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 September 8, 2010, with an effective date of November 1, 2010 and an expiration date of October 31, 2015.

RECEIVING WATER – BASIN

Mulatto Canyon Arroyo in Segment No. 20.6.4.97 of the Rio Grande Basin.

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued September 8, 2010, with an effective date of November 1, 2010 and an expiration date of October 31, 2015, are:

1. Reassign outfall numbers in accordance with information provided in the application;
2. Delete internal Outfall 034A as well as associated effluent limitations with discharge of sanitary waste;
3. Revise requirements for Sediment Control Plan.

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. As described in the application, discharges are to Mulatto Canyon Arroyo which is an ephemeral arroyo. The Mulatto Canyon Arroyo is designated as Segment 20.6.4.97 Ephemeral Waters. Designated uses for the receiving stream are livestock watering, wildlife habitat, limited aquatic life and secondary contact. The NMED contests that the permittee's map in application shows not all discharge are directly to Mulatto Canyon Arroyo and some discharges are to waters which would be subject to 20.6.4.98 NMAC. Because the permittee did not provide detailed descriptions of potential receiving waters other than Mulatto Canyon Arroyo and EPA does not have enough information to determine whether those waters are natural arroyos or man-made ditches to convey potential discharges to Mulatto Canyon Arroyo, EPA has included water quality-based limitations for both 20.6.4.97 and 20.6.4.98 NMAC waters, respectively.

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

The facility submitted information in its application that describes the nature of the permitted discharge. The facility reported effluent characteristics from three outfalls, Outfall 002 process plant area sediment pond, Outfall 080 coal mine drainage sediment pond, and Outfall 092 coal mine drainage sediment pond. There were no discharges during past permit term. Samples were collected from ponded water within the sediment basins which contain mine runoff from rainfall and snowmelt events. The permittee considered those ponded water samples were representative of discharge quality if discharges of overflow occur. Values for certain conventional pollutants are listed as below.

	Outfall 002	Outfall 080	Outfall 092
BOD, mg/l	< 5	11	< 5
COD, mg/l	20	90	34
TOC, mg/l	2.61	33.4	5.94

TSS, mg/l	4.0	16	8.0
pH, s.u.	8.62	7.45	8.53
Hardness, mg/l	310	500	90

Because samples were not collected directly from discharges, although ponded water samples during or right after storm events may be representative of discharges, the permit proposes to require effluent characterization study for the first discharge from each pond. If the permittee believes that discharges from certain areas (i.e., process plant areas or mine drainage areas) are substantially identical, based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas, the permittee may take one representative sample and report the results. In such a case, the results from the representative sample apply to all substantially identical outfalls. EPA will use the representative data for reasonable potential (RP) analysis and establish applicable effluent limitations, if RP exist, to all substantially similar outfalls. It is a violation of the permit if the facility operator fails to collect effluent characterization samples.

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 September 8, 2010, with an effective date of November 1, 2010 and an expiration date of October 31, 2015. The permit renewal application was received April 7, 2015, and was determined to be administratively complete on April 28, 2015, 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 current 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 previously designated Outfall 034A from sanitary lagoon in the expired permit is deleted from the proposed draft permit renewal and therefore the discharge of sanitary waste to any sediment or retention pond is not authorized 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. 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 or snowmelt event are also established in accordance with 40 CFR 434.63. 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 for discharges from reclamation areas under the western alkaline coal mine subcategory in accordance with 40 CFR 434.82 and 434.83, require the operator to submit

a site-specific sediment control plan which is designed to prevent an increase in average annual sediment yield from pre-mined, undisturbed conditions. No monitoring requirements or effluent limitations were established for drainage from undisturbed areas because undisturbed areas are not considered areas associated with industrial activities.

The administratively continued permit Part II, Subpart E Sediment Control Plan states "This subpart applies to any outfall that 100% of its associated drainage is at western alkaline coal mining operations from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas, and re-graded areas where the discharge,…" The permittee requested a similar condition to be included in the renewed permit. When EPA renewed the permit in 2010, the permittee requested to retain the numeric effluent limitations based on the Post-Mining Area category for discharges from reclamation areas at that moment. The permittee wanted to first evaluate its best management practices (BMPs) on reclamation areas before it developed an appropriate Sediment Control Plan (SCP) under the new rule for Western Alkaline Coal Mining category and submitted it to EPA. The 2010 reissued permit designated specific reclamation areas and established Effluent Limitation Guidelines-based numeric effluent limitation for discharges from reclamation areas prior to an approved SCP. Different sediment ponds were installed to store mine drainages from process plant areas and active mining areas in the 2010 reissued permit. Therefore, EPA could presume any discharge from sediment ponds designated for reclamation areas would have no drainage from active mining or mine process areas. However, the permittee has only identified outfalls and sediment ponds as from one of the following two areas, process plant area or mine drainage area. The permittee also states "as areas undergo reclamation, it is common to have an outfall that receives drainage from both reclamation and active mining areas." To properly regulate discharges from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas, and regraded areas in accordance with the alkaline coal mine subcategory ELG, EPA needs to reconsider the "100%" clause in the renewed permit. The permittee could not circumvent the ELG requirements by commingling mine drainages from reclamation and active mining areas if discharges from areas designated under the Western Alkaline Coal Mining category occur.

The permittee has used sediment ponds to contain runoffs and result in no-discharge during the past 5 years. Sediment ponds would address localized precipitation issue and could be appropriate technology to reduce settleable solids in discharges. The permit writer would accept sediment pond technology as site-specific BMPs to meet the proposed permit conditions as long as it maintains no discharge or if a discharge occurs, the discharge would meet specific permit conditions. As long as sediment ponds are retained to minimize discharges of sediment from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas, and regraded area, the SCP approved by State mining authority under the SMCRA authority is considered "satisfactory" for the permit provision requiring Sediment Control Plan established in part II.F of the permit. The permittee may maintain "no discharge" of drainage from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas, and re-graded areas. But, if any discharge is expected, for instance, the permittee plans to dismantle sediment ponds, an approved site-specific SCP must be in place prior to any discharge from those areas. EPA proposes to retain effluent limitations based on post-mined category in the permit in case unexpected discharges occur caused by catastrophic storm evens. EPA proposes to revise the SCP mainly based on the permit requirements for SCP established for the El Segundo Mine (NPDES Permit No. NM0030996) permit modification issued on December 18, 2015, and effective date on January 18, 2016.

EPA also proposes to retain the provision of restriction in the current permit for discharges of process wastewater from coal mine process areas.

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. The State has conducted a Use Attainable Assessment (UAA) for the receiving stream, Mulatto Canyon Arroyo, 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. Because the State has demonstrated that Mulatto Canyon Arroyo is limited for aquatic life use and is also not suitable for swimming use, the applicable water quality standards for ephemeral waters are used to develop water quality-based effluent limitations, if there are any.

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 cease discharging of treated domestic waste, the proposed permit does not authorize discharge of domestic waste. Monitoring requirements and effluent limitations for bacteria, E. coli, established in the current permit at Outfall 034 are proposed to be removed from the permit. Outfall 034 is not included in the permit renewal application, so Outfall 034 is not covered by the proposed draft permit.

b. pH

The pH range 6.6 to 9.0 s.u. was established in accordance with 20.6.4.900D, in the current permit. Because the State completed a UAA and determined that the secondary contact use is appropriate for the receiving stream, effluent limitations for pH of 6.0 – 9.0 based on the Best Professional Judgment (BPJ) is proposed for discharges to 20.6.4.97 NMAC waters in the draft permit. Effluent limitation range for pH (6.0-9.0) is consistent with Statewide Water Quality Management Plan (WQMP) strategies and applies to ephemeral waters. The pH range 6.6 to 9.0 applies to discharges to 20.6.4.98 NMAC waters.

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.

Although ponded water samples were taken for effluent characteristics analyses, EPA decided not to use those data for reasonable potential analysis. However, when EPA proposed the permit renewal in 2010, the permittee commented that samples taken from sediment ponds would not be representative for RP analysis and EPA agreed. EPA, therefore, required in the current permit that samples shall be collected from the first discharge for RP analysis. The draft permit renewal proposes to retain the approach and requires at least one sample of discharge to be collected from process plant area and one sample from active mining 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 dissolved hardness of the effluent so EPA may determine site-specific standards and RP. 20.6.4.900.I NMAC states “Hardness-dependent acute and chronic aquatic life criteria for metals are…expressed as a function of dissolved hardness (as mg CaCO3/L).

D. MONITORING AND REPORTING REQUIREMENTS 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). Because sediment ponds are used to store drainages and few discharges are expected, monitoring frequency of 1/day is proposed for pH and a frequency of 1/week is

proposed for iron, total suspended solids (TSS) and total settleable solids (SS), respectively. Monitoring of mass load is not established because discharge is not continued.

Pursuant to EPA promulgated Sufficiently Sensitive Test Methods rule (Federal Register /Vol. 79, No. 160 /Tuesday, August 19, 2014 /Rules and Regulations 49001), the provision of Minimum Quantification Levels (MQLs) of Part II.D is revised to reflect EPA's final rule on reportable analytical results.

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. The rule requires that 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 report electronically. The permittee is required to file electronic DMRs starting no later than December 21, 2016.

E. WHOLE EFFLUENT TOXICITY TEST

Procedures for implementing the whole effluent toxicity (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. A 48-hour acute WET testing for toxicity once per year is established for the proposed permit term. The critical dilution of the discharge will be 100%. The test species shall be *Daphnia pulex*. Because all potential discharges will be conveyed into Mulatto Canyon Arroyo, and discharges of overflows from retention ponds would be rare, the acute testing for *Daphnia pulex* shall serve the purpose which may demonstrate such discharges would not result in instream aquatic toxicity or threaten human health.

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.

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 E. coli is not established because treated sanitary waste is not authorized for discharge. And, the less stringent pH limitation is established because the change of designated use and applicable water quality standard of the receiving water.

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: Yellow-billed Cuckoo (*Coccyzus americanus*), Southwestern willow flycatcher (*Empidonax traillii extimus*), Mexican spotted owl (*Strix occidentalis lucida*), Zuni bluehead Sucker (*Catostomus discobolus yarrowi*), and Zuni fleabane (*Erigeron rhizomatus)*.

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. EPA determines that the discharge of mining water is unlikely to affect Zuni fleabane.

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. 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 slopped 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 yellow-billed cuckoo, southwestern willow flycatcher or the Mexican spotted owl. The re-issuance of the proposed permit would have no effect on these birds.

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 potential discharges are to an ephemeral stream which is not suitable for Zuni bluehead sucker.

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 has no impact on historical and/or archeological sites.

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 September 8, 2010, with an effective date of November 1, 2010 and an expiration date of October 31, 2015.

B. APPLICATION(S)

EPA Application Consolidated Form 2C received by EPA on April 7, 2015.

C. STATE WATER QUALITY REFERENCES

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

State of New Mexico, Statewide Water Quality Management Plan (WQMP). EPA Approval Date December 23, 2011.

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, March 15, 2012.