



REGION 6  
1445 ROSS AVENUE  
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0030996

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## 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"),

Lee Ranch Coal Company  
El Segundo Mine  
P.O. Box 757  
Grants, NM 87020

is authorized to discharge from a facility located at 35 miles north of Milan, off State Road 509, Grants, in McKinley County, New Mexico. Discharges from multiple outfalls are to receiving water named Kim-me-ni-oli Valley Tributary, thence into Chaco River, a tributary of San Juan River (about 100 miles north-west of El Segundo Mine) and to Inditos Draw, a tributary of Vought Draw, which flows into Arroyo Chico, then to Rio Puerco (about 60 miles southeast the mine area), a tributary of the Rio Grande River. Kim-me-ni-oli Valley Tributary and Inditos Draw are classified under 20.6.4.97 NMAC.

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

This permit supersedes and replaces NPDES Permit No. NM0030996 with an effective date of February 1, 2009.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

Prepared by

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William K. Honker, P.E.  
Director  
Water Quality Protection Division (6WQ)

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Environmental Engineer  
Permits & Technical Section (6WQ-PP)

## DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FCB	Fecal coliform bacteria
FWS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
ug/l	Micrograms per liter
lbs	Pounds
MGD	Million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES Permit Implementation Procedures
NMWQS	New Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
POTW	Publically owned treatment works
RP	Reasonable potential
SS	Settleable solids
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
SWQB	Surface Water Quality Bureau
TDS	Total dissolved solids
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USGS	United States Geological Service
WLA	Wasteload allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plan

**PART I – REQUIREMENTS FOR NPDES PERMITS****A. LIMITATIONS AND MONITORING REQUIREMENTS****1. Coal Preparation & Associated Areas Outfalls**

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 runoff from outfalls (sediment ponds) listed in Attachment A – “Coal Preparation & Associated Areas” to Kim-me-ni-oli Valley Tributary. Such discharges shall be limited and monitored by the permittee and reported as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.0 s.u.	9.0 s.u.	1/day	Instantaneous Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	lbs/day, unless noted		mg/l, unless noted (*1)		DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	30-DAY AVG	7-DAY AVG	30-DAY AVG	7-DAY AVG			
Flow	N/A	N/A	Report, MGD	N/A	Report, MGD	1/day	Estimated (*2)
TSS	N/A	N/A	35	N/A	70	1/day	Grab
Total Iron	N/A	N/A	3.0	N/A	6.0	1/day	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-DAY AVG	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY TESTING 48-HR ACUTE NOEC FRESHWATER (*3)	30-DAY AVG	48-HR MINIMUM	(*4)	SAMPLE TYPE
Daphnia pulex	Report	Report	Once/year	Grab

## Footnotes:

- \*1 See **Appendix A of Part II** of the permit for minimum quantification limits.
- \*2 The flow can be estimated using best engineering judgment; e.g., calculation of discharge volume over discharge duration.
- \*3 Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit for WET testing requirements for additional WET monitoring and reporting conditions.
- \*4 If discharges occur at more than one outfall at the same time, a representative sample from these specific (Attachment B) outfalls may be used. If samples are collected from a representative point, the permittee shall specify in the monitoring narrative: the outfalls being represented; the rationale for outfalls being representative including a description of the control measures at each outfall.

## 2. Alkaline Mine Drainage Outfalls

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 runoff from outfalls (sediment ponds) listed in Attachment B – “Alkaline Mine Drainage” to Kim-me-ni-oli Valley Tributary and Inditos Draw. Such discharges shall be limited and monitored by the permittee and reported as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.0 s.u.	9.0 s.u.	1/day	Instantaneous Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS	
	lbs/day, unless noted		mg/l, unless noted (*1)			MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	30-DAY AVG	7-DAY AVG	30-DAY AVG	7-DAY AVG	DAILY MAX		
Flow	N/A	N/A	Report, MGD	N/A	Report, MGD	1/day	Estimated (*2)
TSS	N/A	N/A	35	N/A	70	1/day	Grab
Total Iron	N/A	N/A	3.0	N/A	6.0	1/day	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-DAY AVG	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY TESTING 48-HR ACUTE NOEC FRESHWATER (*3)	Report	Report	(*4)	
Daphnia pulex	Report	Report	Once/year	Grab

## Footnotes:

- \*1 See **Appendix A of Part II** of the permit for minimum quantification limits.
- \*2 The flow can be estimated using best engineering judgment; e.g., calculation of discharge volume over discharge duration.
- \*3 Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit for WET testing requirements for additional WET monitoring and reporting conditions.
- \*4 If discharges occur at more than one outfall at the same time, a representative sample from these specific (Attachment B) outfalls may be used. If samples are collected from a representative point, the permittee shall specify in the monitoring narrative: the outfalls being represented; the rationale for outfalls being representative including a description of the control measures at each outfall.

## 3. Sewage Lagoon Outfall (Outfall 18)

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 treated wastewater from Outfall 18 to Kim-me-ni-oli Valley Tributary. Such discharges shall be limited and monitored by the permittee and reported as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.0 s.u.	9.0 s.u.	1/day	Instantaneous Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS	
	lbs/day, unless noted		mg/l, unless noted (*1)			MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	30-DAY AVG	7-DAY AVG	30-DAY AVG	7-DAY AVG	DAILY MAX		
Flow	Report MGD	Report MGD	***	***	***	Daily	Estimated (*3)
BOD <sub>5</sub>	N/A	N/A	30	45	N/A	1/Week	Grab
BOD <sub>5</sub> % removal, minimum	≥85	***	***	***	***	1/Week	Calculation (*2)
TSS	N/A	N/A	30	45	N/A	1/Week	Grab
TSS % removal, minimum	≥85	***	***	***	***	1/Week	Calculation (*2)
E. coli bacteria	N/A	N/A	548 cfu/100 ml	N/A	2507 cfu/100 ml	1/Week	Grab
TRC	N/A	N/A	N/A	N/A	11 ug/l (*4)	1/Week	Instantaneous Grab (*5)

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-DAY AVG	48-HR MINIMUM	MEASUREMENT FREQUENCY (*7)	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY TESTING 48-HR ACUTE NOEC FRESHWATER (*6)	Report	Report	Once/5 year	Grab

## Footnotes:

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

\*2 Percent removal is calculated using the following equation:

$$[\text{average monthly influent concentration (mg/l)} - \text{average monthly effluent concentration (mg/l)}] \div [\text{average monthly influent concentration (mg/l)}] \times 100.$$

\*3 The flow can be estimated using best engineering judgment, including calculation of discharge volume over discharge duration.

\*4 The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.

\*5 For instantaneous grab, sample shall be analyzed within 15 minutes of collection.

\*6 Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit for WET testing requirements for additional WET monitoring and reporting conditions.

\*7 The sample collection shall take place when discharge occurs.

## 4. Discharge Resulting From Precipitation Events

- a. 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 runoff from outfalls listed in Attachment A – “Coal Preparation & Associated Areas” and Attachment B – “Alkaline Mine Drainage” resulting from precipitation events less than or equal to a 10-year, 24-hour precipitation event to the receiving waters. Such discharges shall be limited and monitored by the permittee and reported as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

During precipitation events, samples may be collected from a sampling point representative of the type of discharge, rather than from each point of discharge. If samples are collected from a representative point, the permittee shall specify in the monitoring narrative: the outfalls being represented; the rationale for outfalls being representative including a description of the control measures at each outfall. The permittee shall have the burden of proof the discharge was caused by the precipitation event pursuant to 40 CFR 434.63(e).

EFFLUENT PARAMETER	UNIT	EFFLUENT LIMITATION	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD	Daily	Estimated (*1)
pH	s.u.	6.0 – 9.0	Daily	Instantaneous Grab (*2)
SS (*3)	ml/l	0.5	Daily	Grab

## Footnotes:

\*1 The flow can be estimated using best engineering judgment; e.g., calculation of discharge volume over discharge duration.

\*2 For instantaneous grab, sample shall be analyzed within 15 minutes of collection.

\*3 Procedure and method of detection limit for measurement of settleable solids shall be in accordance with 40 CFR 434.64.

- b. 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 runoff from outfalls listed in Attachment A – “Coal Preparation & Associated Areas” and Attachment B – “Alkaline Mine Drainage” resulting from precipitation events greater than a 10-year, 24-hour precipitation event to the receiving waters. Such discharges shall be limited and monitored by the permittee and reported as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

During precipitation events, samples may be collected from a sampling point representative of the type of discharge, rather than from each point of discharge. If samples are collected from a representative point, the permittee shall specify in the monitoring narrative: the outfalls being represented; the rationale for outfalls being representative including a description of the control measures at each outfall. The permittee shall have the burden of proof the discharge was caused by the precipitation event pursuant to 40 CFR 434.63(e).

EFFLUENT PARAMETER	UNIT	EFFLUENT LIMITATION	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD	Daily	Estimated (*1)
pH	s.u.	6.0 – 9.0	Daily	Instantaneous Grab (*2)

Footnotes:

- \*1 The flow can be estimated using best engineering judgment; e.g., calculation of discharge volume over discharge duration.
- \*2 For instantaneous grab, sample shall be analyzed within 15 minutes of collection.

5. Outfalls 1 to 41, Including Sewage Lagoon Outfall (18)

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 runoff and treated wastewater from Outfalls 1 to 41 to Kim-me-ni-oli Valley Tributary. Such discharges shall be limited and monitored by the permittee and reported as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

EFFLUENT PARAMETER	UNIT	EFFLUENT LIMITATION	MEASUREMENT FREQUENCY	SAMPLE TYPE
TDS	lbs/day	2,000*	Quarterly	Grab

\* Totaled amount at discharged outfall(s). Individual TDS mass at each outfall is estimated by measured concentration and estimated discharged flow.

## 6. Western Alkaline Coal Mining Operation

The below requirements apply to alkaline mine drainage and/or drainage at western alkaline mining operations from possible brushing and grubbing areas, reclamation areas, topsoil stockpiling areas and regarded areas as defined at 40 CFR 434.80 and 81. The permittee shall:

- a. Submit, within 6 months of the effective date of the permit, a site specific Sediment Control Plan (SCP) to the permitting authority that is designed to prevent an increase in the average annual sediment yield from pre-mined, undisturbed conditions. The SCP shall identify best management practices (BMPs) and also shall describe design specifications, construction specifications, maintenance schedules, criteria for inspection, as well as expected performance and longevity of the BMPs. The Sediment Control Plan shall be approved by EPA and be incorporated into the permit as an effluent limitation. If the Plan is approved by the Surface Mining Control and Reclamation Act (SMCRA), the SCP is considered to meet EPA approval, unless EPA disapproves it within 90 days after receiving the SCP.
- b. Demonstrate by using watershed models that implementation of the SCP will result in average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. The permittee must use the same watershed model that was, or will be, used to acquire the SMCRA permit.
- c. Design, implement, and maintain BMPs in the manner specified in the SCP throughout the permit term.
- d. Revise the SCP to incorporate new applicable areas. A revised SCP and revised watershed model must be submitted to EPA and approved by EPA or SMCRA permit before it becomes effective. Revisions to the SCP must meet all requirements contained at 40 CFR Part 434.82, and 100% of the drainage area to an outfall that has been disturbed by mining must meet the definition of “western alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded areas” (as defined at 40 CFR 434.80) to be considered for coverage. The approval of an updated SCP will be considered a minor modification to the permit as described in Part II.C of this permit.
- e. Conduct inspections at least quarterly within the drainage areas associated with the SCP to verify implementation of the SCP. Each inspection report shall include, at a minimum, the following items: inspected person and signature, date inspected, summary of observations/findings, photo documentation of findings. The report shall be signed and certified in accordance with Part III.D.
- f. Submit an annual Sediment Control Plan Report (by January 28<sup>th</sup>) documenting that the facility has met the requirements set forth in this section. The first annual report shall be submitted by January 28, 2016. The permittee shall also send a copy of the approved and updated SCP and annual reports to NMED.

## 7. Appendix I - Additional Pollutants Monitoring Requirements

The permittee shall monitor all pollutants below at each outfall listed in Attachment A – “Coal Preparation & Associated Areas” and Attachment B – “Alkaline Mine Drainage” once per calendar year when discharge occurs. This monitoring requirement is not applicable to Sewage Lagoon Outfall.



POLLUTANT	CAS NUMBER
Aluminum, total recoverable	7429-90-5
Antimony, dissolved	7440-36-0
Arsenic, dissolved	7440-38-2
Boron, dissolved	7440-42-8
Cadmium, dissolved	7440-43-9
Chlorine residual	7782-50-5
Chromium III, dissolved	16065-83-1
Chromium VI, dissolved	18540-29-9
Chromium, dissolved	7440-47-3
Cobalt, dissolved	7440-48-4
Copper, dissolved	7440-50-8
Cyanide, total recoverable	57-12-5
Lead, dissolved	7439-92-1
Manganese, dissolved	7439-96-5
Mercury	7439-97-6
Mercury, dissolved	7439-97-6
Molybdenum, total recoverable	7439-98-7
Nickel, dissolved	7440-02-0
Nitrite + Nitrate	
Selenium, dissolved	7782-49-2
Selenium, total recoverable	7782-49-2
Silver, dissolved	7440-22-4
Thallium, dissolved	7440-28-0
Vanadium, dissolved	7440-62-2
Zinc, dissolved	7440-66-6
Adjusted gross alpha	
Radium 226 + Radium 228	
Tritium	
Aldrin	309-00-2
Benzoapyrene	50-32-8
Gamma-BHC (Lindane)	58-89-9
Chlordane	57-74-9
Diazinon	333-41-5
4,4'-DDT and derivatives	
Dieldrin	60-57-1
Dioxin	
alpha-Endosulfan	959-98-8
beta-Endosulfan	33213-65-9
Endrin	72-20-8
Heptachlor	76-44-8
Heptachlor epoxide	1024-57-3
Hexachlorobenzene	118-74-1
Nonylphenol	84852-15-3
Polychlorinated Byphenyls (PCBs)	1336-36-3
Pentachlorophenol	87-86-5
Tetrachloroethylene	127-18-4
Toxaphene	8001-35-2

#### 8. Floating Solids, Visible Foam and/or Oils

There shall be no discharge of floating solids or visible foam in other than trace amounts.

There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the points of discharge from the associate sediment ponds prior to the receiving stream.

#### 9. Human Health Data Requirements

The permittee shall monitor all pollutants in Section V of Form 2C at each outfall listed in Attachment A – “Coal Preparation & Associated Areas” and Attachment B – “Alkaline Mine Drainage” once per permit term when discharge occurs. All the pollutants shall be tested. This monitoring requirement is not applicable to Sewage Lagoon Outfall.

#### 10. Toxics

No discharge shall contain any substance, including but not limited to selenium, DDT, PCB's and dioxin, at a level which, when added to background concentration, can lead to bioaccumulation to toxic levels in any animal species

### B. SCHEDULES OF COMPLIANCE

None

### C. MONITORING AND REPORTING

Monitoring results shall be reported to EPA on either the electronic or paper Discharge Monitoring Report (DMR) approved formats. Monitoring results can be submitted electronically in lieu of the paper DMR Form. To submit electronically, access the NetDMR website at [www.epa.gov/netdmr](http://www.epa.gov/netdmr) and contact the [R6NetDMR@epa.gov](mailto:R6NetDMR@epa.gov) in-box for further instructions. Until you are approved for Net DMR, you shall report on the Discharge Monitoring Report (DMR) Form EPA. No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and other agencies as required (See Part III.D.IV of the permit). Reports shall be submitted quarterly.

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 28<sup>th</sup> day of the month following each reporting period.

If there is no discharge at Outfalls during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

### D. SMCRA BOND RELEASE

When the appropriate regulatory authority returns a reclamation or performance bond based upon its determination that reclamation work has been satisfactorily completed on a watershed or a specific part of a disturbed area, the permittee may request to terminate the corresponding NPDES discharge points to

that specific drainage area. The permittee must also demonstrate that the Phase III bond for that particular drainage area has been released before permit coverage can be terminated.

E. DOCUMENTS AND APPLICATION FOR RENEWAL

A copy of documents, required reports and application for permit renewal shall be sent to New Mexico Environment Department (NMED) at the mailing address listed in Part III.D.4 of this permit.

**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 shall 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 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 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 concurrently to NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

Total Iron

**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 State water quality standards are established and/or remanded by the New Mexico Water Quality Control Commission.

In accordance with [40 CFR Part 122.62(s)(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].

This permit authorizes the discharge of wastewater from over 52 outfalls in 3 distinct subcategories. Throughout the permit term, as mine operations continue in a linear fashion, new outfall locations may

become necessary to treat runoff and other outfalls may need to be authorized under a different subcategory. Therefore, EPA may modify the list of Outfalls in the Attachments during the permit term to add, terminate or reclassify a discharge that occurs during the anticipating course of the existing mining activities. This will be accomplished thru a minor modification of the permit in accordance with 40 CFR Part 122.63. The permit may be reopened to authorize new outfalls for an area not currently being mined through a major modification to the existing permit 40 CFR Part 122.63.

#### D. WHOLE EFFLUENT TOXICITY TESTING (48-HR ACCUTE 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 shall 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):	All Outfalls in Attachments A, B & C
REPORTED ON DMR AS FINAL OUTFALL:	All Outfalls in Attachments A, B & C
CRITICAL DILUTION (%):	100
EFFLUENT DILUTION SERIES (%):	32, 42, 56, 75 and 100
COMPOSITE SAMPLE TYPE:	Defined at PART I
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 shall 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. The conditions of this item are effective beginning with the effective date of the WET limit. When the testing frequency stated above is less than monthly and the effluent fails the survival endpoint at or below the critical dilution, the permittee shall be considered in violation of this permit limit and the frequency for the affected species will increase to monthly until such time compliance with the Lethal No Observed Effect Concentration (NOEC) effluent limitation is demonstrated for a period of three consecutive months, at which time the permittee may return to the testing frequency stated in PART I of this permit. During the period the permittee is out of compliance, test results shall be reported on the DMR for that reporting period.

- d. The purpose of additional tests (also referred to as 'retests' or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.
- e. This permit may be reopened to require chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

## 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:

Each toxicity test control (0% effluent) shall have a survival equal to or greater than 90%.

The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent).

The percent coefficient of variation between replicates shall be 40% or less in the critical dilution unless significant lethal effects are exhibited.

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, 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 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 DMR reporting requirements found in Item 3 below.

### c. Dilution Water

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 where the receiving stream is classified as intermittent or where the receiving stream has no flow due to zero flow conditions.

If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 2.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 synthetic dilution water control which fulfills the test acceptance requirements of Item 2.a was run concurrently with the receiving water control;

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

the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 3.a below; and

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 sample is authorized for this permit)

The permittee shall collect two grab samples from the outfall(s) listed at Item 1.a above.

The permittee shall collect a second grab sample for use during the 24 hour renewal of each dilution concentration for both tests. The permittee shall collect the grab samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee shall 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.

The permittee shall 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.

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 shall 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 shall 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 shall be submitted for agency review.

- b. The permittee shall report the Whole Effluent Lethality values for the 30 Day Average Minimum and the 48 Hr. Minimum on the DMR for that reporting period in accordance with PART III.D.4 of this permit.

If more than one valid test for a species was performed during the reporting period, the test NOECs will be averaged arithmetically and reported as the DAILY AVERAGE MINIMUM NOEC for that reporting period.

A valid test for each species shall be reported on the DMR during each reporting period specified in PART I of this permit. Only ONE set of biomonitoring data for each species is to be recorded on the DMR 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 shall be attached to the DMR for EPA review.

- c. The permittee shall submit the results of the valid toxicity test on the DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

✓ Daphnia pulex

- If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.
- Report the NOEC value for survival, Parameter No. TOM3D.
- Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

If retests are required by NMED, enter the following codes:

- For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
- For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."