



REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

NPDES Permit No NM0029581

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"),

Peabody Natural Resources Company
Lee Ranch Coal Mine
P.O. Box 757
Grants, NM 87020

is authorized to discharge from a facility located at 35 miles north of Milan, City of Grants, in McKinley County, NM. Possible discharges from multiple outfalls are to receiving water named Mulatto Canyon, Arroyo Tinaja, Doctor Arroyo, San Miguel Canyon and San Isidro Arroyo and their unnamed tributaries identified as ephemeral streams subject to 20.6.4.97 NMAC; and San Miguel Canyon subject to 20.6.4.98 NMAC, then to Arroyo Chico, thence to Rio Puerco, thence to Rio Grande (segment 20.6.4.105 of the Rio Grande Basin).

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

This permit, prepared by Tung Nguyen, Environmental Engineer, Permitting Section (6WD-PE), supersedes and replaces NPDES Permit No. NM0029581 with an effective date of June 1, 2018.

This permit shall become effective on June 1, 2023

This permit and the authorization to discharge shall expire at midnight, May 31, 2028

Issued on April 26, 2023

A handwritten signature in black ink, appearing to read "Charles W. Maguire", is positioned above a horizontal line.

Charles W. Maguire
Director
Water Division (6WD)

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
NOEC	No observable effect concentration
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
POTW	Publicly 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 Mulatto Canyon. 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.

POLLUTANT	DISCHARGE LIMITATIONS MINIMUM	DISCHARGE LIMITATIONS MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.0 s.u.	9.0 s.u.	1/day	Instantaneous Grab (*5)

POLLUTANT	30-DAY AVG, lbs/day, unless noted	7-DAY AVG lbs/day, unless noted	30-DAY AVG mg/l, unless noted (*1)	7-DAY AVG mg/l, unless noted (*1)	DAILY MAX mg/l, unless noted (*1)	MEASUREMENT FREQUENCY	SAMPLE TYPE
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
Iron, total	N/A	N/A	3.5	N/A	7.0	1/day	Grab

WHOLE EFFLUENT TOXICITY TESTING 48-HR ACUTE NOEC FRESHWATER (*3)	NOEC	MEASUREMENT FREQUENCY (*4)	SAMPLE TYPE
Daphnia pulex	Report	Once	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 A) 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.

*5 Analyzed within 15 minutes of collection.

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 Mulatto Canyon, Arroyo Tinaja, Doctor Arroyo, San Miguel Canyon and San Isidro Arroyo. 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.

POLLUTANT	DISCHARGE LIMITATIONS MINIMUM	DISCHARGE LIMITATIONS MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH (*6)	6.0 s.u.	9.0 s.u.	1/day	Instantaneous Grab (*5)
pH (*7)	6.6 s.u.	9.0 s.u.	1/day	Instantaneous Grab (*5)

POLLUTANT	30-DAY AVG, lbs/day, unless noted	7-DAY AVG lbs/day, unless noted	30-DAY AVG mg/l, unless noted (*1)	7-DAY AVG mg/l, unless noted (*1)	DAILY MAX mg/l, unless noted (*1)	MEASUREMENT FREQUENCY	SAMPLE TYPE
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
Iron, total	N/A	N/A	3.0	N/A	6.0	1/day	Grab

WHOLE EFFLUENT TOXICITY TESTING 48-HR ACUTE NOEC FRESHWATER (*3,6)	NOEC	MEASUREMENT FREQUENCY (*4)	SAMPLE TYPE
Daphnia pulex	Report	Once	Grab

WHOLE EFFLUENT TOXICITY TESTING 7-DAY CHRONIC NOEC FRESHWATER (*3,7)	NOEC	MEASUREMENT FREQUENCY (*4)	SAMPLE TYPE
Ceriodaphnia dubia	Report	Once	Grab
Pimephales promelas	Report	Once	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.

*5 Analyzed within 15 minutes of collection.

*6 Applicable to outfalls discharging to Mulatto Canyon, Arroyo Tinaja, Doctor Arroyo (except Outfall 097) and San Isidro Arroyo.

*7 Applicable to Outfall 097 discharging to Doctor Arroyo and outfalls discharging to San Miguel Canyon.

3. Internal Outfall EVAP-2

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 sanitary wastewater to Outfall 044 eventually. Such discharges shall be limited and monitored by the permittee and reported as specified below. Effluent samples shall be collected at discharge outlet of clay-lined impoundment EVAP-2, unless noted, when discharge occurs from impoundment EVAP-2.

POLLUTANT	DISCHARGE LIMITATIONS MINIMUM	DISCHARGE LIMITATIONS MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.0 s.u.	9.0 s.u.	1/day	Instantaneous Grab (*5)

POLLUTANT	30-DAY AVG, lbs/day, unless noted	7-DAY AVG lbs/day, unless noted	30-DAY AVG mg/l, unless noted (*1)	7-DAY AVG mg/l, unless noted (*1)	DAILY MAX mg/l, unless noted (*1)	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD	N/A	N/A	N/A	1/day	Estimated (*2)
BOD ₅ , influent	N/A	N/A	Report	Report	N/A	1/day	Grab
BOD ₅ , effluent (*7)	N/A	N/A	30	45	N/A	1/day	Grab
BOD ₅ % removal, minimum	N/A	N/A	≥85	N/A	N/A	1/month	Calculation (*3)
TSS, influent	N/A	N/A	30	45	N/A	1/day	Grab
TSS, effluent (*7)	N/A	N/A	30	45	N/A	1/day	Grab
TSS % removal, minimum	N/A	N/A	≥85	N/A	N/A	1/month	Calculation (*3)
E. coli bacteria	N/A	N/A	548 cfu (or MPN)/100 ml (*6)	N/A	2507 cfu (or MPN)/100 ml	1/day	Grab
TRC	N/A	N/A	N/A	N/A	11 ug/L (*4)	1/day	Instantaneous Grab (*5)
O&G	N/A	N/A	10	15	N/A	1/day	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, including calculation of discharge volume over discharge duration.

*3 Percent removal is calculated using the following equation:

$$\text{Percent removal} = \frac{\text{average monthly influent concentration } \left(\frac{\text{mg}}{\text{L}}\right) - \text{average monthly effluent concentration } \left(\frac{\text{mg}}{\text{L}}\right)}{\text{average monthly influent concentration } \left(\frac{\text{mg}}{\text{L}}\right)}$$

*4 Applicable when chlorine is used in treatment process. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.

*5 Analyzed within 15 minutes of collection.

*6 The 30 day-average for E. coli bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.

*7 Samples shall be collected at treatment package plant.

4. Discharge Resulting From Precipitation Events – Alternative Limitations (Alternative Requirement for WET testing is not authorized)

- 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	MGD	Report	Daily	Estimated (*1)
pH (*2)	s.u.	6.0 – 9.0	Daily	Instantaneous Grab (*4)
pH (*3)	s.u.	6.6 – 9.0	Daily	Instantaneous Grab (*4)
SS (*5)	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 Applicable to outfalls discharging to Mulatto Canyon, Arroyo Tinaja, Doctor Arroyo (except Outfall 097) and San Isidro Arroyo.

*3 Applicable to Outfall 097 discharging to Doctor Arroyo and outfalls discharging to San Miguel Canyon.

*4 Sample shall be analyzed within 15 minutes of collection.

*5 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	MGD	Report	Daily	Estimated (*1)
pH (*3)	s.u.	6.0 – 9.0	Daily	Instantaneous Grab (*2)
pH (*4)	s.u.	6.6 – 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 Sample shall be analyzed within 15 minutes of collection.
- *3 Applicable to outfalls discharging to Mulatto Canyon, Arroyo Tinaja, Doctor Arroyo (except Outfall 097) and San Isidro Arroyo.
- *4 Applicable to Outfall 097 discharging to Doctor Arroyo and outfalls discharging to San Miguel Canyon.

5. Discharges From Reclamation Areas, Brushing and Grubbing Areas, Topsoil Stockpiling Areas, and Regraded Areas

During the period beginning on the effective date of this permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge wastewater from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas, and regraded areas. The permittee shall either utilize sediment ponds or develop a site-specific Sediment Control Plan prior to any expected or planned discharge from these areas. The permittee shall comply with the Nonnumeric Best Management Practices described in the Sediment Control Plan. Prior to obtaining an approved Sediment Control Plan, discharges must comply with the following numeric limitations:

EFFLUENT PARAMETER	UNIT	EFFLUENT LIMITATION	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	Report	Daily	Estimated (*1)
pH (*3)	s.u.	6.0 – 9.0	Daily	Instantaneous Grab (*2)
pH (*4)	s.u.	6.6 – 9.0	Daily	Instantaneous Grab (*2)
SS	mg/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 Sample shall be analyzed within 15 minutes of collection.

*3 Applicable to areas discharging to Mulatto Canyon, Arroyo Tinaja, Doctor Arroyo from one-half mile downstream of the spring to its confluence with San Isidro Arroyo and San Isidro Arroyo.

*4 Applicable to areas discharging to Doctor Arroyo from its headwaters to one-half mile downstream of Doctor Spring and San Miguel Canyon.

6. Western Alkaline Coal Mining Operation (WCMO)

The permittee shall implement and update as necessary an approved Sediment Control Plan (SCP) for all reclamation areas, brushing and grubbing areas, topsoil stockpiling areas and regraded areas as defined under Western Alkaline Coal Mining Rule at 40 CFR 434.80. The SCP, including all authorized updates, is incorporated into the permit as an effluent limitation as required by 40 CFR 434.82(a). As further set forth herein, for areas containing commingled drainage, it is understood that the permittee will comply with the Western Alkaline Coal Mining Rule by utilizing sediment ponds, and other measures set forth in its SCP approved by the Mining and Minerals Division of the Energy Minerals and Natural Resources Department for the State of New Mexico (NMMMD), required for outfalls set forth in Attachments A and B under the "alkaline mine drainage" requirements, 40 CFR Part 434, Subpart D, and "coal preparation plant and coal preparation plant associated areas," 40 CFR Part 434, Subpart B (collectively, "Active Mining"). After Active Mining ceases and 100% of the mining disturbed area in the drainage area to an outfall meets the definition of "western alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded areas," 40 CFR 434.80, a revised SCP will be submitted by the permittee to EPA and the NMMMD for approval to authorize the reclassification of such outfalls and the potential removal of sediment ponds.

- a) The SCP shall be 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 best management practices. Where reclamation areas, brushing and grubbing areas, topsoil stockpiling areas and regraded areas are located in the same drainage area as active mining operations and coal preparation plant areas, the SCP may utilize and incorporate controls also used to comply with permit limitations applicable to the discharges from the active mining operations and coal preparation plant areas, including sediment ponds.
- b) The permittee shall use the same watershed model that was, or will be, used to acquire the NMMMD permit. Where drainage subject to the SCP comingles with and is treated by sediment ponds designed for treatment of active mining or coal preparation plant area drainage and wastewater, modeling of the sediment pond removal efficiency and area-specific BMPs may be used to demonstrate that average annual sediment yields from reclamation areas, brushing and grubbing areas, topsoil stockpiling areas and regraded areas in the co-mingled drainage area will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. Watershed modeling for desired purposes of sediment control structures in these active mining or coal preparation plant areas based on sediment storage volume for the design event in accordance with NMMMD regulations may be used to meet average annual sediment yield modeling requirements.
- c) The permittee has prepared and submitted a sediment control plan to the NMMMD, which was approved by the NMMMD as part of permittee's application for NMMMD Permit No. 2010-01. The SCP is designed so as to prevent an increase in the average annual sediment yield from pre-mined, undisturbed conditions. The permittee used SEDCAD watershed modeling in support of its NMMMD permit application, which demonstrates the effectiveness of the SCP. The SCP identifies BMI's, including sediment ponds, and describes design specifications, construction specifications, maintenance schedules, criteria for inspection, as well as expected performance and longevity of the BMPs. The permittee shall design, implement, and maintain BMPs in the

manner specified in the SCP throughout the permit term. The approved SCP in effect as of the date of permit issuance consists of the portions of the NMMMD permit provided by LRCC and included as Attachment D of this permit. For the purposes of this permit, the requirement to implement the SCP applies to reclamation areas, brushing and grubbing areas, topsoil stockpiling areas and regraded areas and discharges subject to the WACM Effluent Guidelines. EPA recognizes that the Permittee's desire to use portions of the NMMMD permit as their SCP results in some portions of the SCP appearing to apply to areas not subject to the WACM Effluent Guideline Requirement for a SCP. The permittee is not required to implement the SCP on internal areas of a drainage area that are not reclamation areas, brushing and grubbing areas, topsoil stockpiling areas or regraded areas. The Permittee's SCP attached to this permit as Attachment D, and incorporated herein by reference, is the current EPA approved SCP.

- d) Operational changes may be made to an SCP without prior approval by EPA provided that the revisions:
- ✓ do not add or remove outfalls or sediment ponds; and
 - ✓ do not relocate an existing outfall to a different receiving water segment and not more than the 15 seconds of latitude/longitude from the location at the time of permit issuance (approximately 1518 feet-the level of accuracy required for outfall location in NPDES permit applications); and
 - ✓ implement sediment controls that are as effective or more effective than those in the originally approved SCP for any new or expanded reclamation areas, brushing and grubbing areas, topsoil stockpiling areas and regraded areas or replace ineffective controls with ones that will be effective in meeting the original intent of the SCP; and
 - ✓ continue to route all drainage through sediment ponds; and
 - ✓ are no less effective than those in any revised SCP approved by the NMMMD.
- e) Once an outfall ceases to receive runoff from "alkaline mine drainage" areas (as defined under 40 CFR Part 434, Subpart D) and "coal preparation plant and coal preparation plant associated areas" (as defined under 40 CFR Part 434, Subpart B) and 100% of the drainage area to an outfall that has been disturbed by mining meets the definition of "western alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded areas" (as defined at 40 CFR 434.80), a revised SCP and watershed model meeting the requirements contained at 40 CFR Part 434.82 shall be submitted to and approved by EPA and the NMMMD before an outfall may be reclassified and a sediment pond that served as a BMP under a SCP may be removed and the revised SCP becomes effective. If the revised SCP is approved by the NMMMD, the SCP is considered to meet EPA approval, unless EPA disapproves it within 60 days after receiving the revised SCP. The Permittee will also send any EPA approved SCP revisions to NMED. The approval of a revised SCP to address the reclassification of an outfall to western alkaline coal mining (as defined under 40 C.F.R. Subpart H) or the termination of an outfall will be considered a minor modification to the permit as described in Part II.C of this permit.
- f) Inspections and reporting on the SCP controls and implementation shall be conducted in accordance with the current NMMMD requirements and any requirements in the SCP. The Permittee shall submit annual pond certification reports, NMMMD mine inspection reports, and any reports required by the SCP to EPA and NMED annually. Reports prepared by the Permittee for compliance with NMMMD requirements may be used to satisfy any corresponding reporting requirements of the SCP

7. Pollutants Monitoring Requirements

In addition to all pollutants in Form 2C (Tables A to E), 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 permit term when first discharge occurs. Data shall be sent to EPA and NMED as stated under Part I.C.

Pollutants	CAS Number	Pollutants	CAS Number	Pollutants	CAS Number
Aluminum, total*	7429-90-5	Strontium 90		Nitrosodibutylamine	924-16-3
Chromium III, dissolved	16065-83-1	Tritium		Bis(chloromethyl) ether	542-88-1
Chromium VI, dissolved	18540-29-9	Nonylphenol	84852-15-3		
Methylmercury	22967-92-6	Polychlorinated Biphenyls (PCBs)**	1336-36-3	Hexachlorocyclohexane (HCH)-Technical	608-73-1
		Nitrosodiethylamine	55-18-5	N-Nitrosopyrrolidine	930-55-2
		Pentachlorobenzene	608-93-5	1,2,4,5-Tetrachlorobenzene	95-94-3
		2,4,5-Trichlorophenol	95-95-4	2-(2,4,5-Trichlorophenoxy)	93-72-1

* Total recoverable aluminum in a sample that is filtered to minimize mineral phases as specified by the NMED.

8. Floating Solids, Visible Foam and/or Oils

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

10. Sampling Points

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 streams.

B. SCHEDULES OF COMPLIANCE

None

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Discharge Monitoring Report (DMR) results shall be electronically reported to EPA per 40 CFR 127.16. To submit electronically, access the NetDMR website at <https://cdx.epa.gov/>. Until approved for Net DMR, the permittee shall request temporary or emergency waivers from electronic reporting. To obtain the waiver, please contact: U.S. EPA - Region 6, Water Enforcement Branch, New Mexico State Coordinator (6EN-WC), (214) 665-7179. If paper reporting is granted temporarily, 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 copies to NMED as required (See Part III.D.IV of the permit). Other applicable reports shall be submitted as follow:

Applicable e-Reporting	e-Reporting Compliance Date	Reporting Frequency
DMRs	Permit effective date	Quarterly
Sewer Overflow/Bypass Event Reports and Anticipated Bypass Notices	By December 21, 2025	Within five (5) days of the time the permittee becomes aware of

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 reports as described above postmarked no later than the 28th day of the month following each reporting period.
3. NO DISCHARGE REPORTING: If there is no discharge at the 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 NMED at the mailing address listed in Part III.D.4 of this permit.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

EPA-approved test procedures (methods) for the analysis and quantification of pollutants or pollutant parameters, including for the purposes of compliance monitoring/DMR reporting, permit renewal applications, or any other reporting that may be required as a condition of this permit, shall be sufficiently sensitive. A method is "sufficiently sensitive" when (1) the method minimum level (ML) of quantification is at or below the level of the applicable effluent limit for the measured pollutant or pollutant parameter; or (2) if there is no EPA-approved analytical method with a published ML at or below the effluent limit (see table below), then the method has the lowest published ML (is the most sensitive) of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or O, for the measured pollutant or pollutant parameter; or (3) the method is specified in this permit or has been otherwise approved in writing by the permitting authority (EPA Region 6) for the measured pollutant or pollutant parameter. The Permittee has the option of developing and submitting a report to justify the use of matrix or sample-specific MLs rather than the published levels. Upon written approval by EPA Region 6 the matrix or sample-specific MLs may be utilized by the Permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

Current EPA Region 6 minimum quantification levels (MQLs) for reporting and compliance are provided in Appendix A of Part II of this permit. The following pollutants may not have EPA approved methods with a published ML at or below the effluent limit, if specified:

POLLUTANT	CAS Number	STORET Code
Total Residual Chlorine	7782-50-5	50060
Cadmium	7440-43-9	01027
Silver	7440-22-4	01077
Thallium	7440-28-0	01059
Cyanide	57-12-5	78248
Dioxin (2,3,7,8-TCDD)	1764-01-6	34675
4, 6-Dinitro-0-Cresol	534-52-1	34657
Pentachlorophenol	87-86-5	39032
Benzidine	92-87-5	39120
Chrysene	218-01-9	34320
Hexachlorobenzene	118-74-1	39700
N-Nitrosodimethylamine	62-75-9	34438
Aldrin	309-00-2	39330
Chlordane	57-74-9	39350
Dieldrin	60-57-1	39380
Heptachlor	76-44-8	39410
Heptachlor epoxide	1024-57-3	39420
Toxaphene	8001-35-2	39400

Unless otherwise indicated in this permit, if the EPA Region 6 MQL for a pollutant or pollutant parameter is sufficiently sensitive (as defined above) and the analytical test result is less than the MQL, then a value of zero (0) may be used for reporting purposes on DMRs. Furthermore, if the EPA Region 6 MQL for a pollutant or parameter is not sufficiently sensitive, but the analytical test result is less than the published ML from a sufficiently sensitive method, then a value of zero (0) may be used for reporting purposes on DMRs.

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 NMWQS are revised, or new State water quality standards are established and/or remanded by New Mexico Water Quality Control Commission, respectively.

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.

This permit authorizes the discharge of wastewater from the authorized outfalls in 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 outfall lists in Attachments A or B 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 (certain conditions must be met) 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)

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.

CRITICAL DILUTION (%)	100%
EFFLUENT DILUTION SERIES (%)	32%, 42%, 56%, 75%, 100%
TEST SPECIES AND METHODS	Daphnia pulex/ Method 2021.0 (EPA/821/R-02-012 or latest version)
SAMPLE TYPE	Defined in PART I.A

- b. The NOEC (No Observed Lethal Effect Concentration) is herein 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 WET limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. REQUIRED TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

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:

Condition/Criteria	<i>Daphnia pulex</i>
# of replicates per concentration	4
# of organisms per replicate	5
# of organisms per concentration	20
# of test concentrations per effluent	5 and a control
Holding time *	36 hours for first use
Test Acceptability Criteria	≥90% survival of all control organisms.
Coefficient of Variation **	40% or less, unless significant effects are exhibited.

* 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 and the minimum number of effluent portions are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent, and must meet the holding time between collection and first use of the sample. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite 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.

**Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%, or a PMSD value greater than the higher value on the range provided.

a. Statistical Interpretation

The statistical analyses used to determine if there is a 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 the appropriate method manual listed in Part II or the most recent update thereof.

b. Dilution Water

- 1) 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;
 - i. toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - ii. toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- 2) If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria), 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:
 - i. a synthetic dilution water control which fulfills the test acceptance requirements was run concurrently with the receiving water control;
 - ii. the test indicating receiving water toxicity has been carried out to completion,
 - iii. the permittee includes all test results indicating receiving water toxicity with the full report and information required; and
 - iv. 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.

c. Samples and Composites

- 1) The permittee shall collect two samples (flow-weighted composite if possible) from the outfall(s).
- 2) The permittee shall collect a second sample (composite samples if possible) for use during the 24-hour renewal of each dilution concentration for each test. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours for first use of the sample. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage. A holding time up to 72 hrs. is allowed upon notification to EPA and NMED of the need for additional holding time.
- 3) The permittee must collect the composite samples such that the effluent samples are representative of the discharge duration, and of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

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 the most current publication of the method manual, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report and submit them 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. One set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. Additional results are reported under the retest codes below.
- c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period 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.

Reporting Requirement	<i>Daphnia pulex</i>
Enter a "1" if the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, otherwise enter a "0".	TEM3D
Report the NOEC value for survival	TOM3D
Report the highest (critical dilution or control) Coefficient of Variation	TQM3D
(If required) Retest 1 – Enter a "1" if the NOEC for survival is less than the critical dilution, otherwise enter "0".	22418

(If required) Retest 2- Enter a "1" if the NOEC for survival is less than the critical dilution, otherwise enter "0".	22419
(If required) Retest 3- Enter a "1" if the NOEC for survival is less than the critical dilution, otherwise enter "0".	51444

4. MONITORING FREQUENCY REDUCTION

- a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for a test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the vertebrate species) and not less than twice per year for the more sensitive test species (usually the invertebrate species).
- b. Certification - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria above. In addition, the permittee must provide a list with each test performed including test initiation date, species, and NOECs. Upon review and acceptance of this information, the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's compliance section to update the permit reporting requirements.
- c. Failures - If any test demonstrates lethal or sub-lethal effects at or below the critical dilution at any time during the life of this permit, three monthly retests are required. If a frequency reduction had been granted, the monitoring frequency for the affected test species reverts to once per quarter until the permit is re-issued.
- d. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.

5. PERSISTENT TOXICITY

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal effects at or below the critical dilution. Significant toxic effects, are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent). If the initial WET test conducted fails, the permittee will conduct three retests. The purpose of retests 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. If any valid test demonstrates significant lethal effects to a test species at or below the critical dilution, the frequency of testing for this species is automatically increased to once per quarter with no option for frequency reduction.

- a. Retest

The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant lethal effects at or below the critical dilution. The three additional tests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with the reporting requirements previously outlined and available upon request from the Agency.

b. Requirement to Initiate a Toxicity Reduction Evaluation

If persistent lethality is demonstrated by failure of one or more retests, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Part 6 of this section. The permittee shall notify EPA in writing within 5 days of notification of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of intermittent effects at or below the critical dilution, or for failure to perform the required retests.

6. TOXICITY REDUCTION EVALUATION (TRE)

A TRE is triggered following two test failures (a failure followed by one retest failure).

- a. Within ninety (90) days of confirming lethality in the retests, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE to the EPA WET Coordinator at 6WQ-PO. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A TRE is an investigation intended to determine those actions necessary to achieve compliance with water quality based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of effluent toxicity at the critical dilution and include the following:

- 1) Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, a Toxicity Identification Evaluation (TIE) and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Identification Evaluations to characterize the nature of the constituents causing toxicity, the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA 600/6-91/003) or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081), as appropriate.
- 2) Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical

specific analyses when a probable toxicant has been identified; Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where toxicity was demonstrated within 24 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

- 3) Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
 - 4) Project Organization (e.g., project staff, project manager, consulting services, etc.).
- b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal.
- c. The permittee shall submit a quarterly TRE Activities Report to the EPA WET Coordinator (6WQ-PO) in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
- 1) Any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
 - 2) Any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
 - 3) Any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant toxicity at the critical dilution. A copy of the TRE Activities Report shall also be submitted to the state agency.
 - 4) Any results and interpretation of any chemical specific analysis, and for any characterization, identification, and confirmation tests performed during the quarter.
 - 5) Any changes to the initial TRE plan and schedule that are believed necessary.
- d. Finalizing a TRE
- The permittee shall submit (to EPA 6WQ-PO) a final report on TRE activities no later than twenty-eight (28) months from confirming toxicity in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant toxicity at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism. A copy of the final report on TRE Activities shall also be submitted to the state agency.
- A TRE may be stopped if there is no toxicity at the critical dilution for a period of 12 consecutive months (with at least monthly testing) following confirmation of toxicity in the retests. The permittee would submit a final report to EPA at that time.
- e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

E. WHOLE EFFLUENT TOXICITY TESTING (7 DAY CHRONIC NOEC)

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.

CRITICAL DILUTION (%)	100%
EFFLUENT DILUTION SERIES (%)	32%, 42%, 56%, 75%, 100%
TEST SPECIES AND METHODS	Ceriodaphnia dubia / Method 1002.0 (EPA-821-R-02-013 or latest version)
	Pimephales promelas/ Method 1000.0 (EPA/821/R-02-013 or latest version)
SAMPLE TYPE	Defined in PART I.A

- b. The NOEC (No Observed Lethal Effect Concentration) is herein 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. Chronic lethal 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. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.
- c. This permit may be reopened to require WET limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. REQUIRED TEST ACCEPTABILITY CRITERIA AND TEST CONDITIONS

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:

Condition/Criteria	<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>
Test Duration	Until 60% or more of surviving control females have 3 broods (max 8 days)	7 days
# of replicates per concentration	10	5
# of organisms per replicate	1	8
# of organisms per concentration	10	40 (minimum)

# of test concentrations per effluent	5 and a control	5 and a control
Holding time *	36 hours for first use	36 hours for first use
Sampling Requirement *	Minimum of 3 samples	Minimum of 3 samples
Test Acceptability Criteria	≥80% survival of all control organisms.	≥80% survival of all control organisms.
	Average of 15 or more neonates per surviving control female.	Average dry weight per surviving organism in control must be ≥0.25mg.
	60% of surviving control females must produce 3 broods.	
Coefficient of Variation **	40% or less, unless significant effects are exhibited.	40% or less unless significant effects are exhibited.
Percent Minimum Significant Difference (PMSD range) for Sublethal Endpoint **	13 – 47	12 - 30

* 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 and the minimum number of effluent portions are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent, and must meet the holding time between collection and first use of the sample. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite 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.

**Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%, or a PMSD value greater than the higher value on the range provided.

a. Statistical Interpretation

The statistical analyses used to determine if there is a 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 the appropriate method manual listed in Part II or the most recent update thereof.

b. Dilution Water

- 1) 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;
 - i. toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - ii. toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

- 2) If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria), 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:
 - i. a synthetic dilution water control which fulfills the test acceptance requirements was run concurrently with the receiving water control;
 - ii. the test indicating receiving water toxicity has been carried out to completion,
 - iii. the permittee includes all test results indicating receiving water toxicity with the full report and information required; and
 - iv. 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.
- c. Samples and Composites
 - 1) The permittee shall collect a minimum of three samples (flow-weighted composite if possible) from the outfall(s).
 - 2) The permittee shall collect a second and third sample (composite samples if possible) for use during the 24-hour renewal of each dilution concentration for each test. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours for first use of the sample. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage. A holding time up to 72 hrs. is allowed upon notification to EPA and NMED of the need for additional holding time.
 - 3) The permittee must collect the composite samples such that the effluent samples are representative of the discharge duration, and of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

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 the most current publication of the method manual, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report and submit them 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. One set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. Additional results are reported under the retest codes below.

- c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period 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.

Reporting Requirement	Parameter STORET CODE	
	<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>
Enter a "1" if the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, otherwise enter a "0".	TLP3B	TLP6C
Report the NOEC value for survival	TOP3B	TOP6C
Report the LOEC value for survival	TXP3B	TXP6C
Enter a "1" if the NOEC for growth or reproduction is less than the critical dilution, otherwise enter a "0".	TGP3B	TGP6C
Report the NOEC value for growth or reproduction	TPP3B	TPP6C
Report the LOEC value for growth	TYP3B	TYP6C
Report the highest (critical dilution or control) Coefficient of Variation	TQP3B	TQP6C
(If required) Retest 1 – Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	22418	22415
(If required) Retest 2- Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	22419	22416
(If required) Retest 3- Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	51444	51443

4.MONITORING FREQUENCY REDUCTION

- a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for a test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the vertebrate species) and not less than twice per year for the more sensitive test species (usually the invertebrate species).
- b. Certification - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria above. In addition, the permittee must provide a list with each test performed including test initiation date, species, and NOECs. Upon review and acceptance of this information, the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's compliance section to update the permit reporting requirements.
- c. Failures - If any test demonstrates lethal or sub-lethal effects at or below the critical dilution at any time during the life of this permit, three monthly retests are required. If a frequency reduction had been

granted, the monitoring frequency for the affected test species reverts to once per quarter until the permit is re-issued.

- d. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.

5. PERSISTENT TOXICITY

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution. Significant toxic effects, are herein defined as a statistically significant difference at the 95% confidence level between the survival, growth or reproduction of the appropriate test organism in a specified effluent dilution and the control (0% effluent). If the initial WET test conducted fails, the permittee will conduct three retests. The purpose of retests 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. If any valid test demonstrates significant lethal and/or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for this species is automatically increased to once per quarter with no option for frequency reduction.

a. Retest

The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant effects at or below the critical dilution. The three additional tests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with the reporting requirements previously outlined and available upon request from the Agency.

b. Requirement to Initiate a Toxicity Reduction Evaluation

If persistent lethality is demonstrated by failure of one or more retests, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Part 6 of this section. If persistent sub-lethality is demonstrated by failure of two or more retests, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements. The permittee shall notify EPA in writing within 5 days of notification of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest for lethal TREs or second failed retest for sub-lethal TREs. A TRE may also be required due to a demonstration of intermittent effects at or below the critical dilution, or for failure to perform the required retests.

6. TOXICITY REDUCTION EVALUATION (TRE)

EPA Region 6 is currently addressing TREs as follows: A TRE is triggered following three sub-lethal test failures (a failure followed by two retest failures) or two test failures with lethal effects (a failure followed by one retest failure).

- a. Within ninety (90) days of confirming lethality and/or sub-lethality in the retests, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE to the EPA

WET Coordinator at 6WQ-PO. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A TRE is an investigation intended to determine those actions necessary to achieve compliance with water quality based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of effluent toxicity at the critical dilution and include the following:

- 1) Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, a Toxicity Identification Evaluation (TIE) and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Identification Evaluations to characterize the nature of the constituents causing toxicity, the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA 600/6-91/003) or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081), as appropriate.
 - 2) Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified; Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where toxicity was demonstrated within 24 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;
 - 3) Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
 - 4) Project Organization (e.g., project staff, project manager, consulting services, etc.).
- b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal.
- c. The permittee shall submit a quarterly TRE Activities Report to the EPA WET Coordinator (6WQ-PO) in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
- 1) Any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
 - 2) Any studies/evaluations and results on the treatability of the facility's effluent toxicity; and

- 3) Any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant toxicity at the critical dilution. A copy of the TRE Activities Report shall also be submitted to the state agency.
- 4) Any results and interpretation of any chemical specific analysis, and for any characterization, identification, and confirmation tests performed during the quarter.
- 5) Any changes to the initial TRE plan and schedule that are believed necessary.

d. Finalizing a TRE

The permittee shall submit (to EPA 6WQ-PO) a final report on TRE activities no later than twenty-eight (28) months from confirming toxicity in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant toxicity at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism. A copy of the final report on TRE Activities shall also be submitted to the state agency.

A TRE may be stopped if there is no toxicity at the critical dilution for a period of 12 consecutive months (with at least monthly testing) following confirmation of toxicity in the retests. The permittee would submit a final report to EPA at that time.

- e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).