

**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

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DATE PREPARED

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PERMIT ACTION

Proposed reissuance of the current National Pollutant Discharge Elimination System (NPDES) permit issued March 30, 2005, with an effective date of April 1, 2005 and an expiration date of March 31, 2010.

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 March 30, 2005, with an effective date of April 1, 2005 and an expiration date of March 31, 2010, are:

1. Change effluent limitations and monitoring requirements for fecal coliform to E. coli;
2. Change pH range; and
3. Add WET testing requirement.

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 August 1, 2007).

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 March 30, 2005, with an effective date of April 1, 2005 and an expiration date of March 31, 2010. The permit renewal application was received September 16, 2009 and was determined to be administratively complete on October 1, 2009. It is proposed that the current permit be reissued for a 5-year term following regulations promulgated at 40 CFR 122.46(a). The existing permit is administratively continued until this permit is issued. The facility also has coverage, effective January 14, 2009, 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 2005 issued 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 current 2005 issued 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 August 1, 2007). 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. EPA was unable to approve section 20.6.4.97 of the NM WQS 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.

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. The permittee indicates in the application that additional treatment may need to meet the current effluent limitations if the facility resumes the mining operation. Because the facility needs to provide additional treatment that will result in better water quality of discharge to meet the existing permit conditions, EPA proposes that the permittee submits representative discharge characteristics to EPA at least 90 days prior to any discharge. The permittee is also advised to work with NMED to conduct site-specific UAA. EPA determines not to use 1988 and 1993 data for a RP screening against the new WQS as amended through August 1, 2007, rather EPA may reopen the permit and establish effluent limitations based on RP screening analyzed by new effluent characteristics.

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, are proposed based on the current WQS. 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 draft permit proposes to move the sampling point from Internal Outfall 01A to Outfall 001.

b. pH

In accordance with 20.6.4.900D, the pH range 6.6 to 9.0 s.u. applies 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 pH based on the primary contact use will be established in the permit. Because the WQ-based pH range is more stringent than the technology-based range, the WQ-based pH is proposed in the permit. If a UAA is conducted and approved in the future, the pH limit may be modified accordingly.

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 is based on the November, 2009, NMIP. Proposed monitoring frequencies are based on the assumption that the discharge will be continuous during normal mining operation. 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

Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP, July 2009. Table 11 of Section V of the NMIP outlines the type of WET testing for different types of discharges. WET testing requirement was not established in the currently expired permit. 48-hour acute WET testing for toxicity once per 3 months will be established for the proposed permit term. The CD of the discharge will be 100%. The test species shall be *Daphnia pulex*.

VI. 303(d) LIST

The receiving stream, an unnamed tributary to San Miguel Creek and San Miguel Creek are not listed for impairment. Therefore, there is 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. Effluent limitations and monitoring requirements for fecal coliform are replaced with E. coli in accordance with the most recent State WQS.

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: Black-footed ferret (*Mustela nigripes*), Southwestern willow flycatcher (*Empidonax traillii extimus*), Bald eagle (*Haliaeetus leucocephalus*), Mexican spotted owl (*Strix occidentalis lucida*), and Zuni fleabane (*Erigeron rhizomatus*).

Black-footed ferret was extirpated and bald eagle was delisted. The discharge of mining water is unlikely to affect Zuni fleabane. Based on information provided by the permittee, a qualified biologist had evaluated information available and determined that no plant or wildlife species listed as endangered or threatened species are known to occur in proximity to the mining area. 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.

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 prior to the publication of that notice.

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 March 30, 2005, with an effective date of April 1, 2005, and an expiration date of March 31, 2010.

B. APPLICATION(S)

EPA Application Consolidated Form 2C received by EPA on September 16, 2009.
Supplemental information e-mail received by EPA on November 5, 2009.

C. STATE WATER QUALITY REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Waters, (20.6.4 NMAC, amended through August 1, 2007).

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, November 2009.