.79
PM_{10}				1.76	7.56	7.71	33.79
$PM_{2.5}$				0.17	0.76	7.71	33.79

(1) Note that this contribution of VOC and PM represents combustion byproducts only. Additional VOC and PM from the materials processed in the raw mill contribute to the entire emission profile from the source.

(2) Additional VOC (and organic HAP) expected to be emitted from these units, and potential emissions are limited by NESHAP Subpart LLL. Each existing raw material dryer is subject to an emission limit (during normal operation) of 24 ppmvd THC (measured as propane) measured on a 30-day operating day average basis. The calculation uses the ideal gas law to calculate the exhaust flow rate for each unit, 29,193.75 scfm, the Subpart LLL emission limit, and a molecular weight of 44.0 lb/lb-mole (THC expressed as propane).

(3) Uncontrolled PM emission factors from AP-42 Section 11.19.2 (8/04) Table 11.19.2-2 Emission Factors for Crushed Stone Processing Operations – Fines Crushing uncontrolled.

(4) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EU ID	Description	Uncontrolled Emission Factor (lb/ton)	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions	
			lb/hr	TPY	lb/hr	TPY
213 / 223	Transfer to Weigh Meter	PM: 3.00E-03 [1] PM_{10}: 1.10E-03 [1] $PM_{2.5}$: 1.67E-04 [2]	0.35/0.13/0.02	1.51/0.55/0.08	0.86 [3]	3.75 [3]
	Weigh Meter to Feed Belt 1		0.35/0.13/0.02	1.51/0.55/0.08		
212 / 222	Feed Belt 1 to Feed Belt 2		0.35/0.13/0.02	1.51/0.55/0.08		
	Feed Belt 2 to FK Pump Hopper		0.35/0.13/0.02	1.51/0.55/0.08		

(1) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for conveyor transfer point.

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.

(3) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 3 – Raw Blending and Raw Silos

Emissions of PM from EP-07, EP-10, and EP-11 are routed to three (3) baghouses rated at 0.025 gr/acf.

EU ID	Point ID	Description	CD ID	Process Rate
301	EP-07	Kiln Feed Blend Silo D/C	CD-07	225 TPH, 14,400 ACFM
302	EP-10	Raw Silos (South) D/C	CD-10	225 TPH, 7,800 ACFM
303	EP-11	Raw Silo (North) D/C	CD-11	225 TPH, 5,000 ACFM

Point ID	Uncontrolled Emission Factor (lb/ton)	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions [3]	
		lb/hr	TPY	lb/hr	TPY
EP-07	PM: 3.00E-03 [1] PM_{10}: 1.10E-03 [1] $PM_{2.5}$: 1.67E-04 [2]	0.68/0.25/0.04	2.96/1.08/0.16	3.09	13.52
EP-10		0.68/0.25/0.04	2.96/1.08/0.16	1.67	7.32
EP-11		0.68/0.25/0.04	2.96/1.08/0.16	1.07	4.69

(1) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for conveyor transfer point.
(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.
(3) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 3A – Clinker Additive Silo(s)

Emissions of PM from EP-61 and EP-62 are routed to one (1) baghouse rated at 0.025 gr/acf.

EU ID	Point ID	Description	CD ID	Process Rate
1203	EP-61	Clinker Additive Silo	CD-54	10 TPH 1,600 ACFM
1204	EP-62	Clinker Additive Silo	CD-54	10 TPH 1,600 ACFM

Point ID	Uncontrolled Emission Factor (lb/ton)	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions [3]	
		lb/hr	TPY	lb/hr	TPY
EP-61	PM: 3.00E-03 [1] PM_{10}: 1.10E-03 [1] $PM_{2.5}$: 1.67E-04 [2]	0.03/0.01/0.01	0.13/0.05/0.03	0.34	1.50
EP-62		0.03/0.01/0.01	0.13/0.05/0.03		

(1) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for conveyor transfer point.
(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.
(3) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 4A – Kiln Feed Pump(s) #1, #2, #3

Emissions of PM from EP-08 are routed to one (1) baghouse rated at 0.025 gr/acf.

EU ID	Point ID	Description	CD ID	Process Rate
401	EP-08	Kiln Feed Pump(s) #1, #2, #3	CD-08	500 TPH, 1,340 ACFM

Type	Uncontrolled Emission Statement of Basis [1]	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions [2]	
		lb/hr	TPY	lb/hr	TPY
Transfer Points (3)	PM 0.003 lb/ton PM_{10} 0.0011 lb/ton $PM_{2.5}$ 0002 lb/ton	1.50 0.55 0.08	6.57 2.41 0.36	0.29	1.26

(1) Uncontrolled emission calculated using the uncontrolled AP-42 Table 11.19-2-2 Emission Factor for Crushed Stone Processing Operations, Conveyor Transfer Point. $PM_{2.5}$ factor calculated using k factor ratio from AP-42 Section 13.2.4-4.

(2) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 4B – Kiln Feed X-Pump D/C

Emissions of PM from EP-09 are routed to one (1) baghouse rated at 0.025 gr/acf.

EU ID	Point ID	Description	CD ID	Process Rate
402	EP-09	Kiln Feed X-Pump D/C	CD-09	200 TPH, 1,000 ACFM

Type	Uncontrolled Emission Statement of Basis [1]	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions [2]	
		lb/hr	TPY	lb/hr	TPY
Transfer Points (1)	PM 0.003 lb/ton PM_{10} 0.0011 lb/ton $PM_{2.5}$ 0.0002 lb/ton	0.6 0.22 0.03	2.63 0.96 0.15	0.21	0.94

(1) Uncontrolled emission calculated using AP-42 Table 11.19.2-2 Emission Factor for Crushed Stone Processing Operations, Conveyor Transfer Point. PM2.5 factor calculated using k factor ratio from AP-42 Section 13.2.4-4.

(2) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 4C – Kiln Feed System(s)

Emissions of PM from EP-12 and EP-13 are routed to two (2) baghouses rated at 0.025 gr/acf. Due strictly to calculation methodologies (process rates and emission factors vs air flows and baghouse guarantees), controlled emissions shown following exceed uncontrolled emissions.

EU ID	Point ID	Description	CD ID	Process Rate
403	EP-12	Kiln #1 Feed D/C	CD-12	120 TPH, 5,200 ACFM
404	EP-13	Kiln #2 Feed D/C	CD-13	120 TPH, 5,200 ACFM

Point ID	Type	Uncontrolled Emission Statement of Basis[1]	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions [2]	
			lb/hr	TPY	lb/hr	TPY
EP-12	Transfer Points (2)	PM 0.003 lb/ton PM_{10} 0.0011 lb/ton $PM_{2.5}$ 0.0002 lb/ton	0.36 0.13 0.02	1.58 0.58 0.09	1.11	4.88
EP-13	Transfer Points (2)		0.36 0.13 0.02	1.58 0.58 0.09	1.11	4.88

(1) Uncontrolled emission calculated using AP-42 Table 11.19.2-2 Emission factor for Crushed Stone Processing Operations, Conveyor Transfer Point. $PM_{2.5}$ factor calculated using k factor ratio from AP-42 Section 13.2.4-4.

(2) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 5A – Kiln #1 System

Note that the kilns are subject to NESHAP Subpart EEE which includes concentration-based emission limitations for HAPs emitted at the kilns when in FQW mode. TC also complies with NESHAP Subpart EEE in non-FQW mode.

TC has previously provided the maximum expected hourly or TPY estimates of HAPs in prior applications, which are summarized in the table below.

EU ID	Point ID	Description	CD ID	Process Rate
501	EP-14	Kiln #1 D/C	CD-14. SNCR	48 tons-clinker/hr (TPH)** 160,000 ACFM, 172 MMBTUH *Stack Flow – 3,098.15 dscfm @ 7% O_2 109,410 dscfm @ 7% O_2

* As reported in prior permit applications referenced for purposes of HAP calculations summarized below the facility-wide summary table in the memorandum. dscfm = dry standard cubic feet per minute

** The clinker production is based on a combined production rate of 96 TPH.

Pollutant	Emission Factor		Source	Emissions	
	Value	Units		lb/hr	TPY
NO_x	5.67	lb/ton-clinker	EPA Consent Decree	272.16	1,192.1
CO	33.22	lb/hr	Stack Test (05/94) + 25% Safety Factor	33.22	145.50
VOC	0.028	lb/ton-clinker	Section 11.6 of AP-42 (01/95) + 25% Safety Factor	1.34	5.89
SO_2	2.5	lb/ton-clinker	EPA Consent Decree	120	525.6
PM	0.025	gr/acf	Bag Mfg.	34.28	150.17
PM_{10}	0.025	gr/acf	Bag Mfg.	34.28	150.17
$PM_{2.5}$	0.025	gr/acf	Bag Mfg.	34.28	150.17

Pollutant	Emission Factor		Source	Emissions	
	Value	Units		lb/hr	TPY
Lead (Pb)	Refer to Previous Permit Application for SOB*			0.14*	0.614*
D+F	Subject to NESHAP Subpart EEE Standards (Phase II) During Combustion of Hazardous Waste. Refer to Previous Permit Application for SOB				
Hg					
Pb+Cd					
Ar+Be+Cr					
HCl + Cl_2					

* Pb permit limit is combined for both kiln(s). SOB = Statement of Basis

EUG 5B – Kiln #2 System

Note that the kilns are subject to NESHAP Subpart EEE which includes concentration-based emission limitations for HAPs emitted at the kilns when in FQW mode. TC also complies with NESHAP Subpart EEE in non-FQW mode.

TC has previously provided the maximum expected hourly or TPY estimates of HAPs in prior applications, which are summarized in the table below.

EU ID	Point ID	Description	CD ID	Process Rate
502	EP-15	Kiln #2 D/C	CD-15	48 tons-clinker/hr (TPH)** 160,000 ACFM, 172 MMBTUH *Stack Flow – 2,997.09 dscfm @ 7% O_2 105,841 dscfm @ 7% O_2

* As reported in prior permit applications referenced for purposes of HAP calculations summarized below the facility-wide summary table in the memorandum. dscfm = dry standard cubic feet per minute

** The clinker production is based on a combined production rate of 96 TPH.

Pollutant	Emission Factor		Source	Emissions	
	Value	Units		lb/hr	TPY
NO_x	7.0	lb/ton-clinker	EPA Consent Decree	336	1,471.7
CO	41.34	lb/hr	Stack Test (05/94) + 25% Safety Factor	41.34	181.07
VOC	0.028	lb/ton-clinker	Section 11.6 of AP-42 (01/95) + 25% Safety Factor	1.34	5.89
SO_2	2.5	lb/ton-clinker	EPA Consent Decree	120	525.6
PM	0.025	gr/acf	Bag Mfg.	34.28	150.17
PM_{10}	0.025	gr/acf	Bag Mfg.	34.28	150.17
$PM_{2.5}$	0.025	gr/acf	Bag Mfg.	34.28	150.17
Lead (Pb)	Refer to Previous Permit Application for SOB*			0.14*	0.614*
D+F	Subject to NESHAP Subpart EEE Standards (Phase II) During Combustion of Hazardous Waste. Refer to Previous Permit Application No. 98-174-C (M-13) for SOB				
Hg					
Pb+Cd					
Ar+Be+Cr					
HCl + Cl_2					

* Pb permit limit is combined for both kiln(s). SOB = Statement of Basis

EUG 6A – Clinker Cooler System(s)

TC has stated in CAM applicability, submittal with this renewal, that the emissions from each clinker cooler system has pre-control emissions of PM greater than 100 TPY.

EU ID	Point ID	Description	CD ID	Process Rate
601	EP-16	Clinker Cooler #1 D/C	CD-16	43,000 ACFM
602	EP-17	Clinker Cooler #2 D/C	CD-17	43,000 ACFM

Point ID	Uncontrolled Emission Statement of Basis	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions [2]	
		lb/hr	TPY	lb/hr	TPY
EP-16	See Note 1	921.43	4,035.86	9.21	40.36
EP-17		921.43	4,035.86	9.21	40.36

(1) Applicant assumes 99% control efficiency and back-calculates uncontrolled emissions of $PM/PM_{10}PM_{2.5}$ from controlled emission rates.

(2) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 6B – Clinker Handling

Emissions of PM from each EUG 6B Point ID are routed to separate baghouse(s) rated at 0.025 gr/acf each.

EU ID	Point ID	Description	CD ID	Process Rate
603	EP-57	#3 Hot Belt D/C	CD-57	96 TPH, 9,250 ACFM
604	EP-57	#4 Hot Belt D/C		
606	EP-57	North Clinker Elevator D/C		
605	EP-20	Clinker Storage D/C	CD-20	96 TPH, 2,600 ACFM

Due strictly to calculation methodologies (process rates and emission factors vs air flows and baghouse guarantees), controlled emissions shown following exceed uncontrolled emissions. Uncontrolled emissions are calculated only for determining CAM applicability, therefore, controlled emissions based on air flows and baghouse factors will be used to determine PTE and emissions limitations.

Point ID	Uncontrolled Emission Factor (lb/ton)[1]	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions [4]	
		lb/hr	TPY	lb/hr	TPY
EP-20	PM: 6.90E-03 [3] PM_{10}: 3.30E-03 [3] $PM_{2.5}$: 5.00E-04 [2]	0.66/0.32/0.05	2.90/1.39/0.21	0.56	2.44
EP-57		0.66/0.32/0.05	2.90/1.39/0.21	0.21	0.94

(1) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for conveyor transfer point.

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.

(3) Emission factors are taken from Table 11.12.-2 of AP-42 and represent total particulate matter for aggregate transfer.

(4) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 7 – Finish Mill(s) #1, #2, and #3

Emissions of PM from each EU ID within EUG 7 are routed to separate baghouse(s) rated at 0.025 gr/acf each. Due strictly to calculation methodologies (process rates and emission factors vs air flows and baghouse guarantees), controlled emissions shown following exceed uncontrolled emissions.

EU ID	Point ID	Description	CD ID	Process Rate
703	EP-21	Finish Mill #1 Separator D/C	CD-21	50 TPH 31,750 ACFM
702	EP-22	Finish Mill #1 Discharge D/C	CD-22	50 TPH 4,000 ACFM
706	EP-24	Finish Mill #2 Separator D/C	CD-24	50 TPH 31,750 ACFM
705	EP-26	Finish Mill #2 Discharge D/C	CD-26	50 TPH 4,000 ACFM
701	EP-23	Finish Mill #1 Auxiliary D/C	CD-23	50 TPH 4,000 ACFM
704	EP-25	Finish Mill #2 Auxiliary D/C	CD-25	50 TPH 4,000 ACFM
707	EP-52	Finish Mill #3 Transport D/C	CD-52	50 TPH 6,000 ACFM
708	EP-50	Finish Mill #3 Discharge D/C	CD-50	50 TPH 20,000 ACFM
709/711	EP-51	Finish Mill #3 South Nuisance D/C	CD-51	50 TPH 1,500 ACFM
710	EP-49	Finish Mill #3 Separator D/C	CD-49	50 TPH 60,000 ACFM
712	EP-53	Finish Mill #3 North Nuisance D/C	CD-53	50 TPH 1,500 ACFM

Point ID	Uncontrolled Emission Factor (lb/ton) [2]	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions [1]	
		lb/hr	TPY	lb/hr	TPY
EP-21	PM: 0.73 PM_{10}: 0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	6.80	29.80
EP-22	PM: 0.73 PM_{10}:0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	0.86	3.75
EP-24	PM: 0.73 PM_{10}: 0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	6.80	29.80
EP-26	PM: 0.73 PM_{10}:0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	0.86	3.75
EP-23	PM: 0.73 PM_{10}: 0.47 $PM_{2.5:}$ 0.03	3.65/2.35/0.17	15.99/10.29/0.74	0.86	3.75

Point ID	Uncontrolled Emission Factor (lb/ton) [2]	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions [1]	
		lb/hr	TPY	lb/hr	TPY
EP-25	PM: 0.73 PM_{10}: 0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	0.86	3.75
EP-52	PM: 0.73 PM_{10}:0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	1.29	5.63
EP-50	PM: 0.73 PM_{10}:0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	4.29	18.77
EP-51	PM: 0.73 PM_{10}: 0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	0.32	1.41
EP-49	PM: 0.73 PM_{10}: 0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	12.86	56.31
EP-53	PM: 0.73 PM_{10}: 0.47 $PM_{2.5}$: 0.03	3.65/2.35/0.17	15.99/10.29/0.74	0.32	1.41

[1] Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf). EP-51 represents two (2) emission sources.

[2] Uncontrolled PM and PM_{10} emission factors are taken from Table 11.12-2 Emission Factors for Concrete Batching, Elevated silo loading. Sources are inside building so a passive control measure of 90% is included. $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.74)) from AP-42 Section 13.2.4-4.

EUG 8 – Rail Loading

Emissions of PM from each EU ID within EUG 8 are routed to separate baghouse(s) rated at 0.025 gr/acf each.

EU ID	Point ID	Description	CD ID	Process Rate
811	EP-48	Silo 8 Rail Loading Spout D/C	CD-48	600 TPH 2,100 ACFM
812	EP-47	Silo 10 Rail Loading Spout D/C	CD-47	600 TPH 2,100 ACFM
813	EP-46	Silo 12 Rail Loading Spout D/C	CD-46	600 TPH 2,100 ACFM
814	EP-45	Silo 14 Rail Loading Spout D/C	CD-45	600 TPH 2,100 ACFM
815	EP-44	Silo 16 Rail Loading Spout D/C	CD-44	600 TPH 2,100 ACFM

Point ID	Uncontrolled Emission Factor (lb/ton)	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions(4)		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions [3]	
		lb/hr	TPY	lb/hr	TPY
EP-48	PM: 0.73 [1] PM_{10}: 0.47 [1] $PM_{2.5}$: 0.07 [2]	65.70/42.30/6.41	92.09/59.29/8.98	0.45	1.97
EP-47		65.70/42.30/6.41	92.09/59.29/8.98	0.45	1.97
EP-46		65.70/42.30/6.41	92.09/59.29/8.98	0.45	1.97
EP-45		65.70/42.30/6.41	92.09/59.29/8.98	0.45	1.97
EP-44		65.70/42.30/6.41	92.09/59.29/8.98	0.45	1.97

(1) Emission factors are taken from Table 11.12-2 of AP-42 (08/04) representing elevated silo loading for PM and PM_{10}. Passive control of 85% taken due to source partial enclosed.

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.

(3) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

(4) Source annual throughput is limited due to clinker production limits on kilns. Using 96 tph of clinker production * 8760*2 for each loading spout.

EUG 9 – Truck Loading

Emissions of PM from each EU ID within EUG 8 are routed to separate baghouse(s) rated at 0.025 gr/acf each. Due strictly to calculation methodologies (process rates and emission factors vs air flows and baghouse guarantees), EP-65 controlled emissions shown following exceed uncontrolled emissions.

EU ID	Point ID	Description	CD ID	Process Rate
901	EP-41	West Truck Loading Spout D/C	CD-41	150 TPH 2,500 ACFM
902	EP-40	East Truck Loading Spout D/C	CD-40	150 TPH 2,500 ACFM
65	EP-65	NewCem Conveyor No. 1	CD-54	80 TPH 1,200 ACFM

Point ID	Uncontrolled Emission Factor (lb/ton)	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions [4]	
		lb/hr	TPY	lb/hr	TPY
EP-41	PM: 0.73 [1] PM_{10}: 0.47 [1] $PM_{2.5}$: 0.07 [2]	16.46/10.58/1.60	71.91/46.32/7.01	0.54	2.35
EP-40		16.43/10.58/1.60	71.91/46.32/7.01	0.54	2.35
EP-65	PM: 3.00E-03 [3] PM_{10}: 1.10E-03 [3] $PM_{2.5}$: 1.67E-04 [2]	0.24/0.09/0.05	1.05/0.39/0.21	0.26	1.13

(1) Emission factors are taken from Table 11.12-2 of AP-42 (08/04) representing elevated silo loading for PM and PM_{10}. Passive control factor of 85% taken due to partial enclosure.

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.

(3) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for conveyor transfer point.

(4) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 10 – Packhouse

Emissions of PM from each EU ID within EUG 10 are routed to separate baghouse(s) rated at 0.025 gr/acf each.

EU ID	Point ID	Description	CD ID	Process Rate
1001	EP-29	Packing System #1 D/C	CD-29	70 TPH, 8,600 ACFM
1002	EP-30	Packing System #2/2A D/C	CD-30	70 TPH, 8,600 ACFM
1003	EP-32	Packing System #3 D/C	CD-32	70 TPH, 8,600 ACFM
1004	EP-33	Packing System #4 D/C	CD-33	70 TPH, 8,600 ACFM
1005	EP-31	Packhouse Bag Cleaner D/C	CD-31	70 TPH 1,372 ACFM

Point ID	Uncontrolled Emission Factor (lb/ton)	$PM/PM_{10}/PM_{2.5}$ Uncontrolled Emissions		$PM/PM_{10}/PM_{2.5}$ Controlled Emissions [3]	
		lb/hr	TPY	lb/hr	TPY
EP-29	PM: 0.73 [1] PM_{10}: 0.47 [1] $PM_{2.5}$: 0.07 [2]	5.11/3.29/0.50	22.38/14.41/2.18	1.84	8.07
EP-30		5.11/3.29/0.50	22.38/14.41/2.18	1.84	8.07
EP-32		5.11/3.29/0.50	22.38/14.41/2.18	1.84	8.07
EP-33		5.11/3.29/0.50	22.38/14.41/2.18	1.84	8.07
EP-31		5.11/3.29/0.50	22.38/14.41/2.18	0.29	1.29

(1) Emission factors are taken from Table 11.12-2 of AP-42 (08/04) representing elevated silo loading for PM and PM_{10}. Passive control of 90% taken due to sources located inside a building.

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.

(3) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 11 – Coal/Coke Handling

Emissions of PM from each EU ID within EUG 11 are routed to separate baghouse(s) rated at 0.025 gr/acf.

EU ID	Point ID	Description	CD ID	Process Rate
1101	EP-27	Coal/Coke Unloading D/C	CD-27	150 TPH 3,500 ACFM
1102/1103(1)	EP-28	Coal/Coke Crusher D/C	CD-28	150 TPH 3,000 ACFM
1104	EP-55	Coal Silo #1 D/C	CD-55	150 TPH 4,000 ACFM
1105	EP-56	Coal Silo #2 D/C	CD-56	150 TPH 1,250 ACFM

(1) Consists of two (2) transfer points: to bucket elevator and to coal silo.

Due strictly to calculation methodologies (process rates and emission factors vs air flows and baghouse guarantees), controlled emissions shown following exceed uncontrolled emissions. Uncontrolled emissions are calculated only for determining CAM applicability, therefore, controlled emissions based on air flows and baghouse factors will be used to determine PTE and emissions limitations.

Point ID	Uncontrolled Emission Factor (lb/ton)	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions [5]	
		lb/hr	TPY	lb/hr	TPY
EP-27	PM: 0.066 [1] PM_{10}: 0.023 $PM_{2.5}$: 0.01 [2]	9.90/9.90/1.50	43.36/43.36/6.57	0.75	3.29
EP-28	PM: 0.024 [3] PM_{10}: 0.00544 [3] $PM_{2.5}$: 3.63E-04 [2]	0.81/0.36/0.05	3.55/1.58/0.24	0.64	2.82
EP-55	PM: 3.00E-03 [4] PM_{10}: 1.10E-03 [4] $PM_{2.5}$: 1.67E-04 [2]	0.45/0.17/0.02	1.97/0.72/0.11	0.86	3.75
EP-56		0.45/0.17/0.02	1.97/0.72/0.11	0.27	1.17

(1) Emission factors are from AP-42 Table 11.9-4 (7/98) for Uncontrolled Particulate Emissions Factors for Open Dust Sources at Western Surface Coal Mines – Truck unloading (Any Location).

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.

(3) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) representing total particulate matter for tertiary crushing.

(4) Emission factors are taken from Table 11.19.2-2 of AP-42 (08/04) and represent total particulate matter for conveyor transfer point.

(5) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 12/12A – Dust Handling

Emissions of PM from each EU ID within EUG 12 are routed to separate baghouse(s) rated at 0.025 gr/acf each. EP-94 is equipped with a dust collector device designed for product recovery and has been determined to be inherent to the process equipment (silo).

EU ID	Point ID	Description	CD ID	Process Rate
1202	EP-42	Dust Unloading D/C	CD-42	100 TPH, 5,200 ACFM
1201	EP-43	T-10 Dust Silo D/C	CD-43	225 TPH 3,000 ACFM
1202	EP-60	Fly Ash Silo D/C	CD-60	10 TPH 7,800 ACFM
94	EP-94	Cement Kiln Dust (CKD) Silo D/C	NS	2,200 ACFM

Point ID	Uncontrolled Emission Factor (lb/ton)	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions [4]	
		lb/hr	TPY	lb/hr	TPY
EP-42	PM: 0.73 [1]	10.95/7.05/1.07	47.96/30.88/4.68	1.11	4.88

Point ID	Uncontrolled Emission Factor (lb/ton)	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions [4]	
		lb/hr	TPY	lb/hr	TPY
EP-43	PM_{10}: 0.47 [1] $PM_{2.5}$: 0.07 [2]	24.64/15.86/2.40	107.91/69.48/10.52	0.64	2.82
EP-60		1.10/0.71/0.11	4.80/3.09/0.47	1.67	7.32
EP-94	PM/ PM_{10}/ $PM_{2.5}$: 0.025 gr/acf [3]	0.47	2.06	0.47	2.06

(1) Emission factors are taken from Table 11.12-2 of AP-42 (08/04) representing elevated silo loading for PM and PM_{10}. Passive control factor of 85% applied for partial enclosure.

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 Section 13.2.4-4.

(3) EP-94 is equipped with a dust collector device designed for product recovery and has been determined to be inherent to the process equipment (silo) based on the applicant's responses to the criteria listed in the EPA Guidance Document, "Criteria for Determining Whether Equipment is Air Pollution Control Equipment or Process Equipment (11/27/1995)". Therefore, the PTE calculation of PM emissions from CKD storage and handling are calculated based on the dust collectors rated capacity of 2,200 cfm and an exhaust concentration of 0.025 gr/acf (after passing through the dust collector).

(4) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 13 – Rail and Truck Loading

Emission factors are taken from Table 11.12-2 of AP-42 (08/04) representing elevated silo loading for PM and PM_{10}. $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 (11/06) Section 13.2.4-4. Due strictly to calculation methodologies (process rates and emission factors vs air flows and baghouse guarantees), some controlled emissions shown following exceed uncontrolled emissions.

EU ID	Point ID	Description	CD ID	Process Rate
1301	EP-34	Rail Silo #7 D/C	CD-34	141 TPH, 7,000 ACFM
1310	EP-35	Rail Loading Silo #16 (East) D/C	CD-35	141 TPH, 12,500 ACFM
1309	EP-36	Rail Loading Silo #15 (West) D/C	CD-36	141 TPH, 10,000 ACFM
1311, 1312, 1315, 1317, 1318	EP-37	Truck Loading/Middle Cement Silo D/C	CD-37	141 TPH, 7,800 ACFM
1314, 1316, 1319, 1320, 1312	EP-38	Truck Loading/ Silo #2, #4, #6, #6A (East) D/C	CD-38	141 TPH, 12,500 ACFM
1313, 1315, 1317, 1318, 1311	EP-39	Truck Loading/Silo #1, #3, #5, #5A (West) D/C	CD-39	141 TPH, 7,000 ACFM

Point ID	Uncontrolled Emission Factor (lb/ton)	PM/PM_{10}/$PM_{2.5}$ Uncontrolled Emissions		PM/PM_{10}/$PM_{2.5}$ Controlled Emissions [3]	
		lb/hr	TPY	lb/hr	TPY
EP-34	PM: 0.73 [1] PM_{10}: 0.47 [1] $PM_{2.5}$: 0.07 [2]	15.44/9.94/1.51	67.63/43.54/6.59	1.50	6.57
EP-35		15.44/9.94/1.51	67.63/43.54/6.59	2.68	11.73
EP-36		15.44/9.94/1.51	67.63/43.54/6.59	2.14	9.39
EP-37		15.44/9.94/1.51	67.63/43.54/6.59	1.67	7.32
EP-38		15.44/9.94/1.51	67.63/43.54/6.59	2.68	11.73
EP-39		15.44/9.94/1.51	67.63/43.54/6.59	1.50	6.57

(1) Emission factors are taken from Table 11.12-2 of AP-42 (08/04) representing elevated silo loading for PM and PM_{10}. Passive control of 85% for partial enclosure applied.

(2) $PM_{2.5}$ factor calculated using k factor ratio (EF_{PM10} x (0.053/0.35)) from AP-42 (11/06) Section 13.2.4-4.

(3) Controlled emissions are estimated from the maximum air flowrate to the control device and control device rated outlet concentration (0.025 grain/acf).

EUG 14 – Plant Fugitive Sources

EU ID	Point ID	Description	Process Rate	Emission Factor	Reference
1401	NP01	Unpaved roads	63,000 miles*	9.44 lb/vehicle mile	AP-42 (12/03) Section 13.2.2
1402	NP02	Stockpiles, crane storage	13 piles, 19.12 acres	0.1 lb/acre/day, 428 TPY	AP-42 (1/95), Section 13.2.4
1403	NP03	Paved roads	16,300 miles *	2.56 lb/vehicle mile	AP-42 (12/03) Section 13.2.1
1404	NP04	Heavy equipment travel	5,823 miles *	4.2 lb/vehicle mile	AP-42 (12/03) Section 13.2.2
1405	NP05	Quarry operations	Blasting, bulldozing, drilling *	99.7 TPY	AP-42 (10/98) Section 11.9

* As listed in Permit No. 98-174-C (M-22), potential emissions for these operations have been proportioned by the ratio of maximum clinker production (96 TPH) to actual 1997 clinker production (67.1 TPH).

EUG 15 – Engine

Point ID	Description	Process Rate	Emission Factor	Reference
EP-83	1232-hp Diesel emergency generator	1,232 hp	NOx: 4.97 g/hp-hr	Mfg. data
			CO: 1.49 g/hp-hr	Mfg. data
			$PM/PM_{10}/PM_{2.5}$: 0.41 g/hp-hr	Mfg. data
			VOC: 0.34 g/hp-hr	Mfg. data
			SO_2: 0.93 g/hp-hr	Mfg. data
			Formaldehyde: 0.00118 lb/MMBTU	AP-42 (10/96) Table 3.3-2

EUG 16 Vehicle Fuel Storage Tanks

VOC emissions from the fuel storage tanks (TK-1 and TK-4) were estimated using the procedures of AP-42 (06/2020), Section 7.1. The estimates are based on an annual throughput of 400,000 gallons diesel and 10,000 gallons gasoline.

EU ID#	Point ID#	Contents	Capacity		VOC Emissions TPY
			Barrels	Gallons	
TK-1	TK-1	Diesel	440	18,500	0.01
TK-4	TK-4	Gasoline	95	4,000	0.34

Facility-Wide Emissions Summary
Tulsa Cement belongs to one of the named source categories with a regulated NSR pollutant threshold of 100 TPY, where fugitive emissions from the source are included for purposes of determining major source status and major modifications under PSD.

Criteria Pollutants
Since potential emissions of NOx, CO, SO_2, and PM exceed 100 TPY, the facility is considered to be a major PSD source.

Facility-Wide Emissions Summary

Point ID	NO_x		CO		VOC		SO_2		PM		PM_{10}		$PM_{2.5}$	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EP-01	--	--	--	--	--	--	--	--	6.82	9.90	6.82	9.90	6.82	9.90
EP-02	--	--	--	--	--	--	--	--	0.43	1.88	0.43	1.88	0.43	1.88
EP-82	--	--	--	--	--	--	--	--	4.56	19.97	4.56	19.97	4.56	19.97
EP-90	--	--	--	--	--	--	--	--	2.37	10.23	2.37	10.23	2.37	10.23
EP-91	--	--	--	--	--	--	--	--	0.95	0.52	0.45	0.24	0.07	0.04
EP-92	--	--	--	--	--	--	--	--						
EP-93	--	--	--	--	--	--	--	--	3.29	14.41	1.56	6.82	0.24	1.03
EP-03	2.50	10.95	2.10	9.20	1.38	6.02	0.02	0.07	7.71	33.79	0.19	0.82	0.19	0.82
EP-04	2.50	10.95	2.10	9.20	1.38	6.02	0.02	0.07	7.71	33.79	0.19	0.82	0.19	0.82
EP-11	--	--	--	--	--	--	--	--	3.09	13.52	3.09	13.52	3.09	13.52
EP-61 EP-62	--	--	--	--	--	--	--	--	0.34	1.50	0.34	1.50	0.34	1.50
EP-08	--	--	--	--	--	--	--	--	0.29	1.26	0.29	1.26	0.29	1.26
EP-09	--	--	--	--	--	--	--	--	0.21	0.94	0.21	0.94	0.21	0.94
EP-12	--	--	--	--	--	--	--	--	1.11	4.88	1.11	4.88	1.11	4.88
EP-13	--	--	--	--	--	--	--	--	1.11	4.88	1.11	4.88	1.11	4.88
EP-14	272.16	1192.1	33.22	145.50	1.34	5.89	120.00	525.60	34.28	150.17	34.28	150.17	34.28	150.17
EP-15	336.00	1471.70	41.34	181.07	1.34	5.89	120.00	525.60	34.28	150.17	34.28	150.17	34.28	150.17
EP-16	--	--	--	--	--	--	--	--	9.21	40.36	9.21	40.36	9.21	40.36
EP-17	--	--	--	--	--	--	--	--	9.21	40.36	9.21	40.36	9.21	40.36
EP-20	--	--	--	--	--	--	--	--	0.21	0.94	0.21	0.94	0.21	0.94
EP-57	--	--	--	--	--	--	--	--	0.21	0.94	0.21	0.94	0.21	0.94
EP-21	--	--	--	--	--	--	--	--	6.80	29.80	6.80	29.80	6.80	29.80
EP-22	--	--	--	--	--	--	--	--	0.86	3.75	0.86	3.75	0.86	3.75
EP-24	--	--	--	--	--	--	--	--	6.80	29.80	6.80	29.80	6.80	29.80
EP-26	--	--	--	--	--	--	--	--	0.86	3.75	0.86	3.75	0.86	3.75

Point ID	NO_x		CO		VOC		SO_2		PM		PM_{10}		$PM_{2.5}$	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EP-23	--	--	--	--	--	--	--	--	0.86	3.75	0.86	3.75	0.86	3.75
EP-25	--	--	--	--	--	--	--	--	0.86	3.75	0.86	3.75	0.86	3.75
EP-52	--	--	--	--	--	--	--	--	1.29	5.63	1.29	5.63	1.29	5.63
EP-50	--	--	--	--	--	--	--	--	4.29	18.77	4.29	18.77	4.29	18.77
EP-51	--	--	--	--	--	--	--	--	0.32	1.41	0.32	1.41	0.32	1.41
EP-49	--	--	--	--	--	--	--	--	12.86	56.31	12.86	56.31	12.86	56.31
EP-53	--	--	--	--	--	--	--	--	0.32	1.41	0.32	1.41	0.32	1.41
EP-48	--	--	--	--	--	--	--	--	0.45	1.97	0.45	1.97	0.45	1.97
EP-47	--	--	--	--	--	--	--	--	0.43	1.88	0.43	1.88	0.43	1.88
EP-46	--	--	--	--	--	--	--	--	0.45	1.97	0.45	1.97	0.45	1.97
EP-45	--	--	--	--	--	--	--	--	0.47	2.06	0.47	2.06	0.47	2.06
EP-44	--	--	--	--	--	--	--	--	0.45	1.97	0.45	1.97	0.45	1.97
EP-41	--	--	--	--	--	--	--	--	0.54	2.35	0.54	2.35	0.54	2.35
EP-40	--	--	--	--	--	--	--	--	0.54	2.35	0.54	2.35	0.54	2.35
EP-65	--	--	--	--	--	--	--	--	0.26	1.13	0.26	1.13	0.26	1.13
EP-29	--	--	--	--	--	--	--	--	1.84	8.07	1.84	8.07	1.84	8.07
EP-30	--	--	--	--	--	--	--	--	1.84	8.07	1.84	8.07	1.84	8.07
EP-32	--	--	--	--	--	--	--	--	1.84	8.07	1.84	8.07	1.84	8.07
EP-33	--	--	--	--	--	--	--	--	1.84	8.07	1.84	8.07	1.84	8.07
EP-31	--	--	--	--	--	--	--	--	0.29	1.29	0.29	1.29	0.29	1.29
EP-27	--	--	--	--	--	--	--	--	0.75	3.29	0.75	3.29	0.75	3.29
EP-28	--	--	--	--	--	--	--	--	0.64	2.82	0.64	2.82	0.64	2.82
EP-55	--	--	--	--	--	--	--	--	0.86	3.75	0.86	3.75	0.86	3.75
EP-56	--	--	--	--	--	--	--	--	0.27	1.17	0.27	1.17	0.27	1.17
EP-42	--	--	--	--	--	--	--	--	1.11	4.88	1.11	4.88	1.11	4.88
EP-43	--	--	--	--	--	--	--	--	0.64	2.82	0.64	2.82	0.64	2.82
EP-60	--	--	--	--	--	--	--	--	1.67	7.32	1.67	7.32	1.67	7.32

Point ID	NO_x		CO		VOC		SO_2		PM		PM_{10}		$PM_{2.5}$	
	lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
EP-94	--	--	--	--	--	--	--	--	0.47	2.06	0.47	2.06	0.47	2.06
EP-34	--	--	--	--	--	--	--	--	1.50	6.57	1.50	6.57	1.50	6.57
EP-35	--	--	--	--	--	--	--	--	1.50	6.57	1.50	6.57	1.50	6.57
EP-36	--	--	--	--	--	--	--	--	2.14	9.39	2.14	9.39	2.14	9.39
EP-37	--	--	--	--	--	--	--	--	1.67	7.32	1.67	7.32	1.67	7.32
EP-38	--	--	--	--	--	--	--	--	2.68	11.73	2.68	11.73	2.68	11.73
EP-39	--	--	--	--	--	--	--	--	1.50	6.57	1.5	6.57	1.5	6.57
EP-83	13.5	3.37	4.05	1.01	0.92	0.23	2.53	0.63	1.11	0.28	1.11	0.28	1.11	0.28
NP01	--	--	--	--	--	--	--	--	--	175.5	--	49.90	--	4.99
NP02	--	--	--	--	--	--	--	--	--	7.44	--	3.52	--	0.53
NP03	--	--	--	--	--	--	--	--	--	13.1	--	2.61	--	0.65
NP04	--	--	--	--	--	--	--	--	--	16.05	--	4.56	--	0.46
NP05	--	--	--	--	--	--	--	--	--	410.3	--	278.5	--	33.7
IA*	0.99	4.36	0.31	1.31	0.07	0.31	0.19	0.82	0.08	0.36	0.08	0.36	0.08	0.36
Systech**	--	--	--	--	--	21.45	--	--	--	--				
Totals	**626.65**	**2,693.43**	**83.12**	**347.29**	**6.43**	**45.81**	**242.76**	**1052.79**	**193.34**	**1676.8**	**176.07**	**1603.0**	**174.37**	**824.71**
Existing (Permit No. 98-174-TV (M-24)	**626.26**	**2687.2**	**98.54**	**414.86**	**4.42**	**16.44**	**243.04**	**1054.04**	**Not stated**	**Not stated**	**223.45**	**1819.9**	**Not stated**	**Not stated**
Differences	**0.39**	**6.23**	**-15.42**	**-67.57**	**2.01**	**29.37**	**-0.28**	**-1.25**	**--**	**--**	**-47.38**	**-216.9**	**--**	**--**

IA***** = Insignificant Activities and reflects the total emissions from all insignificant activities at the facility, which are detailed in the next section of the permit memorandum (Note that each individual insignificant activity is less than 5 TPY).

** Collocated Facility (Permit No. 2018-0805-TVR). The VOC amount listed in the table is the uncontrolled emissions contribution from Systech. Organic HAP emissions from the tanks, as with VOC emissions, pass through the inline conservation vents and are routed to one of the cement kilns or to a carbon adsorption system for control. Organic HAPS are controlled by the kilns with an efficiency of at least 99.99% which is the minimum DRE required by the HWC NESHAP. The carbon adsorption system controls emissions with a removal efficiency of at least 95% which is the minimum required by the regulations for hazardous waste operations in 40 CFR Part 63 Subpart DD. Actual emissions to the atmosphere are much less than the potential emissions.

Hazardous Air Pollutants (HAPs)

Tulsa Cement and Systech are considered collocated facilities where HAP emissions from both sites are considered when determining major source HAP status. The main contributors of HAP are emitted from the kiln(s), the raw mills (also considered raw material dryers under Subpart LLL) and the FQW piping and storage tanks.

Tulsa Cement HAP Emissions

Potential inorganic/organic HAP emissions of hydrochloric acid (HCl), formaldehyde, benzene, and toluene from the kilns were determined by stack tests conducted in July 2002 and based on full potential operations. Potential HAP emissions of low volatility metal, semi-volatile metals, and mercury are estimated based on each emission unit's stack flow and the associated NESHAP Subpart EEE emission standards.

TC dries their raw materials in separate dryers (raw mills) to remove moisture from feed materials. This drying process has the potential to emit organic HAP and THC emissions in a manner analogous to the release of organic HAP and THC emissions from kilns when hot kiln gas contacts incoming feed materials. The raw mills are considered raw material dryers and affected sources under 40 CFR Part 63, Subpart LLL.

Raw mills #1 (EU 211) and #2 (EU 221) are subject to an emission limit (during normal operation) of 24 ppmvd THC (measured as propane) measured on a 30-day operating day average basis, and work practices contained in §63.1348(b)(9) during periods of startup and shutdown. Stack testing conducted September 8-9, 2021, showed organic HAP emissions of 0.76 ppm from Raw Mill #1 and 0.22 ppm from Raw Mill #2, or 0.98TPY.

Facility Wide HAP Emissions

HAP	CAS #	TPY		HAP	CAS #	TPY
Arsenic	7440-38-2	0.0019		Acenaphthylene	208-96-8	0.0509
Barium	7440-39-3	0.1939		Acetaldehyde	75-07-0	2.1911
Beryllium	7440-41-7	0.0005		Benzene	71-43-2	2.7655
Cadmium	7440-43-9	0.0022		Fluoranthene	206-44-0	0.0372
Chloride	7782-50-5	0.8830		Fluorene	86-73-7	0.0080
Chromium	7440-47-3	0.0097		Formaldehyde	50-00-0	2.5767
Copper	7440-50-8	2.2286		n-Hexane	110-54-3	0.1855
Hydrogen Chloride	7647-01-0	0.6023		Naphthalene	91-20-3	0.4655
Mercury	7439-97-6	0.0131		Phenanthrene	85-01-8	0.1640
Lead	7439-92-1	0.6140		Toluene	108-88-3	0.3735
Selenium	7782-49-2	0.0841		Styrene	100-42-5	0.1916
Thallium	7440-28-0	0.0023		Xylene (m-,o-, p-)	1330-20-7	0.3971
Zinc	7440-66-6	0.1460		Pyrene	129-00-0	0.0020
Total HAP						**14.1902**

Systech HAP Emissions

Potential HAP emissions are estimated using the average emission factors from the USEPA guidance document "Protocol for Equipment Leak Emission Estimates," Table 2-1: SOCMI

Average Emission Factors and a representative average composition of FQW based on constituent information from Systech's facility in Fredonia, Kansas. The working and breathing losses escaping the tanks are VOC and HAP emissions. These emissions can be estimated based on FQW composition, the maximum FQW throughput and by using the AP-42 (6/20) Section 7.1 methodology which assumes no control. VOC emissions (tanks plus fugitives) are assumed to be HAPs but adjusted based on the FQW composition.

Systech Expected Maximum HAP Emissions

HAP	CAS #	TPY
n-Hexane	110-54-3	0.023
Benzene	71-43-2	0.001
Methanol	67-56-1	0.023
Toluene	108-88-3	0.013
Ethyl benzene	100-41-4	0.005
Xylene	1330-20-7	0.001
Methylene chloride	75-09-2	0.012
Styrene	100-42-5	0.001
Methyl methacrylate	80-62-6	0.005
Methyl isobutyl ketone	108101	0.001
Methyl tert-butyl ether	1634-04-4	0.012
Dimethyl aniline	121-69-7	0.001
Total		**0.098**

Given the variable nature of the FQL, a 100% safety factor has been added to the above total to yield 0.20 TPY.

Total HAP Emissions

Total HAP emissions from the two facilities combined is 14.39 TPY.

SECTION VIII. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified on Part 1b of the forms in the application and duplicated below. For activities marked with an asterisk (*) appropriate recordkeeping is required. Any Activity to which a State of federal applicable requirement applies is not insignificant even if it is included on Appendix I or Appendix J of OAC 252:100.

1. Emissions from fuel storage/dispensing equipment operated solely for facility owned vehicles if fuel throughput is not more than 2,175 gallons/day, averaged over a 30-day period. There is one 18,500-gallon diesel storage tank.

2. Emissions from storage tanks constructed with a capacity less than 39,894 gallons which store VOC with a vapor pressure less than 1.5 psia at maximum storage temperature.

3. Welding and soldering operations utilizing less than 100 pounds of solder and 53 tons per year of electrodes. However, welding is conducted as a part of routine maintenance which is considered a "trivial activity," and recordkeeping will not be required in the Specific Conditions.

4. Torch cutting and welding of under 200,000 tons of steel fabricated. However, torch cutting is conducted as a part of plant maintenance which is considered a "trivial activity," and recordkeeping will not be required in the Specific Conditions.

5. Hand wiping and spraying of solvents from containers with less than 1 liter capacity used for spot cleaning and/or degreasing in ozone attainment areas. Routine maintenance might require use of a degreasing solvent sprayed from containers. This activity is conducted as a part of routine maintenance which is considered a "trivial activity," and recordkeeping will not be required in the Specific Conditions.

SECTION IX. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations listed in OAC 252:100, Appendix Q. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in "attainment" of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories were submitted, and fees paid for previous years as required.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are taken from the permit application or are developed from the applicable requirement.

Section 8-4 requires a construction permit prior to the following:

- Construction of a new source that would require an operating permit under 40 CFR Part 70;
- Reconstruction of a major HAP source under 40 CFR Part 63;
- Any physical change or change in method of operation that would be a significant modification under OAC 252:100-8-7.2(b)(2); or
- Any physical change or change in method of operation that would increase the PTE of any one regulated air pollutant by more than 10 TPY, calculated using the approach in 40 CFR § 49.153(b).

The modifications requested by the minor modification applications do not meet any of the above criteria. Based on this determination, the requested modifications do not require a construction permit.

OAC 252:100-9 (Excess Emissions Reporting Requirements) [Applicable]
Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for mitigation, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning) [Applicable]
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-17 (Incinerators) [Not Applicable]
Part 3 applies to incinerators not subject to 40 CFR Part 60, Subparts E, Ea, Eb, Ec, AAAA, CCCC, or EEEE or any other parts in this subchapter. Per 252:100-1-3, *Incinerator* means a combustion device specifically designed for the destruction, by high temperature burning, of solid, semi-solid, liquid, or gaseous combustible wastes and from which the solid residues contain little or no combustible material. The kilns do not appear to meet the definition of incinerator on the basis that they designed to produce cement and not specifically designed for the destruction of waste. As such, the kilns are not subject to any requirements in this chapter.
Part 4 applies to new or existing biomedical waste incinerators the kilns do not combust biomedical waste.
Part 5 applies to large MWC and became effective as of March 23, 1997. Cement kilns firing MSW are not subject to this part per OAC 252:100-17-15(k).
Part 7 applies to Hospital, Medical and Infectious Waste Incinerators (HMIWI) which commenced construction on or before June 20, 1996. Cement kilns firing hospital waste and/or medical/infectious waste are not subject to this part per OAC 252:100-17-43(g).
Part 9 applies to Commercial and Industrial Solid Waste Incineration (CISWI) units which commenced construction on or before November 30, 1999. Cement kilns regulated as hazardous waste combustion units (required to get a permit under Section 3005 of the Solid Waste Disposal Act and regulated under 40 CFR Part 63, Subpart EEE) are not subject to this part per OAC 252:100-17-63(6).
Part 11 applies to Other Solid Waste Incineration (OSWI) units or air curtain incinerator for which construction was commenced on or before December 9, 2004. Cement kilns regulated as hazardous waste combustion units (required to get a permit under Section 3005 of the Solid Waste Disposal Act and regulated under 40 CFR Part 63, Subpart EEE) are not subject to this part per OAC 252:100-17-93(5).

OAC 252:100-19 (Particulate Matter (PM)) [Applicable]

Section 19-4 regulates emissions of PM from new and existing indirect fired fuel-burning equipment, with emission limits based on maximum design heat input rating. Fuel-burning equipment is defined in OAC 252:100-19 as any internal combustion engine or gas turbine, or other combustion device used to convert the combustion of fuel into usable energy. "Indirect fired" means that the hot gasses produced by the flame or heat source do not come into direct contact with the material, excluding air, being processed or heated. Thus, the following table lists all indirect fired fuel-burning equipment items, their individual limits, and expected emissions. Appendix C specifies a PM emission limitation of 0.60 lb/MMBTU for indirect fired fuel-burning equipment at this facility with a heat input rating of 10 MMBTUH or less.

Equipment	Maximum Heat Input (MMBTUH)	Appendix C Emission Limit (lb/MMBTU)	Potential Emission Rate (lb/MMBTU)
EP-83	8.62	0.13	0.60

Section 19-10 limits particulate emissions from new and existing indirectly fired wood fuel-burning equipment. Tulsa Cement does not use indirectly fired wood fuel-burning equipment.

Section 19-12 limits particulate emissions from new and existing directly fuel-burning equipment and/or any emission point in an industrial process based on process weight rate, as specified in Appendix G. "Direct fired" means that the hot gasses produced by the flame or heat source come into direct contact with the material being processed or heated. As shown on the following table, all emission points are in compliance with Subchapter 19.

EUG	Point ID	Process Rate (TPH)	Appendix G Emission Limit (lbs/hr)	Potential Emission Rate (lbs/hr)
1	EP-01	800	74.74	3.82
	EP-02	800	74.74	0.43
1A	EP-82	600	71.16	15.00
	EP-90	228	59.93	27.36
1B	EP-91	72	48.03	0.12
	EP-92	72	48.03	0.12
2A	EP-03	115	52.69	7.71
	EP-04	115	52.69	7.71
3	EP-07	225	59.79	3.08
	EP-10	225	59.79	3.08
	EP-11	225	59.79	3.08
3A	EP-61	10	19.18	0.34
	EP-62	10	19.18	0.34
4A	EP-08	500	68.96	0.29
4B	EP-09	200	58.51	0.21
4C	EP-12	120	53.13	1.11
	EP-13	120	53.13	1.11
5A	EP-14	48*	44.20	34.29
5B	EP-15	48*	44.20	34.29

EUG	Point ID	Process Rate (TPH)	Appendix G Emission Limit (lbs/hr)	Potential Emission Rate (lbs/hr)
6A	EP-16	48*	44.20	9.21
	EP-17	48*	44.20	9.21
6B	EP-20	96	50.87	0.56
	EP-57	96	50.87	0.21
	EP-21	50	44.58	6.8
7/7A	EP-22	50	44.58	0.86
	EP-24	50	44.58	6.8
	EP-26	50	44.58	0.86
	EP-23	50	44.58	0.86
	EP-25	50	44.58	0.86
	EP-52	50	44.58	1.29
	EP-50	50	44.58	4.29
	EP-51	50	44.58	0.32
	EP-49	50	44.58	12.86
	EP-53	50	44.58	0.32
	EP-48	600	71.16	0.45
8	EP-47	600	71.16	0.43
	EP-46	600	71.16	0.45
	EP-45	600	71.16	0.47
	EP-44	600	71.16	0.45
	EP-41	150	55.44	0.54
9	EP-40	150	55.44	0.54
	EP-65	80	49.06	0.26
10	EP-29	70	47.77	1.84
	EP-30	70	47.77	1.84
	EP-32	70	47.77	1.84
	EP-33	70	47.77	1.84
	EP-31	70	47.77	0.29
11	EP-27	150	55.44	0.75
	EP-28	150	55.44	0.64
	EP-55	150	55.44	0.86
	EP-56	150	55.44	0.27
12	EP-42	100	51.28	1.11
	EP-43	225	59.79	0.64
	EP-60	150	55.44	1.67
13	EP-34	141	54.79	1.5
	EP-35	141	54.79	2.68
	EP-36	141	54.79	2.14
	EP-37	141	54.79	1.67
	EP-38	141	54.79	2.68
	EP-39	141	54.79	1.50

*-Based on clinker production, although the clinker production limit is for the kilns combined.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]

The purpose of this subchapter is to control visible emissions and particulate matter from the operation of any air contaminant source. No discharge of greater than 20% opacity is allowed

except for short-term occurrences that consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. Per OAC 252:100-25-3, any units subject to an opacity limit promulgated under section 111 of the Federal Clean Air Act are exempt from this section. This requirement has been incorporated into the specific conditions for all affected units.

Section 5 requires any fuel-burning equipment with a design heat input value of 250 MMBTU/hr or more that does not burn gaseous fuel exclusively, and that was not in being on or before July 1, 1972 or that is modified after July 1, 1972, shall install, calibrate, operate, and maintain all monitoring equipment necessary for continuously monitoring opacity. This section shall not apply to sources that are subject to NSPS. The kilns are rated for more than 250 MMBTU/hr and are not subject to NSPS. The kiln(s) were originally constructed in 1961 and 1964 and have not been modified. Therefore, they are not subject to the requirements of this section.

OAC 252:100-29 (Fugitive Dust) [Applicable]

No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originated in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or to interfere with the maintenance of air quality standards. Under normal operating conditions, this facility generates fugitive dust emissions. Therefore, the permit incorporates reasonable precautions to minimize fugitive dust impacts including, but are not limited to, those actions set forth at OAC 252:100-29-3(1) through (6).

OAC 252:100-31 (Sulfur Compounds) [Applicable]

Part 2 limits the ambient air impact of hydrogen sulfide (H_2S) emissions from any new or existing source. Emissions of H_2S from any facility shall not cause an ambient air concentration of H_2S greater than 0.2 ppm at standard conditions, 24-hour average. There are not normally significant sources of H_2S at this facility. Emissions of H_2S from combustion of pipeline natural gas will not cause a violation of the ambient standard.

Part 5 concerns new equipment standards.

Section 31-25 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels, the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. For solid fuels, the limit is 1.2 lb/MMBTU heat input averaged over 3 hours. For liquid fuels, the limit is 0.8 lb/MMBTU heat input averaged over 3 hours. The only new fuel-burning equipment is the emergency engine. The emergency engine at TC utilizes diesel fuel. All diesel fuel is required to meet the fuel standards for ultra-low sulfur diesel (maximum sulfur content of 15 ppmw) required by federal regulations to have a maximum sulfur content of 15 ppmw. AP-42 (10/96), Section 3.4, gives an emission factor of 1.01*S lb/MMBTU, where S is the percent sulfur, which is approximately 0.0015 lb/MMBTU for ultra-low sulfur diesel. The permit will require the use of diesel-fuel with a maximum sulfur content of 15 ppmw sulfur for the diesel fired CI-ICE.

Any new or modified fuel-burning equipment with design heat input values of 250 MMBTU/hr or more is required to install, calibrate, maintain, and operate a continuous SO_2 emissions monitoring system, except where:

(I) gaseous fuel containing less than 0.1% by weight sulfur (0.29 gr/scf or approximately 500 ppmv at standard conditions on a dry basis) is the only fuel burned; or
(II) a solid or liquid fuel sampling and analysis method is used to determine SO2 emission compliance.

The kilns and raw material heaters were constructed before July 1, 1972, have not been modified, and are not subject to the sulfur limits for gas, liquid, or solid fuels.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter applies to new fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.2 lb of NOx per MMBTU, three-hour average. Per the regulation, "any existing direct-fired fuel-burning equipment or processes that were altered, replaced, or rebuilt after July 1, 1977, resulting in an increase in nitrogen oxide (NO_X) emissions" are considered new fuel-burning equipment and are subject to the applicable emission limit.

The kiln(s) at the Tulsa facility were originally constructed in the 1960s. As was previously evaluated and stated in previous permit memorandum, the conversion to burning coal, according to AP-42 (1/95), Section 11.6, would have resulted in a decrease in NOx emissions due to the lower flame temperature of coal and the absence of fuel bound nitrogen as compared to gaseous fuel. Although the conversion to coal could be considered as being altered after July 1, 1977, an increase in nitrogen oxide emissions did not occur. Therefore, the conversion to coal did not appear to trigger applicability of this subpart. As previously represented in the permit application to burn FQW submitted in 2009, Permit No. 98-174-C (M-13), the NOx emissions from the kilns were not expected to increase from the addition of FQW as a fuel. The conversion of the kilns from solid fuel to liquid FQW did not increase NOx emissions. The fuel bound nitrogen in FQW was expected to be less than the fuel bound nitrogen in solid fuel. Therefore, NOx emissions were not increased. Although the conversion to FQW could be interpreted as the unit being altered after July 1, 1977, an increase in nitrogen oxide emissions did not occur. Therefore, the conversion to FQW did not trigger applicability of this subchapter. Accordingly, this rule is not applicable to the facility. The burner replacement will not increase the firing rate of the kilns which is based on feed rate of raw materials. Therefore, the burner replacement does not qualify as being altered.

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]
This subchapter affects gray iron cupolas, blast furnaces, basic oxygen furnaces, petroleum catalytic cracking units, and petroleum catalytic reforming units. There are no affected sources.

OAC 252:100-37 (Volatile Organic Compounds) [Applicable]
Part 3 concerns the control of volatile organic compounds in storage and loading operations. Section 37-15(b) requires existing storage tanks in Tulsa or Oklahoma Counties with a capacity of 400 gallons or more to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. Section 37-4(a) exempts VOCs with vapor pressures less than 1.5 psia under actual storage conditions. TC has an affected gasoline tank under this subpart.
Part 5 limits the VOC content of coatings used in coating lines or operations. This facility will not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is not an affected operation.

Part 7 requires fuel-burning equipment to be cleaned, operated, and maintained so as to minimize VOC emissions. Based on manufacturer's data and good engineering practice, the equipment must not be overloaded, and temperature and available air must be sufficient to provide essentially complete combustion. TC performs scheduled maintenance on fuel burning equipment.

OAC 252:100-39 (Organic Compounds, Nonattainment Areas) [Not Applicable]
This subchapter applies to facilities in Tulsa and Oklahoma Counties only. This facility is not located in Tulsa or Oklahoma County.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]
This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

Each emissions unit must be evaluated for periodic testing in accordance with the Periodic Testing Standardization guidance issued December 1, 2011, on a pollutant-by-pollutant basis. The frequency of the periodic testing requirement is based on the quantity of the pollutant emitted. Periodic testing requirements are not required for an emission unit that is subject to an applicable requirement that already requires periodic testing, continuous emission monitoring (CEM), or predictive emission monitoring (PEMS).

Periodic Testing Review

EU ID	Point ID	Pollutant	TPY	Monitoring	Periodic Testing
211	EP-03	PM_{10}	33.79	Y – Method 22 or Method 9	N
221	EP-04	PM_{10}	33.79	Y – Method 22 or Method 9	N

EU ID	Point ID	Pollutant	TPY	Monitoring	Periodic Testing
501	EP-14	NOx	1,192.1	Y	N – CEMs
		CO	145.50	Y	N – CEMs
		SO_2	525.60	Y	N – CEMs
		PM	150.17	Y	N – BLDS
502	EP-15	NOx	1,192.1	Y	N – CEMs
		CO	145.50	Y	N – CEMs
		SO_2	525.60	Y	N – CEMs
		PM	150.17	Y	N – BLDS

In addition, numerous baghouses are not subject to CAM as being "intrinsic" or "product recovery." Monitoring of those units' operating pressures is required under Subchapter 43: EP-03, EP-04, EP-08, EP-12, EP-13, EP-21, EP-22, EP-24, EP-26, EP-34, EP-35, EP-36, EP-37, EP-38, EP-39, EP-42, EP-43, EP-44, EP-45, EP-46, EP-47, EP-49, EP-50, EP-51, EP-90

SECTION X. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable for Project M-25, M-26, or M-27]
TC is an existing major source for PSD. As shown in Section V of the permit memorandum, emission increases from each project (M-25, M-26, and M-27) were less than the significant emissions rates for each regulated air pollutant. Any future emissions increases must be evaluated for PSD if they exceed a significance emission rate.

SO_2	NO_x	CO	VOC	$PM/PM_{10}/PM_{2.5}$	SAM	TRS	H_2S	F	Lead
40	40	100	40	25/15/10	7	10	10	3	0.6

TRS = total reduced sulfur (including H2S)
SAM = sulfuric acid mist
F = Fluorides

NSPS, 40 CFR Part 60 [Subparts F, Y, OOO, and IIII Applicable]
Subpart E, Incinerators. This subpart affects each furnace used in the process of burning solid waste for the purpose of reducing the volume of the waste by removing combustible matter of more than 45 metric tons per day charging rate (50 tons/day) that commences construction or modification after August 17, 1971. This facility does not meet the definition of an incinerator that is defined in § 60.51(a). Therefore, this facility is not subject to this subpart.
Subpart Ea, Municipal Waste Combustors for which construction is commenced after December 20, 1989, and on or Before September 20, 1994. This subpart affects each municipal waste combustor unit with a municipal waste combustor unit capacity greater than 225 megagrams per day (250 tons per day) of municipal solid waste for which: 1) Construction is commenced after December 20, 1989, and on or before September 20, 1994; and (2) Modification or reconstruction is commenced after December 20, 1989, and on or before June 19, 1996. Neither of the two kilns were constructed during the affected time frame; therefore, neither are subject to this subpart. Any unit required to have a permit under Section 3005 of the Solid Waste Disposal Act is not subject to this subpart per §60.50a(i).

Subpart Eb, Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994, or for Which Modification or Reconstruction is Commenced After June 19, 1996. Cement kilns firing municipal solid waste are not subject to this subpart per §60.50b(p).
Subpart Ec, Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996. Cement kilns firing hospital and/or medical/infectious waste are not subject to this subpart per §60.50b(g). Hospital and/or medical/infectious waste are not allowed to be processed at the facility.
Subpart F, Portland Cement Plants. This subpart affects the following facilities located at Portland cement plants: kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging, and bulk loading, and unloading systems which commence construction or modification after August 17, 1971. The performance standard for facilities located at Portland cement plants, other than kilns and clinker coolers, is an opacity limit to not exceed 10 percent opacity. The table below summarizes the equipment subject to this subpart per §60.60(a). The following sources are all subject to Subpart F. The permit incorporates all applicable requirements.

Appli-cable? Y/N	**Affected Facility**	**Commenced Construction, Modification, or Reconstruction Date[1]**	**Comment**
N	Kiln(s)	--	Kiln(s) were originally constructed in 1961 and 1964 and have not triggered modification or reconstruction status under this subpart. The burner replacement did not increase PM emissions which were limited by raw material feed rate.
N	Clinker Cooler(s)	--	Clinker Cooler #1 and #2 were originally constructed in 1961 and 1964. In 1995 and 1997, the facility reduced airflow through the clinker coolers. Since the emissions had decreased, the units did not trigger modification under this subpart.
N	Raw Mill System(s)	--	Raw Mill #1 and #2 were originally constructed in 1961 and 1964. The units have not triggered modification under this subpart.
Y	Finish Mill System(s)	Finish Mill #3 (1997)	EP-49 thru EP-52
N	Raw Mill Dryer(s)	--	--
Y	Raw Material Storage(s)	EP-61 (2005), EP-62 (2005), EP-43 (1994), EP-60 (2004), EP-94 (2019)	EP-61, EP-62, EP-43, EP-60, EP-94
Y	Clinker Storage(s)	--	EP-20 commenced construction before August 17, 1971. The modification status related to the removal of the baghouse in 2016 is currently being reviewed.
N	Finished Product Storage(s)	--	--
Y	Conveyor Transfer Points(s)	EP-65 (2005), EP-91 (2017), EP-92 (2017), EP-93 (2019)	EP-65, EP-91, EP-92, EP-93
N	Bagging and Bulk Loading/Unloading System(s)	--	--

Subpart Kb, Volatile Organic Liquids Storage Vessels. This subpart applies to volatile organic liquids storage vessels for which construction, reconstruction, or modification commenced after July 23, 1984, and which have a capacity of 19,812 gallons (40 cubic meters) or greater. Paragraph 60.112b(a) specifies that vessels with a design capacity greater than or equal to 39,980 gallons containing a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 0.75 psia but less than 11 psia shall have one of the following vapor control devices: an external fixed roof in combination with an internal floating roof; an external floating roof; a closed vent system to a control device (flare, condenser, or absorber); or an equivalent system. TC has not identified any tanks that are subject to this subpart at this time.

Subpart Y, Coal Preparation Plants. Coal preparation and processing plant means any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying. This subpart is applicable to any of the following affected facilities:

(a) The provisions of this subpart apply to affected facilities in coal preparation and processing plants that process more than 181 megagrams (Mg) (200 tons) of coal per day.
(b) The provisions in §§60.251, 60.252(a), 60.253(a), 60.254(a), 60.255(a), and 60.256(a) of these subparts 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 systems, transfer and loading systems.
(c) The provisions in §§60.251, 60.252(b)(1) and (c), 60.253(b), 60.254(b), 60.255(b) through (h), 60.256(b) and (c), 60.257, and 60.258 of this subpart are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after April 28, 2008, and on or before May 27, 2009: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems.
(d) The provisions in §§60.251, 60.252(b)(1) through (3), and (c), 60.253(b), 60.254(b) and (c), 60.255(b) through (h), 60.256(b) and (c), 60.257, and 60.258 of this subpart are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after May 27, 2009: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, transfer and loading systems, and open storage piles.

TC performs coal crushing and has coal processing and conveying equipment, coal storage system, coal transfer and loading system processing. There are no thermal dryers or pneumatic coal cleaning equipment at this facility in which the moisture content of bituminous coal is reduced by contact with a heated gas stream which is exhausted to the atmosphere. For coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, opacity is limited to less than 20 percent. EP-55 and EP-56 are subject to the opacity limit of 20% in Subpart Y.

At this time EP-27 and EP-28 are not subject to this regulation since the units have not been determined, at this time, to have commenced modification or reconstruction after October 27, 1974. EP-55 and EP-56 are subject to Subpart Y.

EU ID	Point ID	Description	Commenced Construction, Modification, or Reconstruction Date
1101	EP-27	Coal/Coke Unloading D/C	Pre-10/27/1974, 2016[1]
1102, 1103	EP-28	Coal/Coke Crusher D/C	Pre-10/27/1974
1104	EP-55	Coal Silo #1 D/C	1997
1105	EP-56	Coal Silo #2 D/C	1997

[1]Modification status is currently being reviewed (if determined to have been modified in 2016, the unit would become subject to 10% opacity limit and mechanical vent PM limit of 0.025 gr/dscf).

Subpart OOO, Nonmetallic Mineral Processing Plants, specifies standards for affected facilities which commence construction, modification, or reconstruction after August 31, 1983. Per §60.670(b), an affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart. This subpart affects the following facilities: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Subpart OOO states that any unit subject to Subpart F is not subject to Subpart OOO.

An emission increase for EP-01 was authorized in Permit No. 98-174-TV (M-11), which was issued on May 28, 2009. Based on documentation, EP-01 was determined to have commenced modification in May of 2008. Per Table 2 to Subpart OOO of Part 60, affected facilities that commence construction, modification, or reconstruction on or after April 22, 2008, must meet a PM emission limit of 0.014 gr/dscf. No opacity limit under this subpart is applicable to EP-01 at this time. The owner or operator must demonstrate compliance with these limits by conducting an initial performance test according to §60.8 of this part and §60.675 of this subpart; and monitoring of baghouses according to §60.674(c), (d), or (e) and §60.676(b).

The junction house (EP-02) was determined to have been modified with the stacker reclaimer project authorized in Permit No. 98-174-TV (M-21) issued on January 14, 2015. Per Table 2 to Subpart OOO of Part 60, affected facilities with capture systems that commence construction, modification, or reconstruction on or after April 22, 2008, must meet a PM emission limit of 0.014 gr/dscf. No opacity limit under this subpart is applicable to EP-02 at this time. The owner or operator must demonstrate compliance with these limits by conducting an initial performance test according to §60.8 of this part and §60.675 of this subpart; and monitoring of baghouses according to §60.674(c), (d), or (e) and §60.676(b).

EUG 1 – Raw Material Crushing and Transfer

EU ID	Point ID	Description	Commenced Construction	CD ID	Equipment ID
101	EP-01	Primary Crusher D/C, 2 Impactors, 4 Transfer Points	1961, 2008	CD-01	02-18-118

EU ID	Point ID	Description	Commenced Construction	CD ID	Equipment ID
102	EP-02	Junction House D/C	1961, 2014	CD-02	02-18-120

The new stacker-reclaimer system (EP-90) was authorized in Permit No. 98-174-TV (M-21) issued on January 14, 2015 and is an affected facility without a capture system that commenced construction after April 22, 2008 and is subject to a fugitive emission limit of 7 percent opacity.

EUG 1A – Raw Material Transfer

EU ID	Point ID	Description	Commenced Construction	CD ID	Equipment ID
90	EP-90	Stacker-Reclaimer System	2014	--	--

The permit incorporates all applicable requirements.
Subpart AAAA, Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999, or for Which Modification or Reconstruction is Commenced After June 6, 2001. Cement Kilns that combust municipal solid waste are exempt from this subpart per §60.1020(j).
Subpart CCCC, Commercial and Industrial Solid Waste Incineration (CISWI) units. Cement kilns regulated as hazardous waste combustion units (required to get a permit under Section 3005 of the Solid Waste Disposal Act and regulated under 40 CFR Part 63, Subpart EEE) are not subject to this subpart per §60.2020(f).
Subpart EEEE, Other Solid Waste Incineration (OSWI) Units. Cement kilns regulated as hazardous waste combustion units (required to get a permit under Section 3005 of the Solid Waste Disposal Act and regulated under 40 CFR Part 63, Subpart EEE) are not subject to this subpart per §60.2887(e).
Subpart IIII, Stationary Compression Ignition Internal Combustion Engines. This subpart affects stationary compression ignition (CI) internal combustion engines (ICE) based on power and displacement ratings, depending on date of construction and the date of manufacture of the engine, beginning with those constructed after July 11, 2005 and manufactured after April 1, 2006 (July 1, 2006 for fire pump engines). The one engine which was subject to Subpart IIII has been removed from the facility.
Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines. This subpart affects stationary spark ignition (SI) internal combustion engines (ICE) based on power, type of combustion, and dates of construction and manufacture. There are no engines on-site subject to Subpart JJJJ.

NESHAP, 40 CFR Part 61 [Subparts M, V, and FF Applicable]
Subpart E, National Emission Standard for Mercury. This subpart is applicable to those stationary sources which process mercury ore to recover mercury, use mercury chlor-alkali cells to produce chlorine gas and alkali metal hydroxide, and incinerate or dry wastewater treatment plant sludge. This facility does not process any of the materials listed above. This subpart is not applicable.
Subpart J, National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene. This subpart applies to sources that are intended to operate *in benzene service* which include: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices

or systems required by this subpart. *In benzene service* means a piece of equipment either contains or contacts a fluid (Liquid or gas) that is at least 10 percent benzene by weight as determined according to the provisions of §61.245(d). The provisions of §61.245(d) also specify how to determine that a piece of equipment is not in benzene service. The benzene content of the FQW is not expected to equal or exceed 10 percent, therefore, this regulation is not applicable to the equipment used to convey and burn FQW from Systech's facility.

Subpart M, National Emission Standard for Asbestos. The provisions of this subpart are applicable to those sources specified in §§61.142 through 61.151, 61.154, and 61.155. Specifically, §61.145, Standard for Demolition and Renovation, affects facilities where demolition or renovation occurs in the presence of asbestos. The facility has been in compliance with this rule to date.

Subpart V, Equipment Leaks (Fugitive Emission Sources). This regulation is applicable to piping components and other fugitive sources when referenced from other regulations. The monitoring requirements of §61.242 through §61.247 are referenced from 40 CFR 63 Subpart DD (Section 5.2.5); therefore, the requirements for leak detection and repair of pumps, valves and connectors are applicable. The piping components before the burner floor are owned and operated by Systech and the components on the burner floor to the kiln are owned and operated by TC. Subpart FF, National Emission Standard for Benzene Waste Operations. Per §61.340(b), The provisions of this subpart apply to owners and operators of hazardous waste treatment, storage, and disposal facilities that treat, store, or dispose of hazardous waste generated by any facility listed in paragraph 61.340(a). This regulation applies to the cement kilns at Tulsa Cement LLC when burning FQW because they are treatment processes for the benzene-containing waste streams covered by the standards in this regulation. FQW is a liquid hazardous waste stream from Systech's hazardous waste treatment, storage and disposal facility that may include benzene-containing waste from chemical manufacturing facilities, coke by-product recovery plants and petroleum refineries. These benzene-containing waste streams are required to be treated to remove or destroy the benzene in accordance with §61.342(c) of Subpart FF which is incorporated by reference in OAC 252:100-2-3. The kilns are operated and maintained to treat the FQW as required by the standards for treatment processes in §61.348(a). Furthermore, the kilns and the benzene-containing waste streams that are destroyed in the kilns are in compliance with the requirements of this regulation and exempt from the demonstration requirements as described in §61.348(c) and §61.348(d).

NESHAP, 40 CFR Part 63 [Subparts EEE, LLL, ZZZZ and CCCCCC Applicable]

Subpart H, National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks. The provisions of this subpart apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by this subpart that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within a source subject to the provisions of a specific subpart in 40 CFR Part 63 that references this subpart. By ceasing to be a major source of HAPs, Subpart H ceases to be applicable upon issuance of this permit.

Subpart DD, National Emission Standard for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. This subpart is applicable to major sources of HAPs. By ceasing to be a major source of HAPs, Subpart DD ceases to be applicable.

Subpart EEE, National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors. This subpart applies to all hazardous waste combustors: hazardous waste incinerators, hazardous waste cement kilns, hazardous waste light-weight aggregate kilns, hazardous waste

solid-fuel boilers, hazardous waste liquid fuel boilers, and hazardous waste hydrochloric acid production furnaces. Hazardous waste is defined in 40 CFR §261.3. This regulation applies to the cement kilns at Tulsa Cement LLC when burning FQW, or any combination of FQW and other fuels. The Kiln(s) at TC commenced construction in 1961 and 1964. Although several modifications have been evaluated for the kiln(s), to date the reconstruction status as defined in §63.2 has not been triggered. Tulsa Cement LLC will operate the two dry-process kiln (EP-14 and EP-15) systems under two modes of operation:

Mode A: Hazardous waste being fed to the kilns.
Mode B: Hazardous waste **not** being fed to the kilns.

As provided by §63.1206(b)(1)(ii), the facility may operate under otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act in lieu of the substantive requirements of this subpart.

In accordance with 40 CFR §63.1209(q), If the facility operates under different modes of operation, it must establish operating parameter limits for each mode. The facility must document in the operating record when it changes a mode of operation and begins complying with the operating limits for an alternative mode of Tulsa Cement has chosen to operate under the Subpart III standards at all times.

Per §63.1209(q)(1), the facility may operate under otherwise applicable requirements of Mode B, as defined in their startup, shutdown, and malfunction plan (SSMP) in lieu of the substantive requirements of 40 CFR Part 63, Subpart EEE after the hazardous waste residence time has transpired. Per §63.1209(q)(2), When the facility transitions to a different mode of operation, it must calculate rolling averages as outlined in Sections (i) through (ii). *Hazardous waste residence time* means the time elapsed from cutoff of the flow of hazardous waste into the combustor (including, for example, the time required for liquids to flow from the cutoff valve into the combustor) until solid, liquid, and gaseous materials from the hazardous waste (excluding residues that may adhere to combustion chamber surfaces and excluding waste-derived recycled materials such as cement kiln dust and internally recycled metals) exit the combustion chamber. For combustors with multiple firing systems whereby the residence time may vary for the firing systems, the hazardous waste residence time for purposes of complying with this subpart means the longest residence time for any firing system in use at the time of the waste cutoff.

The units are considered existing sources subject to the Phase II standards for cement kilns (CK) under §63.1220. The Phase II emission standards for CK are summarized in the table below. Per §63.1206 (b), the emission standards and operating requirements set forth in this subpart apply at all times except: (i) During periods of startup, shutdown, and malfunction; and (ii) When hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time) and the facility has documented in the operating record that they are complying with all otherwise applicable requirements and standards promulgated under authority of sections 112 (e.g., 40 CFR Part 63, subparts LLL, DDDDD, and NNNNN) or 129 of the Clean Air Act in lieu of the emission standards under §§ 63.1203, 63.1204, 63.1205, 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221; the monitoring and compliance standards of §63.1206 and §§ 63.1207

through 63.1209, except the modes of operation requirements of § 63.1209(q); and the notification, reporting, and recordkeeping requirements of §§ 63.1210 through 63.1212.

Note that mercury, lead and cadmium, and arsenic, beryllium and chromium have standards in different units of measure. For mercury, lead and cadmium, combined arsenic, beryllium, and chromium, both standards must be met. For particulate both the concentration and opacity standards must be met. The emission limits provided in §63.1220 are presented with two significant figures. Although the intermediate calculations must be performed using at least three significant figures, the resultant emission levels may be rounded to two significant figures to document compliance. Per §63.1220(h), When a facility complies with the particulate matter requirements of §63.1220(a)(7) or (b)(7), it is exempt from the New Source Performance Standard for particulate matter and opacity under 40 CFR §60.60.

Phase II Emission Standards for New and Existing Cement Kilns

Pollutant	Units	Existing	New
D+F	ng-TEQ/dscm	0.20 (1)	0.20 (1)
D+F 400°F	ng-TEQ/dscm	0.40 (2)	0.40 (2)
Hg	ppmw	3.0 (3)	1.9 (3)
	ug/dscm	120 (4)	120 (4)
Pb+Cd	lb/MMBTU	7.6×10^{-4} (5)	6.2×10^{-5} (5)
	ug/dscm	330 (6)	180 (6)
Ar+Be+Cr	10^{-5} lb/MMBTU	2.1 (7)	1.5 (7)
	ug/dscm	56 (8)	54 (8)
CO or HC	ppmvd	100 (9) or 10-20 (9)	100 (9) or 10-50 (9)
HCl + Cl_2	ppmvd	120 (10)	86 (10)
PM/Opacity	gr/dscf	0.028/20% (11)	0.0069/20% (11)

(1) Corrected to 7 percent oxygen.

(2) Corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400 °F or lower based on the average of the test run average temperatures.

(3) An average as-fired concentration of mercury in all hazardous waste feed streams in excess of standard (terms of per million by weight); and

(4) Emissions in excess of standard (terms of µg/dscm) corrected to 7 percent oxygen, or A hazardous waste feed maximum theoretical emission concentration (MTEC) in excess of standard (terms of µg/dscm).

(5) Emissions in excess of standard (in terms of lbs combined emissions of cadmium and lead attributable to the hazardous waste per million BTU heat input from the hazardous waste); and

(6) Emissions in excess of standard (in terms of µgm/dscm), combined emissions, corrected to 7 percent oxygen.

(7) Emissions in excess of standard (in terms of lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million BTU heat input from the hazardous waste); and

(8) Emissions in excess of standard (in terms of µgm/dscm, combined emissions, corrected to 7 percent oxygen).

(9) Refer to §63.1220(a)(5) for existing standard or §63.1220(b)(5) for new standard.

(10) Hydrogen chloride and chlorine gas in excess of standard (in terms of parts per million by volume, combined emissions, expressed as a chloride ($Cl^{(-)}$) equivalent, dry basis, corrected to 7 percent oxygen).

(11) Emissions in excess of gr/dscf corrected to 7 percent oxygen; and Opacity greater than 20 percent unless the source is equipped with a bag leak detection system under § 63.1206(c)(8) or a particulate matter detection system under § 63.1206(c)(9).

Per §63.1120(c), the subpart requires a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC), or, 99.9999% for dioxin-listed hazardous wastes.

The owner or operator shall control the combustion system leaks of hazardous air pollutants by maintaining the maximum combustion chamber pressure lower than ambient pressure. The subpart requires comprehensive performance testing (CPT) to demonstrate compliance with the emission standards. Enforceable operating parameter limits (OPLs) will be set during CPT to ensure compliance with emission standards.

The operator must use either a carbon monoxide or a hydrocarbon CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard under this subpart. The operator must also use an oxygen CEMS to continuously correct the carbon monoxide or hydrocarbon level to 7 percent oxygen. The operator must use a continuous opacity monitoring system (COMS) to demonstrate and monitor compliance with the opacity standard under §§63.1204(a)(7) and (b)(7) at each point where emissions are vented from these affected sources including the bypass stack of a preheater or preheater/precalciner kiln with dual stacks. The inlet temperature of the baghouse shall be measured continuously with a thermocouple. The owner or operator shall develop and implement a written startup, shutdown, and malfunction (SSM) plan in accordance with 40 CFR §63.6(e)(3). During the periods of startup, shutdown and malfunction, the owner or operator shall comply with the SSM plan in accordance with procedures specified in 40 CFR §63.1206(c)(2). The owner or operator shall operate the hazardous waste combustor with a functioning Automatic Waste Feed Cutoff System (AWFCO) per 40 CFR §63.1206(c)(3). The purpose of the AWFCO system is to stop the flow of waste-derived fuel instantaneously and automatically to the kiln if any of the OPLs are exceeded. During an AWFCO period, hazardous waste will not be used, other fuels will be used to replace the thermal energy supplied from the waste-derived fuel (WDF) to maintain the system operation along with the system's capacity to destroy constituents of WDF remaining in the system. In accordance with the Operation and Maintenance Plan, the AWFCO system and associated alarms operability must be verified monthly. The facility must establish and implement training and, as appropriate, certification programs for all categories of personnel whose activities may be expected to directly affect emissions of hazardous air pollutants from the source in accordance with 40 CFR §63.1206(c)(6). The facility shall operate according to an operation and maintenance (O&M) plan as required under 40 CFR §63.1206(c)(7). The facility must develop and implement a feed stream analysis plan (FAP) and record it in the operating record in accordance with §63.1209(c)(2).

The owner or operator shall meet all applicable reporting and record keeping requirements as specified in 40 CFR §63.1211, §63.1354, §63.1355 and Subpart A. These records shall be maintained in accordance with the requirements of §63.10(b)(1) and made available for inspection upon request. All applicable requirements have been incorporated into the permit.

Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. The provisions of this subpart apply to each new and existing Portland cement plant which is a major source or an area source as defined in §63.2. This facility is considered an area source of HAP emissions. The subpart also notes that sources that are subject to standards for nonmetallic mineral processing plants in Subpart OOO, Part 60 of this chapter are not subject to this subpart. Per §63.1356, If an affected source subject to this subpart with a different emissions limit or requirement for the same pollutant under another regulation in Title 40 of this chapter, once you are in compliance with the most stringent emissions limit or requirement,

you are not subject to the less stringent requirement. Until the source is in compliance with the more stringent limit, the less stringent limit continues to apply. The affected source(s) subject to this subpart are addressed below.

If your source is a (an):	And the operating mode is:	And if is located at a:	Your emissions limits are:	And the units of the emissions limit are:	The oxygen correction factor is:
1. Existing kiln	Normal operation	Major or area source	PM[1] 0.07	lb/ton clinker	NA.
			D/F[2] 0.2	ng/dscm (TEQ)	7 percent.
			Mercury 55	lb/MM tons clinker	NA.
			THC[3, 4] 24	ppmvd	7 percent.
3. Existing kiln	Startup and shutdown	Major or area source	Work practices (§63.1346(g))	NA	NA.
7. Existing clinker cooler	Normal operation	Major or area source	PM 0.07	lb/ton clinker	NA.
8. Existing clinker cooler	Startup and shutdown	Major or area source	Work practices (§63.1348(b)(9))	NA	NA.
11. Existing or new raw material dryer	Normal operation	Major or area source	THC[3, 4] 24	ppmvd	NA.
12. Existing or new raw material dryer	Startup and shutdown	Major or area source	Work practices (§63.1348(b)(9))	NA	NA.

(1) The initial and subsequent PM performance tests are performed using Method 5 or 5I and consist of three test runs.
(2) If the average temperature at the inlet to the first PM control device (fabric filter or electrostatic precipitator) during the D/F performance test is 400 °F or less, this limit is changed to 0.40 ng/dscm (TEQ).
(3) Measured as propane.
(4) Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP.

- Each kiln including alkali bypasses and inline coal mills, except for kilns that burn hazardous waste and are subject to and regulated under subpart EEE of this part.

Kiln 1 (EP-14) and Kiln 2 (EP-15) are considered affected sources under this subpart when hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period not less than the hazardous waste residence time) and the requirements of NESHAP Subpart EEE are satisfied. Per §63.1206 (b) of 40 CFR Part 63, Subpart EEE, TC must document in the operating record that the site is complying with all otherwise applicable

requirements and standards promulgated under authority of sections 112 (e.g., 40 CFR Part 63, subparts LLL) when not in FQW mode. TC is electing to comply with NESHAP Subpart EEE at all times regardless of whether the facility is burning hazardous waste or not.

Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This subpart establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand. For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR §1068.30 and is not used to propel a motor vehicle or a vehicle used solely for competition. A non-road engine means by itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. An internal combustion engine is not a nonroad engine if the engine remains or will remain at a location for more than 12 consecutive months or a shorter period for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. For any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced, include the period of both engines in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year. See § 1068.31 for provisions that apply if the engine is removed from the location. The engines represented as EP84 through EP87 are portable units used for welding operations throughout the plant. The welding engines are not operated in one location for more than 12-months; therefore, they are not stationary engines and are not subject to 40 CFR Part 63, Subpart ZZZZ.

The emission unit in the table below (EP-83) is considered an existing source under Subpart ZZZZ.

EU ID	Point ID	Description	Commenced Construction	Status
83	EP-83	1,232-hp Diesel Emergency Generator	1996	Existing

EP-83 is subject to the requirements in Table 2d of Subpart ZZZZ which is summarized in the table below. In addition, the facility is required to operate the engine according to the requirements in paragraphs (f)(1) through (4) of §63.6640.

From Table 2d to Subpart ZZZZ of Part 63—Requirements (Existing Sources)

RICE Category	You must meet the following requirements, except during periods of startup…	During periods of startup, you must…
Emergency stationary CI RICE and black start stationary CI RICE[1]	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;[2]	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 engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first, and replace as necessary.	
Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;[2]	
	b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first, and replace as necessary.	

(1) If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of Subpart ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, state or local law under which the risk was deemed unacceptable.

(2) Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of Subpart ZZZZ.

Subpart CCCCCC, Gasoline Dispensing Facilities. This subpart establishes emission limitations and management practices for HAP emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF) located at an area source with a compliance date of January 10, 2011. GDF means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank. TK-1 is a gasoline storage tank; therefore, the facility is subject to this subpart.

If a GDF has a monthly throughput of less than 10,000 gallons of gasoline, it is subject to the following work practice standards:

1) Minimize gasoline spills;
2) Clean up spills as expeditiously as practicable;
3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

Compliance Assurance Monitoring (CAM), 40 CFR Part 64 [Applicable]
This part applies to any pollutant-specific emission unit at a major source that is required to obtain an operating permit, if it meets all the following criteria.

- It is subject to an emission limit or standard for an applicable regulated air pollutant (or a surrogate thereof).
- It uses a control device to achieve compliance with any such applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant greater than major source levels.

The Cement Kilns (EP-14 and EP-15) are subject to CAM for particulate matter. CAM, as required by NESHAP Subpart EEE, is presumptively-acceptable CAM for the two (2) cement kilns within the initial Title V permit application submitted in July 1998. In the application, the two cement kilns were identified to meet the criteria that made them subject to CAM requirements for particulate matter. As such, the facility is required to comply with the CAM requirements on the two cement kilns and associated baghouses for particulate matter. Continuous opacity monitors (COMs) were purchased and installed on each kiln stack. The following monitoring parameter and justification for their usage for compliance assurance monitoring are below. All CAM requirements are incorporated into the specific conditions of the permit as Table 1, Appendix A.

The applicability of 40 CFR Part 64 was reviewed for all sources on-site during this renewal. Those sources that have potential emissions, prior to the control device, greater than major source levels have been included in the table following.

Compliance Assurance Monitoring (CAM) Applicability Review

EU ID	Applicable Pollutant [1]	Subject to emission limit or standard? (Y/N)	Utilize a control device? (Y/N)	Notes	Exempt under §64.2(b)? (Y/N)	Notes
EP-14	PM	Y	Y	Part 70 Permit; 40 CFR Part 63 Subpart EEE	Y	§64.2(b)(vi)
	NO_X	Y	Y	Part 70 Permit; CD No. 3:10-cv-00044-JPG-CJP	Y	§64.2(b)(1)(vi) - CEMS requirement established in Title V permit (CD No. 3:10-cv-00044-JPG-CJP) which relies on the construction permit as the underlying requirement.
	CO	Y	N	40 CFR Part 63 Subpart EEE [2]	--	No control device utilized. CAM is not applicable.
	SO_2	Y	Y	Part 70 Permit; CD No. 3:10-cv-00044-JPG-CJP	Y	§64.2(b)(1)(vi) - CEMS requirement established in Title V permit (CD No. 3:10-cv-00044-JPG-CJP) which relies on the construction permit as the underlying requirement.
EP-15	PM	Y	Y	Part 70 Permit; 40 CFR Part 63 Subpart EEE	Y	§64.2(b)(vi)
	NO_X	Y	Y	Part 70 Permit; CD No. 3:10-cv-00044-JPG-CJP	Y	§64.2(b)(1)(vi) - CEMS requirement established in Title V permit (CD No. 3:10-cv-00044-JPG-CJP) which relies on the construction permit as the underlying requirement.
	CO	Y	N	40 CFR Part 63 Subpart EEE [2]	--	No control device utilized. CAM is not applicable.
	SO_2	Y	Y	Part 70 Permit; CD No. 3:10-cv-00044-JPG-CJP	Y	§64.2(b)(1)(vi) - CEMS requirement established in Title V permit (CD No. 3:10-cv-00044-JPG-CJP) which relies on the construction permit as the underlying requirement.
EP-16	PM	Y	Y	40 CFR Part 63 Subpart LLL	Y	§64.2(b)(1)(i) [4]
EP-17	PM	Y	Y	40 CFR Part 63 Subpart LLL	Y	§64.2(b)(1)(i) [4]

[1] It has potential emissions, prior to the control device, of the applicable regulated air pollutant greater than major source levels.

[2] As provided by §63.1206(b)(1)(ii), you may operate under otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act in lieu of the substantive requirements of this subpart. TC chooses to comply with NESHAP Subpart EEE during all periods of operation.

[3] The unit is not subject to a CO emission limitation or standard when not in FQW mode. However, these unit(s) do not utilize a control device to comply with the standard. Therefore, CAM is not applicable.

[4] Each existing clinker coolers (EP-16 and EP-17) are subject to an emission limit (during normal operation) of 0.07 lb PM per ton clinker, and work practices contained in §63.1348(b)(9) during periods of startup and shutdown. Since they are subject to emission limitation(s) in NESHAP Subpart LLL, these units are exempt from CAM because they are subject to a standard under Section 112 proposed after November 15,1990.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Applicable]
This facility does not process or store more than the threshold quantity of any regulated substance (Section 112r of the Clean Air Act 1990 Amendments). The Chemical Accident Prevention Provisions, 40 CFR Part 68, do not apply to the CPCC facility. The site uses 19% ammonium hydroxide for emissions control which is not subject to the Chemical Accident Prevention Provisions. There are no other chemicals used on site in quantities that may potentially subject the facility to the requirements of the Chemical Accident Prevention Provisions. More information on this federal program is available on the web page: *https://www.epa.gov/rmp*.

Stratospheric Ozone Protection, 40 CFR Part 82 [Subparts A and F are Applicable]
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).
Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.
Subpart F requires that any persons servicing, maintaining, or repairing appliances except for motor vehicle air conditioners; persons disposing of appliances, including motor vehicle air conditioners; refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment comply with the standards for recycling and emissions reduction.
The Standard Conditions of the permit address the requirements specified at §82.156 for persons opening appliances for maintenance, service, repair, or disposal; §82.158 for equipment used during the maintenance, service, repair, or disposal of appliances; §82.161 for certification by an approved technician certification program of persons performing maintenance, service, repair, or disposal of appliances; §82.166 for recordkeeping; § 82.158 for leak repair requirements; and §82.166 for refrigerant purchase records for appliances normally containing 50 or more pounds of refrigerant.

Greenhouse Gas Reporting, 40 CFR Part 98 [Applicable]
The following rules are applicable to the facility but are not addressed in the permit because Oklahoma has not been delegated authority to enforce these rules.

SECTION XI. COMPLIANCE

The Specific Conditions of this permit contain various testing, monitoring, recordkeeping, and reporting requirements to document on-going compliance with emission limits. The specific method used to document compliance was based on the type of emission unit, the type of process equipment, the specific pollutants emitted, and the number of permitted emissions taking into account other regulatory requirements that an emission unit may be subject to.

In addition to the permitting requirements, the following compliance inspections have been conducted since the issuance of the initial Title V permit.

Inspection Type	Date	Summary/Results
FCE 03203	1/22/2007	No violations
FCE 03780	4/14/2008	No violations
FCE 04394	6/30/2009	No violations
FCE 04893	6/29/2010	Based on the observations made and information reviewed for this evaluation the Department alleged that Lafarge operated in noncompliance with OAC 252:100-25-3(b) (Opacity limit) by exceeding 20% opacity for more than one six-minute period in a one-hour period for sixteen (16) excess emissions events reported from October 3, 2009, through June 27, 2010.
FCE 05377	6/27/2011	Based on information received during the evaluation, the department had alleged that Lafarge operated in noncompliance with OAC 252:100-25-3(b) (Opacity limit) by exceeding 20% opacity for more than one six-minute period in a one-hour period for ten (10) excess emissions events reported from August 17, 2010, through April 14, 2011. Lafarge operated in noncompliance with Specific Condition No. 1(A) EUG 13 (B) (b) of Permit No. 98-174-TV (M-11) by failing to operate the EP 37 Truck Loading Silo baghouse within the manufacturer's recommended pressure differential range on October 27, 2010, as indicated by a pressure reading of 0 inches of water on the records provided. Lafarge operated in noncompliance with 40 CFR Part 60 Subpart IIII by failing to conduct initial performance tests on the emergency generator (330-hp Caterpillar G379) and units 66, 80, and 81 within 180-days after startup.
FCE 05673	2/29/2012	Alleged late performance test notification/addressed by Enforcement Case No. 6276.
FCE 06191	6/7/2013	Alleged violation of 30-day rolling average SO_2 emissions/addressed by Enforcement Case No. 7029.
FCE 06498	3/7/2014	No violations
FCE 06921	3/11/2015	No violations
FCE 07902	5/30/2017	Alleged recordkeeping violations/addressed by Enforcement Case No. 8910.
FCE 08287	5/16/2018	Alleged emission reporting violations/failed stack test/addressed by Enforcement Case No. 9366.
PCE 48523	2/12/2019	Alleged facility-wide permit requirement violations/addressed by Enforcement Case No. 9242.

There have been enforcement actions since issuance of the initial Title V permit.

Enforcement ID	Date Referred	Date Closed	Alleged Violation(s)
4061	7/2/2007	11/19/2007	Excess Emission and Malfunction Reporting and Visible Emissions and Particulates
4543	7/15/2008	9/14/2009	An enforcement referral was made for an excess emission which was determined to be reported with late immediate notices. After further review of the events, it appears that the events were actually reported as the rule required. The rule states, the event shall be reported to the Department no later than 4:30 the next working day. The events appear to have occurred during weekends and were reported the following Monday before 4:30. Therefore, these events were properly reported and are not issues of noncompliance.
4614	9/15/2008	9/14/2009	
4983	8/10/2009	9/14/2009	
5392	7/7/2010	7/21/2020	Consent Decree (CD)
5815	9/15/2011	10/25/2013	Fugitive dust
5907	1/9/2012	9/24/2013	Alleged violations of the specific conditions of operating permit and NSPS Subpart IIII.
6276	7/10/2012	10/25/2012	Alleged late performance test notification.
6967	5/24/2013	7/25/2013	Self-disclosure for failure to perform required visible emissions observations
7029	08/01/2013	11/19/2015	Alleged violation of 30-day rolling average SO_2 emissions set by CD.
8910	09/21/2017	11/8/2017	Alleged recordkeeping violations.
8978	11/15/2017	9/25/2018	Late submittal of Title V permit application.
9242	7/25/2018	Open	Facility-wide permit requirements
9366	12/17/2018	3/10/2020	Emission reporting violations/failed stack test

SECTION XII. TIER CLASSIFICATION, PUBLIC AND EPA REVIEW

Tier Classification

Permit Application No. 2016-0458-TVR has been determined to be **Tier II** based on the request for renewal of a Part 70 operating permit. Part 70 operating permit renewal fee of $7,500 has been received on May 16, 2016.

(1.) Permit Application No. 98-174-TV (M-25) has been determined to be **Tier I** based on the request for a minor modification which meets the criteria contained in OAC 252:100-8-7.2(b)(1)(A)(i). Part 70 minor modification fee of $3,000 has been received on April 19, 2019.

(2.) Permit Application No. 98-174-TV (M-26) has been determined to be **Tier I** based on the request for a minor modification which meets the criteria contained in OAC 252:100-8-7.2(b)(1)(A)(i). Part 70 minor modification fee of $3,000 has been received on August 21, 2019.

(3.) Permit Application No. 98-174-TV (M-27) has been determined to be **Tier I** based on the request for a minor modification which meets the criteria contained in OAC 252:100-8-

7.2(b)(1)(A)(i). Part 70 minor modification fee of $3,000 has been received on June 16, 2020.

(4.) Permit Application No. 98-174-TV (M-28) has been determined to be **Tier I** based on the request for a minor modification which meets the criteria contained in OAC 252:100-8-7.2(b)(1)(A)(i). Part 70 minor modification fee of $3,000 has been received on June 16, 2020.

Public Review

TC published a "Notice of Filing a Tier II Application" in *The Tulsa World*, a daily newspaper published in the city of Tulsa County, on May 14, 2016. The notice stated that the applications supporting the permit were available for public review at the Catoosa City Library located at 105 East Oak Street in Catoosa Oklahoma, and at the DEQ Air Quality Division's main office in Oklahoma City.

TC will publish a "Notice of Tier II Draft Permit" which will state that the draft permit is available for public review at a location accessible to the public in the same county as the facility, at the AQD main office, and on the Air Quality section of the DEQ web page. The information on all permit actions is available for review by the public in the Air Quality section of the DEQ web page at https://www.deq.ok.gov.

State Review

This facility is not located within 50 miles of the Arkansas or Kansas border or the border of any other state, so state notification is not required. Based on google earth, the plant is located approximately 69 miles from the Arkansas border and approximately 56 miles from the Kansas border.

EPA Review

This permit has been approved for concurrent public and EPA review. The draft/proposed permit will be forwarded to EPA Region VI for a 45-day concurrent review period. If no comments are received from the public the draft/proposed permit will be deemed the proposed permit.

If the Administrator does not object in writing during the 45-day EPA review period, any person that meets the requirements of OAC 252:100-8-8(j) may petition the Administrator within 60 days after the expiration of the Administrator's 45-day review period to make such objection. Any such petition shall be based only on objections to the permit that the petitioner raised with reasonable specificity during the public comment period provided for in 27A O.S. § 2-14-302. A.2., unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period. If the Administrator objects to the permit because of a petition filed under OAC 252:100-8-8(j), the DEQ shall not issue the permit until EPA's objection has been resolved, except that a petition for review does not stay the effectiveness of a permit or its requirements if the permit was issued after the end of the 45-day review period and prior to an EPA objection. If the DEQ has issued a permit prior to receipt of an EPA objection under this subsection, the DEQ will modify, terminate, or revoke such permit, and shall do so consistent with the procedures in 40 CFR §§ 70.7(g)(4) or (5)(i) and (ii) except in

unusual circumstances. If the DEQ revokes the permit, it may thereafter issue only a revised permit that satisfies EPA's objection. In any case, the source will not be in violation of the requirement to have submitted a timely and complete application.

SECTION X. SUMMARY

The facility was constructed and is operated as described in the permit application and supplemental materials. Ambient air quality standards are not threatened at this site. There are no active Air Quality compliance or enforcement issues concerning this facility that would prohibit issuance of the permit. Issuance of the permit is recommended, contingent on public and EPA review.

PERMIT TO OPERATE
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

Tulsa Cement LLC (dba Central Plains Cement Co.) **Permit No. 2016-0458-TVR**
Tulsa-Rogers County Line Portland Cement Plant

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality Division on May 16, 2016, April 19, 2019, August 21, 2019, June 8, 2020, and subsequent information received. The Evaluation Memorandum dated April 30, 2025, explains the derivation of applicable permit requirements, and estimates of emissions; however, it does not contain operating limitations or permit requirements;. Continuing operations under this permit constitutes acceptance of and consent to the conditions contained herein.

1. Points of emissions limitations for each point. [OAC 252:100-8-6(a)(1)]

A. **Grandfathered Units:** Emissions from the grandfathered emission units below shall be limited to the following. [OAC 252:100-25, OAC 252:100-19]

EUG 3 Raw Blending and Raw Silo(s)				
EU ID	**Point ID**	**EU Name/Function**	**Opacity (1)**	**PM, lb/hr (2)**
301	EP-07	Kiln Feed Blend Silo D/C	20%	59.8
302, 1203	EP-10	Raw silo(s) South	20%	59.8
303, 304	EP-11	Raw silo(s) North	20%	59.8
EUG 4A Kiln Feed Pump(s) #1, #2, #3				
EU ID	**Point ID**	**EU Name/Function**	**Opacity (1)**	**PM, lb/hr (2)**
401	EP-08	Kiln Feed Pump(s) #1, #2, #3	20%	69.0 (total)
EUG 4B Kiln Feed X-Pump D/C				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity (1)**	**PM, lb/hr (2)**
402	EP-09	Kiln Feed X-Pump D/C	20%	58.5
EUG 4C Kiln Feed System(s)				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity (1)**	**PM, lb/hr (2)**
403	EP-12	Kiln #1 Feed D/C	20%	53.1
404	EP-13	Kiln #2 Feed D/C	20%	53.1
EUG 6B Clinker Handling				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity (1)**	**PM, lb/hr (2)**
603 & 604	EP-57	#3 Hot Belt D/C & #4 Hot Belt D/C	20%	50.9 (total)
606		Clinker Storage D/C		
EUG 7A Finish Mill #1 System				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity (1)**	**PM, lb/hr (2)**
703	EP-21	Finish Mill #1 Separator D/C	20%	44.6
702	EP-22	Finish Mill #1 Discharge D/C	20%	44.6

EUG 7B Finish Mill #2 System				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity [1]**	**PM, lb/hr [2]**
706	EP-24	Finish Mill #2 Separator D/C	20%	44.6
705	EP-26	Finish Mill #2 Discharge D/C	20%	44.6
EUG 7D Finish Mills #1 and #2 Feed Belts				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity [1]**	**PM, lb/hr [2]**
701	EP-23	Finish Mill #1 Auxiliary D/C	20%	44.6
704	EP-25	Finish Mill #2 Auxiliary D/C	20%	44.6
EUG 8 Rail Loading				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity [1]**	**PM, lb/hr [2]**
811	EP-48	Silo 8 Rail Loading Spout D/C	20%	71.2
812	EP-47	Silo 10 Rail Loading Spout D/C	20%	71.2
813	EP-46	Silo 12 Rail Loading Spout D/C	20%	71.2
814	EP-45	Silo 14 Rail Loading Spout D/C	20%	71.2
815	EP-44	Silo 16 Rail Loading Spout D/C	20%	71.2
EUG 9 Truck Loading				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity [1]**	**PM, lb/hr [2]**
901	EP-41	West Truck Loading Spout D/C	20%	55.4
902	EP-40	East Truck Loading Spout D/C	20%	55.4
EUG 10 Packhouse				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity [1]**	**PM, lb/hr [2]**
1001	EP-29	Packing System #1 D/C	20%	47.8
1002	EP-30	Packing System #2/2A D/C	20%	47.8
1003	EP-32	Packing System #3 D/C	20%	47.8
1004	EP-33	Packing System #4 D/C	20%	47.8
1005	EP-31	Packhouse Bag Cleaner D/C	20%	47.8
EUG 11 Coal/Coke Handling				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity [1]**	**PM, lb/hr [2]**
1101	EP-27	Coal/Coke Unloading D/C	20%	55.4
1102,1103	EP-28	Coal/Coke Crusher D/C	20%	55.4
EUG 12 Dust Handling				
EU ID#	**Point ID#**	**EU Name/Function**	**Opacity [1]**	**PM, lb/hr [2]**
1202	EP-42	Dust Unloading D/C	20%	53.1
EUG 13A Rail Cement Storage Silos				
EU ID	**Point ID**	**EU Name/Function**	**Opacity [1]**	**PM, lb/hr [2]**
1301	EP-34	Rail Silo #7 D/C	20%	54.8
1302	EP-35, EP-54	Rail silo 8	20%	54.8
1304	EP-35, EP-54	Rail silo 10 and interstice C	20%	54.8
1306	EP-35, EP-54	Rail silo 12	20%	54.8
1308	EP-35, EP-54	Rail silo14 and interstice E	20%	54.8
1310	EP-35	Rail Loading Silo #16 (East) D/C	20%	54.8
1303	EP-35	Rail silo 9	20%	54.8

EUG 13A Rail Cement Storage Silos – Continued				
EU ID	**Point ID**	**EU Name/Function**	**Opacity [(1)]**	**PM, lb/hr [(2)]**
1305	EP-35	Rail silo 11 and interstice D	20%	54.8
1307	EP-35	Rail silo 13 and interstice E	20%	54.8
1309	EP-36	Rail Loading Silo #15 (West) D/C	20%	54.8
EUG 13B Truck Cement Storage Silos				
EU ID	**Point ID**	**EU Name/Function**	**Opacity [(1)]**	**PM, lb/hr [(2)]**
1311	EP37, 39	Truck silo interstice A	20%	54.8
1313	EP37, 39	Truck silo 1	20%	54.8
1315	EP37, 39	Truck silo 3	20%	54.8
1317	EP37, 39	Truck silo 5	20%	54.8
1318	EP37, 39	Truck silo5A	20%	54.8
1312	EP38	Truck silo interstice B	20%	54.8
1314	EP38	Truck silo 2	20%	54.8
1316	EP38	Truck silo 4	20%	54.8
1319	EP38	Truck silo 6	20%	54.8
1320	EP38	Truck silo 6A	20%	54.8

[(1)] Opacity Limit from OAC 252:100-25

[(2)] Emission limit from OAC 252:100-19, expressed as a three-hour average.

I. Compliance with the hourly PM emission limit for the above units shall be demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions. Monthly 10-minute Method 22, Visible emissions monitoring is used as a surrogate for PM monitoring. Visible emission monitoring is a performance indicator as it shows good operation and maintenance of the dust collector. The presence of visible emissions indicates reduced performance of the control device. Baghouses shall be operated in the pressure differential range recommended by the manufacturer during all operating modes. All baghouse maintenance activities shall be recorded and kept.

[OAC 252:100-8-6(a) and OAC 252:100-43]

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected 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 semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

II. EP-03, EP-04, EP-07, EP-10, EP-11, EP-08, EP-09, EP-12, EP-13, EP-18, EP-19, EP-57, EP-21, EP-22, EP-24, EP-26, EP-23, EP-25, EP-48, EP-47, EP-46, EP-45, EP-44, EP-41, EP-40, EP-29, EP-30, EP-31, EP-32, EP-33, EP-27, EP-28, EP-42, EP-34, EP-35, EP-36, EP-37, EP-39, EP-54 and EP-38, and the open clinker storage piles are existing sources on or after the compliance date(s) specified in §63.1351, the permittee shall comply with all applicable requirements of 40 CFR Part 63 Subpart LLL, including but not limited to, the following.[40 CFR Part 63 Subpart LLL (§§63.1340-63.1359, Table 1-2 to Subpart LLL)]

Opacity Monitoring Requirements. The facility will conduct required opacity monitoring in accordance with the provisions of paragraphs (f)(1)(i) through (vii) of §63.1350 and in accordance with your monitoring plan developed under §63.1350(p). You must also develop an opacity monitoring plan in accordance with paragraphs (p)(1) through (4) and paragraph (o)(5), if applicable, §63.1350. [40 CFR §63.1350(f)(1)]

EUG 14 Plant Fugitive Sources		
EU ID#	**Point ID#**	**EU Name/Function**
1401	NP01	Unpaved roads
1402	NP02	Stockpiles, crane storage
1403	NP03	Paved roads
1404	NP04	Heavy equipment travel
1405	NP05	Quarry operations
1406	NP06	Cement Kiln Dust (CKD) landfill

III. Reasonable precautions shall be taken to minimize fugitive dust emissions. These precautions may include, but are not limited to:

(a) Use of water or chemicals on roads, stockpiles, material processing and transfer operations.
(b) Apply coatings or coverings to substances susceptible to becoming air-borne or wind-borne.
(c) Plant and maintain vegetation coverings or windbreaks.
(d) Locate stockpiles so as to provide minimum exposure to high wind and avoid pen spaces near neighboring homes or businesses.
(e) Curtail operations as required to comply with emissions limitations.

B. Permitted Units

I. **EUG 1 – Raw Material Crushing and Transfer:** Emissions from the raw material and transfer units shall be limited to the following. [OAC 252:100-8-6(a)]

EU ID	Point ID	Description	PM Emission Limit [(1)]
101	EP-01	Primary Crusher D/C, 2 Impactors, 4 Transfer Points	3.82 lb/hr
102	EP-02	Junction House D/C	0.43 lb/hr

[(1)] lb/hr limit expressed as a three-hour average.

(a) EP-01 and EP-02 are affected sources subject to the New Source Performance Standards (NSPS), Subpart OOO for Nonmetallic Mineral Processing Plants. On or after the compliance date(s) specified, the permittee shall comply with all applicable requirements of 40 CFR Part 60 Subpart OOO, including but not limited to, the following.

[40 CFR Part 60 Subpart OOO (§§60.670-60.676, Table 1-3 to Subpart OOO)]

i) EP-01 and EP-02 are affected facilities that commenced construction, modification, or reconstruction on or after April 22, 2008. Each are subject to the PM emission limit of 0.014 gr/dscf, during all operating modes.

[40 CFR §60.672(a), Table 2 to Subpart OOO]

ii) Initial *Performance Test Requirements.* An initial performance test according to §60.8 of this part and §60.675 of this subpart.

[40 CFR §60.8, §60.675, Table 2 to Subpart OOO]

iii) *Baghouse Monitoring Requirements.* Facility must follow the appropriate monitoring of baghouse according to the procedures in §60.674(c), (d), or (e) and §60.676(b) for EP-01 and EP-02.[40 CFR §60.674(c), (d), or (e) and §60.676(b)]

(b) Compliance with the hourly PM emission limit for EP-01 and EP-02 shall be demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions. Visible emissions monitoring is conducted in accordance with the requirements of Subpart OOO. Monthly 10-minute Method 22, Visible emissions monitoring is used as a surrogate for PM monitoring. Visible emission monitoring is a performance indicator as it shows good operation and maintenance of the dust collector. The presence of visible emissions indicates reduced performance of the control device. Baghouses shall be operated in the pressure differential range recommended by the manufacturer during all operating modes. All baghouse maintenance activities shall be recorded and kept. For EP-01, the permittee may demonstrate compliance with this requirement by complying with Specific Condition No. 1. B. I. (a). [OAC 252:100-8-6(a)]

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected 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 semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

II. **EUG 1A – Raw Material Crushing and Transfer:** Emissions from the raw material and transfer units shall be limited to the following. [40 CFR §60.672(b), OAC 252:100-8-6(a)]

EU ID	Point ID	Description	Opacity
82	EP-82	Raw Material Screening System	10%
90	EP-90	Stacker-Reclaimer System	7%
93	EP-93	Multi-Hopper System	7%

(1) TPY limit expressed as a 12-month rolling total.

(a) EP-82, EP-90 and EP-93 are affected sources subject to the New Source Performance Standards (NSPS), Subpart OOO for Nonmetallic Mineral Processing Plants. On or after the compliance date(s) specified, the permittee shall comply with all applicable requirements of 40 CFR Part 60 Subpart OOO, including but not limited to, the following.

[40 CFR Part 60 Subpart OOO (§§60.670-60.676, Table 1-3 to Subpart OOO)]

i) EP-82 is an affected facility that commenced construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008, and shall not exceed a fugitive emission limit of 10%, during all operating modes. EP-90 and EP-93 are affected facilities that commenced construction, modification, or reconstruction on or after April 22, 2008, and shall not exceed shall not exceed a fugitive emission limit of 7%, during all operating modes.

[40 CFR §60.672(b), Table 3 to Subpart OOO]

ii) *Opacity Performance Test Requirements.* Facility must use Method 9 of appendix A-4 of this part and the procedures in §60.11, with the additional requirements outlined in §60.675(c)(1)(i) through (iii) and §60.675(c)(2)(i) through (ii). A repeat performance test according to §60.11 of this part and §60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §§60.674(b) and 60.676(b) are exempt from this 5-year repeat testing requirement. [40 CFR §60.675(c), Table 3 to Subpart OOO]

iii) *Opacity Monitoring Requirements.* Facility must follow the appropriate monitoring procedures in §60.674(b) and §60.676(b) for EP-90 and EP-93 if using wet suppression. [40 CFR §60.674(b)]

(b) Compliance with the hourly PM emission limit for EP-93 shall be demonstrated based on bag manufacturer guarantees and fan flows. Monthly 10-minute Method 22, Visible emissions monitoring is used as a surrogate for PM monitoring. Visible emission monitoring is a performance indicator as it shows good operation and maintenance of the dust collector. The presence of visible emissions indicates reduced performance of the control device. Baghouses shall be operated in the pressure differential range recommended by the manufacturer during all operating modes. All baghouse maintenance activities shall be recorded and kept. [OAC 252:100-8-6(a)]

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected 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 semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

III. **EUG 1B—Mini Belt Conveyor(s)**: Emissions from the mini-conveyors shall be limited to the following. [40 CFR §60.672(b), OAC 252:100-8-6(a)]

EU ID	Point ID	Description	Opacity
110	EP-91	Mini Conveyor #1	7%
111	EP-92	Mini Conveyor #2	7%

(1) TPY limit expressed as a 12-month rolling total.

(a) EP-91 and EP-92 are affected sources subject to the New Source Performance Standards (NSPS), Subpart OOO for Nonmetallic Mineral Processing Plants. On or after the compliance date(s) specified, the permittee shall comply with all applicable requirements of 40 CFR Part 60 Subpart OOO, including but not limited to, the following.

[40 CFR Part 60 Subpart OOO (§§60.670-60.676, Table 1-3 to Subpart OOO)]

i) EP-91 and EP-92 are affected facilities that commenced construction, modification, or reconstruction on or after April 22, 2008, and shall not exceed shall not exceed a fugitive emission limit of 7%, during all operating modes.

[40 CFR §60.672(b), Table 3 to Subpart OOO]

ii) *Opacity Performance Test Requirements.* Facility must use Method 9 of appendix A-4 of this part and the procedures in §60.11, with the additional requirements outlined in §60.675(c)(1)(i) through (iii) and §60.675(c)(2)(i) through (ii). A repeat performance test according to §60.11 of this part and §60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §§60.674(b) and 60.676(b) are exempt from this 5-year repeat testing requirement. [40 CFR §60.675(c), Table 3 to Subpart OOO]

iii) *Opacity Monitoring Requirements.* Facility must follow the appropriate monitoring procedures in §60.674(b) and §60.676(b) for EP-91 and EP-92 if using wet suppression. [40 CFR §60.674(b)]

IV. **EUG 2A – Raw Mill(s):** Emissions from each of the raw mills shall be limited to the following. [40 CFR §63.1343(b), 40 CFR §63.1345, OAC 252:100-19-12]

EU ID	Point ID	Description	Opacity (1)	PM (lb/hr) (2)	THC (ppmvd) (3)
211	EP-03	Raw Mill #1 D/C	10%	52.7	24
212	EP-03	Raw Mill #1 FK Pump Hoppers			
213	EP-03	Raw Mill #1 Weigh Meters, Feed Belt System			
221	EP-04	Raw Mill #2 D/C	10%	52.7	24
222	EP-04	Raw Mill #2 FK Pump Hoppers			
223	EP-04	Raw Mill #2 Weigh Meters, Feed Belt System			

(1) Based on a six-minute average Opacity limit from 40 CFR 63.1345.
(2) Derived from OAC 252:100-19-12. Averaging time expressed as a three-hour average.
(3) Based on a 30-day (operating day) average basis (measured as propane).

(a) Compliance with the hourly PM emission limit for the above units shall be demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions. Visible emissions monitoring is conducted in accordance with the requirements of Subpart OOO. Monthly 10-minute Method 22, Visible emissions monitoring is used as a surrogate for PM monitoring. Visible emission monitoring is a performance indicator as it shows good operation and maintenance of the dust collector. The presence of visible emissions indicates reduced performance of the control device. Baghouses shall be operated in the pressure differential range recommended by the manufacturer during all operating modes. All baghouse maintenance activities shall be recorded and kept. [OAC 252:100-8-6(a)]

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected 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 semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(b) EU 211 and EU 221 are affected sources subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart LLL for the Portland Cement Manufacturing Industry. On or after the compliance date(s) specified in §63.1351, the permittee shall comply with all applicable requirements of 40 CFR Part 63 Subpart

LLL, including but not limited to, the following.
[40 CFR Part 63 Subpart LLL (§§63.1340-63.1359, Table 1-2 to Subpart LLL)]

i) Each existing raw mill, by definition, considered an affected raw material dryer is subject to an emission limit (during normal operation) of 24 ppmvd THC, measured as propane, on a 30-day operating day average basis (alternatively any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP), and shall comply with the work practices contained in §63.1348(b)(9) during periods of startup and shutdown.
[40 CFR §63.1343(b), Table 1]

ii) *THC Compliance Requirements.* Compliance with the THC emissions standards shall be demonstrated by using the performance test methods and procedures in §63.1349(b)(4)(i). You must use the average THC concentration obtained during the first 30 operating days after the compliance date of this rule to determine initial compliance. [40 CFR §63.1348(a)(4)]

iii) *THC Performance Test Requirements*. For each raw mill, the facility must operate a CEMS in accordance with the requirements in §63.1350(i). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 to 60 ppmvw and the reference method (RM) is Method 25A of appendix A to part 60 of this chapter.
[40 CFR §63.1349(4)(i)]

iv) *THC Monitoring Requirements.* The facility must comply with the monitoring requirements of paragraphs (i)(1) and (i)(2) and (m)(1) through (m)(4) of §63.1350. You must also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of §63.1350. [40 CFR §63.1350(i)]

V. **EUG 3A—Clinker Additive Silo(s):** Emissions from the clinker additive silo(s) shall be limited to the following. [40 CFR §60.62(c), OAC 252:100-8-6(a)]

EU ID	Point ID	Description	Opacity (1)	PM	
				lb/hr (2)	TPY (3)
1203	EP-61	Clinker Additive Silo	10%	0.34	1.50
1204	EP-62	Clinker Additive Silo	10%	0.34	1.50

(1) Averaging time is expressed as a six-minute average (NSPS Subpart F).
(2) Averaging time expressed as a three-hour average.
(3) Averaging time expressed as a monthly rolling, 12-month total.

(a) All air exhausts from the above units shall be processed by fabric filters (baghouses) or equivalent systems for PM emissions control. Alternate particle control devices may be used provided they individually meet the particulate matter concentration of 0.025 grains/ACF or less and are approved by DEQ. Baghouses shall be operated in the pressure differential range recommended by the manufacturer during all operating modes. The baghouses identified in the current application have a recommended manufacturer's range of 2 to 12 inches water column.
[OAC 252:100-8-6(a), OAC 252:100-43]

(b) PM compliance shall be demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions.
[OAC 252:100-8-6(a)]

(c) EP-61 and EP-62 are subject to the New Source Performance Standards, Subpart F for Portland Cement Plants. The permittee shall comply with all applicable requirements of 40 CFR Part 60 Subpart F, including but not limited to, the following.
[40 CFR Part 60 Subpart F (§§60.60-60.66)]

i) Each silo is subject to the emission standards for raw material storage and shall not exceed opacity limit of 10%, six-minute average, during all operating modes.
[40 CFR §60.62(c)]

ii) *Opacity Performance Test Requirements.* Facility must use Method 9 and the procedures in §60.11 to determine opacity. [40 CFR §60.64(b)(2)]

iii) *Opacity Monitoring Requirements.* Although the facility is an Area Source of HAP's, the facility elects to follow the appropriate monitoring procedures in §63.1350(f)(1), [40 CFR §60.64(b)(3)]

VI. **EUG 5A – Kiln #1 System & EUG 5B – Kiln #2 System:** Emissions from the Portland cement kilns shall be limited to the following.
[OAC 252:100-8-6(a), CD No. 3:10-cv-00044-JPG-CJP

EU ID	Point ID	SO_2		NO_x		PM*		Lead
		lb/ton-clinker	TPY	lb/ton-clinker	TPY	lb/hr	TPY	TPY
501	EP-14	2.5(1)	1,051.2	5.67(1)	1,192	47.6(2) 50.3(3)	359.4	0.614
502	EP-15	2.5(1)		7.0(1)	1,471.7	47.6(2) 50.3(3)		

*PM emission limits for these units shall include filterable plus condensable.
(1) Based on a 30-day rolling average
(2) PM allowable when burning liquid or gaseous fuel. lb/hr limit expressed as a three-hour average.
(3) lb/hr limit expressed as a three-hour average.

(a) Kiln 1 (EP-14) and Kiln 2 (EP-15) shall each be equipped with SO_2 CEMs and NO_x CEMs and shall monitor and record the applicable SO_2 and NO_x emission rates from each kiln stack in units of lbs of pollutant per ton of clinker produced at such kiln. The permittee shall calibrate, certify, maintain, and operate each SO_2 CEMs and NOx CEMs at Kiln #1 (EP-14) and Kiln #2 (EP-15) as per the performance specifications and quality assurance procedures found in Appendix B and F of 40 CFR Part 60.
[OAC 252:100-43, CD No. 3:10-cv-00044-JPG-CJP]

(b) Tulsa Cement shall operate the selective non-catalytic reduction (SNCR) control system to control NOx emissions from the main kiln stacks when the cement kilns are in operation consistent with the technological limitations including but not limited to exhaust temperatures, manufacturers' specifications, and good engineering and maintenance practices for such pollution control technology and the cement kilns, and

good air pollution control practices for minimizing emissions.
[OAC 252:100-43, CD No. 3:10-cv-00044-JPG-CJP]

(c) Compliance with the short-term emission limit(s) for NO_x and SO_2 from each kiln shall be based on production during calendar days when a fuel source is being fed to the kilns (30-day rolling average). The CEMs data and clinker production collected during each demonstration period shall be used to demonstrate compliance with SO_2 and NO_x emission limits. Results must be reported for each CEMs.
[OAC 252:100-43, CD No. 3:10-cv-00044-JPG-CJP]

(d) Except during CEMS breakdowns, repairs, calibration checks, and zero span adjustments, the CEMS required pursuant to EUG 5A Specific Condition No. 1 shall be operated at all times during Kiln Operation. During any time when CEMs are inoperable and otherwise not measuring emissions of SO_2 from any Kiln, the facility shall apply the missing data substitution procedures approved by DEQ or the missing data substitution procedures in 40 CFR Part 75, Subpart D whichever is deemed appropriate by the DEQ. [OAC 252:100-43, CD No. 3:10-cv-00044-JPG-CJP]

(e) Compliance with the annual emission limit(s) for NO_x and SO_2 from each kiln shall be demonstrated as a monthly rolling, 12-month total and shall be based on CEMs emission data. Results must be reported for each CEMs. [OAC 252:100-8-6(a)]

(f) The kilns are authorized to combust coal, petroleum coke, natural gas, alternative non-hazardous fuels, and fuel quality waste (FQW) subject to compliance within the Specific Conditions specified in this permit. [OAC 252:100-8-6(a)]

(g) PM compliance shall be demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions.
[OAC 252:100-8-6(a)]

(h) A baghouse leak detection system shall be installed on the baghouses for Kiln #1 and Kiln #2. Baghouses shall be operated as recommended by the manufacturer during all operating modes. All baghouse maintenance activities shall be recorded and kept.
[OAC 252:100-8-6(a)]

(i) EP-14 and EP-15 are considered affected sources subject to the emission standard for existing cement kilns in the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart EEE from Hazardous Waste Combustors. On or after the compliance date(s) specified in §63.1206, the permittee shall comply with all applicable requirements of 40 CFR Part 63 Subpart EEE, including but not limited to, the following. When the facility is not burning FQW the facility will be regulated in an alternative mode of operation as specified in the facilities current operations plan, either; Documentation of Compliance (DOC) or Notification of Compliance (NOC) and by all requirements of 40 CFR Part 63, Subpart EEE.
[40 CFR Part 63 Subpart EEE (§§63.1200-63.1221,
Table 1, Appendix to Subpart EEE)]

i) **Dioxin and Furan Emission Standard**. Each kiln shall not exceed emissions of Dioxin and Furan in the main stack more than 0.20 ng TEQ/dscm corrected to 7 percent oxygen, or Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400 °F or lower based on the average of the test run average temperatures; [40 CFR §63.1220(a)(1)]

(1) *Dioxin and Furan Compliance.* You must comply with the Dioxin and Furan emission standard by establishing and complying with the operating parameter limits specified in §63.1209(k)(1) through (9). You must base the limits on operations during the comprehensive performance test unless the limits are based on manufacturer specifications. [40 CFR §63.1209(k)]

ii) ***Mercury Emission Standard:*** Each kiln shall not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that exceed an average as-fired concentration of mercury in all hazardous waste feed stream more than 3.0 parts per million by weight; and either: 1.) Emissions more than 120 µg/dscm, corrected to 7 percent oxygen, or 2.) a hazardous waste feed maximum theoretical emission concentration (MTEC) in excess of 120 µg/dscm. [40 CFR §63.1220(a)(2)]

(1) *Mercury Compliance.* You must comply with the mercury emission standard by establishing and complying with the operating parameter limits specified in §63.1209(l)(1)(iii)(A) through (D). You must base the limits on operations during the comprehensive performance test unless the limits are based on manufacturer specifications. [40 CFR §63.1209(l)]

iii) ***For Particulate Matter:*** Each kiln shall not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that exceed Emissions more than 0.028 gr/dscf corrected to 7 percent oxygen; and Opacity greater than 20 percent unless your source is equipped with a bag leak detection system under §63.1206(c)(8) or a particulate matter detection system under § 63.1206(c)(9). [40 CFR §63.1220(a)(7)]

(1) *Particulate matter.* Facility shall comply with a bag leak detection system under §63.1206(c)(8) or a particulate matter detection system under § 63.1206(c)(9).

iv) ***For Cadmium and Lead:*** Each kiln shall not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that exceed emissions more than 7.6×10^{-4} lbs combined emissions of cadmium and lead attributable to the hazardous waste per million BTU heat input from the hazardous waste; and Emissions in excess of 330 µgm/dscm, combined emissions, corrected to 7 percent oxygen. [40 CFR §63.1220(a)(3)]

(1) *Cadmium and Lead Compliance.* You must comply with the semi volatile metal (cadmium and lead) emission standards by establishing and complying with the operating parameter limits specified in §63.1209(n)(1), (2)(i) through (iii), (vi) and (vii), and (3), and (4) and (5). You must base the limits on operations during the comprehensive performance test unless the limits are based on manufacturer specifications. [§63.1209(n)]

v) ***For Arsenic, Beryllium, and Chromium:*** Each kiln shall not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that exceed emissions more than 2.1×10^{-5} lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million BTU heat input from the hazardous waste; and emissions in excess of 56 µgm/dscm, combined emissions, corrected to 7 percent oxygen; [40 CFR §63.1220(a)(4)]

(1) *Arsenic, Beryllium, and Chromium Compliance.* You must comply with the low volatile metal (arsenic, beryllium, and chromium) emission standards by establishing and complying with the operating parameter limits specified in §63.1209(n)(1), (2)(i) through (iii), (vi) and (vii), and (3), and (4) and (5). You must base the limits on operations during the comprehensive performance test unless the limits are based on manufacturer specifications. [§63.1209(n)]

vi) ***Carbon Monoxide Emission Standard:*** Each kiln shall not exceed emissions of carbon monoxide (CO) in the main stack more than 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii)(A) of §63.1220, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons in the main stack do not exceed 20 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane. [40 CFR §63.1220(a)(5)]

(1) *CO Compliance Requirements.* The facility must use a carbon monoxide CEMS to demonstrate and monitor compliance with the carbon monoxide standard under this subpart. You must also use an oxygen CEMS to continuously correct the carbon monoxide or hydrocarbon level to 7 percent oxygen. You must install, calibrate, maintain, and continuously operate the CEMS in compliance with the quality assurance procedures provided in the appendix to this subpart and 4B (carbon monoxide and oxygen) in Appendix B, 40 CFR Part 60. If carbon monoxide readings exceeding the span, the facility must follow the procedures outlined in §63.1209 (a)(3)(i) through (ii). Facility shall follow the procedures for calculating the rolling average(s) in accordance with §63.1209 (a)(6)(i) through (iii). [40 CFR §63.1209(a)]

(2) *Operating parameter limits for hydrocarbons.* If you elect to comply with the carbon monoxide and hydrocarbon emission standard by continuously monitoring carbon monoxide with a CEMS, you must demonstrate that hydrocarbon emissions during the comprehensive performance test do not exceed the hydrocarbon emissions standard. In addition, the limits you establish on the destruction and removal efficiency (DRE) operating parameters required under paragraph (j) of §63.1209 also ensure that you maintain compliance with the hydrocarbon emission standard. If you do not conduct the hydrocarbon demonstration and DRE tests concurrently, you

must establish separate operating parameter limits under paragraph (j) of §63.1209 based on each test and the more restrictive of the operating parameter limits applies. [40 CFR §63.1209(a)(7)]

vii) ***For Hydrogen Chloride and Chlorine Gas:*** Each kiln shall not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that exceed hydrogen chloride and chlorine gas in excess of 120 parts per million by volume, combined emissions, expressed as a chloride ($Cl^{(-)}$) equivalent, dry basis, corrected to 7 percent oxygen; and

[40 CFR §63.1220(a)(6)]

(1) *Hydrogen Chloride and Chlorine Gas Compliance.* You must comply with the hydrogen chloride and chlorine gas emission standard by establishing and complying with the operating parameter limits specified in §63.1209(o)(1)(i) and (2)(i)-(ii). You must base the limits on operations during the comprehensive performance test unless the limits are based on manufacturer specifications. [§63.1209(o)]

VII. **EUG 6A – Clinker Cooler(s):** Emissions from the clinker coolers shall be limited to the following:

EU ID	Point ID	Description	PM	
			lb/hr (1)	TPY (2)
601	EP-16	Clinker Cooler #1 D/C	9.21	40.36
602	EP-17	Clinker Cooler #2 D/C	9.21	40.36

(1) Averaging time expressed as a three-hour average.
(2) Averaging time expressed as a monthly rolling, 12-month total.

(a) EP-16 and EP-17 are affected sources subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart LLL for the Portland Cement Manufacturing Industry. On or after the compliance date(s) specified in §63.1351, the permittee shall comply with all applicable requirements of 40 CFR Part 63 Subpart LLL, including but not limited to, the following.

[40 CFR Part 63 Subpart LLL (§§63.1340-63.1359, Table 1-2 to Subpart LLL)]

i) Each clinker cooler is considered an existing affected source subject to a PM emission limit (during normal operation) of 0.07 lb/ton-clinker, on a 30-day operating day rolling average basis and shall comply with the work practices contained in §63.1348(b)(9) during periods of startup and shutdown.

[40 CFR §63.1343(b), Table 1]

(1) *PM Compliance Requirements.* Compliance with the PM emissions standards shall be demonstrated by using the performance test methods and procedures in §63.1349(b)(1). If you are subject to limitations on PM emissions under §63.1343(b), you must use the monitoring methods and procedures in §63.1350(b) and (d). [40 CFR §63.1348(a)(1) and (b)(2)]

(2) *PM Performance Test Requirements.* The owner or operator of a kiln and clinker cooler subject to limitations on PM emissions shall demonstrate initial compliance by conducting a performance test using Method 5 or Method 5I at Appendix A-3 to 40 CFR Part 60. You must also monitor

continuous performance through use of a PM continuous parametric monitoring system (PM CPMS). [40 CFR §63.1349(b)(i) through (vi)]

(3) *PM Monitoring Requirements.* You will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using Method 5 or Method 5I at Appendix A-3 to 40 CFR Part 60. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test using the procedures in §63.1349(b)(1) (i) through (vi) of Subpart LLL. You must also repeat the test if you change the analytical range of the instrument, or if you replace the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration. Clinker production shall be monitored according to the requirements of 40 CFR §63.1350(d)(1) through (4).

[40 CFR §63.1350(b)(1)(i) through (iv), (d)(1) through (4)]

(b) All air exhausts from the above units shall be processed by fabric filters (baghouses) or equivalent systems for PM emissions control. Alternate particle control devices may be used provided they individually meet the particulate matter concentration of 0.025 grains/ACF or less and are approved by DEQ. Baghouses shall be operated as recommended by the manufacturer during all operating modes.

[OAC 252:100-8-6(a)]

VIII. **EUG 7C –Finish Mill #3:** Emissions from finish mill #3 shall be limited to the following.

EU ID	Point ID	Description	Opacity (1)	PM	
				lb/hr (2)	TPY (3)
707	EP-52	Finish Mill #3 Transport D/C	10%	1.29	5.63
708	EP-50	Finish Mill #3 Discharge D/C	10%	4.29	18.77
709, 711	EP-51	Finish Mill #3 South Nuisance D/C	10%	0.32	1.41
710	EP-49	Finish Mill #3 Separator D/C	10%	12.86	56.31
712	EP-53	Finish Mill #3 North Nuisance D/C	10%	0.32	1.41

(1) Averaging time is based on a six-minute average (NSPS F).
(2) Averaging time expressed as a three-hour average.
(3) Averaging time expressed as a monthly rolling, 12-month total.

(a) Compliance with the hourly PM emission limits shall be demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions. Monthly 10-minute Method 22, Visible emissions monitoring is used as a surrogate for PM monitoring. Visible emission monitoring is a performance indicator as it shows good operation and maintenance of the dust collector. The presence of visible emissions indicates reduced performance of the control device. Baghouses shall be operated in the pressure differential range recommended by the manufacturer during all operating modes. All baghouse maintenance activities shall

be recorded and kept. The operating pressure of each baghouse shall be monitored and recorded at least once each week of operation. [OAC 252:100-8-6(a)]

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected 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 semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(b) Finish Mill #3 is subject to the New Source Performance Standards, Subpart F for Portland Cement Plants. The permittee shall comply with all applicable requirements of 40 CFR Part 60 Subpart F, including but not limited to, the following.
[40 CFR Part 60 Subpart F (§§60.60-60.66)]

i) No person shall allow the discharge of any emissions to the atmosphere to exceed an opacity of 10%, as six-minute average, during all operating modes.
[40 CFR §60.62(c)]

(1) *Opacity Performance Test Requirements.* Facility elects to use Method 9 and the procedures in §60.11 to determine opacity. [40 CFR §60.64(b)(2)]

(2) *Opacity Monitoring Requirements.* Facility must follow the appropriate monitoring procedures in §63.1350(f)(2). [40 CFR §60.64(b)(3)]

IX. **EUG 9A –Truck Loading:** Emission from the NewCem Conveyor shall be limited to the following.

EU ID	Point ID	Description	Opacity (1)	PM	
				lb/hr (2)	TPY (3)
65	EP-65	NewCem Conveyor No. 1	10%	0.26	1.13

(1) Averaging time is based on a six-minute average (NSPS F).
(2) Averaging time expressed as a three-hour average.
(3) Averaging time expressed as a monthly rolling, 12-month total.

(a) Compliance with the hourly PM emission limit shall be demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions. Monthly 10-minute Method 22, Visible emissions monitoring is used as a surrogate for PM monitoring. Visible emission monitoring is a performance indicator as it shows good operation and maintenance of the dust collector. The presence of visible emissions indicates reduced performance of the control device. Baghouses shall be operated in the pressure differential range recommended by the

manufacturer during all operating modes. All baghouse maintenance activities shall be recorded and kept. The operating pressure of each baghouse shall be monitored and recorded at least once each week of operation. [OAC 252:100-8-6(a)]

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected 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 semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(b) EP-65 is subject to the New Source Performance Standards, Subpart F for Portland Cement Plants. The permittee shall comply with all applicable requirements of 40 CFR Part 60 Subpart F, including but not limited to, the following.[40 CFR Part 60 Subpart F (§§60.60-60.66)]

i) No person shall allow the discharge of any emissions to the atmosphere to exceed an opacity of 10%, as six-minute average, during all operating modes. [40 CFR §60.62(c)]

(1) *Opacity Performance Test Requirements.* Facility must use Method 9 and the procedures in §60.11 to determine opacity. [40 CFR §60.64(b)(2)]

(2) *Opacity Monitoring Requirements.* Facility will follow the appropriate monitoring procedures in §63.1350(f)(1) [40 CFR §60.64(b)(3)]

X. **EUG 11 – Coal/Coke Handling**: Emissions from coal/coke handling and storage shall be limited to the following. [40 CFR §63.1345, OAC 252:100-8-6(a)]

EU ID	Point ID	Description	Opacity (1)	PM lb/hr (2)
1104	EP-55	Coal Silo #1 D/C	10%	0.86
1105	EP-56	Coal Silo #2 D/C	10%	0.27

(1) Averaging time is based on a six-minute average per §63.1345.

(2) Averaging time expressed as a three-hour average.

(a) PM compliance shall be demonstrated based on bag manufacturer guarantees and fan flows. Visible emissions monitoring is conducted in accordance with the requirements of 40 CFR 63 Subpart LLL. Monthly 10-minute Method 22, Visible emissions monitoring is used as a surrogate for PM monitoring. Visible emission monitoring is a Compliance with the hourly PM emission limit for EP-55 and EP-56 shall be

demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions. Visible emissions monitoring is conducted in accordance with the requirements of NESHAP Subpart LLL. Visible emission monitoring is a performance indicator as it shows good operation and maintenance of the dust collector. The presence of visible emissions indicates reduced performance of the control device. Baghouses shall be operated in the pressure differential range recommended by the manufacturer during all operating modes. All baghouse maintenance activities shall be recorded and kept. [OAC 252:100-8-6(a)]

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected 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 semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(b) *Opacity Monitoring Requirements.* The facility must conduct opacity monitoring in accordance with the provisions of paragraphs (f)(1)(i) through (vii) of §63.1350 and in accordance with your monitoring plan developed under §63.1350(p).
[40 CFR §63.1350(f)(1)]

XI. **EUG 12B—Dust Handling:** Emissions from dust handling and storage shall be limited to the following.

EU ID	Point ID	Description	Opacity [(1)]	PM	
				lb/hr [(2)]	TPY [(3)]
1202	EP-60	FlyAsh Silo D/C	10%	1.34	5.01
1201	EP-43	T-10 Dust Silo D/C	10%	0.64	2.82
94	EP-94	Cement Kiln Dust (CDK) Silo	10%	0.47	2.06

(1) Averaging time is based on a six-minute average (NSPS F).
(2) Averaging time expressed as a three-hour average.
(3) Averaging time expressed as a monthly rolling, 12-month total.

(a) Compliance with the hourly PM emission limit for EP-43 and EP-60 shall be demonstrated based on bag manufacturer guarantees and fan flows as approved in Table 1, Appendix B of the Specific Conditions. Monthly 10-minute Method 22, Visible emissions monitoring is used as a surrogate for PM monitoring. Visible emission monitoring is a performance indicator as it shows good operation and maintenance of the dust collector. The presence of visible emissions indicates reduced performance of the control device. Baghouses shall be operated in the pressure

differential range recommended by the manufacturer during all operating modes. All baghouse maintenance activities shall be recorded and kept. [OAC 252:100-8-6(a)]

If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected 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 semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(b) EP-60, EP-43, and EP-94 are subject to the New Source Performance Standards, Subpart F for Portland Cement Plants. The permittee shall comply with all applicable requirements of 40 CFR Part 60 Subpart F, including but not limited to, the following. [40 CFR Part 60 Subpart F (§§60.60-60.66)]

i. No person shall allow the discharge of any emissions to the atmosphere to exceed an opacity of 10%, as six-minute average, during all operating modes. [40 CFR §60.62(c)]

(1) *Opacity Performance Test Requirements.* Facility must use Method 9 and the procedures in §60.11 to determine opacity. [40 CFR §60.64(b)(2)]

(2) *Opacity Monitoring Requirements.* Facility will follow the appropriate monitoring procedures in §63.1350(f)(1). [40 CFR §60.64(b)(3)]

XII. **EUG 15—Emergency Engine:** Emissions from the internal combustion engine shall be limited to the following.

EU ID	Point ID	Description
83	EP-83	1,232-hp Detroit Diesel Emergency Generator

(a) Each engine shall have a permanent identification plate attached, which shows the make, model number, and serial number. [OAC 252:100-43]

(b) The internal combustion engines shall be fired by diesel containing no more than 15 ppm sulfur content by weight. Compliance can be shown for gaseous fuel by a current gas company bill, supplier's delivery ticket, lab analysis, stain-tube analysis, gas contract, tariff sheet, or other approved methods. Compliance shall be demonstrated at least once every calendar year. [OAC 252:100-31, 40 CFR Subpart ZZZZ §63.6604]

(c) EUG 15 units are subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. On or after the compliance date(s) specified in §63.6595, the permittee shall comply with all applicable requirements of 40 CFR Part 63 Subpart ZZZZ, including but not limited to, the following.

[40 CFR Subpart ZZZZ (§§63.6580-63.6675, Table 1-Table 8, Appendix A)]

i) § 63.6580 What is the purpose of Subpart ZZZZ?
ii) § 63.6585 Am I subject to this subpart?
iii) § 63.6590 What parts of my plant does this subpart cover?
iv) § 63.6595 When do I have to comply with this subpart?
v) § 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary CI RICE located at an area source of HAP emissions?
vi) § 63.6605 What are my general requirements for complying with this subpart?
vii) § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
viii) § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
ix) § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
x) § 63.6650 What reports must I submit and when?
xi) § 63.6655 What records must I keep?
xii) § 63.6660 In what form and how long must I keep my records?
xiii) § 63.6665 What parts of the General Provisions apply to me?
xiv) § 63.6670 Who implements and enforces this subpart?
xv) § 63.6675 What definitions apply to this subpart?

XIII. **EUG 16: Gasoline Tank:** Emissions from the 4,000-gallon gasoline tank shall be limited to the following.

(a) Each VOC storage vessel with a capacity of 400 gal or more shall be equipped with a permanent submerged fill pipe or a vapor-recovery system as required in 252:100-37-15(a)(2). [OAC 252:100-37-15(b)]

(b) The gasoline tank in this EUG is subject to NESHAP Subpart CCCCCC and shall comply with all applicable requirements. [40 CFR §63.11110 to §11132]

i) Minimize gasoline spills;
ii) Clean up spills as expeditiously as practicable;
iii) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
iv) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

2. The maximum total production rate of cement clinker at the facility shall be limited to 96 TPH calendar day average. Compliance shall be based on the hourly average production of clinker for each calendar day (total production per calendar day divided by total operating hours per calendar day). [OAC 252:100-8-6(a)]

3. The facility is subject to the National Emission Standard for Benzene Waste Operations. The permittee shall comply with all applicable requirements.
[40 CFR Part 61, Subpart FF (§§61.340-61.358, Appendix A through E to Part 61)]

   A. § 61.342 Standards: General.
   B. § 61.348 Standards: Treatment processes.
   C. § 61.349 Standards: Closed-vent systems and control devices.
   D. § 61.354 Monitoring of operations.
   E. § 61.355 Test methods, procedures, and compliance provisions.
   F. § 61.356 Recordkeeping requirements; and
   G. § 61.357 Reporting requirements.

4. The facility is subject to National Emission Standard for Hazardous Air Pollutants from Hazardous Waste Combustors and shall comply with all applicable requirements.
[40 CFR Part 63, Subpart EEE (§§63.1200-63.1220, Table 1, Appendix to Subpart EEE)]

   A. §63.1200 Who is subject to these regulations?
   B. §63.1201 Definitions and acronyms used in this subpart.
   C. §63.1203 What are the standards for hazardous waste incinerators that are effective until compliance with the standards under §63.1219?
   D. §63.1204 What are the standards for hazardous waste burning cement kilns that are effective until compliance with the standards under §63.1220?
   E. §63.1205 What are the standards for hazardous waste burning lightweight aggregate kilns that are effective until compliance with the standards under §63.1221?
   F. §63.1206 When and how must you comply with the standards and operating requirements?
   G. §63.1207 What are the performance testing requirements?
   H. §63.1208 What are the test methods?
   I. §63.1209 What are the monitoring requirements?
   J. §63.1210 What are the notification requirements?
   K. §63.1211 What are the recordkeeping and reporting requirements?
   L. §63.1212 What are the other requirements pertaining to the NIC?
   M. §63.1213 How can the compliance date be extended to install pollution prevention or waste minimization controls?
   N. §63.1214 Implementation and enforcement.
   O. §63.1215 What are the health-based compliance alternatives for total chlorine?
   P. §63.1216 What are the standards for solid fuel boilers that burn hazardous waste?
   Q. §63.1217 What are the standards for liquid fuel boilers that burn hazardous waste?
   R. §63.1218 What are the standards for hydrochloric acid production furnaces that burn hazardous waste?
   S. §63.1219 What are the replacement standards for hazardous waste incinerators?

T. §63.1220 What are the replacement standards for hazardous waste burning cement kilns?
U. §63.1221 What are the replacement standards for hazardous waste burning lightweight aggregate kilns?

5. The facility is subject to National Emission Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry and shall comply with all applicable requirements. [40 CFR Part 63 Subpart LLL (§§63.1340-63.1359, Table 1-2 to Subpart LLL)]

A. §63.1340 What parts of my plant does this subpart cover?
B. §63.1341 Definitions.
C. §63.1342 Standards: General.
D. §63.1343 What standards apply to my kilns, clinker coolers, raw material dryers, and open clinker storage piles?
E. §63.1345 Emissions limits for affected sources other than kilns; clinker coolers; new and reconstructed raw material dryers.
F. §63.1346 Operating limits for kilns.
G. §63.1347 Operation and maintenance plan requirements.
H. §63.1348 Compliance requirements.
I. §63.1349 Performance testing requirements.
J. §63.1350 Monitoring requirements.
K. §63.1351 Compliance dates.
L. §63.1352 Additional test methods.
M. §63.1353 Notification requirements.
N. §63.1354 Reporting requirements.
O. §63.1355 Recordkeeping requirements.
P. §63.1356 Sources with multiple emissions limits or monitoring requirements.
Q. §63.1358 Implementation and enforcement.

6. The Portland cement kilns (EP-14 and EP-15), and associated baghouse systems (CD-14 and CD-15) are subject to Compliance Assurance Monitoring (CAM), 40 CFR Part 64, for particulate matter and shall comply with all applicable requirements including but not limited to the monitoring as approved in Table 1, Appendix A in the Specific Conditions. The permittee shall implement a CAM Plan for continuous opacity monitors (COMs) on each kiln/baghouse exhaust stack to verify the proper functioning of the system. [40 CFR Part 64 (§§64.1-64.10)]

7. Operating limits for alternative non-hazardous fuels based on previous Permit No. 74-197-C (M-3). [OAC 252:100-8-6(a), Permit No. 74-197-C (M-3)]

A. There shall be no increase in criteria pollutant emissions associated with the combustion of alternative non-hazardous fuels versus traditional fuels (coal, natural gas, and petroleum coke) when compared to the emission testing results shown in Permit No. 74-197-O (M-1).
B. Fuel streams that substitute non-hazardous material for coal, coke or natural gas may be utilized. The alternate fuels shall have a minimum heat input of 5,000 BTU/lb as generated.

Acceptable substitute fuels include materials that are not classified RCRA "hazardous wastes" according to 40 CFR 261 and not regulated "medical wastes" according to 40 CFR 259 or Oklahoma Waste Management Rules. The following are the only types of materials that may be used, pending evaluation as set forth in these Specific Conditions. Landfill gas may be utilized in the Raw Mills or the Kilns; the other materials may only be used in the Kilns.

Alternate Fuels Consumption			
Materials	**Substitution Rate**	**Hourly**	**Annual, 12-month rolling**
Tire-derived fuel	25%	4.0 tons	35,040 tons
Landfill Gas	80%	0.688 $MMft^3$	6,028 $MMft^3$
Used greases, oils, lubricants	50%	1,494 gallons	24,000 gallons
Toner		0.55 tons	

C. No substitute non-hazardous fuel materials (except for landfill gas) shall be fed to the kiln unless the kiln is at full operating temperature for producing cement and the baghouse system is operating properly.

D. The maximum chlorine content of the non-hazardous alternative fuels shall be limited to 100 pounds per hour.

E. Prior to use, each type of alternative non-hazardous fuel shall be evaluated by sampling, laboratory analysis, and/or engineering judgment. Any sampling and laboratory analysis shall be conducted in accordance with Test Methods for the Evaluation of Solid Waste, SW-846, published by the U.S. EPA Office of Solid Waste, ASTM Physical/Chemical Methods, or other methods approved by EPA or ODEQ. No RCRA regulated hazardous waste shall be accepted into the kiln(s).

F. The following records shall be maintained on-site for a minimum of five years after the date of recording and made available to regulatory personnel upon request:
   I. Shipments of alternative fuels received on-site (daily).
   II. Accounting of materials fed to the kiln(s) by weight and specific type (monthly).
   III. Internal kiln(s) temperature (hourly during periods when alternative fuels are being introduced into the kiln(s)).
   IV. Evaluations performed which show compliance with operating procedures and limits. (Note: Tulsa Cement LLC evaluates the material for safety, quality, and production/process considerations. An SDS is also required for these materials. Additionally, they review how the materials and potential quantities to be received may impact compliance with programs such as SPCC, TRI Tier II, NPDES, Emergency Response, Hazard Communication, Air Permitting Programs, and TSCA.)
   V. The average content of chlorine for the non-hazardous alternate fuels as required in c. above shall be recorded.

G. Whole tires may be burned utilizing mid-kiln injection technology. Other alternative non-hazardous fuels shall be introduced into the kiln(s) in a manner to ensure that complete combustion is achieved.

H. The storage of alternative non-hazardous fuel materials shall minimize fugitive emissions in accordance with OAC 252:100-29-2(a). The materials shall not be commingled until the final transfer process to the kiln(s) unless otherwise approved by the Department.

8. The following records shall be maintained on-site to verify Insignificant Activities. The owner/operator shall be able to keep records on alternative media such as: microfilm, computer files, compact disks, magnetic tape disks, or microfiche, provided it does not conflict with other applicable recordkeeping requirements.[OAC 252:100-8-2, OAC 252:100-8-6 (a)(3)(B)]

   A. Emissions from fuel storage/dispensing equipment operated solely for facility owned vehicles if fuel throughput is not more than 2,175 gallons/day, averaged over a 30-day period. There is one 18,500-gallon diesel storage tank.
   B. Emissions from storage tanks constructed with a capacity less than 39,894 gallons which store VOC with a vapor pressure less than 1.5 psia at maximum storage temperature.
   C. Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant.

9. The permittee shall keep records of facility operations as listed below. These records shall be retained on-site for a period of at least five years following the dates of recording and shall be made available to regulatory personnel upon request. [OAC 252:100-8-6 (a)(3)(B)]

   A. Records of the current manufacturer's specifications containing the acceptable pressure differential range for all baghouses and/or fabric filters identified within Specific Condition No. 1 and Table 1, Appendix B of the Specific Conditions.
   B. The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.
   C. The date and time of periodic visual observations specified by Specific Condition No. 1 noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.
   D. Records of the current manufacturer's specifications containing the PM exhaust concentration rating for each baghouse and/or fabric filters identified within Specific Condition No. 1 and Table 1, Appendix B of the Specific Conditions. If different bag manufactures are used within each year, a record for each should be kept.
   E. Records of the maximum airflow (acfm) for each exhaust system identified within Specific Condition No. 1 and Table 1, Appendix B of the Specific Conditions.
   F. Records in a logbook specifying the date, time, and pressure differential reading required by Specific Condition No. 1 (frequency is specified within each condition).
   G. Emissions of PM from EP-82 and EP-90 per Specific Condition No. 1 (B) II. (2) (monthly, 12-month rolling total)
   H. Emissions of PM from EP-91 and EP-92 per Specific Condition No. 1 (B) III. (1) (monthly, 12-month rolling total)
   I. Emissions of NOx and SO_2 from EP-14 and EP-15 per Specific Condition No. 1 (B) VI. (3) (in units of lb./ton-clinker, 30 day rolling average).
   J. Emissions of NOx and SO_2 from EP-14 and EP-15 per Specific Condition No. 1 (B) VI. (5) (in unit of TPY, monthly, 12 months rolling total)
   K. Records of clinker production rates per Specific Condition No. 1 (B) VI. (7). (daily and annual total)
   L. Diesel fuel sulfur content per Specific Condition No. 1 (B) XII. (2)

M. Records of cement clinker production rates per Specific Condition No. 2 (daily and annual totals)
N. Records per Specific Condition No. 9.
O. Records as required by 40 CFR Part 60 Subpart F, IIII, and OOO.
P. Records as required by 40 CFR Part 61 Subpart V
Q. Records as required by 40 CFR Part 63 Subpart EEE, LLL, ZZZZ, and CCCCCC.
R. Records as required for 40 CFR Part 64 (CAM).

10. This facility is considered a Prevention of Significant Deterioration (PSD) facility. As such, the facility is subject to the provisions of OAC 252:100-8-36.2(c) for any project as defined therein. [OAC 252:100-8-36.2(c)]

11. No later than 30 days after each anniversary date of the issuance of the original Part 70 permit, the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit. [OAC 252:100-8-6 (c)(5)(A) & (D)]

12. This Part 70 permit supersedes all other Air Quality operating permits for this facility, which are now superseded and cancelled.

13. The Permit Shield (Standard Conditions, Section VI) is extended to the following requirements that have been determined to be inapplicable to this facility. [OAC 252:100-8-6(d)(2)]

OAC 252:100-11	Alternative Reduction
OAC 252:100-17	Incinerators
OAC 252:100-23	Cotton Gins
OAC 252:100-24	Feed & Grain Facility
OAC 252:100-47	Municipal Solid Waste Landfills

14. The sources listed in §61.240(a) that are intended to operate in volatile hazardous air pollutant (VHAP) service at the facility are subject to NESHAP, 40 CFR Part 61, Subpart V-National Emission Standard for Equipment Leaks (Fugitive Emission Sources) and shall comply with all applicable requirements. [40 CFR 61.240 to 61.247]

A.	§61.240	Applicability and designation of sources.
B.	§61.241	Definitions.
C.	§61.242-1	Standards: General.
D.	§61.242-2	Standards: Pumps.
E.	§61.242-3	Standards: Compressors.
F.	§61.242-4	Standards: Pressure relief devices in gas/vapor service.
G.	§61.242-5	Standards: Sampling connecting systems.
H.	§61.242-6	Standards: Open-ended valves or lines.
I.	§61.242-7	Standards: Valves.
J.	§61.242-8	Standards: Pressure relief services in liquid service and connectors.
K.	§61.242-9	Standards: Surge control vessels and bottoms receivers.
L.	§61.242-10	Standards: Delay of repair.

M. §61.242-11 Standards: Closed-vent systems and control devices.
N. §61.243-1 Alternative standards for valves in VHAP service--allowable percentage of valves leaking.
O. §61.243-2 Alternative standards for valves in VHAP service--skip period leak detection and repair.
P. §61.244 Alternative means of emission limitation.
Q. §61.245 Test methods and procedures.
R. §61.246 Recordkeeping requirements.
S. §61.247 Reporting requirements.

APPENDIX A

Monitoring of those units' opacities is required under Subchapter 43: EP-44, EP-45, EP-46, EP-47, EP-90

	Indicator No. 1
I. Indicator	Opacity
Measurement Approach	Exhaust gas opacity is measured using Method 9
II. Indicator Range	The range is continuous from 0% to 10%. Excursions trigger corrective action, logging and reporting. An excursion is defined as opacity greater than 10% except for one six-minute period per hour not to exceed 27% opacity.
III. Performance Criteria A. Data Representativeness	--
B. QA/QC Practices and Criteria	Method 9 testing is to be conducted by a Certified Visible Emissions Evaluator
C. Monitoring Frequency	A six-minute opacity test is required at least once per month when operated.
D. Data Collection Procedures	Data are recorded on paper or computer.
E. Averaging period	Six-minute block averages.

APPENDIX B

TABLE 1. EMISSION POINT PROCESS PARAMETERS

Point ID	Q Flowrate (ACFM)	Baghouse Rating (gr/acf)	Point ID	Q Flowrate (ACFM)	Baghouse Rating (gr/acf)
EP-01	31,850	0.025	EP-36	10,000	0.025
EP-02	10,000	0.005	EP-37	7,800	0.025
EP-03	36,000	0.025	EP-38	12,500	0.025
EP-04	36,000	0.025	EP-39	7,000	0.025
EP-07	14,400	0.025	EP-40	2,500	0.025
EP-08	1,340	0.025	EP-41	2,500	0.025
EP-09	1,000	0.025	EP-42	5,200	0.025
EP-10	7,800	0.025	EP-43	3,000	0.025
EP-11	5,000	0.025	EP-44	2,100	0.025
EP-12	5,200	0.025	EP-45	2,100	0.025
EP-13	5,200	0.025	EP-46	2,100	0.025
EP-14	160,000	0.025	EP-47	2,100	0.025
EP-15	160,000	0.025	EP-48	2,100	0.025
EP-16	43,000	0.025	EP-49	60,000	0.025
EP-17	43,000	0.025	EP-50	20,000	0.025
EP-18	9,250	0.025	EP-51	1,500	0.025
EP-19	9,250	0.025	EP-52	6,000	0.025
EP-20	2,600	0.025	EP-53	1,500	0.025
EP-21	31,750	0.025	EP-54	6,000	0.025
EP-22	4,000	0.025	EP-55	4,000	0.025
EP-23	4,000	0.025	EP-56	1,250	0.025
EP-24	31,750	0.025	EP-57	9,250	0.025
EP-25	4,000	0.025	EP-60	7,800	0.025
EP-26	4,000	0.025	EP-61	1,600	0.025
EP-27	3,500	0.025	EP-62	1,600	0.025
EP-28	3,000	0.025	EP-65	1,200	0.025
EP-29	8,600	0.025	Where:		
EP-30	8,600	0.025	**Q Flowrate (actual cubic feet per minute) =** The maximum design actual flowrate of the control device exhaust system.		
EP-31	1,372	0.025			
EP-32	8,600	0.025			
EP-33	8,600	0.025	**Baghouse Rating (grain/actual cubic feet of exhaust) =** The design outlet exhaust concentration reported by bag manufacturing specifications.		
EP-34	7,000	0.025			
EP-35	12,500	0.025			

MAJOR SOURCE AIR QUALITY PERMIT
STANDARD CONDITIONS
(June 21, 2016)

SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.
[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

A. Any exceedance resulting from an emergency and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV (Emergencies). [OAC 252:100-8-6(a)(3)(C)(iii)(I) & (II)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements.
[OAC 252:100-8-6(a)(3)(C)(iv)]

C. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F.[OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(c)(2)(B)]

B. Records of required monitoring shall include:

(1) the date, place and time of sampling or measurement;
(2) the date or dates analyses were performed;
(3) the company or entity which performed the analyses;
(4) the analytical techniques or methods used;
(5) the results of such analyses; and
(6) the operating conditions existing at the time of sampling or measurement.

[OAC 252:100-8-6(a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted report. [OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting Of Deviations From Permit Terms) of these standard conditions. [OAC 252:100-8-6(a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act. [OAC 252:100-43]

F. Any Annual Certification of Compliance, Semi Annual Monitoring and Deviation Report, Excess Emission Report, and Annual Emission Inventory submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1), OAC 252:100-9-7(e), and OAC 252:100-5-2.1(f)]

G. Any owner or operator subject to the provisions of New Source Performance Standards ("NSPS") under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants ("NESHAPs") under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

H. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

I.All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer's instructions and in accordance with a protocol meeting the requirements of the "AQD Portable Analyzer Guidance" document or an equivalent method approved by Air Quality. [OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

J. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM_{10}). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

K. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit.

[OAC 252:100-8-6(c)(5)(A), and (D)]

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source. [OAC 252:100-8-6(c)(5)(C)(i)-(v)]

C. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." [OAC 252:100-8-5(f) and OAC 252:100-8-6(c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based, except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.
[OAC 252:100-8-5(e)(8)(B) and OAC 252:100-8-6(c)(3)]

SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification. [OAC 252:100-8-6(c)(6)]

SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit. [OAC 252:100-8-6(d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are summarized in the Specific Conditions of this permit. [OAC 252:100-8-6(d)(2)]

SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.
[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

SECTION VIII. TERM OF PERMIT

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance. [OAC 252:100-8-6(a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration.
[OAC 252:100-8-7.1(d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
[OAC 252:100-8-6 (a)(6)]

SECTION X. PROPERTY RIGHTS

A. This permit does not convey any property rights of any sort, or any exclusive privilege.
[OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued. [OAC 252:100-8-6(c)(6)]

SECTION XI. DUTY TO PROVIDE INFORMATION

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, revoking, reissuing,

terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.
[OAC 252:100-8-6(a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.
[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.
[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.
[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances: [OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

(1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
(2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
(3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.
(4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d). [OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The notification should include any changes which may alter the status of a "grandfathered source," as defined under AQD rules. Such changes may require a permit modification.
[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6(c)(6)]

SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(17) for confidential information submitted to or obtained by the DEQ under this section):

(1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
(2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
(3) inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
(4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6(c)(2)]

SECTION XIV. EMERGENCIES

A. Any exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken.

[OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (IV)]

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [OAC 252:100-8-6(a)(3)(C)(iii)(II)]

C. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that: [OAC 252:100-8-6 (e)(2)]

(1) an emergency occurred and the permittee can identify the cause or causes of the emergency;

(2) the permitted facility was at the time being properly operated;
(3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6(e)(3)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F.
[OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION XV. RISK MANAGEMENT PLAN

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6(a)(4)]

SECTION XVI. INSIGNIFICANT ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I to OAC Title 252, Chapter 100, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or Federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list.

(1) 5 tons per year of any one criteria pollutant.
(2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.
[OAC 252:100-8-2 and OAC 252:100, Appendix I]

SECTION XVII. TRIVIAL ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or Federal applicable requirement applies is not trivial even if included on the trivial activities list.
[OAC 252:100-8-2 and OAC 252:100, Appendix J]

SECTION XVIII. OPERATIONAL FLEXIBILITY

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating. [OAC 252:100-8-6(a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

(1) result in no net emissions increases,
(2) are not modifications under any provision of Title I of the federal Clean Air Act, and
(3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

(1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter. [OAC 252:100-13]
(2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]
(3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]
    (a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
    (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
    (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
    (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.
(4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
(5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]

(6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]
(7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances: [40 CFR 82, Subpart A]

(1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;
(2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and
(3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant. [40 CFR 82, Subpart B]

C. The permittee shall comply with the following standards for recycling and emissions reduction except as provided for MVACs in Subpart B: [40 CFR 82, Subpart F]

(1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156;
(2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158;
(3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161;
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166;
(5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158; and
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §

82.166.

SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Source's Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in OAC 252:100-8-7.2(a) only if the following procedures are followed:

(1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
(2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).
(3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).
(4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R.§ 70.8(a) and (c).
(5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
(6) The DEQ complies with 40 C.F.R. § 70.8(d).
(7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).
(8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
(9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by DEQ as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).
(10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [OAC 252:100-43-6]

Robert Singletary
Executive Director

OKLAHOMA Environmental Quality

Kevin Stitt
Governor

Tulsa Cement LLC d/b/a Central Plains Cement Company
Attn: Mr. Craig Bruehl, Environmental Manager
2609 North 145th North Avenue
Tulsa, OK 74116

Subject: Operating Permit No. **2016-0458-TVR**
Tulsa Cement Plant
AQD Facility ID: 166
Section 22, Township 20N, Range 14E, Rogers County, Oklahoma.

Dear Mr. Bruehl:

Air Quality has received the permit application for the referenced facility and completed initial review. This application has been determined to be a Tier II application. In accordance with 27A O.S. 2-14-301 and 302 and OAC 252:4-7-13(c), the enclosed draft permit is now ready for public review. The requirements for public review of the draft permit include the following steps, which **you** must accomplish:

1. Publish at least one legal notice (one day) in at least one newspaper of general circulation within the county where the facility is located (Instructions enclosed);
2. Submit sample notice and provide date of publication to **AQD 5 days prior to notice publishing;**
3. Provide for public review, for a period of 30 days following the date of the newspaper announcement, a copy of the application and draft permit at a convenient location (preferentially at a public location) within the county of the facility;
4. Send AQD a signed affidavit of publication for the notice(s) from Item #1 above within 20 days of publication of the draft permit. Any additional comments or requested changes you have for the draft permit or the application should be submitted within 30 days of publication.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact me or the permit writer at (405) 702-4100.

Sincerely,

Phillip Fielder

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

NOTICE OF DRAFT PERMIT
TIER II or TIER III AIR QUALITY PERMIT APPLICATION

APPLICANT RESPONSIBILITIES

Permit applicants are required to give public notice that a Tier II or Tier III draft permit has been prepared by DEQ. The notice must be published in one newspaper local to the site or facility. Note that if either the applicant or the public requests a public meeting, this must be arranged by the DEQ.

1. Complete the public notice using the samples provided by AQD below. Please use the version applicable to the requested permit action;
   Version 1 – Traditional NSR process for a construction permit
   Version 2 – Enhanced NSR process for a construction permit
   Version 3 – initial Title V (Part 70 Source) operating permit, Title V operating permit renewal, Significant Modification to a Title V operating permit, and any Title V operating permit modification incorporating a construction permit that followed Traditional NSR process
2. Determine appropriate newspaper local to facility for publishing;
3. Submit sample notice and provide date of publication to AQD 5 days prior to notice publishing;
4. Upon publication, a signed affidavit of publication must be obtained from the newspaper and sent to AQD.

REQUIRED CONTENT (27A O.S. § 2-14-302 and OAC 252:4-7-13(c))

1. A statement that a Tier II or Tier III draft permit has been prepared by DEQ;
2. Name and address of the applicant;
3. Name, address, driving directions, legal description and county of the site or facility;
4. The type of permit or permit action being sought;
5. A description of activities to be regulated, including an estimate of emissions from the facility;
6. Location(s) where the application and draft permit may be reviewed (a location in the county where the site/facility is located must be included);
7. Name, address, and telephone number of the applicant and DEQ contacts;
8. Any additional information required by DEQ rules or deemed relevant by applicant;
9. A 30-day opportunity to request a formal public meeting on the draft permit.

SAMPLE NOTICE on page 2.

SAMPLE NOTICE *(Italicized print is to be filled in by the applicant.)***:**

DEQ NOTICE OF TIER *…II or III…* **DRAFT PERMIT**

A Tier *…II or III…* **application for an air quality** *…type of permit or permit action being sought (e.g., significant modification to a Title V permit or Title V/Title V renewal permit)…* **has been filed with the Oklahoma Department of Environmental Quality (DEQ) by applicant,** *…name and address.*

The applicant requests approval to *…brief description of purpose of application…* **at the** *…site/facility name … …***[proposed to be] located at** *…physical address (if any), driving directions, and legal description including county…***..**

In response to the application, DEQ has prepared a draft operating permit [modification] (Permit Number: *…xxxx-xxxx-x…***), which may be reviewed at** *…locations (one must be in the county where the site/facility is located)…* **or at the Air Quality Division's main office (see address below). The draft permit is also available for review under Permits for Public Review on the DEQ Web Page: http://www.deq.ok.gov/**

This draft permit would authorize the facility to emit the following regulated pollutants: *(list each pollutant and amounts in tons per year (TPY))* [For facility modifications only, either add**: , which represents** (*identify the emissions change involved in the modification)*, or add: **. The modification will not result in a change in emissions**]

The public comment period ends 30 days after the date of publication of this notice. Any person may submit written comments concerning the draft permit to the Air Quality Division contact listed below or as directed through the corresponding online notice. [Modifications only, add: **Only those issues relevant to the proposed modification(s) are open for comment.**] **A public meeting on the draft permit [modification] may also be requested in writing at the same address. Note that all public meetings are to be arranged and conducted by DEQ staff.**

In addition to the public comment opportunity offered under this notice, this draft permit is subject to U.S. Environmental Protection Agency (EPA) review, EPA objection, and petition to EPA, as provided by 40 CFR § 70.8.

If the Administrator (EPA) does not object to the proposed permit, the public has 60 days following the Administrator's 45-day review period to petition the Administrator to make such an objection as provided in 40 CFR 70.8(d) and in OAC 252:100-8-8(j).

Information on all permit actions including draft permits, proposed permits, final issued permits and applicable review timelines are available in the Air Quality section of the DEQ Web page: http://www.deq.ok.gov/.

For additional information, contact *…names, addresses and telephone numbers of contact persons for the applicant,* **or contact DEQ at: Chief Engineer, Air Quality Division, 707 N. Robinson, Suite 4100, P.O. Box 1677, Oklahoma City, OK, 73101-1677. Phone No. (405) 702-4100**

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List
11-21-24

ACFM	Actual Cubic Feet per Minute
AD	Applicability Determination
AFRC	Air-to-Fuel Ratio Controller
API	American Petroleum Institute
ASTM	American Society for Testing and Materials
AVO	Audio, Visual, or Olfactory
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
BBL	Barrel(s)
BHP	Brake Horsepower (bhp)
BTU	British thermal unit (Btu)
C&E	Compliance and Enforcement
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS	Chemical Abstract Service
CAAA	Clean Air Act Amendments
CC	Catalytic Converter
CCR	Continuous Catalyst Regeneration
CD	Consent Decree
CEM	Continuous Emission Monitor
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CI	Compression Ignition
CNG	Compressed Natural Gas
CO	Carbon Monoxide or Consent Order
COA	Capable of Accommodating
COM	Continuous Opacity Monitor
D	Day
DEF	Diesel Exhaust Fluid
DG	Demand Growth
DSCF	Dry Standard (At Standard Conditions) Cubic Foot (Feet)
EGU	Electric Generating Unit
EI	Emissions Inventory
EPA	Environmental Protection Agency
ESP	Electrostatic Precipitator
EUG	Emissions Unit Group
EUSGU	Electric Utility Steam Generating Unit
FCE	Full Compliance Evaluation
FCCU	Fluid Catalytic Cracking Unit
FIP	Federal Implementation Plan
FR	Federal Register
GACT	Generally Achievable Control Technology
GAL	Gallon (gal)
GDF	Gasoline Dispensing Facility
GEP	Good Engineering Practice
GHG	Greenhouse Gases
GR	Grain(s) (gr)
H_2CO	Formaldehyde
H_2S	Hydrogen Sulfide
HAP	Hazardous Air Pollutants
HC	Hydrocarbon
HCFC	Hydrochlorofluorocarbon
HFR	Horizontal Fixed Roof
HON	Hazardous Organic NESHAP
HP	Horsepower (hp)
HR	Hour (hr)
I&M	Inspection and Maintenance
IBR	Incorporation by Reference
ICE	Internal Combustion Engine
LAER	Lowest Achievable Emission Rate
LB	Pound(s) [Mass] (lb, lbs, lbm)
LB/HR	Pound(s) per Hour (lb/hr)
LDAR	Leak Detection and Repair
LNG	Liquefied Natural Gas
LT	Long Ton(s) (metric)
LPE	Legally and Practicably Enforceable
M	Thousand (Roman Numeral)
MAAC	Maximum Acceptable Ambient Concentration
MACT	Maximum Achievable Control Technology
MM	Prefix used for Million (Thousand-Thousand)
MMBTU	Million British Thermal Units (MMBtu)
MMBTUH	Million British Thermal Units per Hour (MMBtu/hr)
MMSCF	Million Standard Cubic Feet (MMscf)
MMSCFD	Million Standard Cubic Feet per Day
MSDS	Material Safety Data Sheet
MWC	Municipal Waste Combustor
MWe	Megawatt Electrical
NA	Nonattainment
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NH_3	Ammonia
NMHC	Non-methane Hydrocarbon
NGL	Natural Gas Liquids

NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NOI	Notice of Intent
NSCR	Non-Selective Catalytic Reduction
NSPS	New Source Performance Standards
NSR	New Source Review
O_3	Ozone
O&G	Oil and Gas
O&M	Operation and Maintenance
O&NG	Oil and Natural Gas
OAC	Oklahoma Administrative Code
OC	Oxidation Catalyst
OGI	Optical Gas Imaging
PAH	Polycyclic Aromatic Hydrocarbons
PAE	Projected Actual Emissions
PAL	Plant-wide Applicability Limit
Pb	Lead
PBR	Permit by Rule
PCB	Polychlorinated Biphenyls
PCE	Partial Compliance Evaluation
PEA	Portable Emissions Analyzer
PFAS	Per- and Polyfluoroalkyl Substance
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter with an Aerodynamic Diameter <= 2.5 Micrometers
PM_{10}	Particulate Matter with an Aerodynamic Diameter <= 10 Micrometers
POM	Particulate Organic Matter or Polycyclic Organic Matter
ppb	Parts per Billion
ppm	Parts per Million
ppmv	Parts per Million Volume
ppmvd	Parts per Million Dry Volume
PSD	Prevention of Significant Deterioration
psi	Pounds per Square Inch
psia	Pounds per Square Inch Absolute
psig	Pounds per Square Inch Gage
RACT	Reasonably Available Control Technology
RATA	Relative Accuracy Test Audit
RAP	Regulated Air Pollutant or Reclaimed Asphalt Pavement
RFG	Refinery Fuel Gas
RICE	Reciprocating Internal Combustion Engine
RO	Responsible Official
ROAT	Regional Office at Tulsa
RVP	Reid Vapor Pressure
SCC	Source Classification Code
SCF	Standard Cubic Foot
SCFD	Standard Cubic Feet per Day
SCFM	Standard Cubic Feet per Minute
SCR	Selective Catalytic Reduction
SER	Significant Emission Rate
SI	Spark Ignition
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SNCR	Selective Non-Catalytic Reduction
SO_2	Sulfur Dioxide
SOx	Sulfur Oxides
SOP	Standard Operating Procedure
SRU	Sulfur Recovery Unit
T	Tons
TAC	Toxic Air Contaminant
TEG	Triethylene Glycol
THC	Total Hydrocarbons
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulates
TV	Title V of the Federal Clean Air Act
$\mu g/m^3$	Micrograms per Cubic Meter
US EPA	U. S. Environmental Protection Agency
VFR	Vertical Fixed Roof
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
VOL	Volatile Organic Liquid
VRT	Vapor Recovery Tower
VRU	Vapor Recovery Unit
YR	Year
2SLB	2-Stroke Lean Burn
4SLB	4-Stroke Lean Burn
4SRB	4-Stroke Rich Burn

Robert Singletary
Executive Director

OKLAHOMA Environmental Quality

Kevin Stitt
Governor

February 25, 2025

Cherokee Nation
Attn: Chuck Hoskin, Jr., Principal Chief
P.O. Box 948
Tahlequah, OK 74465

Re: Application No. **2016-0458-TVR**
Tulsa Cement, LLC d/b/a Central Plains Cement Company
AQD Facility ID: 166
Section 22, Township 20N, Range 14E; Tulsa, Rogers County
Date Received: May 9, 2016

Dear Mr. Hoskin:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier II/Tier III application referenced above. A Tier II/III application requires the facility provide a 30-day public comment period on the draft Tier II/III permit and a 20-day public comment period on a proposed Tier III permit at a public location within the county of the facility. The process requires the facility to notify the public by newspaper notice in a newspaper in the county of the proposed project. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to the newspaper notice.

Copies of draft permits and comment opportunities are also provided to the public on the ODEQ website at the following location:

https://www.deq.ok.gov/air-quality-division/air-permits/public-participation-issued-permits/

If you prefer a copy of the draft and/or proposed permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify me by e-mail at phillip.fielder@deq.ok.gov, or by letter at:

Department of Environmental Quality, Air Quality Division
Attn: Phillip Fielder, Chief Engineer
P.O. Box 1677
Oklahoma City, OK, 73101-1677

Thank you for your cooperation. If you have any questions, I can also be contacted at (405) 702-4185.

Sincerely,

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

Robert Singletary
Executive Director

OKLAHOMA Environmental Quality

Kevin Stitt
Governor

February 25, 2025

Muscogee Creek Nation
Attn: David Hill, Principal Chief
P.O. Box 580
Okmulgee, OK 74447

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Tulsa Cement, LLC d/b/a Central Plains Cement Company
AQD Facility ID: 166
Section 22, Township 20N, Range 14E; Tulsa, Rogers County
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Department of Environmental Quality, Air Quality Division
Attn: Phillip Fielder, Chief Engineer
P.O. Box 1677
Oklahoma City, OK, 73101-1677

Thank you for your cooperation. If you have any questions, I can also be contacted at (405) 702-4185.

Sincerely,

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON STREET, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit Number: 2016-0458-TVR

Tulsa Cement LLC,

having complied with the requirements of the law, is hereby granted permission to operate the Tulsa Portland Cement Manufacturing Plant located in Section 22, T20N, R14E, Rogers County, Oklahoma, subject to standard conditions dated June 21, 2016, and specific conditions, both attached.

This permit shall expire five (5) years from the date below, except as authorized under Section VIII of the Standard Conditions.

DRAFT

Division Director
Air Quality

Issuance Date