

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PROPOSED PERMIT FACT SHEET
July 2026

Permittee Name: Chevron Mining Inc.

Mailing Address: 354 State Highway 38
Quest, NM 87556

Facility Location: McKinley Mine
24 miles NW of Gallup on State Highway 264
Gallup, NM 87305

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NPDES Permit No.: NN0029386

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I. STATUS OF PERMIT

Chevron Environmental Management Company (“CEMC”) on behalf of Chevron Mining Inc., (“permittee” or “CMI”) applied for the renewal of their National Pollutant Discharge Elimination System (NPDES) permit to authorize the discharge of effluent from the reclamation areas of McKinley Mine to Coal Mine Wash, Defiance Draw, and Tse Bonita Wash, all three of which are tributaries to the Puerco River. The reclamation areas are located on Tribal, private, and public lands within the Navajo Nation, and New Mexico. While New Mexico is located within the geographic jurisdiction of EPA Region 6, pursuant to a Memorandum of Agreement, all NPDES permits for facilities within the boundaries of the Navajo Nation lands are issued by EPA Region 9.

CMI timely applied on December 23, 2021, and subsequently requested a permit modification on March 13, 2025. The modification sought to remove six full watersheds and outfalls associated with Area 9S which was released to Phase III status allowing the operator to be released from further obligations and the reclamation bond to be returned. (See Section III below, for more information about mining regulations.) Phase III status is the final stage in mine reclamation where the land is confirmed to meet all regulatory requirements for restoration. Phase III Bond release is achieved under the Surface Mining Control Reclamation Act (SMCRA). On April 21, 2025, CMI withdrew its request to modify the permit and to remove select outfalls because the Office of Surface Mining Remediation and Enforcement (OSMRE) did not concur with the proposed removal of those watersheds and associated outfalls. On June 13, 2025, OSMRE concurred with the Phase III bond release for Area 9S of the McKinley Mine and transmitted this decision to New Mexico Mining and Minerals Division (NM-MMD) by letter. NM-MMD has released the full bond amount requested by CMI for Area 9S, indicating that final reclamation performance standards have been met for that area. On March 31, 2026, OSMRE concurred with the Phase III bond release for Vegetation Management Unit (VMU) 1, 4, and 9 of the McKinley Mine and transmitted the decision to NM-MMD by letter. NM-MMD has released the full bond amount requested by CMI for VMU 1, 4, and 9, indicating that final reclamation performance standards have been met for those areas.

The permittee is currently discharging under NPDES permit NN0029386 which expired on June 30, 2022, but which EPA administratively continued after determining that the permittee’s application was complete. Under EPA’s NPDES regulations at 40 CFR § 122.6, the term of an administratively extended permit continues until the issuance of a new permit.

EPA Region 9 has developed this permit and fact sheet pursuant to Section 402 of the Clean Water Act (CWA), which requires point source dischargers to obtain a National Pollutant Discharge Elimination System (NPDES) permit that limits pollutants that are discharged to waters of the United States. EPA developed this fact sheet based on information provided in the permit application and effluent discharge data, as well as applicable laws and regulations.

This permittee is classified as a minor discharger.

II. SIGNIFICANT CHANGES TO PREVIOUS PERMIT

Prior Permit Condition	Proposed Permit Condition (2026-2030)	Reason for Change
pH Limits	pH Limits Removed	pH limits are removed and replaced with monitoring requirements since there is no reasonable potential or applicable effluent limitation guidelines (Part I, Table 1. of permit).
Priority Pollutants Scan	Monitor Discharge	A priority pollutant scan is required to determine if the discharge has the reasonable potential to exceed Navajo Nation and/or New Mexico Water Quality Standards for certain pollutants not monitored in prior permit (Part I, Table 1. of permit).
Whole Effluent Toxicity Monitoring	Monitor Discharge	Whole effluent toxicity monitoring is required to determine if the discharge has the reasonable potential to exceed Navajo Nation and/or New Mexico Water Quality Standards for toxicity (Part I, Section C. of permit).
Monitoring Requirements for Metals	Monitor Discharge in both dissolved and total recoverable	Dissolved and total recoverable metal values are required for comparison with Navajo Nation and New Mexico Water Quality Standards. In prior permit some parameters were only measured in total recoverable (Part I, Table 1. of permit).
Natural Background Monitoring	Monitor Discharge	Natural background monitoring is required to determine whether certain parameters have reasonable potential to cause or contribute to exceedance of water quality standards (Part II, Section E. of the permit).
401 Certification	401 Monitoring Requirements Section Removed	The New Mexico 401 certification monitoring requirements have been removed from the permit. Monitoring requirements can be added directly to the State's 401 certification if applicable.
Sampling Method	Substantially Identical Discharge Points (SIDPs)	The permittee may sample SIDPs to provide flexibility where two or more discharge points are substantially identical and representative of one another, particularly when intermittent discharges over a large area make sampling difficult.

III. GENERAL DESCRIPTION OF FACILITY

CEMC operates the facility on behalf of CMI who remains the permittee and responsible party. Until June 2013, CMI, operated the facility, which is located approximately 24 miles northwest of Gallup, NM adjacent to New Mexico State Highway #264 on Tribal, public, and private lands. The facility operated as a coal mine between July 1961 and December 2009. Mining operations

began on the Navajo Nation portion of the facility June 1972. The facility is now a post-operative coal mine engaged in reclamation activities. In June 2013, responsibility for managing the reclamation operations, including control of wastewater, transitioned from CMI to CEMC.

The discharges from the facility are stormwater runoff from reclamation areas. No further active mining, re-mining, or coal preparation activities are taking place, or are planned, and all areas of the former mine are in reclamation.

OSMRE requires CMI to control all surface runoff water with the potential of being contaminated from contact with mining- and mining-related activities as well as post-mining reclamation activities in their SMCRA permit. CMI utilizes various Best Management Practices (BMPs) including sedimentation ponds to control surface runoff. The sediment ponds are designed to contain storm water runoff from a 10-year, 24-hour precipitation event. Weather stations operated by the mine in the vicinity of the site's facilities areas document precipitation events and are used to determine when design storm event criteria are exceeded.

The facility has used a variety of methods and structures to route stormwater runoff onto and through reclaimed lands, including channels designed to direct stormwater runoff from specified precipitation events. The channels may be unlined, vegetation lined, or rip rap lined. Additionally, the channels incorporate loose rock check dams, small depressions, and gradient terraces with rip rap lined drains. The design and construction of these structures has evolved in response to mine site-specific conditions, and due to advances in technology and engineering.

The prior NPDES permit, issued to CMI in June 2017, authorized discharges from 67 outfalls which primarily emptied into sediment impoundments. Since then, several permit modifications have been made to add and remove outfalls from the list of authorized discharge points. Currently, there are 48 permitted outfall points for active reclamation areas, numbered 003 through 092 (excluding 007, 008, 011-013, 025, 029, 030, 034, 037-057, 062, 066-075, and 78). For the status of outfalls, see "Description of Discharge" below.

IV. DESCRIPTION OF RECEIVING WATER

Discharges authorized under this NPDES permit flow through Coal Mine Wash, Defiance Draw, and Tse Bonita Wash, which are all tributaries to the Puerco River. The Puerco River is tributary to the Little Colorado River. The receiving waters are located on the Navajo Nation and in New Mexico. The tributaries, including Coal Mine Wash, Defiance Draw, and Tse Bonita Wash, are primarily situated within the Navajo Nation, while the Puerco River extends into New Mexico.

The Navajo Nation establishes water quality standards for waters located on the Navajo Nation. The receiving waters associated with this facility within the Navajo Nation have the following designated uses:

Primary Human Contact (PrHC), Secondary Human Contact (ScHC), Fish Consumption (FC), Aquatic and Wildlife Habitat (A&WHbt), Livestock and Wildlife Watering (L&W), and Agricultural Water Supply (AgWS).

The State of New Mexico establishes water quality standards for waters located within their jurisdiction. Receiving waters associated with this facility within the State of New Mexico have the following designated uses:

Livestock watering, wildlife habitat, limited aquatic life and secondary contact.

V. DESCRIPTION OF DISCHARGE

The facility is an inactive surface coal mine undergoing reclamation in the arid Southwest. The site discharges stormwater runoff from reclamation areas, including roads, and support activities. EPA has determined that all 48 authorized outfalls (003 through 092) discharge stormwater exclusively from areas under reclamation.

McKinley Mine is subject to the requirements of the SMCRA of 1977. Reclaimed areas at McKinley Mine fall into three regulatory categories: Pre-Law Lands, Initial Program Lands, and Permanent Program Lands based on whether the areas were mined prior to the adoption or post adoption of the SMCRA. The OSMRE-issued SMCRA permit NM-0001K for the portion of the mine on the Navajo Nation, while the New Mexico Mining and Materials Division (NM-MMD) issued SMCRA permit NM-2016-02 for the portion of the mine located in the jurisdiction of New Mexico. The SMCRA permits require surface grading and hydrologic reclamation plans (known as Sediment Control Plans) to control sediment and maintain sediment loads in runoff at or below natural background levels.

The permittee developed a site-specific Sediment Control Plan that was approved by OSMRE. The permittee conducted surface water hydrologic modeling and designed post-mining topography and hydrologic features to support stable reclaimed land. Using watershed modeling, the permittee identified BMPs expected to reduce sediment levels in runoff to or below pre-mining levels and included these in the Sediment Control Plan. BMPs include reclaimed slope control, drainages, velocity and grade control structures, surface treatments, impoundments, and temporary sediment control structures. In addition, the permittee uses the substantially identical discharge points (SIDP) to sample outfalls in in both OSMRE and MMD jurisdictions as described in the most recently approved Sediment Control Plan and addendum.

CMI modeled stormwater runoff from both reclaimed and undisturbed lands across various watershed sizes, using RUSLE, SEDCAD, and AutoCAD. The modeling results indicate that with implementation of the Sediment Control Plan, reclaimed lands can produce less sediment runoff than undisturbed lands with similar watershed characteristics. Stormwater monitoring programs on Initial and Permanent Program Lands have supported the modeling results. These programs have measured sediment in runoff from both reclaimed and undisturbed areas, demonstrating that reclaimed lands can produce lower concentrations of suspended and settleable solids.

For purposes of the CWA, all reclamation areas are subject to the effluent limitation guidelines for Western Alkaline Coal Mining reclamation areas at 40 C.F.R. 434 Subpart H. In the prior permit, EPA developed discharge limits using the effluent limitation guidelines for Western Alkaline Coal Mining reclamation areas, as specified in 40 C.F.R. Part 434 Subpart H. As required by 40 CFR § 434.82(b), CMI used the same models to develop the Sediment Control Plan required by the NPDES permit as it used to obtain SMCRA permits. As outlined in the 2003 Memorandum of Understanding between EPA and OSMRE, EPA considers OSMRE's approval of the Sediment Control Plan and sediment yield modeling therein as sufficient to satisfy the NPDES permit requirements.

A. Application Discharge Data

As part of the application for permit renewal, the permittee provided data from an analysis of the facility's stormwater discharge, shown in Table 1. The permittee in their application indicated that between July 2017 and March 2025 discharges occurred at the following outfalls: 003(22), **004**(12), **005**(1), 009(7), 010(17), 013(12), 014(13), 015(21), 016(2), 017(1), 018(7), 020(3), 021(5), 022(1), 024(12), 026(1), **032**(4), **033**(10), **036**(17), 056(2), 057(2), 060(1), **079**(17), 080(3), 084(1), and 091(3). The number of discharges at each outfall varied from 1 to a maximum of 22 and is indicated in the parenthesis next to the outfall number. **Bold** numbers are outfalls that discharge into waters in **New Mexico** jurisdiction. Table 1 below summarizes the data reported in the permit renewal application.

Table 1. Application Discharge Data.

Parameter	Units	Maximum value reported from Navajo Nation outfalls	Maximum value reported from New Mexico outfalls
TSS	mg/L	25,000	17,000
Oil and Grease	mg/L	504	53.1
pH	SU	Lowest 7.2 – Highest 8.9	Lowest 7.7- Highest 9.2
Temperature	degrees Centigrade	Low 1.1; Highest 24.2	Low 4.9 Highest 26.2
Flow	MGD	2.16	11.52

SU = Standard units

MGD = Million gallons/day

B. Discharge Monitoring Report (DMR) Data (2017-2025)

In addition to the data reported in the application package, EPA reviewed the DMR data for the facility from July 2017 to March 2025. No violations were reported. Monitoring showed the following results:

Table 2. Effluent Data for All Outfalls from 2017 to 2025

Parameter	Units ⁽¹⁾	2017-2025 Permit Effluent Limitations			Effluent Data		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly	Highest Maximum Daily	Number of Samples
Flow Rate	MGD	(1)	--	(1)	0.057	0.058	4055
2,3,7,8-Tetrachlorodibenzo-p-dioxin	Ug/L	(1)	--	(1)	N/A	ND	62
4,4'-DDT		(1)	--	(1)	N/A	ND	62
Aldrin	ug/L	(1)	--	(1)	N/A	ND	61
Alpha Gross Radiation	pCi/L	(1)	--	(1)	1110	1110	4061
Aluminum, total (as Al)	mg/L	(1)	--	(1)	33.75	35.31	4056
Aluminum, dissolved (as Al)	ug/L	(1)	--	(1)	N/A	ND	6
Antimony, dissolved (as Sb)	ug/L	(1)	--	(1)	N/A	ND	62
Arsenic, dissolved (as As)	ug/L	(1)	--	(1)	1.16	1.9	62
Benzo(a)pyrene	ug/L	(1)	--	(1)	N/A	ND	62
Boron, dissolved (as B)	ug/L	(1)	--	(1)	N/A	ND	62
Cadmium, dissolved (as Cd)	ug/L	(1)	--	(1)	N/A	ND	6
Chlordane	ug/L	(1)	--	(1)	N/A	ND	62
Chromium, dissolved (as Cr)	ug/L	(1)	--	(1)	N/A	ND	6
Cobalt, dissolved (as Co)	ug/L	(1)	--	(1)	N/A	ND	6
Copper, dissolved (as Cu)	ug/L	(1)	--	(1)	N/A	ND	6
Cyanide, total (as Cn)	mg/L	(1)	--	(1)	6.77	6.77	4056
Cyanide, weak acid, dissociable	ug/L	(1)	--	(1)	N/A	ND	6
Dieldrin	ug/L	(1)	--	(1)	N/A	ND	62
Endrin	ug/L	(1)	--	(1)	N/A	ND	6

Parameter	Units ⁽¹⁾	2017-2025 Permit Effluent Limitations			Effluent Data		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly	Highest Maximum Daily	Number of Samples
Hardness, Ca Mg Calculated (mg/L as CaCO ₃)	mg/L	(1)	--	(1)	850	850	4056
Heptachlor	ug/L	(1)	--	(1)	N/A	ND	6
Heptachlor epoxide	ug/L	(1)	--	(1)	N/A	ND	6
Hexachlorobenzene	ug/L	(1)	--	(1)	N/A	ND	62
Iron, total (as Fe)	mg/L	(1)	--	(1)	180	180	4056
Lead, dissolved (as Pb)	ug/L	(1)	--	(1)	N/A	ND	6
Mercury, total (as Hg)	ug/L	(1)	--	(1)	N/A	ND	6
Nickel, dissolved (as Ni)	ug/L	(1)	--	(1)	N/A	1.9	62
Oil and Grease	mg/L	(1)	--	--	17	17	4056
Pentachlorophenol	ug/L	(1)	--	(1)	N/A	ND	6
pH	Standard Units	Between 6.5 and 9.0 S.U. at all times.			6.79 to 9 (min-max)		3150
Polychlorinated biphenyls (PCBs)	ug/L	(1)	--	(1)	N/A	ND	62
Radium 226 + Radium 228, total	ug/L	(1)	--	(1)	N/A	ND	6
Selenium, dissolved (as Se)	ug/L	(1)	--	(1)	N/A	3	56
Selenium, total (as Se)	mg/L	(1)	--	(1)	N/A	ND	6
Selenium, total recoverable	ug/L	(1)	--	(1)	N/A	ND	6
Silver, dissolved (as Ag)	ug/L	(1)	--	(1)	N/A	ND	6
Solid, total dissolved	mg/L	(1)	--	(1)	35000	35000	4056
Solids, total suspended	mg/L	(1)	--	(1)	15000	15000	4056
Tetrachloroethylene	ug/L	(1)	--	(1)	N/A	0	62

Parameter	Units ⁽¹⁾	2017-2025 Permit Effluent Limitations			Effluent Data		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly	Highest Maximum Daily	Number of Samples
Thallium, dissolved (as Tl)	ug/L	(1)	--	(1)	N/A	ND	62
Toxaphene	ug/L	(1)	--	(1)	N/A	ND	6
Vanadium, dissolved (as V)	ug/L	(1)	--	(1)	N/A	ND	6
Zinc, dissolved (as Zn)	ug/L	(1)	--	(1)	N/A	57	62
.beta.-Endosulfan	ug/L	(1)	--	(1)	N/A	ND	6
.alpha.-Endosulfan	ug/L	(1)	--	(1)	N/A	0	6
.gamma.-BHC	ug/L	(1)	--	(1)	N/A	0	6

ND = Non-detect

N/A = Not applicable

- (1) No effluent limits were established but monitoring and reporting were required. In some cases, the permittee supplied monitoring data on pollutants that were not required to be monitored for in the permit. That monitoring information has also been included in the table above.

VI. DETERMINATION OF EFFLUENT LIMITS AND OTHER LIMITATIONS

EPA has developed effluent limits, other limitations, and monitoring requirements in the permit based on an evaluation of the technology used to treat the pollutant and the water quality standards applicable to the receiving water. EPA has included the more stringent of applicable technology-based or water quality-based limits in the proposed permit, as described below.

A. Applicable Technology-Based Effluent Limitations

Effluent Limitations Guidelines (ELGs)

EPA has established national standards based on the performance of treatment and control technologies for wastewater discharges to surface waters for certain industrial categories. Effluent limitation guidelines represent the greatest pollutant reductions that are economically achievable for an industry, and are based on Best Practicable Control Technology (BPT), Best Conventional Pollutant Control Technology (BCT), and Best Available Technology Economically Achievable (BAT). (Sections 304(b)(1), 304(b)(4), and 304(b)(1) of the CWA respectively).

The discharge of wastewater from coal mines is subject to 40 CFR § Part 434: Coal Mining Limitations and Performance Standards. McKinley Mine is a surface coal mine undergoing reclamation only and therefore the authorized discharge is exclusively stormwater runoff through outfalls subject to 40 CFR § Part 434, Subpart H or "Western Alkaline Coal Mining"

drainages. The discharges from all outfalls, have a pH greater than 6.0 and contain dissolved iron levels less than 10 mg/L before treatment. The ELGs at 40 CFR § 434.82 apply to these discharges.

The ELG for Western Alkaline Coal Mining, applicable to reclamation areas (40 CFR § 434.82), specifies the following requirements:

(a) The operator must submit a site-specific Sediment Control Plan to the permitting authority that is designed to prevent an increase in the average annual sediment yield from pre-mined, undisturbed conditions. The Sediment Control Plan must be approved by the permitting authority and be incorporated into the permit as an effluent limitation. The Sediment Control Plan must identify BMPs and also must describe design specifications, construction specifications, maintenance schedules, criteria for inspection, as well as expected performance and longevity of the best management practices.

(b) Using watershed models, the operator must demonstrate that implementation of the Sediment Control Plan will result in average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. The operator must use the same watershed model that was, or will be, used to acquire the SMCRA permit.

(c) The operator must design, implement, and maintain BMPs in the manner specified in the Sediment Control Plan.

The operator previously submitted a site-specific Sediment Control Plan to EPA on September 5, 2017 and conducted modeling demonstrating that implementation of the Sediment Control Plan is expected to result in average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. EPA and OSMRE coordinated review of the Sediment Control Plan in accordance with the December 19, 2003 Memorandum of Understanding, "Process for Obtaining A NPDES Permit Under Subpart H - Western Alkaline Mine Drainage Category." EPA and OSMRE approved the Sediment Control Plan on July 12, 2018. The approved Sediment Control Plan was incorporated into the 2017 permit as an effluent limitation.¹

¹ EPA Region 9 and the Office of Surface Mining Reclamation and Enforcement (OSMRE) had entered a Memorandum of Understanding on December 19, 2003: Process for Obtaining A NPDES Permit Under Subpart H - Western Alkaline Mine Drainage Category. Working through the process outlined in the MOU, OSMRE and EPA conduct technical reviews of the Sediment Control Plan submitted by the Permittee. EPA has concluded that the Sediment Control Plan has been submitted in accordance with the requirements of 40 CR Part 434, and that the Sediment Control Plan meets the minimum requirements to demonstrate that the average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. Therefore, this proposed permit requires that the approved Sediment Control Plan be incorporated into the permit as an effluent limit, and requires that the permittee design, implement, and maintain the BMPs in the manner specified in the approved Sediment Control Plan.

The operator submitted an updated site-specific Sediment Control Plan to EPA and OSMRE on October 16, 2025. Notable changes include the removal of numerous outfalls that discharge to New Mexico waters, additional language and data detailing the projected release of Phase III areas, and updated field collection procedures. On June 12, 2026, EPA received an Addendum to the 2025 Sediment Control Plan, which included updated figures, tables, and SIDP language. The operator submitted a revised SCP Addendum on July 17, 2026 that OSMRE approved. The approved SCP Addendum was incorporated into the 2026 permit as an effluent limitation. Accordingly, the approved Sediment Control Plan Addendum remains the currently applicable Sediment Control Plan.

B. Water Quality-Based Effluent Limitations

Water quality-based effluent limitations are required in NPDES permits when the permitting authority determines that pollutants are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard (40 CFR § 122.44(d)(1)).

1. Applicable Standards, Designated Uses and Impairments of Receiving Water

The Navajo Nation and the State of New Mexico have developed Surface Water Quality Standards (Navajo Nation WQS and New Mexico WQS) for different stream segments, depending on the designated uses and level of protection required. EPA-approved Navajo Nation WQS (2007 and 2015) and New Mexico WQS (2025) were used to analyze the need for water quality-based effluent limitations.

The Navajo Nation Water Quality Standards establish water quality criteria to protect the following beneficial uses in receiving waters on the Navajo Nation: Primary Human Contact (PrHC), Secondary Human Contact (SchC), Fish Consumption (FC), Aquatic and Wildlife Habitat (A&WHbt), and Livestock and Wildlife Watering (L&W).

The State of New Mexico Water Quality Standards establish water quality criteria to protect the following beneficial uses in receiving waters in New Mexico: Livestock watering (LW), wildlife habitat (WH), limited aquatic life, and secondary contact.

EPA applied the Navajo Nation water quality standards to outfalls discharging to waters on the Navajo Nation. EPA applied State of New Mexico water quality standards to outfalls discharging to waters in New Mexico as seen in Attachment C of the permit.

2. Reasonable Potential Analysis

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the

sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water (40 CFR § 122.44(d)(1)(ii)).

EPA conducted the reasonable potential analysis, by reviewing the data submitted by the permittee in the renewal application plus additional data received from the applicant after the renewal application was received and while the permit was administratively continued. EPA reviewed the DMR data submitted by the applicant for the period of July 2017 to March 2025. The most stringent applicable water quality standard based on the beneficial uses of the receiving waters was used to conduct the reasonable potential analysis as seen in Part XV. of the factsheet.

Using the data from July 2017 to March 2025, EPA conducted a reasonable potential analysis and determined there is reasonable potential for several pollutants in the effluent discharge to cause or contribute to an excursion above numeric Navajo Nation WQS and New Mexico WQS criteria (See Part XV. – Reasonable Potential Analyses for more information). The permit requires the use of BMPs to control or abate the discharge of these pollutants, in accordance with 40 C.F.R. § 122.44(k). The Sediment Control Plan identifies multiple BMPs that could be combined to control or abate the discharge of these pollutants. The permit requires the permittee to design, develop, and implement the BMPs identified in the Sediment Control Plan to control or abate site runoff containing these pollutants. Additionally, the permit requires regular inspections of BMPs and water quality monitoring to gain a better understanding of the source of these pollutants and the efficacy of the BMPs.

3. Dilution in the Receiving Water

Discharges from the Mine flow to Coal Mine Wash, Defiance Draw, and Tse Bonita Wash, which may have no natural flow during certain times of the year. Therefore, when evaluating the reasonable potential of the discharges to cause or contribute to exceedance of water quality criteria, EPA conducted the analysis using 100% effluent with no dilution.

4. Type of Industry

The facility meets the definition of a western alkaline coal mine at 40 CFR § 434.81. Mine drainage and runoff from western alkaline coal mines undergoing reclamation have several typical parameters of concern, including suspended solids, iron, and pH (40 CFR §§ 434.81 and 434.82).

5. History of Compliance Issues and Toxic Impacts

EPA Region 9 conducted an inspection on September 30, 2023 which included a review of discharge monitoring reports for the time period of October 1, 2018 to June 6, 2023. During that time, the discharger reported no effluent limit violations. EPA further reviewed DMR data submitted electronically between July 2017 and March 2025 and concluded that there are no reported effluent limit violations during the previous permit term.

6. Water Quality Related Effluent Limitations

NPDES permits must include effluent limits more stringent than ELGs where necessary to attain or maintain a specified water quality under section 302 of the CWA (40 CFR § 122.44(d)(2)). This permit implements provisions of the Colorado River Salinity Forum, a multi-state coalition focused on reducing salinity levels in the Colorado River Basin to protect water quality and agricultural productivity. This forum specifies restrictions on Total Dissolved Solids (TDS) discharges to tributaries of the Colorado River and establishes conditions for facilities making such discharges or seeking exemption from the provisions. The permit requires implementation of the BMPs in the Salinity Control Plan to minimize discharge of TDS. The permit also requires regular monitoring of TDS discharges during rainfall events in order to facilitate comparison with the Salinity Control Forum provisions. The forum's provisions, established under the Colorado River Basin Salinity Control Act, serve as a foundation for developing permit limits and regulatory standards to address salinity impacts and ensure compliance with water quality objectives. Further details on the provisions can be reviewed at [coloradoriversalinity.org/docs/1014 Final REVIEW - complete.pdf](http://coloradoriversalinity.org/docs/1014%20Final%20REVIEW%20-%20complete.pdf), appendix B; the provisions specific to existing industrial facilities like McKinley Mine are detailed on page B-8.

For McKinley Mine, which began operations before October 18, 1975, the applicable provisions of the Colorado River Basin Salinity Control Act allow for the discharge of salt if it is impracticable to prevent all salt discharge. Permit conditions for the facility are determined by evaluating factors such as the current tonnage of salt discharged, the volume of effluent, and the costs associated with modifying the facility to minimize salt discharge. The facility actively monitors for TDS to assess for reasonable potential.

C. Rationale for Numeric Effluent Limits and Monitoring

EPA evaluated the pollutants expected to be present in the effluent and selected the most stringent of applicable technology-based standards or water quality-based effluent limitations. Where effluent concentrations of toxic parameters are unknown or are not reasonably expected to be discharged in concentration that have the reasonable potential to cause or contribute to water quality violations, EPA may establish monitoring requirements in the permit. Where monitoring is required, data will be re-evaluated and the permit may be reopened to incorporate effluent limitations as necessary.

Flow

The permit requires implementation of BMPs in the Sediment Control Plan to manage discharge rates. The permit contains flow monitoring requirements that must be reported on the schedule specified in the approved Sediment Control Plan.

TSS

The permit requires implementation of BMPs in the Sediment Control Plan to limit discharge of total suspended solids (TSS). The permit also contains a TSS monitoring requirement, with sampling conducted on the schedule specified in the approved Sediment Control Plan.

TDS

The permit requires implementation of BMPs in the Sediment Control Plan to limit discharge of total dissolved solids (TDS). The permit also requires monitoring of TDS, with sampling conducted on the schedule specified in the approved Sediment Control Plan. Monitoring of total dissolved solids is necessary to ensure alignment with the Colorado River Salinity Forum provisions and to evaluate the reasonable potential of discharges to affect salinity levels in the Colorado River Basin.

Iron

The permit requires implementation of BMPs in the Sediment Control Plan to limit discharge of iron. The permit also requires monitoring of iron as both dissolved and total recoverable at the discharge point to allow comparison with Navajo Nation and New Mexico water quality standards. Sampling is conducted on the schedule specified in the approved Sediment Control Plan.

pH

The permit requires implementation of BMPs in the Sediment Control Plan to limit pH excursions in discharges. The permit also requires monitoring of pH on the schedule specified in the approved Sediment Control Plan.

Alpha Radiation

The permit requires implementation of BMPs in the Sediment Control Plan to limit alpha radiation in discharges. The permit also requires monitoring of alpha radiation on the schedule specified in the approved Sediment Control Plan.

Aluminum

The permit requires implementation of BMPs in the Sediment Control Plan to limit discharge of aluminum. The permit also requires monitoring of aluminum as dissolved, as total recoverable, and in acid-soluble form for comparison with the Navajo Nation and New Mexico water quality standards. Monitoring must follow the schedule outlined in the approved Sediment Control Plan.

Selenium

The permit requires implementation of BMPs in the Sediment Control Plan to limit discharge of selenium. The permit also requires monitoring of selenium as dissolved and as total recoverable for comparison with the Navajo Nation and New Mexico water quality standards. Monitoring must follow the schedule outlined in the approved Sediment Control Plan.

Cyanide

The permit requires implementation of BMPs in the Sediment Control Plan to limit discharge of cyanide. The permit also requires monitoring of cyanide on the schedule specified in the approved Sediment Control Plan.

Turbidity

The permit contains monitoring for Turbidity to determine whether the discharge complies with Navajo Nation and New Mexico WQS at the discharge point. Monitoring is required quarterly.

Oil and Grease

The permit requires implementation of BMPs in the Sediment Control Plan to limit discharge of oil and grease. The permit also requires monitoring of oil and grease on the schedule specified in the approved Sediment Control Plan.

Uranium

The permit requires uranium monitoring to allow for calculation of adjusted gross alpha when water quality samples exceed 15 pCi/L. The permit also requires monitoring of uranium as dissolved and as total recoverable for comparison with the Navajo Nation and New Mexico water quality standards.

Hardness Monitoring

The Navajo Nation WQS and New Mexico WQS establish water quality criteria for the protection of aquatic wildlife from acute and chronic exposure to certain metals that are hardness dependent. The permit requires total hardness (unfiltered sample) and dissolved hardness (filtered sample) monitoring to evaluate the metals monitoring data for comparison with water quality standards. Monitoring of Hardness is required according to the schedule outlined in the approved Sediment Control Plan.

Whole Effluent Toxicity Monitoring

The Navajo Nation WQS states: "All Waters of the Navajo Nation shall be free from pollutants in amounts or combinations that, for any duration: Cause injury to, or toxic to, or otherwise adversely affect habitation, growth or propagation of aquatic life and wildlife."

The New Mexico WQS states: " Except as provided in 20.6.4.16 NMAC, surface waters of the state shall be free of toxic pollutants from other than natural causes in amounts, duration, concentrations, or combinations that affect the propagation of fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food, or that will or can reasonably be expected to bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic organisms."

Therefore, the permit contains monitoring for whole effluent toxicity. Where monitoring is required, data will be re-evaluated and the permit may be re-opened to incorporate effluent limitations for toxicity as necessary.

Other Limitations

NPDES permits must include any more stringent limitations necessary to meet water quality standards established pursuant to any state law or regulations. (CWA § 301(b)(1)(C), 40 CFR § 122.44(d)(5).) Section 203 of the Navajo Nation WQS and Section 20.6.4.13 of the New Mexico Standards for Interstate and Intrastate Surface Waters contain narrative water quality

standards applicable to receiving waters under the jurisdiction of the Navajo Nation and the State of New Mexico respectively. This permit incorporates other limitations for the discharge based on the applicable narrative water quality standards.

D. Anti-Backsliding

Section 402(o) and 303(d)(4) of the CWA and 40 CFR § 122.44(l)(1) prohibits the renewal or reissuance of an NPDES permit that contains effluent limits and permit conditions less stringent than those established in the previous permit, except as provided in the statute and regulation.

EPA has removed limits for pH that were included in the previous permit, consistent with anti-backsliding requirements of the CWA and federal regulations. The statute identifies six exceptions in CWA Section 402(o)(2) where effluent limitations may be relaxed, including an exception new information. See 40 CFR § 122.44(l)(2)(i)(B). Since the last permit issuance, EPA has received effluent data that shows there is no reasonable potential for the discharges to cause or contribute to an exceedance of water quality standards for pH. Thus, EPA is including only monitoring requirements for pH in this permit.

The effluent data for the previous permit did not display reasonable potential to exceed either the Navajo Nation WQS or New Mexico WQS, and there are no TBELs under 40 CFR Part 434 Subpart H - Western Alkaline Coal Mining associated with pH. As a result, EPA has removed the pH effluent limit in the permit and added monitoring requirements.

E. Antidegradation Policy

The Navajo Nation (Section 201) and New Mexico WQS (§20.6.4.8) for the receiving waters require that existing water uses and the level of water quality necessary to protect the existing uses be maintained.

As described in this document, the permit establishes effluent limits and monitoring requirements to ensure that all applicable water quality standards are met. The permit does not include a mixing zone; therefore, these limits will apply at the discharge point without consideration of dilution in the receiving water. No effluent limits are less stringent than the previous permit except for pH. EPA has replaced the pH limits with monitoring requirements, as there is no reasonable potential to exceed the Navajo Nation or New Mexico WQSs. This change also addresses a technical error, detailed in Section VI.D of the fact sheet.

Although some pollutants in the effluent are present at higher levels, the discharge is not expected to adversely affect receiving water bodies or degrade water quality. This is because the potential for exceedances is attributed to background water quality conditions, rather than the discharge itself. Consequently, no water quality-based effluent limits are incorporated into this permit. To ensure ongoing protection of water quality, upstream and downstream monitoring is required to assess the influence of background conditions on pollutant levels.

VII. MONITORING AND REPORTING REQUIREMENTS

The permit requires the permittee to conduct monitoring for all pollutants or parameters where effluent limits have been established, at the frequency specified in the approved Sediment Control Plan. Additionally, where effluent concentrations of toxic parameters are unknown or where data are insufficient to determine reasonable potential, monitoring may be required for pollutants or parameters where effluent limits have not been established.

A. Effluent Monitoring and Reporting

The permittee shall conduct effluent monitoring to evaluate compliance with the proposed permit conditions. The permittee shall perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR § 136, unless otherwise specified in the proposed permit. All monitoring data shall be reported on monthly DMRs and submitted quarterly as specified in the proposed permit. All DMRs are to be submitted electronically to EPA using NetDMR.

B. Priority Pollutants Scan

A priority pollutants scan shall be conducted annually to ensure that the discharge does not contain toxic pollutants in concentrations that may cause a violation of water quality standards. Results of this scan shall be submitted along with the application for NPDES permit renewal. The permittee shall perform all effluent sampling and analyses for the priority pollutants scan in accordance with the methods described in the most recent edition of 40 CFR § 136, unless otherwise specified in the proposed permit or by EPA. 40 CFR §131.36 provides a complete list of Priority Toxic Pollutants.

Whole Effluent Toxicity (WET) Requirements

The CWA requires that all waters be suitable for aquatic life, which includes the protection and propagation of fish, shellfish, and wildlife. To evaluate whether CWA requirements protecting aquatic life from chronic and acute toxicity are met in surface waters receiving the NPDES discharge, samples are collected from the effluent and tested for toxicity in a laboratory using EPA's WET methods. These aquatic toxicity test results are used to determine if the NPDES effluent causes toxicity to aquatic organisms. Toxicity testing is important because for scores of individual chemicals and compounds, chemical-specific environmentally protective levels for toxicity to aquatic life have not been developed or set as water quality standards. In due course, some such chemicals and compounds can eventually make their way into effluents and their receiving surface waters. When this happens, toxicity tests of effluents can demonstrate toxicity due to present, but unknown, toxicants (including possible synergistic and additive effects), signaling a water quality problem for aquatic life.

EPA's WET methods are systematically-designed to expose sensitive life stages of a test species (e.g., fish, invertebrate, algae) to both an NPDES effluent sample and a control sample. During the toxicity test, the test organism may show a difference in biological response, such as; eggs

not fertilized, early life stages that grow too slowly or abnormally, or death. At the end of a toxicity test, the different biological responses of the organisms in the effluent group and the organisms in the control group are summarized using common descriptive statistics (e.g., means, standard deviations, coefficients of variation). The effluent and control groups are then compared using an applicable inferential statistical approach (i.e., hypothesis testing or point estimate model) chosen by the permitting authority and specified in the NPDES permit. The chosen statistical approach is compatible with both the experimental design of the WET method and the applicable toxicity water quality standard. Based on this statistical comparison, a toxicity test will demonstrate that the effluent is either toxic or not toxic, in relation to the permit's toxicity limit for the effluent. EPA's WET methods are specified under 40 CFR § 136 and/or in applicable water quality standards.

In the permit, EPA requires the permittee to analyze WET test data using the Test of Significant Toxicity (TST) statistical approach. This statistical approach is described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document* (EPA 833-R-10-003, 1010; TST Technical Document) and Denton DL, Diamond J, and Zheng L. 1011. Test of significant toxicity: A statistical application for assessing whether an effluent or site water is truly toxic. *Environ Toxicol Chem* 30:1117-1116. This statistical approach supports important choices made within a toxicity laboratory which favor quality data and EPA's intended levels for statistical power when true toxicity is statistically determined to be unacceptably high (≥ 15 Percent Effect (PE)), or acceptably low (< 10 PE). Example choices are practices supporting healthy test organisms, increasing the minimum recommended replication component of the WET method's experimental design (if needed), technician training, etc. TST results do not often differ from other EPA-recommended statistical approaches using hypothesis testing (Diamond D, Denton D, Roberts J, Zheng L. 1013. Evaluation of the Test of Significant Toxicity for determining the toxicity of effluents and ambient water samples. *Environ Toxicol Chem* 31:1101-1108.). The TST maintains EPA's desired low false positive rate for WET methods—the probability of declaring toxicity when true toxicity is acceptably low $\leq 5\%$ —when quality toxicity laboratories conduct toxicity tests (TST Technical Document; Fox JF, Denton DL, Diamond J, and Stuber R. 1019. Comparison of false-positive rates of 1 hypothesis-test approaches in relation to laboratory toxicity test performance. *Environ Toxicol Chem* 38:511-513.). Note: The false positive rate is a long-run property for the toxicity laboratory conducting a WET method. A low false positive rate is indicated by a low long-run toxicity laboratory control coefficient of variation for the test species/WET method, using a minimum of 30 to 50 toxicity tests.

For NPDES samples for toxicity testing, the sample hold time begins when the 24-hour composite sampling period is completed and ends at the first time of sample use (initiation of toxicity test). 40 CFR § 136.3(e) states that the WET method's 36-hour hold time cannot be exceeded unless a variance of up to 71-hours is authorized by EPA.

EPA has not had sufficient data to evaluate whether the discharge from the Facility causes, has the reasonable potential to cause, or contributes to an excursion above criteria for toxicity in accordance with 40 CFR § 122.44(d)(1)(ii), because chronic toxicity tests have not been previously conducted for the discharge. No chronic toxicity limits are included in the permit. However, monitoring and reporting for both the median monthly and maximum daily effluent

results for the parameter of chronic toxicity are required, so that effluent toxicity can be assessed in relation to CWA requirements and applicable water quality standards (See Part I, Table 2 in NPDES permit). In accordance with 40 CFR § 122.44(d)(1)(ii), in setting the permit's levels for chronic toxicity and conditions for discharge, EPA is using a test species/chronic short-term WET method and a discharge Instream Waste Concentration (IWC) representing conservative assumptions for effluent dilution necessary to protect receiving water quality. The IWC is a discharge-specific term based on the permit's authorized mixing zone or initial dilution. Generally, the dilution model result "S" from Visual Plumes/Cormix is used. S is the volumetric dilution factor, i.e. 1 volume effluent is diluted with S – 1 volumes surface water) = $[(V_e + V_a) / V_e]$. Following the mass balance equation, if the dilution ratio $D = Q_s / Q_e$, then $[(Q_e + Q_s) / Q_e] = 1 + D = S$.

For this discharge, $S = 1$ (i.e., no authorized dilution). The discharge-specific IWC = 1 to 1 dilution (1:1, 1/1) = 100% effluent. The IWC made by the toxicity laboratory is mixed as 1 part solute (i.e., effluent) to 0 parts dilutant (1: (1 – 1)) for a total of 1 part.

The TST's null hypothesis for chronic toxicity (H_0) is: In-stream Waste Concentration (IWC) mean response (% effluent) ≤ 0.75 Control mean response. The TST's alternative hypothesis is (H_a): IWC mean response (% effluent) > 0.75 Control mean response. For this permit, results obtained from a single chronic toxicity test are analyzed using the TST statistical approach, where the required chronic toxicity IWC for all discharge points (outfalls) is 100% effluent. A species sensitivity screening for chronic toxicity is required in the permit to determine the most sensitive species at the IWC

VIII. SPECIAL CONDITIONS

A. Whole Effluent Toxicity Requirements

The Whole Effluent Toxicity (WET) requirements in this permit are required under 40 CFR § 122.44(d)(1)(v) to ensure that discharges do not harm aquatic life. These requirements involve regular sampling and chronic toxicity testing using specific aquatic species to evaluate the potential toxic effects of effluent on receiving waters. The permit specifies an Instream Waste Concentration (IWC) of 100% effluent to protect sensitive organisms and for quality assurance for testing accuracy. In cases of toxicity failure, a Toxicity Reduction Evaluation (TRE) work plan is required to identify and mitigate sources of toxicity, ensuring compliance with water quality standards.

B. Best Management Practices and Pollution Prevention

The permit requires the use of BMPs to control or abate the discharge of these pollutants, in accordance with 40 C.F.R. § 122.44(k). The approved Sediment Control Plan identifies multiple BMPs that could control or abate the discharge of these pollutants. The permit requires the permittee to design, develop, and implement the BMPs identified in the Sediment Control Plan to control or abate site runoff containing these pollutants.

C. Natural Background Monitoring and Summary Report

To assess whether natural background levels of pollutants are contributing to exceedances above Navajo Nation or New Mexico WQSs rather than mining or reclamation activities, this permit mandates monitoring at Coal Mine Wash (CMW), alongside effluent monitoring at each applicable SIDP outfall during discharge events. Upstream locations must represent natural background conditions with no mining or reclamation activities. This applies to all parameters with limits or monitoring requirements as outlined in Section VI.C of the fact sheet. The permittee may also conduct background monitoring of priority toxic pollutants and/or WET testing to determine whether constituent concentrations are consistent with natural background. This focuses monitoring on pollutants attributable to the discharge where background conditions drive toxicity or pollutant levels.

Representative natural background samples from Coal Mine Wash are collected to assess the impact of natural background pollutant concentration levels on effluent discharges. The permittee is required to use sufficiently sensitive EPA-approved analytical methods for measuring these concentrations. Monitoring results support the Reasonable Potential Analysis by comparing ambient and effluent pollutant levels to evaluate if additional limits are necessary. The monitoring results provide a basis for potential future permit modifications.

D. Phase III Bond Release Notification Requirement

This permit requires notification of the removal of outfalls associated with areas that have achieved termination of reclamation liability (e.g., Phase III bond release) to ensure the permit reflects current site conditions and SMCRA status. Written notification, identification of outfalls proposed for removal, and supporting documentation of liability termination allows EPA to verify removal. Requiring updates to the approved site-specific Sediment Control Plan, as needed, ensures sediment controls continue to meet applicable standards 40 CFR § 434, Subpart H.

IX. OTHER CONSIDERATIONS UNDER FEDERAL LAW

A. Impact to Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the federal agency does not jeopardize the continued existence of a listed or proposed species, or result in the destruction or adverse modification of its habitat. A federal agency must consult with the relevant Service, either U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service, if it determines that an endangered or threatened species or designated critical habitat is present in the area affected by the federal action and that the implementation of such action is likely to adversely affect the species or critical habitat. ESA § 7(a)(3); 16 U.S.C. § 1536(a)(3). A federal agency must confer with the relevant Service if it determines that a proposed species or proposed critical habitat is present in the action area and that implementation of the action is

likely to jeopardize the continued existence of the species or destroy or adversely modify the proposed critical habitat. ESA § 7(a)(4); 16 U.S.C. § 1536(a)(4).

Potentially Affected Species

On May 28, 2025, EPA obtained a USFWS Information for Planning and Consultation (IPaC) report that identified threatened and endangered species with the potential to occur in the Action Area (EPA Species List) which is defined as quadrangle of approximately 100 square miles around the mine and includes all outfalls. The EPA Species List identified eight threatened or endangered species and two proposed threatened and endangered species with the potential to occur in the Action Area. No critical habitat was identified for any species in the Action Area.

Table 3. Endangered or Threatened Species in the Vicinity of McKinley Mine

Type	Species Name	Status	Determination
Mammals	Mexican Wolf (<i>Canis lupus baileyi</i>)	E	NLAA
Birds	Mexican Spotted Owl (<i>Strix occidentalis lucida</i>)	T	NLAA
	Southwestern Willow Flycatcher (<i>Empidonax traillii extimus</i>)	E	NLAA
	Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>)	T	NLAA
Fish	Colorado Pikeminnow (<i>Ptychocheilus lucius</i>)	E	NLAA
	Razorback Sucker (<i>Xyrauchen texanus</i>)	E	NLAA
	Zuni Bluehead Sucker (<i>Catostomus discobolus yarrow</i>)	E	NLAA
Plants	Zuni Fleabane (<i>Erigeron rhizomatus</i>)	T	No effect
Insects	Monarch Butterfly (<i>Danaus plexippus</i>)	Proposed, T	No effect
	Suckley's Cuckoo Bumble Bee (<i>Bombus suckleyi</i>)	Proposed, E	No effect

(1) E=Endangered, T=Threatened, NLAA=Not Likely to Adversely Affect

Analysis of Potential Impacts

The Mexican Wolf is the smallest, southern-most occurring, rarest, and most genetically distinct subspecies of gray wolf in North America. Mexican Wolves' preferred and historical habitat of is montane woodlands with an abundance of prey species, availability of water, and suitable den sites. The mine site has very few trees despite reclamation efforts at planting vegetation (mostly grasses and brush). No critical habitat is identified for this species in the Action Area. Therefore, there is likely to be only incidental contact by any individuals with any discharge from the reclaimed mine outfalls. Thus, EPA has determined that the permitted discharges may affect but are not likely to adversely affect the Mexican Wolf.

The Mexican Spotted Owl is one of the largest owl species of North America with dark circles around the eyes and a rusty brown color. The owls are residents of mature forests that possess

complex structural components and large trees with trunk diameters of 11 inches or more. Canyons with riparian or conifer communities are also preferred. Owls may also be found in vertical walled rocky cliffs within complex watersheds. They generally need perennial water source, or ephemeral pools from runoff. The mine site has very few trees despite reclamation efforts at planting vegetation (mostly grasses and brush). The nearest permanent water in the Puerco River is many miles downstream. No critical habitat is identified for this species in the Action Area. Therefore, there is likely to be only incidental contact by any individuals with any discharge from the reclaimed mine outfalls. Thus, EPA has determined that the permitted discharges may affect but are not likely to adversely affect the Mexican Spotted Owl.

The Yellow-billed Cuckoo is a fairly large bird with a brownish plumage above and clean whitish below. They have a black facemask and a yellow eye-ring. The cuckoo uses wooded habitat with dense cover and water nearby. They often nest in dense willows along streams and rivers. Their diet consists of insects, as well as small frogs and lizards. They also forage on small wild fruit such as elderberries, blackberries, as well as seeds. The nearest permanent water in the Puerco River is many miles downstream. No critical habitat is identified for this species in the Action Area. Therefore, there is likely to be only incidental contact by any individuals with any discharge from the reclaimed mine outfalls. Thus, EPA has determined that the permitted discharges may affect, but are not likely to adversely affect the Yellow-billed Cuckoo.

The Colorado Pikeminnow is large fish which grows up to 6 or more feet in length with mature individuals being highly mobile moving over three miles or more a day in longer reaches of perennial reaches. The outfalls permitted here are many miles from the Puerco River, an eventual tributary to the Little Colorado. No critical habitat for this species exists in the Action Area. Furthermore, this species is restricted to the main larger rivers of Colorado River system, such as the San Juan and the Colorado itself. Thus, EPA has determined that the permitted discharge may affect, but is not likely to adversely affect the Colorado Pikeminnow

The Razorback Sucker is a medium sized fish that can grow up to 3 feet in length. The Razorback Sucker feeds on algae, zooplankton, and aquatic invertebrates and is prefers pools, slow runs, and backwaters lower reaches of the Colorado and Green rivers. The population in the San Juan is believed to have been extirpated. No critical habitat for this species exists in the Action Area. The outfalls permitted here are many miles from any permanent or semi-permanent waters where the Razorback Sucker is found. Thus, EPA has determined that the permitted discharge may affect, but is not likely to adversely affect the Razorback Sucker

The Zuni Bluehead Sucker is a small, silvery-tan to dark green fish with a bluish head, found in streams and rivers in the Zuni River watershed of west-central New Mexico and east-central Arizona. Its historical range includes drainages of the San Juan and Little Colorado River. It feeds primarily on algae scraped from in-stream rocks, boulders and gravel. It also feeds on small invertebrates. They inhabit streams and rivers with clean, perennial water flowing over hard substrates like bedrock, boulders, and cobble. They avoid silt-laden habitats. No critical habitat for this species exists in the Action Area. The outfalls permitted here are to ephemeral silt laden washes many miles from any appropriate Sucker habitat. Thus, EPA has determined that the permitted discharge may affect but is unlikely to adversely affect the Zuni Bluehead Sucker.

The Zuni Fleabane is a perennial herb that forms clumps. The fleabane favors erodible, crustless soils on fine-textured red clay hillsides. These habitats are found at elevations between 7500 to 8000 feet. The McKinley mine site is at a slightly lower elevation of just over 7000 feet. No critical habitat for this species exists in the Action Area. The fleabane is unlikely to be present where permitted discharge occurs. Thus, EPA has determined that the permitted discharge will have no effect on the Zuni Fleabane.

EPA conducted an evaluation and analysis for the two proposed species, the Monarch Butterfly and the Suckley's Cuckoo Bumble Bee. Proposed species do not have the same legal protection as listed species. However, a federal agency must confer with the USFWS on any agency action that is likely to jeopardize the continued existence of any species proposed to be listed. EPA reviewed the literature and conferred with the appropriate USFWS office and based on its review and input from USFWS staff, determined that the reissuance of this NPDES permit will not jeopardize the continued existence of the Monarch Butterfly and the Suckley's Cuckoo Bumble Bee.

Conclusion

As stated above, EPA concludes the reissuance of this NPDES permit may affect, but is unlikely to adversely affect the Mexican Gray Wolf, the Mexican Spotted Owl, the Yellow-billed Cuckoo the Willow Flycatcher, the Colorado Pikeminnow, the Razorback Sucker, and the Zuni Bluehead Sucker. The permit reissuance will have no effect on the Zuni Fleabane. The permit reissuance will also not jeopardize the continued existence of the Monarch Butterfly and the Suckley's Cuckoo Bumble Bee. Informal consultation with USFWS for this permit re-issuance is pending.

B. Impact to Coastal Zones

The Coastal Zone Management Act (CZMA) requires that Federal activities and licenses, including Federally permitted activities, must be consistent with an approved state Coastal Management Plan (CZMA Sections 307(c)(1) through (3)). Section 307(c) of the CZMA and implementing regulations at 40 CFR 930 prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State (or Territory) Coastal Zone Management program, and the State (or Territory) or its designated agency concurs with the certification.

The proposed permit does not affect land or water use in the coastal zone.

C. Impact to Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (MSA) set forth a number of new mandates for the National Marine Fisheries Service, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish species and habitat. The MSA requires Federal agencies to make a determination on Federal actions that may adversely impact Essential Fish Habitat (EFH).

The permit does not discharge pollutants to areas of essential fish habitat. Therefore, EPA has determined that the proposed permit will not adversely affect essential fish habitat.

D. Impact to National Historic Properties

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to the NHPA and 36 CFR §800.3(a)(1), EPA is making a determination that issuing this proposed NPDES permit which does not include disturbing any new areas does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require EPA to undertake additional consulting on this permit issuance.

E. Water Quality Certification Requirements (40 CFR §§ 124.53 and 124.54)

The permittee is required to seek CWA Section 401 Certification (including paying applicable fees) from the Navajo Nation the State of New Mexico. This Certification ensures that the permit will meet all applicable water quality standards. Certification under section 401 of the CWA shall be in writing and shall include the conditions necessary to assure compliance with referenced applicable provisions of sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of Tribal law. EPA cannot issue the permit until the certifying State, Territory, or Tribe has granted certification under 40 CFR § 124.53 or waived its right to certify.

D. Government-to-Government Consultation

EPA's Policy on Consultation and Coordination with Indian Tribes states that consultation could be appropriate when actions and decisions may affect Tribal interests. EPA offered the Navajo Nation the opportunity to consult on EPA's issuance of the permit on December 2, 2022. The Navajo Nation did not respond to the offer to initiate Government-to-Government consultation.

X. STANDARD CONDITIONS

A. Reopener Provision

In accordance with 40 CFR § 122 and 124, this permit may be modified by EPA to include effluent limits, monitoring, or other conditions to implement new regulations, including EPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards.

B. Clean Water Act Section 402(k)

The permittee is authorized to discharge from the identified facility at the outfall location(s)

specified in the permit, in accordance with the effluent limits, monitoring requirements, and other conditions set forth in the permit. Only authorized pollutant discharges are shielded from liability under section 402(k) of the Clean Water Act.

Any pollutant loading greater than or different than the proposed discharge (the “proposed discharge” is based on the chemical-specific data and the facility’s design flow as described in the permit application, or any other supplemental information provided to EPA during the permitting process) is not authorized by this Permit.

EPA notes that such other discharges or increases may be allowable, but Permittee must first submit a request to EPA to authorize such other discharge or increase. request. This request will allow EPA to conduct an updated reasonable potential analysis to reassess whether a WQBEL is needed for the newly proposed discharge. Permit modification or reissuance may be required before the discharge would be authorized.

C. Standard Conditions

The permit requires the permittee to comply with EPA Region 9 Standard Federal NPDES Permit Conditions, which are required by the CWA and implementing regulations.

XI. ADMINISTRATIVE INFORMATION

A. Public Notice (40 CFR § 124.10)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application.

B. Public Comment Period (40 CFR § 124.10)

Notice of the draft permit will be on EPA Region 9’s website for a 30-day comment period for interested parties to respond in writing to EPA. The draft permit and fact sheet will be posted on the EPA website for the duration of the public comment period. After the closing of the public comment period, EPA is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

C. Public Hearing (40 CFR §124.12(c))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if EPA determines there is a significant amount of interest expressed during the 30-day public comment period or when it is necessary to clarify the issues involved in the permit decision.

D. Water Quality Certification Requirements (40 CFR §§ 124.53 and 124.54)

For States, Territories, or Tribes with EPA approved water quality standards, EPA is requesting certification from the affected State, Territory, or Tribe that the proposed permit will meet all applicable water quality standards. Certification under section 401 of the CWA shall be in writing and shall include the conditions necessary to assure compliance with referenced applicable provisions of sections 108(e), 301, 301, 303, 306, and 307 of the CWA and appropriate requirements of Tribal and State law.

After the draft permit has been revised to include any relevant comments from the 30-day public comment period, it will be forwarded to NNEPA and NM EPA for CWA Section 401 certification. This certification ensures that the permit will comply with applicable Federal CWA standards as well as with the applicable state and tribal environmental laws.

XII. CONTACT INFORMATION

Comments, submittals, and additional information relating to this proposal may be directed to:

Kelsey Husted, (415) 972-3599

Husted.kelsey@epa.gov

EPA Region 9

75 Hawthorne Street (WTR 2-3)

San Francisco, California 94105

XIII. REFERENCES

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- OSMRE. Surface Mining Control and Reclamation Act of 1977 (SMCRA) permit. Permit No. NM-0001K.
- OSMRE. 2018. Post-Mining Hydrologic Assessment of the Chevron Environmental Management Company's McKinley Mine.
- OSMRE and EPA. 2003. Memorandum of Understanding: Process for Obtaining A NPDES Permit Under Subpart H - Western Alkaline Mine Drainage Category, EPA Region 9

and OSMRE, dated December 19, 2003.

USFWS. IPaC Species List for Project 2024-0083467 from New Mexico Ecological Services Field Offices. May 28, 2025.

DRAFT

XIV. Attachment A: Existing Data on Toxic Pollutants and Reasonable Potential Analysis (RPA)

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria, the NPDES permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water (40 CFR § 122.44(d)(1)(ii)).

For pollutants with effluent data available and numeric Navajo Nation or New Mexico WQS, EPA conducted a reasonable potential analysis based on statistical procedures outlined in EPA's Technical Support Document for Water Quality-based Toxics Control (EPA's TSD) (EPA 1991). These statistical procedures result in the calculation of the projected maximum effluent concentration based on monitoring data to account for effluent variability and a limited data set. As presented below, EPA evaluated effluent monitoring data to determine the maximum pollutant concentration (per outfall) and applied a multiplier value to obtain the projected maximum effluent concentration which was then compared to the applicable water quality standard value. The RP analyses below use a coefficient of variation of 0.6 for sample sizes less than 10 and the 99 percent confidence interval of the 99th percentile based on an assumed lognormal distribution of daily effluent concentration values.

Given the numerous discharge events and the substantial number of samples collected for some parameters, the multiplier value for some parameters is notably low. This reflects the reduced variability and increased statistical confidence associated with the larger dataset. Consequently, some parameters exhibit extremely low concentration values due to the high number of samples and low variability. In contrast to situations with limited data, such as a single monitoring result where the multiplier is high (e.g., for $n=1$, the multiplier is 13.2), a larger sample size leads to a decrease in the multiplier value (e.g., for $n=2496$, the multiplier is 0.3). This adjustment acknowledges the consistency and reliability of the effluent monitoring results. For detailed guidance, refer to the TSD, sections 3.3, 5.5.2, and Table 3-1.

EPA calculated the projected maximum effluent concentration for each pollutant using the following equation:

Projected maximum concentration = $C_e \times$ reasonable potential multiplier factor.

Where, " C_e " is the reported maximum effluent value, and the multiplier factor is obtained from Table 3-1 of the TSD. The table below contain a summary of EPA's reasonable potential statistical analysis.

Table 1. Summary of EPA's Reasonable Potential Statistical Analysis for All Navajo Nation Outfalls

Parameter ⁽¹⁾⁽²⁾	Extreme Observed Concentration ⁽³⁾ (4)	n	RP Multiplier	Projected Maximum Effluent Concentration	Navajo Nation WQS Most Stringent Water Quality Criterion ⁽³⁾	Statistical Reasonable Potential?	Max. Observed Concentration Exceeds Most Stringent WQC?
pH (Maximum)	9.0 SU	2470	N/A ⁽⁷⁾	N/A ⁽⁷⁾	9 SU	N	N
pH (Minimum)	6.79 SU	2470	N/A ⁽⁷⁾	N/A ⁽⁷⁾	6.5 SU	N	N
2,3,7,8-Tetrachlorodibenzo-p-dioxin	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	5.1E-09 ug/L (FC)	N	N
Aldrin	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	0.00000077 ug/L (FC)	N	N
Alpha Radiation	809 pCi/L	2496	0.3	238 pCi/L	15 pCi/L (L&W)	Y	Y
Aluminum, total (as Al)	210,000 ug/L	2496	0.3	64,953 ug/L	750 ug/L (A&WHbt) ⁽⁸⁾	Y ⁽⁵⁾	Y ⁽⁵⁾
Antimony, dissolved (as Sb)	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	88 ug/L (A&WHbt)	N	N
Arsenic, dissolved (as As)	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	30 ug/L (PrHC)	N	N
Benzo(a)pyrene	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	0.00013 ug/L (FC)	N	N
Chlordane	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	0.00032 ug/L (FC)	N	N
Cyanide, total (as CN)	6,770 ug/L	2496	0.22	1,465 ug/L	22 ug/L (A&WHbt)	Y	Y
Dieldrin	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	0.0000012 ug/L (FC)	N	N
Hexachlorobenzene	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	0.000079 ug/L (FC)	N	N
Nickel, dissolved (as Ni)	1.10 ug/L	2	7.4	8.13 ug/L	1,100 ug/L (A&WHbt)	N	N
Polychlorinated biphenyls (PCBs)	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	0.000064 ug/L (FC)	N	N
Selenium, total (as Se)	23 ug/L	2496	0.3	7.17 ug/L	20 ug/L (A&WHbt)	Y	Y
Tetrachloroethylene	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	3.3 ug/L (FC)	N	N
Thallium, dissolved (as Tl)	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	1.0 ug/L (FC)	N	N
Zinc, dissolved (as Zn)	N/A ⁽⁶⁾	2	N/A ⁽⁶⁾	N/A ⁽⁶⁾	117 ug/L (A&WHbt)	N	N

-- = No applicable criteria

N/A = Not applicable

N = No

Y = Yes

(1) For purposes of RP analysis, parameters measured as Non-Detect are considered to be half of the non-detection limit. Only pollutants detected and with applicable Navajo Nation WQS or New Mexico WQS are included in this analysis. Some pollutants detected in the effluent and listed in Tables 1 do not have applicable Navajo Nation WQS or New Mexico WQS.

(2) Effluent data was collected by the Permittee from 2017-2025.

(3) A hardness of 400 mg/L was assumed to determine the most stringent water quality criterion in the Navajo Nation WQS and to make metal conversions between total and dissolved.

(4) Metal conversion factors between total and dissolved were used from Nationally Recommended Water Quality Criteria for Priority Toxic Pollutants, U.S. EPA, 1999, Appendix A.

(5) There is not an EPA recommended conversion factor for converting total to acid-soluble aluminum.

(6) Parameters with a maximum observed concentration listed as 'N/A' indicate that all measured samples had concentrations of zero with no RP multiplier.

(7) pH does not have an RP multiplier and thus does not have a project effluent concentration.

(8) The A & W aluminum standard is for acid-soluble aluminum. Acid aluminum is defined as the aluminum that passes through a 0.45 µm membrane filter after the sample has been acidified to a pH between 1.5 and 2.0 with nitric acid (EPA 1988).

Table 2. Summary of EPA's Reasonable Potential Statistical Analysis for All State of New Mexico Outfalls

Parameter ⁽¹⁾⁽²⁾	Extreme Observed Concentration ⁽³⁾ (4)	<i>n</i>	RP Multiplier	Projected Maximum Effluent Concentration	New Mexico WQS Most Stringent Water Quality Criterion ⁽³⁾	Statistical Reasonable Potential?	Max. Observed Concentration Exceeds Most Stringent WQC?
pH (Minimum)	6.10 SU	234	N/A ⁽⁶⁾	N/A ⁽⁶⁾	6.0 SU	N	N
2,3,7,8-Tetrachlorodibenzo-p-dioxin	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	--	N	N
Aldrin	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	3 ug/L (AqL)	N	N
Alpha Radiation ⁽⁷⁾	318 pCi/L	474	0.98	310 pCi/L	15 pCi/L (LW)	Y	Y
Aluminum, total (as Al)	46,000 ug/L	468	0.99	45,348 ug/L	3,961 ug/L (AqL)	Y	Y
Antimony, dissolved (as Sb)	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	--	N	N
Arsenic, dissolved (as As)	1.4 ug/L	18	8.8	12 ug/L	200 ug/L (AqL)	N	N
Benzo(a)pyrene	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	--	N	N
.alpha.-Endosulfan	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	--	N	N
.beta.-Endosulfan	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.22 ug/L (AqL)	N	N
Boron, dissolved (as B)	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	5000 ug/L (LW)	N	N
Cadmium, dissolved (as Cd)	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.0414 ug/L (AqL)	N	N
Chlordane	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	2.4 ug/L (AqL)	N	N
Chromium, dissolved (as Cr)	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	1000 ug/L (L&W)	N	N
Cobalt, dissolved (as Co)	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	1000 ug/L (LW)	N	N
Cyanide, total (as CN)	9.7 ug/L	468	0.98	9.5 ug/L	5.2 ug/L (WH)	Y	Y
Dieldrin	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.24 ug/L (AqL)	N	N
Endrin	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.086 (AqL)	N	N
.gamma.-BHC	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.95 ug/L (AqL)	N	N
Heptachlor	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.52 ug/L (AqL)	N	N

Heptachlor epoxide	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.52 ug/L (AqL)	N	N
Hexachlorobenzene	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	--	N	N
Lead, dissolved (as Pb)	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	40 ug/L (AqL)	N	N
Nickel, dissolved (as Ni)	1.9 ug/L	18	8.7	15 ug/L	1,723 ug/L (AqL)	N	N
Pentachlorophenol	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	19 ug/L (AqL)	N	N
Polychlorinated biphenyls (PCBs)	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.014 ug/L (FC)	N	N
Selenium, total (as Se)	6 ug/L	468	1	6 ug/L	5 ug/L (WH)	Y	Y
Selenium, dissolved (as Se)	3 ug/L	12	13.5	41 ug/L	50 ug/L (LW)	N	N
Silver, dissolved (as Ag)	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.0087 ug/L (AqL)	N	N
Tetrachloroethylene	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	--	N	N
Thallium, dissolved (as Tl)	N/A ⁽⁵⁾	18	N/A ⁽⁵⁾	N/A ⁽⁵⁾	--	N	N
Toxaphene	N/A ⁽⁵⁾	6	N/A ⁽⁵⁾	N/A ⁽⁵⁾	0.73 ug/L (AqL)	N	N
Zinc, dissolved (as Zn)	12 ug/L	18	7.1	85 ug/L	245 ug/L (AqL)	N	N

-- = No applicable criteria

N/A = Not applicable

N = No

Y = Yes

(1) For purposes of RP analysis, parameters measured as Non-Detect are considered to be half of the non-detection limit. Only pollutants detected and with applicable Navajo Nation WQS or New Mexico WQS are included in this analysis. Some pollutants detected in the effluent and listed in Tables 1 do not have applicable Navajo Nation WQS or New Mexico WQS.

(2) Effluent data was collected by the Permittee from 2017-2025.

(3) A hardness of 160 mg/L was assumed to determine the most stringent water quality criterion in the New Mexico WQS and to make metal conversions between total and dissolved due to high variability.

(4) Metal conversion factors between total and dissolved were used from Nationally Recommended Water Quality Criteria for Priority Toxic Pollutants, U.S. EPA, 1999, Appendix A. (5) Parameters with a maximum observed concentration listed as 'N/A' indicate that all measured samples had concentrations of zero with no RP multiplier.

(6) pH does not have an RP multiplier and thus does not have a project effluent concentration.

(7) NM WQS define "adjusted gross alpha" as the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample, including radium-226, but excluding radon-222 and uranium.

Conclusion

Based on currently available data, EPA has concluded that there is a statistical reasonable potential for each pollutant marked with a 'Y' in the 'Statistical Reasonable Potential?' column above to cause or contribute to an exceedance of applicable water quality standards. These conclusions were drawn by following the statistical procedures outlined in EPA's Technical Support Document for Water Quality-based Toxics Control (EPA's TSD, 1991). Pollutants were assessed separately for outfalls discharging into receiving waters on Navajo Nation and receiving waters in New Mexico to account for effluent variation and the appropriate applicable water quality standards (WQS). Consequently, the determination of which pollutants have reasonable potential varies by applicable WQS.

EPA notes there is uncertainty associated with monitoring results for pollutants that currently show reasonable potential. The RPA indicates aluminum, gross alpha radiation, cyanide, and selenium may cause or contribute to exceedances of applicable WQS. However, insufficient ancillary data to characterize naturally occurring background levels adds uncertainty to these findings. Aluminum results are reported as total recoverable, while the applicable criterion (EPA 1988; Navajo Nation 2015) is for acid-soluble aluminum; because these fractions are not directly comparable, additional acid-soluble monitoring is needed to confirm compliance. There is also uncertainty for gross alpha radiation result because both Navajo Nation and New Mexico apply an adjusted gross alpha criterion that excludes measured results for uranium and radon. Without uranium and radon data and confirmation of the analytical method, compliance with the gross alpha radiation criteria cannot be determined with high degree of confidence. Monitoring site-specific conditions, including natural background concentrations, is consistent with applicable WQS for Navajo Nation and New Mexico, and the 2018 Post-Mining Hydrologic Assessment for the McKinley Mine (OSMRE 2018) identified exceedances potentially attributable to unassessed background in an inactive mine setting. Both Navajo Nation and New Mexico water quality standards recognize the potential for background concentrations to exceed numeric criteria.

Navajo Nation WQS: “Where the concentration of a pollutant exceeds a water quality standard and the exceedance is not anthropogenic but is due to natural background conditions, the exceedance shall not be considered a violation of the water quality standard” (Navajo Nation 2015).

New Mexico WQS: “The commission may adopt site-specific criteria equal to the concentration resulting from natural background where that concentration protects the designated use” (New Mexico 2025).

The source of observed exceedances within the RPA conclusions remains uncertain, in part due to unassessed natural background conditions identified in the 2018 Post-Mining Hydrologic Assessment (OSMRE 2018). Consistent with the preceding discussion and both jurisdictions’ WQS, targeted monitoring—acid-soluble aluminum, adjusted gross alpha (e.g., including radium-226 but excluding radon-222 and uranium), and monitoring of natural background samples—will be used to inform future water quality evaluations. The permit includes a reopener and may be amended to add limits if subsequent monitoring demonstrates a need.