



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0031101

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

New Mexico Copper Corporation
Copper Flat Production Well Field
2425 San Pedro NE, Suite 100
Albuquerque, NM 87110

is authorized to discharge to receiving waters named Grayback Arroyo thence Greenhorn Arroyo thence to Caballo Reservoir, in Waterbody Segment Code No. 20.6.4.98 in the Rio Grande Basin, from a facility located in Sierra County, approximately eight miles east of the town of Hillsboro, New Mexico.

The discharge is located on that water at the following coordinates:

Outfall 001: Latitude 32° 57' 42" North, Longitude 107° 22' 22" West,

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, and Part III hereof.

This is a first-time issuance.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight, two-years after the permit effective date on

Issued on

Prepared by

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – 3.0 MGD

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge groundwater to Grayback Arroyo thence Greenhorn Arroyo thence to Caballo Reservoir, in Segment Number 20.6.4.98, from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Standard Units		MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	MINIMUM	MAXIMUM		
pH	6.6	9.0	Once/Week (*2)	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	lbs/day, unless noted		ug/l, unless noted (*1)		MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	30-DAY AVG	DAILY MAX	30-DAY AVG	DAILY MAX		
Flow	Report MGD	Report MGD	***	***	Once/Week (*2)	Estimate (*3)
Aluminum	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Cadmium	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Chromium	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Copper	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Lead	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Manganese	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Mercury	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Molybdenum	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Nickel	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Selenium	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Silver	N/A	N/A	Report	Report	Once/Month (*2)	Grab
Zinc	N/A	N/A	Report	Report	Once/Month (*2)	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-DAY AVG MINIMUM	48 HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT LETHALITY (48 Hour Static Renewal) (*4)				
Daphnia pulex	Report	Report	One Time (*4)	Grab (*5)
Pimephales promelas	Report	Report	One Time (*4)	Grab (*5)

Footnotes:

- *1 See **Appendix A of Part II** of the permit for minimum quantification limits.
- *2 When discharging.
- *3 "Estimate" flow measurements shall not be subject to the accuracy provisions established at Part III.C.6. Flow may be estimated using sound analytical techniques.
- *4 One time test requirement. Monitoring and reporting requirements begin on the effective date of this permit. See PART II, Whole Effluent Toxicity testing requirements for additional WET monitoring and reporting conditions.
- *5 Grab samples are authorized for this test. See Part II, Whole Effluent Toxicity testing requirements for additional WET monitoring and reporting conditions.

2. Human Health Testing Requirements

Discharges from industrial facilities for permits issued to protect NMWQS human health pollutants are required to be analyzed. The following pollutants need to be sampled ONE-TIME during the first discharge, analyzed and reported with the DMR on a separate form.

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING
POLLUTANT	Single Grab Sample, ug/l (*1)	POLLUTANT	Single Grab Sample, ug/l (*1)
Antimony (dissolved)		Vinyl Chloride	
Cyanide, weak acid dissociable		2-Chlorophenol	
2,3,7,8-TCDD (Dioxin)		2,4-Dichlorophenol	
Acrolein		2,4-Dimethylphenol	
Acrylonitrile		2-Methyl-4	
Benzene		6-Dinitrophenol	
Bromoform		2,4-Dinitrophenol	
Carbon Tetrachloride		Pentachlorophenol	
Chlorobenzene		Phenol	
Clorodibromomethane		2,4,6-Trichlorophenol	
Chloroform		Acenaphthene	
Dichlorobromomethane		Anthracene	
1,2-Dichloroethane		Benzidine	
1,1-Dichloroethylene		Benzidine	
1,2-Dichloropropane		Benzo(a)anthracene	
1,3-Dichloropropene		Benzo(a)pyrene	
Ethylbenzene		Benzo(b)fluoranthene	
Methyl Bromide		Benzo(k)fluoranthene	
Methylene Chloride		Bis (2-chloroethyl) Ether	
1,1,2,2-Tetrachloroethane		Bis (2-chloroisopropyl) Ether	
Tetrachloroethylene		Bis (2-ethylhexyl) Phthalate	
Toluene		Butyl Benzyl Phthalate	
1,2--trans-Dichloroethylene		2-Chloronaphthalene	
1,1,2-Trichloroethane		Chrysene	
Trichloroethylene		Dibenzo(a,h)anthracene	

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING
POLLUTANT	Single Grab Sample, ug/l	POLLUTANT	Single Grab Sample, ug/l
1,2-Dichlorobenzene		Nitrobenzene	
1,3-Dichlorobenzene		n-Nitrodimethylamine	
1,4-Dichlorobenzene		n-Nitrosodi-n-Propylamine	
3,3-Dichlorobenzidine		n-Nitrosodiphenylamine	
Diethyl Phthalate		Pyrene	
Dimethyl Phthalate		1,2,4-Trichlorobenzene	
Dibutyl Phthalate		Aldrin	
2,4-Dinitrotoluene		Alpha-BHC	
1,2-Diphenylhydrazine		Beta-BHC	
Fluoranthene		Gamma-BHC	
Fluorene		Chlordane	
Hexachlorobenzene		4, 4'-DDT and derivatives	
Hexachlorobutadiene		Dieldrin	
Hexachlorocyclopentadiene		Alpha-Endosulfan	
Hexachloroethane		Beta-Endosulfan	
Indeno (1,2,3-cd)Pyrene		Endosulfan sulfate	
Isophorone		Endrin	

Footnotes:

*1 See **Appendix A of Part II** of the permit for minimum quantification limits.

3. SAMPLE LOCATIONS

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge after the final treatment unit and prior to the receiving stream.

4. FLOATING SOLIDS, OIL AND GREASE

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

B. SCHEDULE OF COMPLIANCE

None

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring results must be reported either using the electronic or paper Discharge Monitoring Report (DMR) approved formats to EPA. If using paper DMR forms, the report shall be also sent to NMED and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period. See Part III, D.4 of the permit.

1. Reporting periods shall end on the last day of the months March, June, September, and December.
2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

See list of MQL's at Appendix A of Part II below. For pollutants listed on Appendix A of Part II below with MQL's, analyses must be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached Appendix A of Part II.

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR §136. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to the EPA Region 6 NPDES Permits Branch (6WQ-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) reporting requirements until/or unless changes are required for adoption of a lower MQL.

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

None

C. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(a)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

D. WHOLE EFFLUENT TOXICITY TESTING (48 HOUR ACUTE NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	001
REPORTED AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	100
EFFLUENT DILUTION SERIES (%):	32%, 42%, 56%, 75%, 100%
COMPOSITE SAMPLE TYPE:	Defined at PART I [Grab samples are authorized for this test]
TEST SPECIES/METHODS:	40 CFR Part 136

Daphnia pulex acute static renewal 48 hour definitive toxicity test using EPA 821 R 02 012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

Pimephales promelas (Fathead minnow) acute static renewal 48 hour definitive toxicity test using EPA 821 R 02 012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

- b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is

- defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.
- c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.
 - d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.
 - e. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.
- ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: *Daphnia pulex* survival test; and Fathead minnow survival test.
- iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: *Daphnia pulex* survival test; and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the *Daphnia pulex* survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the

critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA 821 R 02 012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the reporting requirements found in Item 3 below.

c. Dilution Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

(B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites [Grab samples are authorized for this test]

- i. The permittee shall collect two grab samples from the outfall(s) listed at Item 1.a above.
- ii. The permittee shall collect a second grab sample for use during the 24 hour renewal of each dilution concentration for both tests. The permittee must collect the grab samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first grab sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.
- iii. The permittee must collect the grab samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent grab sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent grab sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

3. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA 821 R 02 012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for EPA review.

- c. The permittee shall report the following results of each valid toxicity test. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.
- i. *Pimephales promelas* (Fathead minnow)
- (A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.
- (B) Report the NOEC value for survival, Parameter No. TOM6C.
- (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.
- ii. *Daphnia pulex*
- (A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.
- (B) Report the NOEC value for survival, Parameter No. TOM3D.
- (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.