

**NPDES PERMIT NO. NM0028100
FACT SHEET**

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

APPLICANT

Rio Grande Resources Corporation
P.O. Box 1150
Grants, NM 87020

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

PREPARED BY

Isaac Chen
Environmental Engineer
NPDES Permits & Technical Branch (6WQ-PP)
Water Quality Protection Division
VOICE: 214-665-7364
FAX: 214-665-2191
EMAIL: chen.isaac@epa.gov

DATE PREPARED

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PERMIT ACTION

Proposed reissuance of the current National Pollutant Discharge Elimination System (NPDES) permit issued July 28, 2010, with an effective date of August 1, 2010 and an expiration date of July 31, 2015.

RECEIVING WATER – BASIN

An unnamed tributary, thence to San Miguel Creek, thence to Arroyo Chico, thence to Rio Puerco and thence to the Rio Grande in Segment No. 20.6.4.105 of the 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 liter (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
SQL	Minimum quantification level
O&G	Oil and grease
POTW	Publically 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 July 28, 2010, with an effective date of August 1, 2010 and an expiration date of July 31, 2015, are:

1. Change whole effluent toxicity (WET) monitoring requirements from acute testing to chronic testing based on WET requirements for discharge to intermittent streams; and
2. Change water quality-based effluent limitations based on water quality standards designated for intermittent streams.

II. APPLICANT LOCATION and ACTIVITY

Under the Standard Industrial Classification (SIC) Code(s) 1094, the applicant operates the Mt. Taylor Mine- an underground mine currently on standby with no mine drainage discharge. The applicant may discharge mine water and treated domestic wastewater during the period of mining operation. The plant site is located in Cibola County, New Mexico. Potential mining water, storm runoff, and treated sewage will discharge to an unnamed tributary, thence to San Miguel Creek, thence to Arroyo Chico, thence to Rio Puerco and thence to the Rio Grande in Segment No. 20.6.4.105 of the Rio Grande Basin. The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC, amended through June 5, 2013).

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) is described in the EPA Permit Application Form 2C. The facility submitted information in its application that describes the nature of the permitted discharge. The facility is not operating and therefore no mine water has been discharged since June of 1990. No effluent characteristics are available.

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 current permit was issued July 28, 2010, with an effective date of August 1, 2010 and an expiration date of July 31, 2015. The permit renewal application was received January 27, 2015 and was determined to be administratively complete on March 2, 2015. It is proposed that the current permit be reissued for a 5-year term following regulations promulgated at 40 CFR 122.46(a). The facility also has coverage under EPA's Multi-sector General Permit for storm water discharges associated with industrial activity (tracking number NMR05GB27).

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 standard for the discharge from existing industrial point sources of 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.

Outfall 001- For mine drainage from uranium mines, 40 CFR 440.32 defines the BPT and 40 CFR 440.33 defines the BAT. The BCT is equivalent to BPT for the conventional pollutants. Subsequently, effluent guidelines limitations for this category are:

PARAMETER	DAILY AVG. mg/l	DAILY MAX. mg/l
Total Suspended Solids	20	30
Chemical Oxygen Demand	100	125
Ra226 (dissolved)	3 pCi/l	10 pCi/l
Total Ra226	10 pCi/l	30 pCi/l
Total Uranium	2	4
Total Zinc	0.5	1.0
pH	Within the range of 6.0 to 9.0 s.u.	

The same effluent guideline limits were established in the existing permit.

Outfall 01A- Effluent limitations established in the current permit are adopted by this proposed permit. Effluent limitations for total suspended solids (TSS), biochemical oxygen demands (BOD), and pH are BCT limits for the secondary treatment under 40 CFR 133.102. The same limits were established in the existing permit.

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 June 5, 2013). The State of New Mexico has designated uses of livestock watering, wildlife habitat, limited aquatic life, and secondary contact for ephemeral water, in Water

Quality Segment No. 20.6.4.97; and uses of livestock watering, wildlife habitat, marginal warmwater aquatic life, and primary contact for intermittent water, in Segment No. 20.6.4.98. 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. Because the State has not had an approved 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), designated uses for intermittent water and associated WQS are applied to the receiving water.

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).

Effluent data is not available because there has been no discharge due to inactivity of mining since June of 1990. When EPA reissued the permit in 2000, EPA screened data from 1988 and 1993 against the State WQS as amended through January 23, 1995 for RP and based on the RP, EPA established WQ-based effluent limitations. When EPA reissued the permit in 2005, EPA revised effluent limitations based on the State WQS as amended through October 11, 2002. Because the facility has not discharged since 1990 so no new effluent data could be used for RP screening against the current State WQS. When EPA reissued the permit in 2007, EPA determined not to use 1988 and 1993 data for a RP screening against the WQS as amended through August 1, 2007, rather EPA proposed the permittee to submit representative discharge characteristics to EPA at least 90 days prior to any discharge so that EPA might reopen the permit and develop effluent limitations based on more representative effluent characteristics. Because representative effluent data are not available, the facility may need to provide additional treatment to meet the existing permit conditions, in order to use actual effluent data for RP screening purposes, EPA proposes the permittee to submit representative discharge characteristics to EPA no later than 90 days after the first discharge. For water quality-based effluent limitations listed in the current permit, EPA proposes to update effluent limitations based on the most stringent designated uses for stream segment 20.6.4.98. EPA used a default hardness of 100 mg/l to calculate hardness-dependent criteria, and used the 30-day average TSS limitation, 20 mg/l, to calculate dissolved metal-to-total metal conversion factors. To reduce both financial, operation and reporting burdens, EPA also proposes to change the monitoring frequency for water quality-based pollutants from 1/day to 1/month.

a. E. Coli

Because the facility would discharge treated domestic waste when it resumes operation and it has a RP to contribute bacterial via Outfall 001, monitoring requirements and effluent limitations for bacteria, E. coli, were established in the existing permit. In accordance with 20.6.4.900D, the monthly geometric mean of E. coli of 126 cfu/100 ml and single sample of 410 cfu/100 ml apply to the primary contact use. Until a UAA is submitted to support that secondary contact is

appropriate designated use for the receiving stream, effluent limitations for E. coli for primary contact use will be established in the permit. Because effluent limitations for E. coli are water quality-based limitations, the sampling point is located at Outfall 001.

b. pH

In accordance with 20.6.4.900D and H(6), the pH range 6.6 to 9.0 s.u. applies to the primary contact and marginal warmwater uses. Effluent limitations for pH based on the primary contact and marginal warmwater aquatic life uses are established in the permit. Because the WQ-based pH range is more stringent than the technology-based range, the WQ-based pH is retained in the permit.

c. Toxics

The CWA in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criteria, the permit must contain an effluent limit for that pollutant.

As stated above, the facility has not discharged since 1990. Effluent limitations established in the previous permit were based on historic data and might not be representative anymore. EPA proposes to retain those limitations without change until more representative effluent characteristics are available for future RP screening.

Because standards for certain metals are hardness-dependent and the potential discharge is to a dry arroyo, the permittee is also required to monitor the hardness of the effluent so EPA may determine site-specific standards and RP.

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 in the existing permit was based on the November, 2009, NMIP. Proposed monitoring frequencies were based on the assumption that the discharge would be continuous during normal mining operation. EPA proposes not to change monitoring frequencies in the existing permit. Monitoring frequency for flow at Outfall 001 is continuous record and at internal Outfall 01A is 1/day. Monitoring for all other parameters is 1/day when discharges occur. Monitoring of mass load is not established because discharge flow data is not available.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

In the existing permit, a 48-hour acute WET testing requirement for *Daphnia pulex* once per 3 months was established. The acute testing requirement applies to discharges to an ephemeral water body. For discharges to intermittent water body, chronic tests for *Ceriodaphnia dubia* and

Pimephales promelas are required. Because WET testing is a monitoring and reporting, instead of effluent limitations, requirements, EPA proposes to replace the acute with chronic WET testing requirement to the permit.

VI. 303(d) LIST

The receiving stream, an unnamed tributary to San Miguel Creek and San Miguel Creek are not listed for impairment. Therefore, no other conditions are proposed to address impairment.

VII. 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.

VIII. 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. No changes of effluent limitations are proposed for the permit renewal.

IX. ENDANGERED SPECIES CONSIDERATIONS

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. Although the mining site is located in Cibola County, the point of discharge which is about 4.25 miles north of the mining site is located in McKinley County. According to the most recent county listing of species for the State of New Mexico, the following species may be present in the McKinley County where the proposed NPDES discharge occurs: southwestern willow flycatcher, Mexican spotted owl, yellow-billed cuckoos, Zuni bluehead sucker, and Zuni fleabane.

Mexican spotted owl and southwestern willow flycatcher: Research of available material finds that the primary cause for the population decreases leading to threatened or endangered status of the avian species, the Mexican spotted owl and Southwestern willow flycatcher, is destruction of habitat. Issuance of this permit is found to have no impact on the habitat of the listed species, since no construction is authorized by this permitting action.

No pollutants are identified by the permittee-submitted application at levels which might affect species habitat or prey species. Catastrophic fires and elimination of riparian habitat also were identified as threats to species habitat, particularly that of the Mexican spotted owl and the southwestern willow flycatcher. The National Pollution Discharge Elimination System (NPDES) program regulates discharge of pollutants and does not regulate forest management practices and agricultural practices, which contribute to catastrophic fires and elimination of riparian habitat, and thus, species habitat. Reissuance of this permit is found to have no impact on the habitats of these species. The critical habitat of Mexican spotted owl around Mt. Taylor several miles south of and not in the mining area. The point of discharge is further north of the mining area.

Yellow-billed cuckoo: Yellow-billed Cuckoos use wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. In the Midwest, look for cuckoos in shrublands of mixed willow and dogwood, and in dense stands of small trees such as American elm. In the Southwest, Yellow-Billed Cuckoos are rare breeders in riparian woodlands of willows, cottonwoods and dense stands of mesquite to breed. Yellow-billed Cuckoo populations declined by 1.6 percent per year between 1966 and 2010, resulting in a cumulative decline of 51 percent, according to the North American Breeding Bird Survey. In the West, much of the Yellow-Billed Cuckoo's riparian habitat has been converted to farmland and housing, leading to significant population declines and the possible extirpation of cuckoos from British Columbia, Washington, Oregon, and Nevada. As long-distance, nocturnal migrants, Yellow-Billed Cuckoos are vulnerable to collisions with tall buildings, cell towers, radio antennas, wind turbines, and other structures. The reissuance of the permit does not authorize construction activities which may result in destruction of habitat or cause collision of species with any building structures.

Zuni bluehead sucker: The Zuni bluehead sucker is a small, slender fish with a bluish head, silvery tan to dark green back, and yellowish to silvery white sides and abdomen. The fish grows between 3.5 to 8 inches. Males exhibit a bright red band running laterally along each side during the spawning season. The fish uses stream reaches with clean, perennial water flowing over hard substrate, such as bedrock. It feeds primarily on algae it scrapes from rocks, rubble, and gravel on the streambed. It appears to avoid silt-laden habitat, such as beaver ponds, which represent poor or marginal habitat. The current range of the Zuni bluehead sucker has been reduced to less than 10 percent of its historic distribution. The fish is now restricted to three semi-isolated populations (totaling just 3 stream miles) in the upper Rio Nutria drainage in west-central New Mexico, and scattered areas along 27 miles of the Kinlichee (a.k.a. "Kin Li Chee") watershed in Arizona. The fish continues to face a host of threats, including habitat modification and stream siltation caused by logging, livestock grazing, road construction, residential development and reservoirs; reduced or discontinuous stream flow from water withdrawal for irrigation; application of pesticides; and competition with and predation by exotic fishes and crayfish. Reissuance of the permit will not result in any adverse impact on the species and EPA determines that this permitting action has no effect on the species.

Zuni fleabane: The Zuni fleabane is found on barren detrital clay hillsides with soils derived from shales of the Chinle or Baca formations (often seleniferous); most often on north or east-facing slopes in open pinyon-juniper woodlands at 7,300-8,000 ft. It never occurs on southern

slopes. The primary threat to Zuni fleabane is disturbance due to habitat destruction and heavy equipment resulting in surface disturbances. The discharge from this facility will not have any impact on this species.

EPA determines that the reissuance of Permit No. NM0028100 will have “no effect” on threatened and endangered species nor will adversely modify designated critical habitat.

X. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

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

XI. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if State Water Quality Standards are promulgated or revised. The permit may also be reopened if new information becomes available. Modification of the permit is subject to the provisions of 40 CFR §124.5.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. 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 for review and comments. A draft permit and this fact sheet will be sent to the Pueblo

XIV. FINAL DETERMINATION

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

XV. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. PERMIT(S)

NPDES Permit No. NM0028100 issued July 28, 2010, with an effective date of August 1, 2010, and an expiration date of July 31, 2015.

B. APPLICATION(S)

EPA Application Consolidated Form 2C received by EPA on January 27, 2015.

C. STATE WATER QUALITY REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Waters, (20.6.4 NMAC, amended through June 5, 2013).

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