NPDES PERMIT NO. NM0000116
FACT SHEET

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT

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ISSUING OFFICE

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PREPARED BY

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DATE PREPARED

March 15, 2021

PERMIT ACTION

Proposed revocation and reissuance of the current permit issued with an effective date of June 1, 2016, and an expiration date of May 31, 2021.

RECEIVING WATER – BASIN

Corral Canyon, thence to Tijeras Canyon, thence to Rio Grande– Rio Grande Basin

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FCB	Fecal coliform bacteria
F&WS	United States Fish and Wildlife Service
mg/l	Milligrams per liter (one part per million)
ug/l	Micrograms per litter (one part per billion)
MGD	Million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES Permit Implementation Procedures
NMWQS	New Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
POTW	Publicly owned treatment works
RP	Reasonable potential
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
SWQB	Surface Water Quality Bureau
TDS	Total dissolved solids
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Service
WLA	Wasteload allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plant

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued April 8, 2016, with an effective date of June 1, 2016, and an expiration date of May 31, 2021, are:

A. SSM language has been included.
B. Electronic reporting language has been included.
C. Outfall 004 and all associated requirements and limits have been removed at the request of the permittee. Outfall was never constructed.
D. 30 day average limit for aluminum and copper have been included.
E. Cadmium monitoring and reporting requirements have been included.

II. APPLICANT LOCATION and ACTIVITY

The plant site is located at 11783 State Highway 337, in Bernalillo County, New Mexico, about 10 miles east of Albuquerque. Under Standard Industrial Classification (SIC) Code(s) 3241, the applicant currently manufactures Portland cement. The production processes include procurement of raw materials, raw milling, kilns, clinker cooling/storage, product finishing, product storage and load out. Outfall(s) are listed
below:

Outfall 001: Latitude: 35° 04' 25", Longitude: 106° 23' 51"

III. EFFLUENT CHARACTERISTICS

The Southwestern U.S., including New Mexico continues to be a in a period of extended drought. The most recent sampling event occurred in September of 2015 and prior to that event, two discharge events were sampled in July 2015. Because of limited data and to comply with anti-backsliding laws, the current permit establishes monitoring requirements for several metals based on data submitted in 2015. In addition, because discharge is very infrequent, with the last discharge occuring more than five years ago, it is impossible to have the permittee submit data satisfying SSM because of the inability to obtain a sample to analyze. Copper is reported as total metals. The geometric means, analytical results, expressed in µg/l , of analytical results are listed below:

Parameter	Max	Avg
	(mg/l unless noted)	
Flow (MGD)	0.012	N/A
pH, minimum, standard units (su)	7.9	N/A
pH, maximum, standard units (su)	8.6	N/A
TSS	62.33	N/A
BOD	2.0	N/A
Cadmium*1	0.002	N/A
Copper	0.006	N/A
Lead	ND	N/A
Mercury *2	0.0002	N/A

Nickel *3	0.010	N/A
Selenium	ND	N/A
Silver*4	0.005	N/A
Thallium	ND	N/A
Zinc	ND	N/A
Phosphorous	0.067	N/A
Sulfate	81.00	N/A
Aluminum, total	2.87	N/A
Barium, total	0.083	N/A
Boron, total	ND	N/A
Cobalt, total	ND	N/A
Iron, total	70.0	N/A
Magnesium, total	5.33	N/A
Molybdenum, total	0.015	N/A
Manganese, total	0.014	N/A

*1 Reported as ND, however detection limit used 0.002 mg/l doesn't meet MQL of 1 ug/l. Therefore the detection limit was used as value.
* 2 Reported as ND, however the detection limit used 0.0002 mg/l doesn't meet the MQL of 0.0005 ug/l. Therefore the detection limit was used as value.
*3 Reported as ND, however the detection limit used 0.010 mg/l doesn't meet the MQL of 0.5 ug/l. Therefore the detection limit was used as value.
*4 Reported as ND, however the detection limit used 0.0050 mg/l doesn't meet the MQL of 0.5 ug/l. Therefore the detection limit was used as value.

IV. REGULATORY AUTHORITY/PERMIT ACTION

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water," more commonly known as the "swimmable, fishable" goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs, such as setting wastewater standards for industry, and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its' provisions. Regulations governing the EPA administered NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

The permittee's requests are discussed below. It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a).

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW OF TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations contained in 40 CFR §122.44 requires that NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standards for conventional pollutants.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Regulations found in 40 CFR 411.13 and 411.17 define BAT and BCT effluent limitations, respectively, for cement manufacturing non-leaching process, and 40 CFR 411.37 defines BCT effluent guidelines for materials storage piles runoff from cement manufacturing facilities. Effluent limitations established at Outfall 001 in the current permit regulate overflows from Quarry #1 pond which stores storm runoff and process water effluent from plant areas. The 40 CFR 411.37 ELG of 50 mg/l was the basis for establishment of TSS effluent limitation at Outfall 001. EPA did not establish 40 CFR 411.13 temperature limitation at Outfall 001 because discharges at Outfall 001 would be intermittent and the permit restricted discharges due to catastrophic or chronic precipitation events. The 40 CFR 411.17 TSS mass load limitation might not be applicable at Outfall 001 because the combination of storm runoff and process water. TSS reported maximum daily discharge did exceed the daily max limit of 50 mg/l. As a result, it is proposed in the draft permit that the permittee report 30-day average for TSS.

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits.

Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained or attained.

2. Implementation

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

3. State Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC amended through July 24, 2020). The facility discharges into Corral Canyon, thence into Tijeras Canyon in segment number 20.6.4.105 of the Rio Grande Basin. The designated uses for intermittent stream, designated as segment number 20.6.4.98, are wildlife habitat, livestock watering, marginal warmwater aquatic life, and primary contact. EPA was unable to approve section 20.6.4.98 of the NMWQS because the State did not submit a Use Attainable Assessment (UAA) to support an aquatic life designation that does not meet the CWA §101(a)(2) objective as required by 40 CFR 131.10(j)(1). The CWA sections 101(a)(2) and 303(c) require water quality standards to provide, wherever attainable, water quality for the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water, functions commonly referred to as “fishable/swimmable” uses. EPA's current water quality regulation effectively establishes a rebuttable presumption that “fishable/swimmable” uses are attainable and therefore should apply to a water body unless it can be demonstrated that such uses are not attainable. Prior to submittal of UAA, the designated uses of the downstream perennial stream are applicable to the receiving water. Therefore, chronic aquatic life criteria are appropriate for RP screening.

The permittee is encouraged to contact NMED on conducting a UAA study.

4. Permit Action - Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based). State WQS that are more stringent than effluent limitation guidelines are as follows:

a. TOXICS

The previous permit established limits for total aluminum and total copper. These limits will be maintained. In accordance with 40 CFR 122.45(c), total recoverable metal concentration must be established as effluent limitations. The exceptions listed in that sub-section refers to technology-

based, not WQ-based, criteria. The permittee must report total or total recoverable metal concentrations for compliance purpose. Because State WQS for aluminum and copper were dissolved-based criteria, the linear partition coefficient for copper to convert dissolved copper concentration to total concentration is used to calculate the maximum daily effluent limitation. However, because a partition coefficient for aluminum is not available, the effluent limitation for total aluminum is based on the dissolved criteria. Three samples with hardness data were submitted and the average of these samples 187 mg/L was used for RP screening purposes. The permit proposes to continue to include monitoring for hardness (CaCO3) for later RP analysis.

1. Aluminum

Aluminum did show RP, however because the prescribed daily and 30 day average limit concentration (3.2 mg/l) is less stringent than the limit in the previous permit, the previous limit will be maintained at the request of NMED and to comply with antibacksliding requirements. Permit limit of 0.75 mg/l daily max was previously established for aluminum based on water quality standards. It is proposed that the permit limit of 0.75 mg/l be applied to the 30 day average. Because aluminum exhibited RP, daily and 30 day loadings of 0.78 lbs/day will be established in the draft permit.

2. Copper

Copper did not show RP, however permit limit of .0011 mg/l daily max was previously established for copper based on water quality standards and will be maintained in the draft permit. It is proposed that this limit be applied to the 30 day average as well. Because data is limited and discharge is infrequent, dissolved copper monitoring requirements will be maintained inthe draft permit.

3. Cadmium

The permittee reported a non-detect result for Cadmium, however the testing submitted by the permittee did not satisfy SSM. As previously described the permittee has not discharged in over five years and is unable to obtain a sample to analyze at the appropriate detection level. As a result, the detection limit used by the permittee .002 mg/l was used as the effluent concentration value in RP analysis. Using this value, cadmium showed RP and as a result limits were suggested. Only one sample result was provided as a result of a drought. Because data is limited and based on presumptive values, Cadmium monitoring and reporting requirements will be added to the draft permit to obtain more current data for later RP analysis. Limits will not be prescribed.

b. Oil & Grease

Effluent data demonstrated that the discharge has no RP to contribute to or cause exceedance of current effluent limitation. Also, the operation has no RP to generate oil & grease. EPA proposes to continue to maintain the oil and grease narrative “no visible sheen” limitation.

D. MONITORING FREQUENCY FOR LIMITED PARAMETERS

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). Sample frequency is based on the March, 2012, NMIP. Based on the discharge frequency of the facility, the NMIP requires that pH has daily monitoring frequency and all other limited parameters have weekly monitoring frequency requirements. Flow is proposed to be monitored daily by estimate. Grab sample type is proposed because a discharge would be the overflow from a retention pond.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP, March 2012. Table 11 of Section V of the NMIP outlines the type of WET testing for different types of discharges. The 48-hour WET testing for toxicity will be maintained for the proposed permit term. The frequency is 1/year. The CD of the discharge was previously determined to be 100%. The test species shall be *Daphnia pulex*.

During the period, beginning at the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge from Outfall 001 to the Corral Canyon. WET testing is established at Outfall 001. Because there was no data to analyze WET RP therefore conditions from the last permit will be carried over. WET will be performed at first discharge. A grab sample type is established because if a discharge occurs, it comes from a retention pond which provides a relative similarity of effluent characteristics and EPA does not expect such a discharge will last long.

VI. FACILITY OPERATIONAL PRACTICES

A. BEST MANAGEMENT PRACTICES

1. The operator shall take reasonable steps to maintain maximum capacities of retention ponds to contain the process wastewaters and storm water runoffs from manufacturing areas.

2. Discharges are restricted to overflows from the retention pond due to catastrophic or chronic precipitation events.

3. Discharges of storm water runoff from access roads in undisturbed areas shall be covered under the NPDES Multi-Sector Storm Water Permit.

4. If a discharge of storm runoffs from mining areas is necessary, the discharge must comply with effluent limitations established at Outfall 001.

B. OPERATION AND REPORTING

The applicant is required to operate the treatment facility at maximum efficiency at all times; to monitor the facility's discharge on a regular basis; and report the results quarterly. The

monitoring results will be available to the public.

Electronic Reporting Rule

The EPA published the electronic reporting rule in the federal register (80 FR 64063) on October 22, 2015. The rule became effective on December 21, 2015. One year after the effective date of the final rule, NPDES regulated entities that are required to submit DMRs (including majors and non-majors, individually permitted facilities and facilities covered by general permits) must do so electronically. All DMRs shall be electronically reported effective December 21, 2016, per 40 CFR 127.16. If you are submitting on paper before December 21, 2016, you must report on the Discharge Monitoring Report (DMR) Form EPA. No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and other agencies as required. (See Part III.D.IV of the permit.). To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR@epa.gov in-box for further instructions. PA and authorized NPDES programs will begin electronically receiving these DMRs from all DMR filers and start sharing these data with each other.

Sufficiently Sensitive Analytical Methods (SSM)

The permittee must use sufficiently sensitive EPA-approved analytical methods (SSM) (under 40 CFR part 136 or required under 40 CFR chapter I, subchapters N or O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the approved methods are not sufficiently sensitive to the limits, the most SSM with the lowest method detection limit (MDL) must be used as defined under 40 CFR 122.44(i)(1)(iv)(A). If no analytical laboratory is able to perform a test satisfying the SSM in the region, the most SSM with the lowest MDL must be used after adequate demonstrations by the permittee and EPA approval.

VII. 303(d) LIST

The Tijeras Arroyo (Canyon), a tributary to Rio Grande, is listed as being impaired for benthic-macroinvertebrate bioassessment and nutrient/eutrophication biological indicators and the probable cause include channelization, drought-related impacts, on site treatment systems, rangeland grazing, wastes from pets and unknown sources. EPA does not consider that the discharger is a probable contributor to the impairment because of the nature of operation and the frequency of discharges. No additional pollutants are established to address the stream impairment. A reopener language in the permit allows additional permit conditions if warranted by future changes and/or new TMDLs.

VIII. ANTIDEGRADATION

The NMAC, Section 20.6.4.8 “Antidegradation Policy and Implementation Plan” sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are

developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements and the limits are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water, NMAC Section 20.6.4.8.A.2.

IX. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR §122.44(l)(i)(A), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. Previous permit limits have been maintained in the permit, in addition, additional limits and monitoring has been required.

X. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action, five species in Bernalillo County are listed as endangered or threatened. The New Mexico meadow jumping mouse (*Mustela nigripesZapus hudsonius luteus*), Rio Grande silvery minnow (*Hybognathus amarus*), and the Southwestern willow flycatcher (*Empidonax traillii extimus*) are listed as endangered. The Mexican spotted owl (*Strix occidentalis lucida*) and the Yellow-billed Cuckoo (*Coccyzus americanus*) are listed as threatened. The American bald eagle (*Haliaeetus leucocephalus*) was previously listed as endangered. The USFWS removed the American bald eagle in the lower 48 states from the Federal List of Endangered and Threatened Wildlife Federal Register, July 9, 2007, (Volume 72, Number 130).

EPA evaluated the effects of listed species by reviewing a report titled “Threatened and Endangered Species Survey of Kirtland Air Force Base (KAFB), New Mexico” dated April 1995, when EPA issued the permit to the GCC Rio Grande in 2000. Mexican spotted owl and southwestern willow flycatcher were not observed in the area and the discharge would be much diluted by runoff if it ever reaches Rio Grande to cause any effect on Rio Grande silvery minnow. In addition, USFWS defines the site as not having any critical habitat for any of the aforementioned endangered and threatened species. Therefore, EPA has determined that this reissuance of this permit will have “*no effect*” on listed threatened and endangered species nor will it adversely modify designated critical habitat.

XI. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites as no construction activities are planned.

XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if State Water Quality

Standards are promulgated or revised. In addition, if the State establishes a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

XIII. VARIANCE REQUESTS

No variance requests have been received.

XIV. CERTIFICATION

The permit is in the process of certification by the State Agency following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

XV. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XVI. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Application Form 2A received December 2, 2020

B. 40 CFR CITATIONS

Citations to 40 CFR are as of January 7, 2021

C. Endangered Species References

http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action

D. STATE OF NEW MEXICO REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, July 24, 2020.

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, March 2012.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2018-2020.