

## Statement of Basis - Title V Operating Permit

**COMPANY:** GCC Rio Grande  
**FACILITY:** GCC Rio Grande – Tijeras Plant  
**SIC and NAISC:** 3241 and 327310  
**PERMIT NO.:** 0532-RN2  
**AIRS No.:** 35/001/00008  
**LOCATION:** 11783 Highway 14 South  
 Tijeras, NM 87059  
 UTME: 373,180 m UTMN: 3,881,650 m Zone: 13  
**PERMIT WRITER:** Barbara Georgitsis  
**DATE APPLICATION RULED COMPLETE:** October 12, 2022

<b>Permit Review</b>	
<b>Permitting (initial &amp; date): AL, 6/1/23 KT, 6/2/23</b>	<b>Compliance/Enforcement (initial &amp; date): DR, 5/23/23</b>
	<b>Legal Review (if applicable - initial &amp; date): N/A</b>
<b>Date to Permittee/Facility for review: 5/24/23 and 6/2/23</b>	<b>Date of Permittee/Facility response: 5/25/23 and 6/6/23</b>
<b>Public Notice (30-day comment): June 9, 2023 - July 9, 2023</b>	<b>Any Comments from Public Notice:</b>
<b>Date DRAFT/Proposed Permit (concurrent with PN) to EPA: June 9, 2023 – July 24, 2023</b>	<b>Any Comments from EPA:</b>
<b>Date Final permit to Permit Manager or Asst Director for signature:</b>	

### **1. Introduction**

This document summarizes GCC Rio Grande Tijeras Plant (Facility) and the basis for the conditions for the draft Title V Operating Permit renewal under the authority of the Albuquerque Environmental Health Department, Air Quality Program (Department) and the Albuquerque/Bernalillo County Air Quality Control Board (A/BCAQCB); pursuant to the Federal Clean Air Act (CAA, also known herein as the Federal Act); the New Mexico Air Quality Control Act, NMSA 1978, as amended 74-2-4, 74-2-5.C; the Joint Air Quality control Board Ordinance, Revised Ordinances of Albuquerque 1994, 9-5-1-4; the Joint air quality Control Board Ordinance, Bernalillo County Ordinance 94-5; A/BCAQCB Regulation Title 20, New Mexico Administrative Code (NMAC), Chapter 11 (20.11 NMAC), chapter 11, Part 41 (20.11.41 NMAC), Authority-To-Construct; Part 42 (20.11.42 NMAC), Operating Permits. Unlike the permit, this Application Review Summary document is not legally enforceable. This document includes references to the applicable statutory or regulatory provisions, emission calculations and other data that relates to the draft permit review.

### **2. Facility Description**

The Facility is a Portland cement manufacturing plant owned and operated by GCC Rio Grande (Permittee). The Facility is designed to inherently minimize the emission of gaseous criteria pollutants from the production process. The Facility is also equipped with an extensive array of fabric filter dust collectors throughout that provide control of particulate emissions for various processes. Fugitive particulate

emissions are also limited through design, procedures and best operating practices that have been implemented at the Facility.

The Facility has several primary systems used in manufacturing of Portland cement. These systems include an onsite limestone mining operation, a limestone crushing and screening system, ball-type raw mills used for grinding raw materials into raw meal (kiln feed), a blending system used for homogenization of raw meal, a raw meal metering system, a raw meal metering feed system, pyroprocessing systems used to convert raw materials into clinker (an intermediate product), and ball-type finish mills used to grind clinker into various Portland cement products. In addition, there are many auxiliary systems and equipment associated with the facility including storage silos and buildings, various conveying systems including belt, screw, pneumatic and airslide conveyors as well as bucket elevators. There are also many auxiliary support systems and equipment at the Facility including storage silos used for processing and storing various raw materials, intermediate and final products. The transferring of materials throughout the Facility is carried out by various conveying systems including belt, screw, and airslide conveyors, as well as bucket elevators. See the Permit Table 4 for a list and description of the significant emission sources.

Insignificant activities include processes and devices that emit less than 1 tpy of criteria pollutants and the Department deems “insignificant” pursuant to 20.11.42.7 NMAC. Insignificant activities at the Facility include on-site include storage tanks, processes associated with stockpiles (load-in and load-out, wind erosion), dust dumps (load-in and load-out, wind erosion), wind erosion from quarries, and Activated Carbon Injection system. See the Permit Table 3 for a list of the insignificant activities.

### **3. Description of this Permit Action**

This application is for the renewal of the Operating Permit #0532-RN1 and was initially received by the Department, on July 28, 2021 with additional information and corrections requested by the Program submitted on August 26, 2022 and January 20, 2023. The application was deemed administratively complete on October 12, 2022.

### **4. Prevention of Significant Deterioration**

This Facility is a listed source under the Prevention of Significant Deterioration (PSD) regulations. It is a grandfathered source except for the coal handling facilities the #3 Finish Mill. The coal handling facilities were not subject to PSD review according to correspondence from EPA, Ideal Cement (former owners) and AEHD (see ATC #44 below). The remaining portions of the plant have not undergone a major modification as defined by the PSD rules and therefore has not triggered these requirements.

### **5. History of Permitting Actions**

(In descending chronological order)

<b>Permit Number</b>	<b>Issue Date</b>	<b>Action Type</b>	<b>Description of Action</b>
0532-RN2	PENDING	Title V Renewal	Renewal of 0532-RN1 with various updates from the previous renewal permit. See table in number 6. below: “Updates from Previous Permit”.

Permit Number	Issue Date	Action Type	Description of Action
0532-RN1	July 28, 2017	Title V Renewal	Submitted by the Facility to renew Operating Permit #0532 and to incorporate Construction Permit #2197-M1 and Source Registration #2195. Renewal application also updates PC MACT requirements, revises facility-wide PM emissions due to PC MACT updates, removes Section 4 which held obsolete PC MACT requirements, and includes other minor revisions and reorganizations.
2197-M1	April 5, 2016	Minor NSR permit	The purpose of modifying permit number 2197 is to authorize construction of new Tire Derived Fuel (TDF) systems for Kiln #1 and Kiln #2. Combined coal and TDF usage or total fuel excluding natural gas for both kilns shall be limited to 96,346 tons per year. Kiln emissions will continue be exhausted through the combined stack and currently permitted kiln emission limits in Title V Permit #532-RN2 remain unchanged. The construction authorized by this permit does not trigger a “modification” as defined by 20.11.41.7.U NMAC or a “major modification” as defined by 20.11.61.7.II NMAC.
2195	February 8, 2012	Source Registration	Registration issued for a temporary project to study the feasibility of using calcium cake (a waste by product of semiconductor manufacturing) as a raw material. This temporary project will offset limestone as a raw material and thus there is no increase in cement production.
2197	March 30, 2012	Minor NSR permit	This permit is for the construction of new baghouses and stack for the existing kilns and clinker coolers. The purpose of this project is to replace the existing kiln and clinker cooler baghouses with newer, more efficient baghouses that will exhaust through a new stack. For energy efficiency purposes, the clinker cooler exhaust shall be combined with the kiln exhaust that will be routed to the new baghouse. The production level of Portland cement at this facility will remain unchanged and thus no modification or major modification (as defined by the NSR rules) is triggered with this project. The project is necessary in order for the Facility to comply with newer federal emission standards and monitoring requirements under 40 CFR 63 Subpart LLL. Accordingly, Kiln #1, Clinker Cooler #1, Kiln #2, and Clinker Cooler #2 shall comply with the applicable requirements for particulate matter found in 40 CFR 63 Subpart LLL and the general applicable requirements of 40 CFR 63 Subparts A. Kiln exhaust gas emissions for the remaining pollutants that are subject to the requirements of 40 CFR 63 Subpart LLL (dioxin/furans, mercury, total hydrocarbons, hydrochloric acid) shall be regulated and enforced under Title V permit #532. PM emission limits for NAAQS/NMAAQs compliance or that are applicable to cement kilns under Albuquerque – Bernalillo County Air Quality Control Regulations, Title 20, Chapter 11 (20.11 NMAC) shall be enforced under Title V permit #532.
532	May 30, 2012	Title V initial permit	Title V initial permit in order to incorporate all applicable requirements.

Permit Number	Issue Date	Action Type	Description of Action
PSD-NM-12	November 16, 1978	Permit Modification	On April 11, 1978, a request was made by Ideal Basic Industries, Inc., to EPA regarding the test method requirements to demonstrate compliance with the emission limits established by permit PSD-NM-12. EPA responded by issuing a permit modification of PSD-NM-12. Test methods were specified by the permit modification and additional administrative conditions were added to permit PSD-NM-12. Based on the limited information available, there was no physical or operational change at the plant that triggered a major modification. The permit modification was issued in response to Ideal Basic's inquiry regarding test methods.
PSD-NM-12	May 9, 1977	PSD permit	EPA received this application on March 3, 1977. This project occurred under the ownership of Ideal Basic Industries, Inc. which was prior to GCC's ownership and modification details are not available. However, based on the public notice published by the EPA on April 2, 1977, the project consisted of modifying the plant by installing a new finish mill with a throughput of 64,000 pounds/hour. The name of this project was called the New Finish Mill Project (presumably this is the #3 Finish Mill). Maximum TSP emission rates were established in permit PSD-NM-12 for the Mill Feed Dust Collector, Air Separator Dust Collector, and the Mill Dust Collector. EPA approved the proposed modification based on the project meeting BACT requirements in 40 CFR 52.21 and any pertinent air quality impact analysis on May 9, 1977.
44	October 14, 1976	Department Authority to Construct Permit	Authority to Construct permit application #44 was received by AEHD on July 6, 1976 to request conversion from natural gas to coal firing for each cement kiln. On October 14, 1976, AEHD granted Authority to Construct permit #44 to authorize construction in accordance with application #44. No PSD review was required by AEHD since it did not have authority to issued PSD permits. The PSD permitting authority at this time was EPA.
43	October 14, 1976	Department Authority to Construct Permit	Authority to Construct permit application #43 was received by AEHD on July 8, 1976 to request installation of the #3 Finish Mill. On October 14, 1976, AEHD granted Authority to Construct permit #43 to authorize construction in accordance with application #43. No PSD review was required by AEHD since the PSD rules were not enacted until the 1977 Clean Air Act Amendments which were signed into law by the President on August 7, 1977.

## 6. Updates from Previous Permit

Device, EU's	Description
3.1 & 3.3 raw mill dryers	Removed from Facility
9.5, 9.6, 9.7 packing machines	Removed from Facility
Tank #2	Removed 40 CFR 63, Subpart CCCCC, Gasoline Dispensing Facilities (GDF), requirements since the NESHAP applies to fuel tanks <10,000 gallons at area sources of HAP, and the Permittee is a Major HAP source and NESHAP (MACT) source category.
11, Blasting Activities	Removed 48 blasts/yr limit and included the ANFO limit of 17 tons/blast (1 blast/day) and 816 tons ANFO/yr in Table 4 for Blasting Unit #11. CO lb/hr emission rate has increased based on the calculation using the ANFO emission factor. The CO tpy remains the same. The NO <sub>x</sub> and SO <sub>2</sub> emission have decreased based on the updated emission factor and calculation. The Facility is in compliance with the NAAQS and NMAAQs.
Units 11-1 through 11-9A	Removed from the Emission's Table 5, since these emissions are all combined in EU-11.
All significant devices/units	The TSP column was removed from Table 5 since TSP is not a regulated air pollutant, only PM <sub>10</sub> & PM <sub>2.5</sub> .
Facility-Wide	<p>Added "Air Quality Dispersion Modeling" to section 4.0 which as previously a reserved section (4.0 Reserved). Added limitations which are needed to maintain the NAAQS &amp; NMAAQs which was demonstrated by modeling the Facility. See details and limits in permit and for more information on the modeling refer to the Interoffice Modeling Memo dated May 3, 2023 in electronic source file- 4.0. EHD Dispersion Modeling Review.</p> <p>Added section 4.2, #8, regarding a requirement for a barrier or gate before the parking lot entrance at the end of the driveway off the Highway 337 South in order to restrict the Facility from public access.</p>
Kiln Emergency Generators	Removed from Table 3, Insignificant activities, since they are significant sources.
Gen-1 and Gen-2	Added the reference to 40 CFR 63, Subpart ZZZZ applicability for Reciprocating Internal Combustion Emergency Engines constructed before 2006. The Facility is in compliance with operating Gen-1 and Gen-2 as emergency engines according to Subpart ZZZZ. Added to Table 1 as an Applicable Requirement.
11, Blasting Activities	Added section 5.1.3 to permit as an Administrative Amendment initiated by the Department. The Permittee/Facility shall give 24-hr notice to residents in the surrounding community and Village of Tijeras of Blasting Activities that will occur.

1-2, 1-3, 1-4, 2-1, 2-2, 2-3, 2-4 2-7, 2-9, 2-10, 3-1, 3-3, 3-2, 3-4 4-1, 4-2, 4-3, 4-4, 4-5, 4-6 5-3 – 5-10 6-1, 6-2, 6-3, 6-4 7-1, 7-12, 7-13 8-1 – 8-7 9-1 – 9-3	Added more details in Continuous Compliance Requirements section 5.4, for the Compliance Assurance Monitoring (CAM) plan, section 5.4.3, that is applicable to the Facility. The Facility provided a CAM plan in the permit application which was reviewed by the Department. The plan is referenced in attachment 4) in the operating permit and available in the electronic file as well as the application.  In addition, language was added for the Quality Improvement Plan which is a component of the CAM plan and was added to section 5.4.3.A.
Facility Wide	Added another section under 5.8 Recordkeeping section which includes general recordkeeping applicable for the Facility.  Added another section under 5.9 Reporting which includes general reporting applicable for the Facility.
HAP Emissions - HCl, Hg and D/F from Kilns/Clinkers (monitored with CEM) Glycol Ethers from grinding additive	Added to Total Facility Emissions TABLE 2, Total Facility Fee Emissions TABLE 12 and TABLE 5a. which lists the units with HAP emissions.

## 7. Compliance Testing

A summary of tests and reports conducted during the last permit term (2017-2022) are listed in the table below. All of the testing done at the Facility over that time is not listed in the table. The Facility is compliance with other required testing and reporting in accordance with 20.11.42.12 NMAC, 40 CFR 63, Subpart LLL and other applicable testing/reporting requirements in the permit. Files are available in the Department's database.

Date of Compliance Test	Regulatory Requirement	Description of Compliance Test	In Compliance (Y/N)
08/25/2022	40 CFR 63 Subpart LLL	Annual Compliance Certification Report	Yes
01/21/2022	40 CFR 63 Subpart LLL	Semi-Annual Stack Report	Yes
02/12/2021	40 CFR 63 Subpart LLL	Periodic Reports (7/2020-12/31/2020)	Yes
05/28/2020	40 CFR 63 Subpart LLL	Relative Accuracy Testing Audit (RATA) for the Continuous Emission Monitoring Systems (CEMS)	Yes
04/9/2019	40 CFR 60, Subpart Y	Periodic reports, Coal Analysis/Consumption	Yes
06/18/2018	40 CFR 63 Subpart LLL	Relative Accuracy Testing Audit (RATA) for the CEMS	Yes

## 8. Startup and Shutdown

In accordance with 40 CFR 63.1347, the facility must prepare an operation and maintenance plan (OMP) that addresses periods of startup and shutdown. This requirement is specified in Section 5.3 of Operating Permit #0532-RN2 and is listed as an attachment to the permit in Section 8.

## 9. Compliance and Enforcement Status

A Compliance Order between the Department and Permittee was issued on July 29, 2022 to allow the Facility to continue operation under 0532-RN1 until 0532-RN-2 is issued.

There are no other compliance or enforcement actions pending at time of this draft permit.

## 10. Air Dispersion Modeling

Air dispersion modeling was conducted for the entire Facility and the report was received by the Department on January 20, 2023 using AERMOD for NO<sub>2</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The modeling was reviewed by the Department. The modeling included proposed new sources for blended cement production, including a new dust collector, pump and additional fugitive dust sources from unpaved roads. The blended cement process will be permitted in a New Source Review permit pursuant to 20.11.41 NMAC. The NSR application and permit will be processed as a separate permitting action outside of this Operating Permit 0532-RN2. In accordance with 20.11.42.12.A.4.(j)(ii) NMAC, the modeling demonstrated that the Facility does not cause or contribute to an exceedance of a NAAQS or NMAAQs; however, limitations were imposed on the Facility to ensure compliance with the NAAQS and NMAAQs. For more information, refer to the electronic file for this Operating Permit, 4.0. EHD Dispersion Modeling Review, and section 4.0 of the Operating Permit.

## 11. State Regulatory Analysis – New Mexico Administrative Code (NMAC)

20 NMAC	Title	Applies (Y/N)	Comments
11.02	Permit Fees	Y	Applicable for all sources subject to 20.11.42 NMAC – Operating Permits.
11.05	Visible Air Contaminants	Y	This rule provides visible emission limitations on specific stationary sources and mobile sources such as incinerators, pathological waste destructors, crematoriums, stationary spark ignition engine, diesel-powered engine; railroad train or aircraft. The Facility owns and operates stationary (diesel-powered) engines that are subject to the requirements of this rule.
11.08	Ambient Air Quality Standards	Y	The objective of 20.11.8 NMAC is to adopt local ambient air quality standards that are identical to the federal NAAQS codified at 40 CFR Part 50, and to adopt applicable state Ambient Air Quality Standards codified at 20.2.3 NMAC, which is applicable to the city of Albuquerque and Bernalillo county. Since the Facility is under Albuquerque/Bernalillo county air quality control board jurisdiction, it is subject to this rule.

20 NMAC	Title	Applies (Y/N)	Comments
11.20	Fugitive Dust Control	Y	20.11.20 NMAC is applicable to all sources of fugitive dust in Bernalillo county, unless otherwise exempt. It does not apply to sources within Bernalillo county that are stationary source operations subject to 20.11.41 NMAC, <i>Authority to Construct</i> , or 20.11.42 NMAC, <i>Operating Permits</i> , that produce fugitive dust as defined in 20.11.20 NMAC, but only if the source of fugitive dust is addressed and controlled through permit conditions required by a 20.11.41 NMAC or 20.11.42 NMAC permit; however construction at a stationary source site, whether it involves new construction or a site modification, is subject to 20.11.20 NMAC. Since the Facility is located within Bernalillo County, and it is likely to undergo a construction or a site modification in the future as it has undergone numerously throughout its operations, the facility is subject to requirements imposed by 20.11.20 NMAC.
11.23	Stratospheric Ozone Protection	Y	The objective of this Part is to prevent or reduce deterioration of the stratospheric ozone layer, and it is applicable to persons engaged in the sale, servicing, or wrecking of automotive air conditioning systems, or automotive air conditioning refrigerants. The Tijeras facility performs maintenance and servicing of the vehicles including automotive air conditioning refrigerants replacement. Hence, the Part is applicable to the facility.
11.40	Source Registration	Y	By January 1, 1974, any person owning or operating any commercial or industrial stationary source, which emits more than two thousand pounds of any air contaminant per year or any amount of a hazardous air pollutant, must obtain a Registration Certificate for the source from the Director per 20.11.40 NMAC. This Part is applicable to any stationary source located in Bernalillo County. The Facility was originally constructed in 1959 with subsequent modifications in the years that follow, and it has been generating criteria pollutant emissions that exceed two thousand pounds per year. Therefore, the Facility is subject to the provisions of 20.11.40 NMAC.
11.41	Authority-to-Construct	Y	20.11.41 requires that any person planning to construct a new stationary source or modify an existing stationary source of air contaminants such that any of the emissions thresholds, classifications, or kinds of permits apply, shall obtain a permit from the Department prior to commencement. The Facility has obtained Authority to Construct permits #2197 and #2197-M1 and is likely to undergo construction and/or modifications in the future; therefore, the Facility is subject to requirements imposed by 20.11.41 NMAC.

20 NMAC	Title	Applies (Y/N)	Comments
11.42	Operating Permits	Y	20.11.42 NMAC requires that operating permits must be obtained from the Department for any major source. The objective of this Part is to assure that major air pollution sources within Bernalillo County obtain an operating permit setting forth minimum requirements and conditions of operation pursuant to Title V of the Clean Air Act Amendments of 1990 (42 U.S.C. 7401, et seq.). The Facility has the total potential emissions greater than 100 tons per year for NO <sub>x</sub> , CO, TSP, PM <sub>10</sub> and SO <sub>2</sub> ; the Facility is also subject to the Portland Cement Manufacturing NESHAP (see section 12. Table below); therefore, the Facility is considered as a major source and is subject to requirements of 20.11.42 NMAC.
11.46	Sulfur Dioxide Emissions Inventory Requirements: Western Backstop Sulfur Dioxide Trading Program	Y	20.11.46 NMAC implements the western backstop SO <sub>2</sub> trading program (“WEB trading program”) provisions required under the federal Regional Haze Regulation, 40 CFR 51.309, the Albuquerque-Bernalillo county element of the state of New Mexico’s regional haze implementation plan and related requirements associated with the time period prior to the WEB trading program trigger date. 20.11.46 NMAC is applicable to all geographic areas within Bernalillo County, New Mexico and within the jurisdiction of the Albuquerque-Bernalillo county air quality control board. Being a major source of SO <sub>2</sub> , the Facility is subject to this Part.
11.47	Emissions Inventory Requirements	Y	20.11.47 NMAC applies to the owner or operator of every stationary source, located within Bernalillo county that: <b>(1)</b> has an active permit issued pursuant to 20.11.41 NMAC, <i>Authority to Construct</i> , or 20.11.42 NMAC, <i>Operating Permits</i> ; or <b>(2)</b> is required to file a source registration pursuant to 20.11.40 NMAC, <i>Source Registration</i> . A source that meets requirements above is required to submit an emissions report annually. A source is not required to submit an emissions report more frequently than annually. The provisions of this Part are applicable to the Facility since they have an active operating permit.
11.48	Greenhouse Gas Emissions Reporting	Y	20.11.48 NMAC applies to the owner or operator of a cement manufacturing facility with a North American Industry Classification System (NAICS) code 32731 and requires reporting of greenhouse gas emissions to the Administrator (USEPA). As a cement manufacturing facility with NAICS code 32731, the Facility is subject to the requirements of this Part.
11.49	Excess Emissions	Y	This regulation implements requirements for the reporting of excess emissions and establish affirmative defense provisions for Facility owners and operators for excess emissions.

20 NMAC	Title	Applies (Y/N)	Comments
11.61	Prevention of Significant Deterioration	Y	The requirements of 20.11.61 NMAC apply to the construction of any new major stationary source or any project at an existing major stationary source in an area designated as attainment or unclassifiable. The Bernalillo County is currently classified as an attainment or unclassifiable area for all criteria pollutant. The Tijeras Facility is located in an attainment area; has obtained EPA PSD permit #PSD-NM-12 and is classified as an existing major stationary source with respect to PSD and Operating Permit requirements. Hence, the Tijeras facility is subject to the requirements of 20.11.61 NMAC.
11.63	New Source Performance Standards for Stationary Sources	Y	20.11.63 NMAC is applicable to all stationary sources of air pollutants located within Bernalillo County, which are subject to the requirements of 40 CFR Part 60, as amended in the Federal Register through July 1, 2004. The Facility is currently subject to 40 CFR Part 60, Subpart F (Standards of Performance for Portland Cement Plants) and Subpart Y (Standards of Performance for Coal Preparation Plants); therefore, 20.11.63 NMAC is applicable to the Facility.
11.64	Emission Standards for Hazardous Air Pollutants for Stationary Sources	Y	20.11.64 NMAC is applicable to all stationary sources of air pollutants located within Bernalillo County, which are subject to requirements of 40 CFR Part 61 or Part 63, as amended in the Federal Register through July 1, 2004. The Facility is currently subject to 40 CFR Part 63, Subpart LLL - <i>National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry</i> ; therefore, 20.11.64 NMAC is applicable to the Facility. The Gen 1 and Gen 2, Emergency generator engines (<2006) are subject to 40 CFR 63, Subpart ZZZZ, and required to operate the engines as emergency only.
11.65	Volatile Organic Compounds	Y	The objective of this Part is to prevent or reduce emission of hydrocarbon vapors from facilities and sources not otherwise regulated or exempted by 40 CFR Part 60; including volatile organic compounds and petroleum liquids, in order to prevent the formation of photochemical oxidants in the atmosphere. 20.11.65 NMAC is applicable to any source located within Bernalillo County. The Facility currently has several storage tanks that handle and store organic and petroleum liquids, which are subject to the requirements of 20.11.65.

20 NMAC	Title	Applies (Y/N)	Comments
11.66	Process Equipment	Y	20.11.66 NMAC provides emission standards for various process equipment to achieve attainment of regulatory air pollution standards and to minimize air pollution emissions. The process emissions at the Tijeras facility that are subject to this Part are particulate matter emissions including fugitive dust. Specifically, the cement kilns at the Facility is subject to the requirement that prohibits any person operating or utilizing cement kilns to permit, cause, suffer or allow particulate matter emissions in excess of 230 mg/m <sup>3</sup> of exhaust gas.
11.67	Equipment, Emissions, Limitations	Y	20.11.67 NMAC is applicable to any stationary source located in Bernalillo County containing, constructing or modifying the following: Orchard Heaters; Kraft Mills; Coal, Oil, or Gas Burning Equipment. The purpose of this rule is to prevent equipment covered by this Part from being constructed, placed, maintained, altered, used, or operated unless the equipment meets the applicable emission limitations established by 20.11.67 NMAC. The primary fuel for the #1 and #2 kiln systems is coal. In the event of coal system maintenance or malfunction, the primary fuel used in the #1 and #2 kiln systems is natural gas. Natural gas is used as a primary fuel in the kiln systems until such time as the coal system maintenance and/or repairs are completed. Therefore, this Part is applicable to the Facility. Tire Derived Fuel (TDF) is permitted under #2197-M1; however, the Facility does not currently utilize TDF as a fuel source.
11.90	Administrative, Enforcement, Inspection	Y	The objective of this Part is to minimize emissions from sources through inspection, enforcement, and good operating procedures, and this Part is applicable to any source within Bernalillo County, which includes the Facility.

**In addition to specifically applicable NMAC regulations cited above, there are additional relevant NMACs that do not impose any specific requirements on the operation of the Facility, but rather provide general guidance. The following is the list of such NMAC regulations**

20 NMAC	Title	Applies (Y/N)	Comments
11.43	Stack Height Requirements	As required	Specifies local requirements that are identical to those required by Federal New Source Review regulations assuring uniform procedures and formulae in determining, on a case-by-case basis, what stack heights or other air dispersion techniques are creditable under the term "good engineering practice".

11.60	Permitting in Non-Attainment Areas	N	Implements a pre-construction permit program for new or modified major stationary sources that wish to locate or are located in an area where federal ambient air quality standards are being exceeded. However, the Facility is located in the Bernalillo County, which is currently classified as an attainment or unclassifiable area for all criteria pollutants. Thus, the requirements of this Part are not applicable to the facility.
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## 12. Federal Regulatory Analysis – Code of Federal Regulations (CFR)

(40 CFR 50)	Title	Applies (Y/N)	Comments
All Sections	National Primary and Secondary Ambient Air Quality Standards	Y	40 CFR part 50 establishes primary and secondary National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Tijeras facility is subject to these standards and emissions are controlled and restricted to maintain its region's attainment/unclassified status for the Bernalillo County. The Facility demonstrated compliance with these standards by performing ambient air dispersion modeling analyses.

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
A	General Provisions	Y	Applies as several NSPS's apply to this facility.
F	Standards of Performance for Portland Cement Plants	Y	Subpart F has provisions that are applicable to the following affected facilities in Portland cement plants; Kilns, clinker coolers, raw mill systems, finish mill systems, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems. Per 40 CFR 60.60(b), existing affected facilities constructed or modified before August 17, 1971 are exempt from the requirements of NSPS F.  Emission units which are subject to Subpart F are also subject to the NESHAP, 40 CFR 63, Subpart LLL, and operation of the Facility in accordance with this Subpart LLL shall demonstrate compliance with the provisions of new source performance standards specified in 40 CFR 60, Subpart F pursuant to 63.1356 (See Subpart LLL below).
Y	Standards of Performance for Coal Preparation Plants	Y	Per 40 CFR 60.250, existing affected facilities constructed or modified before October 24, 1974 are exempt from NSPS Y (Standards of Performance for Coal Preparation Plants). The entire Coal System as listed and labeled in Emission Unit Group 5 Process Equipment – Kiln and Coal Systems above in Section 3.1 is subject to Subpart Y as all equipment in this system were installed in 1976 or later. The Emission Unit numbers associated with the equipment are 5-13, 5-14, and 5-15.

<b>NSPS Subpart (40 CFR 60)</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
OOO	Standards of Performance for Non-metallic Mineral Processing Plants	N	Per 40 CFR 60.670(e), existing affected facilities constructed or modified before August 31, 1983 are exempt from the requirements of NSPS OOO and processes constructed after that date are exempt since the devices at the Facility are subject to either 40 CFR 60, Subpart F or 40 CFR 63, Subpart LLL. The Secondary Crusher, installed in 1994, replaced an existing piece of equipment, equal or smaller in size per 40 CFR 60.670(d) having the same function as a crusher that was installed or modified prior to August 31, 1983. The Secondary Crusher's emissions are controlled by Emission Unit #1-3 (Fabric Filter Baghouse). EUs #1-3 are determined to be exempt from Subpart OOO because they are subject to Subpart LLL.
K	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	N	All organic liquid storage tanks currently in service at the Facility have a capacity that is less than 40,000 gallons (151,412 liters). Therefore, 40 CFR Part 60, Subparts K, Ka and Kb are not applicable to the Tijeras facility as identified in the Permit Shield Section 1.1.
Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	N	All organic liquid storage tanks currently in service at the Facility have a capacity that is less than 40,000 gallons (151,412 liters). Therefore, 40 CFR Part 60, Subparts K, Ka and Kb are not applicable to the Tijeras facility as identified in the Permit Shield Section 1.1.
Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, reconstruction, or Modification Commenced After July 23, 1984	N	All organic liquid storage tanks currently in service at the Facility have a capacity that is less than 40,000 gallons (151,412 liters). Therefore, 40 CFR Part 60, Subparts K, Ka and Kb are not applicable to the Tijeras facility as identified in the Permit Shield Section 1.1.

<b>NESHAP Subpart (40 CFR 63)</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
A	General Provisions	Y	Applies if any other subpart applies to a regulated source.

<b>NESHAP Subpart (40 CFR 63)</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
LLL	National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry	Y	The Facility is a Portland cement manufacturing plant that is a major source as defined by 40 CFR 63.2 and is therefore subject to this subpart.
ZZZZ	National Emission Standards for Hazardous Air Pollutants from Reciprocating Internal Combustion Engines (RICE)	Y	The emergency RICE at the Facility were installed before 2006 and are subject to demonstrate that the engines operate as emergency engines pursuant to 40 CFR 63.6585(f)(2). The stationary RICE shall meet the definition of an emergency stationary RICE in 63.6675, which includes operating according to the provisions specified in 63.6640(f).

<b>40 CFR 98 – Mandatory GHG Reporting</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
A	General Provisions	Y	Establishes mandatory greenhouse gas reporting requirements for owners and operators of certain facilities that directly emit GHG as well as for certain fossil fuel suppliers and industrial GHG suppliers. The emissions are reported to the Administrator, USEPA.
H	Cement Production	Y	Applies to Portland cement production facilities that contain a kiln and inline kiln/raw mill. GHG that must be reported are CO <sub>2</sub> , N <sub>2</sub> O, and CH <sub>4</sub> . The emissions are reported to the Administrator, USEPA.

<b>Review of New Sources and Modifications (40 CFR 51, Subpart I)</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
Sections 160 through 164	N/A	Y	Sections 160 through 164 are the general plan requirements for review of minor stationary sources. Although the Facility is not a minor source, but a major stationary source by definition in Subpart I, changes that are made to the Facility that do not trigger the requirements of Sections 165 and 166 must follow the requirements of the delegated agency's New Source Review program.

Review of New Sources and Modifications (40 CFR 51, Subpart I)	Title	Applies (Y/N)	Comments
165	Permit Requirements	N	<p>Section 165 sets forth the plan requirements for major stationary source permitting in non-attainment areas. The Facility is a Portland Cement Manufacturing Plant, which is one of the 28 listed source categories. Therefore, major stationary source status is classified at the 100 tons per year emission threshold for any NSR regulated pollutant.</p> <p>The Facility is considered a major stationary source since the potential to emit of NO<sub>x</sub>, PM<sub>10</sub>, TSP, SO<sub>2</sub>, and CO emissions (NSR regulated pollutants) from the facility exceeds 100 tons per year. If the area under the jurisdiction of the AEHD becomes a non-attainment area, this facility would be subject to requirements of PSD permitting in non-attainment areas.</p>
51.166	Prevention of significant deterioration of air quality	Y	<p>The PSD regulations are contained in 40 CFR 51.166. These regulations specify federally required permitting procedures for a "major stationary source" in an attainment or unclassifiable area.</p> <p>The Facility is a Portland Cement Manufacturing Plant, which is one of the 28 listed source categories. Therefore, major stationary source status is classified at the 100 tons per year emission threshold for any regulated pollutant.</p> <p>The Facility is considered a major stationary source since the potential to emit of NO<sub>x</sub>, PM<sub>10</sub>, TSP, SO<sub>2</sub>, and CO emissions (NSR regulated pollutants) from the Facility exceeds 100 tons per year. Therefore, this Facility is subject to requirements of PSD permitting regulations. The Facility was issued PSD permit #PSD-NM-12 by the EPA on May 9, 1977 for the installation of the #3 Finish Mill project. Since 1978, there have been no major modifications subject to PSD review based on the best available historical records.</p>

40 CFR 64	Title	Applies (Y/N)	Comments
All Sections	Compliance Assurance Monitoring	Y	<p>40 CFR Part 64. Section 64.2 specifies that these monitoring requirements apply to a "pollutant specific emission unit at a major source" if all of the following are satisfied:</p> <ul style="list-style-type: none"> <li>• The unit is subject to an emission limitation or standard;</li> <li>• The unit uses a control device to achieve compliance with any such emission limitation or standard; and</li> <li>• The unit has potential pre-control device (uncontrolled) emissions equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.</li> </ul> <p>The factors which will qualify a facility for CAM plan submittal are: 1) the Facility must be defined as a "major source"; and 2) the units must be subject to an emission limitation or standard (acid rain limitations and standards are not included).</p> <p>The requirements of Compliance Assurance Monitoring (CAM), provided in 40 CFR 64, are applicable to the Particulate Matter (PM<sub>2.5</sub>, PM<sub>10</sub>, and TSP) emission units at the Facility since the potential to emit of uncontrolled annual emissions of Particulate Matter exceed the major source threshold (i.e., &gt; 100 tpy), and the Facility also employs controls (baghouses) to minimize PM emissions. The Facility submitted a CAM plan in the application. The plan is in Attachment 4 of the operating permit, and in the permit under section 5.4.3.</p>

**13. Title V - Insignificant Activities listed in Permit Table 3.**

The Department's List of Insignificant Activities was proposed to EPA on December 15, 1993 and was revised on August 18, 1995 and on January 3, 1996 with EPA approval.

Pursuant to 20.11.42.7 NMAC, the Department may list certain activities located at major source as insignificant based on the activities' actual limitations, emission rates, or production rates and approved by the Administrator of the US Environmental Protection Agency (EPA). The Department may not consider any activity for which applicable requirements apply as insignificant, regardless of whether the activity meets the criteria listed below. The EPA stresses in its "White Paper for Streamlined Development of Part 70 Permit Applications, dated July 10, 1995, (White Paper) that there is "inherent flexibility" for states to determine trivial activities without EPA approval. In addition, the White Paper also reminds the states that the process of determining and listing insignificant activities should be streamlined to minimize paperwork.

**14. Title V/NSR Interface**

Below is the table to cross reference NSR permit (ATC #2197, #2197-M1) conditions with the Title V permit. Only PM emission limits of 40 CFR 63 Subpart LLL are enforced under the NSR permit. The remaining requirements including the emission limits of dioxin/furans, mercury, total hydrocarbons, and hydrochloric acid under 40 CFR 63 Subpart LLL are enforced under Title V permit #0532-RN2.

NSR Condition	Title V Section Number
2.a) In accordance with Table 1 of 40 CFR 63.1343(b)(1), Kiln #1 and Kiln #2 are subject to a PM emission limit of 0.07 lb/ ton clinker during normal operation and must comply with the work practices of 40 CFR §63.1346(g) during startup and shutdown.	5.1 Emission Limits
2.b) In accordance with Table 1 of 40 CFR 63.1343(b)(1), Clinker Cooler #1 and Clinker Cooler #2 are subject to a PM emission limit of 0.07 lb/ton of clinker during normal operation and must comply with the work practices of 40 CFR 63.1348(b)(9) during startup and shutdown.	5.1 Emission Limits
2.c) In accordance with Table 1 of 40 CFR 63.1343(b)(1), Clinker Cooler #1 and Clinker Cooler #2 are subject to a PM emission limit of 0.07 lb/ton of clinker during normal operation and must comply with the work practices of 40 CFR 63.1348(b)(9) during startup and shutdown.	5.1 Emission Limits
<p>2.d) In accordance with this Construction Permit, the permittee will combine the clinker cooler exhaust with the kiln exhaust for energy efficiency purposes and will send the combined exhaust to the PM control device as a single stream. As such the permittee may meet an alternative PM emissions limit. This limit is calculated using the following equation in 40 CFR §63.1343(b)(2):</p> $PM_{alt} \text{ (lb/ton clinker)} = 0.006 \times 1.65 \times (Q_k + Q_c) / 7000$ <p>Where,</p> <ul style="list-style-type: none"> <li>• 0.006 is the PM exhaust concentration (gr/dscf).</li> <li>• 1.65 is the conversion factor of lb feed per lb clinker.</li> <li>• <math>Q_k</math> is the exhaust flow of the kiln (dscf/ton raw feed).</li> <li>• <math>Q_c</math> is the exhaust flow of the clinker cooler (dscf/ton raw feed).</li> <li>• 7000 is the conversion from grains to pounds.</li> </ul>	5.1 Emission Limits
<p>a) The permittee shall maintain files of information suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1) – (3) including all records required for initial notifications and notifications of compliance status under § 3.9 and supporting information for the waiver under §63.8(f)(6).</p> <p>b) Affected source equipped with a continuous monitoring system shall maintain all records required by §63.10(c).</p> <p>c) The permittee must keep records of the daily clinker production rates and kiln feed rates.</p> <p>d) The permittee must keep records of the occurrence and duration of each startup or shutdown.</p> <p>e) The permittee must keep records of the occurrence and duration of each malfunction of operation (<i>i.e.</i>, process equipment) or the air pollution control and monitoring equipment.</p> <p>f) The permittee must keep records of actions taken during periods of malfunction to minimize emissions in accordance with §63.1348(d) including corrective actions to restore malfunctioning process and air</p>	5.9 Recordkeeping

NSR Condition	Title V Section Number
<p>pollution control and monitoring equipment to its normal or usual manner of operation.</p> <p>g) The permittee shall maintain records of the fuels fired for each kiln on a daily basis and records should be made available to the Department upon request.</p> <p>h) The permittee shall maintain records of the number of TDF trucks and amount of tires received at the facility on a daily basis and records should be made available to the Department upon request.</p>	
<p>a) If the permittee elects to submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards for this subpart except for emission standards for THC, the permittee will comply with the requirements of 40 CFR §63.1350(o).</p> <p>b) The permittee must install, operate, calibrate, and maintain the flow rate monitoring system according to the requirements of 40 CFR §63.1350(n).</p> <p>c) For each continuous monitoring system (CMS) using an approved alternate monitoring requirement, a monitoring plan must be developed and submitted as required by 40 CFR §63.1350(p).</p> <p>d) The permittee shall meet the applicable monitoring requirements in accordance with 40 CFR §63.1350.</p> <p>e) The permittee shall determine hourly clinker production in accordance with 40 CFR §63.1350(d).</p>	5.8 Monitoring Requirements
<p>a) The permittee shall report the results of the performance test to the Department before the close of business on the 60th day following the completion of the performance test.</p> <p>b) If actions taken by the permittee during a SSM of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the SSMP specified in §63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a SSM occurred during the reporting period. The SSM report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.</p> <p>c) Any time an action taken by the permittee during a SSM (including actions taken to correct a malfunction) is not consistent with the procedures in the SSMP, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.</p> <p>d) As required by §63.10(e)(2), the Permittee shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by §63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test.</p> <p>e) As required by §63.10(e)(3), the owner or operator of an affected source</p>	5.10 Reporting

NSR Condition	Title V Section Number
<p>equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.</p> <p>f) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the permittee shall submit an excess emissions and continuous monitoring system performance report along with the summary report.</p> <p>g) The semiannual report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions including actions taken to correct a malfunction.</p>	
<p>(the following conditions are in Section 6.)</p> <p>a) Performance tests results shall be documented and reported as specified in 40 CFR §63.1349(a) and (d).</p> <p>b) PM: Performance tests results shall be conducted as specified in 40 CFR §63.1349(b)(1).</p> <p>c) If the permittee undertakes a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR 63 Subpart LLL §63.1348 (c), the source must conduct a performance test.</p>	<p>5.6 Compliance Requirements for Change in Operations and 5.7 Performance Testing Requirements</p>
<p>(the following conditions are in Section 8.)</p> <p>a) The compliance date for the new emission standard requirements under 40 CFR 60 Subpart LLL became effective on September 9, 2015. The facility is defined as an existing source under 40 CFR §63.2.</p>	<p>1. Introduction</p>

### **15. Process Equipment**

Refer to permit 0532-RN2 Table 4. For all significant processes at the Facility.

### **16. Emission Limits in Tables 5 and 5a. of Permit**

The Permittee provided emission data along with applicable references for the emission factors used to derive the emissions at the Facility. The Department reviewed and verified the emissions. The emissions are listed in Tables 5 and 5a, and the associated references are listed in Table 5 as footnotes; reference documents can be found in the Facility's application.

### **17. Public and EPA Response/Concerns**

Public comment period will run from 6/9/2023 to 7/9/2023. The public notice was published on the CABQ.gov website, the Albuquerque Journal, Tijeras Village website; e-mails and certified letters were sent to affected programs and interested parties.

The EPA 45-day comment period will run concurrently with the Public comment period from 6/9/2023 to 7/24/2023. If any significant comments are received during the public comment period, the EPA will have an additional 45 days for review.

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## 1. Data Base Summary

Permit Writer:	Barbara Georgitsis
Permit No. (NSR):	#0043, #0044, #2197-M1, and Registration Certificate #2195
Operating Permit No.:	0532-RN2
AIRS Number:	35/001/00008
SIC Code:	3241 – Portland Cement Manufacturing
Facility Type:	Portland Cement Manufacturing
Company:	GCC Rio Grande, Inc.
Facility:	Tijeras Plant
Type of Permit Action:	Title V Permit Renewal
Application Date:	July 28, 2021 with additional info/amended application received 8/26/2022 and 01/23/2023
Ruled Incomplete:	9/24/2021
Ruled Complete:	October 12, 2022
Application Sent to EPA:	June 9, 2023
Public Notice:	June 9, 2023
Public Comments Due:	July 9, 2023
Public Hearing:	
Proposed Permit to EPA:	June 9, 2023 (concurrent with PN - if comments are received during the PN, EPA will get an additional 45 days period to review)
Permit Due:	July 24, 2023
Permit Issued:	TBD
Permit to EPA:	TBD
Facility Location:	11783 Highway 337, Tijeras, NM 87059
UTME:	373180
UTMN:	3881650
Elevation:	6,300 ft
County:	Bernalillo
Contact Names:	Sarah Vance, VP of Environmental and Samantha Kretz, Environmental Engineer Phone: (505) 286-6026 Email: <a href="mailto:svance@gcc.com">svance@gcc.com</a> ; <a href="mailto:skretz@gcc.com">skretz@gcc.com</a>
Contact Address:	P.O. Box 100 Tijeras, NM 87059

**2. Title V Affected Program Notification**

<b>Affected Program</b>	<b>Distance</b>	<b>Units</b>	<b>Date Letter Sent</b>
Acoma Pueblo	50	miles	
Cochiti Pueblo	45	miles	
Isleta Pueblo	15	miles	
Jemez Pueblo	45	miles	
Kewa Pueblo (formerly Santo Domingo)	37	miles	
Laguna Pueblo	47	miles	
Navajo Nation	>50	miles	
San Felipe Pueblo	28	miles	
Sandia Pueblo	13	miles	
Santa Ana Pueblo	26	miles	
Zia Pueblo	34	miles	
State of New Mexico (NMED)			

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