

**NPDES PERMIT NO. NM0029581
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 23, 2005, with an effective date of May 1, 2005 and an expiration date of April 30, 2010.

RECEIVING WATER – BASIN

Mulatto Canyon Arroyo 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)
µg/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 23, 2005, with an effective date of May 1, 2005 and an expiration date of April 30, 2010, are:

1. Add effluent characteristics sampling requirement for mine drainage;
2. Update outfall numbers and locations;
3. Delete effluent limitations for discharges from reclamation areas;
4. Add sediment control plan requirements for discharges from reclamation areas;
5. Change pH range limitation from 6.0 – 9.0 to 6.6 – 9.0;
6. Delete monitoring and limitation requirements of fecal coliform;
7. Add monitoring and limitation requirements of E. coli; and
8. Add Whole Effluent Toxicity (WET) testing requirement for mine drainage discharge.

II. APPLICANT LOCATION and ACTIVITY

Under Standard Industrial Classification (SIC) Codes 1221 the applicant currently conducts surface coal and lignite mining activities. The mining site is located near San Mateo, McKinley County, New Mexico. Discharges are to Mulatto Canyon Arroyo which is an ephemeral arroyo. The Mulatto Canyon Arroyo drains into San Isidro Arroyo, which joins Arroyo Chico, tributary of the Rio Puerco. The Rio Puerco flows southeastward to Segment 20.6.4.105 of the Rio Grande Basin. Information in the record indicates that the facility is 10 miles from the nearest town (a village of 200) and about 115 miles from the nearest perennial water.

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

The facility submitted information in its application that describes the nature of the permitted discharge. The facility indicated in the application that intermittent discharges occurred at each outfalls. However, the facility did not collect samples for effluent characteristics due to negligible amounts of discharges. In order to obtain effluent characteristics for future RP screen against applicable NMWQS, the draft permit proposes to include effluent characteristics sampling.

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 23, 2005, with an effective date of May 1, 2005 and an expiration date of April 30, 2010. The permit renewal application was received October 21, 2009 and was determined to be administratively complete on November 4, 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.

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.

The draft permit establishes technology-based effluent limitations as follows:

The BOD and TSS effluent limitations for discharges from sanitary lagoon at Outfall 034 are based on the secondary treatment regulation and the expired permit conditions. Limitations are daily maximum of 45 mg/l and monthly average of 30 mg/l for both BOD and TSS. Outfall 034A in the expired permit is deleted from the proposed draft permit renewal and not authorized to discharge sanitary waste to other pond because this outfall is not included in the application.

Information in the record indicated that the mine drainage had a pH greater than 6 and total iron concentration of less than 10 mg/l. Therefore, discharges of mine drainage from this mine facility are subject to alkaline mine drainage sub-category in accordance with 40 CFR 434.11.

The BPT and the BAT based effluent limitations of TSS, total iron, and pH are established for discharges from coal preparation plant associated areas in accordance with the provisions of 40 CFR 434.22 and 434.23. The same requirements are established for mine drainage discharges, including drainage from disturbed and mining areas, in accordance with the provisions of 40 CFR 434.42 and 434.43. The alternate effluent limitations for discharges caused by precipitation within any 24 hour period less than or equal to the 10-year, 24-hour precipitation or snowmelt event are also established for pH and settleable solids, in accordance with 40 CFR 434.63(a). Effluent limitation of pH for discharges caused by precipitation greater than the 10-year, 24-hour event established in the expired permit are also retained from the expired permit (40 CFR 434.63(d)).

The BPT and the BAT based effluent limitations of settleable solids and pH established for discharges from reclamation areas in the expired permit were replaced with sediment control plan as required in 40 CFR 434.82 and 434.83 for western alkaline coal mine. No monitoring requirements or effluent limitations were established for drainage from undisturbed areas because undisturbed areas are not considered areas associated with industrial activities.

See attached draft permit for proposed technology based effluent limitations.

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).

a. E. Coli

Because the facility would discharge treated domestic waste and it has a RP to contribute bacterial via Outfall 034, 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. Effluent limitations and monitoring requirements for fecal coliform in the expired permit are removed in accordance with the NMWQS update.

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.

Because chlorine or chlorine-contained product is used in sanitary waste treatment process, effluent limitation and monitoring requirement are retained from the expired permit. As stated above, no representative effluent characteristics are available for RP screening. The draft permit proposes at least one sample of mine drainage to be collected from an active mining area, a reclamation area, and an undisturbed area, respectively, to be used for future RP analysis. 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 1/day for pH and 1/week for all other parameters. Monitoring of mass load is not established because discharge is not continued.

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. A 48-hour acute WET testing for toxicity once per year is 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, Mulatto Canyon Arroyo is 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. Technology-based effluent limitations for discharges from reclamation areas (subpart E – post mine areas) are replaced with Sediment Control Plan under subpart H – western alkaline coal mining. And, the less stringent alternate ELG for discharges caused by the 10-year, 24-hour storm event has been determined as technical error and deleted from the proposed permit term.

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. 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*), Mexican spotted owl (*Strix occidentalis lucida*), and Zuni fleabane (*Erigeron rhizomatus*).

Black-footed ferret was extirpated. The discharge of mining water is unlikely to affect Zuni fleabane. The Southwestern willow flycatcher is a riparian-dependent species and the Mexican spotted owl occurs in uneven-aged stands with a high canopy closure, high tree density, and a sloped terrain. Such habitats do not exist at this facility. According to the environmental review conducted in 1986, by EPA, the Lee Ranch facility is located in a broad, flat alluvial plain with very little defined drainage. The climate is semi-arid. On-site vegetation consists of mainly desert grassland plant communities, predominantly short grasses and shrub-grasslands. No permanent surface water bodies, such as wetlands, are at or near the site. Therefore, the site would not provide suitable habitats for the Southwestern willow flycatcher or the Mexican spotted owl. The re-issuance of the proposed permit would have no effect on federally listed endangered or threatened species.

In 1986, EPA consulted with U.S. Fish and Wildlife Service (USFWS) on the reissuance of the permit. As a result of that consultation, USFWS determined that no listed species would be affected by the proposed action. USFWS also indicated that a discharge at this facility, should it occur, would have minimal impact upon fish and wildlife resources of New Mexico. Field surveys designed to locate rare, threatened, or endangered plant species and critical floral habitats were conducted within the permit area between 1982 and 1989 and in the proposed mine expansion area in 1997. These field surveys were performed by METRIC Corporation's specialists. The surveys did not reveal the presence of any rare, threatened, or endangered plant species or critical floral habitats within the original permit area.

Based on the information available to EPA, EPA determines that the reissuance of Permit No. NM0029581 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. NM0029581 issued March 23, 2005, with an effective date of May 1, 2005, and an expiration date of April 30, 2010.

B. APPLICATION(S)

EPA Application Consolidated Form 2C received by EPA on October 21, 2009.
Supplemental information e-mail received by EPA on November 4, 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.