



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

NPDES Permit No NM0023485

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"),

Town of Bernalillo
P.O. Box 638
Bernalillo, NM 87004

is authorized to discharge from a facility located at 585 Calle Chaparral, Bernalillo, Sandoval County, New Mexico, to Rio Grande River, adjacent to Segment 20.6.4.106 NMAC of the Middle Rio Grande Basin (NMED AU of NM-2105.1_00) from a point located approximately:

Outfall 001: Latitude 35° 18' 20" North and Longitude 106° 33' 40" West

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. NM0023485 with an effective date of September 1, 2021.

This permit shall become effective on

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

Issued on

Troy Hill, P.E.
Director
Water Division (WD)

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)
BOD ₅	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
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
ML	Minimum level
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
PFAS	Per- and polyfluoroalkyl substances
POS	Pueblo of Sandia
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. OUTFALL 001 - FINAL Effluent Limits – 0.8 MGD Design Flow

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 domestic wastewater from Outfall 001 to Rio Grande River. Such discharges shall be limited and monitored by the permittee and reported as specified below:

POLLUTANT	DISCHARGE LIMITATIONS MINIMUM	DISCHARGE LIMITATIONS MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.6 s.u.	9.0 s.u.	5/week	Instantaneous Grab (*3)
DO	5 mg/L	N/A	5/week	Instantaneous Grab (*3)

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	Daily	Totalized meter
BOD ₅	200	300	30	45	N/A	1/week	3-hr Composite
TSS	200	300	30	45	N/A	1/week	3-hr Composite
BOD ₅ % removal, minimum	≥85 (*2)	N/A	N/A	N/A	N/A	Monthly	Calculation
TSS % removal, minimum	≥85 (*2)	N/A	N/A	N/A	N/A	Monthly	Calculation
TRC	N/A	N/A	N/A	N/A	11 ug/l (*4)	Daily (*7)	Instantaneous Grab (*3)
E. coli bacteria	1.43 x 10 ⁹ cfu (or MPN)/day (*6)	N/A	47 cfu (or MPN)/100 ml (*5)	N/A	88 cfu (or MPN)/100 ml	1/week	Grab
Ammonia, total (as N), interim	N/A	226.8 (daily max.)	N/A	N/A	34.0	1/month	3-hr Composite
Ammonia, total (as N), final	N/A	17.3 (daily max.)	N/A	N/A	2.6	3/month	3-hr Composite
Phosphorus, total	N/A	N/A	N/A	N/A	Report	Quarterly	3-hr Composite
Nitrogen, total	N/A	N/A	N/A	N/A	Report	Quarterly	3-hr Composite
Arsenic, total	N/A	N/A	N/A	N/A	Report	Quarterly	3-hr Composite
Mercury	N/A	N/A	N/A	N/A	Report	Quarterly	3-hr Composite
Gross alpha, pCi/L	N/A	N/A	N/A	N/A	Report	Quarterly	3-hr Composite
Uranium, ug/L (*10)	N/A	N/A	N/A	N/A	Report	Quarterly	3-hr Composite

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
Adjusted gross alpha, pCi/L (*10)	N/A	N/A	N/A	N/A	Report	Quarterly	Calculation
O&G (*11)	N/A	N/A	N/A	N/A	Report	Quarterly (*12)	3-hr Composite
PCBs	N/A	N/A	N/A	N/A	Report	Once (*8)	3-hr Composite

WHOLE EFFLUENT TOXICITY TESTING (48-Hr Acute Static Renewal/ NOEC) (*9)	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	Report	Yearly	24-hr Composite
Pimephales promelas	Report	Yearly	24-hr Composite

Footnotes:

- *1 See **Appendix A of Part II** of the permit for minimum quantification limits.
- *2 Percent removal is calculated using the following equation:

$$\text{Percent removal} = \frac{\text{average monthly influent concentration } \left(\frac{\text{mg}}{\text{L}}\right) - \text{average monthly effluent concentration } \left(\frac{\text{mg}}{\text{L}}\right)}{\text{average monthly influent concentration } \left(\frac{\text{mg}}{\text{L}}\right)} \times 100$$
- *3 Analyzed within 15 minutes of collection.
- *4 The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *5 The geometric mean of E. coli bacteria shall be used for reporting the 30-day average values.
- *6 Loading is calculated by multiplying the discharge (in mgd) x bacteria concentration (in cfu/100 mL) x a conversion factor (3.79×10^7).
- *7 Applicable when chlorine is used in the treatment process, including cleaning of treatment units.
- *8 PCBs shall be tested using Method 1668A or as revised, Chlorinated Biphenyl Congeners in Water, Soil, Sediment and Tissue by High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS). If there are no changes in treatment process and SIU, and the discharge flow is less than 1.0 MGD (with permittee's certification), the permittee may resubmit previous test result for PCBs.
- *9 Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit for WET testing requirements and additional WET monitoring and reporting conditions. Grab samples are allowed per method, if needed.
- *10 [Adjusted Gross Alpha] (pCi/L) = [Gross Alpha] (pCi/L) - {[Uranium] $\mu\text{g/L}$ * 0.67}. A conversion factor of 0.67 (pCi/L) μg is used to convert uranium concentrations (in $\mu\text{g/L}$) to uranium activity (in pCi/L) prior to subtraction. U-238 can be used in the absence of natural uranium.
- *11 Must be analyzed with an approved test method with ML sensitive to 10 mg/L or less. Qualitative test result (e.g., Non detect) shall be reported with the ML.
- *12 Frequency reduction to no less than once per year may be requested of EPA after completing 4 quarterly samples, with all results of "ND" (non-detect) or actual values at 10 mg/L or less using a 40 CFR 136 test method with a ML of 10 mg/l or less. EPA will consult with the Pueblo of Sandia on this reduction request, if applicable.

2. 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.

3. SAMPLE LOCATION

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the receiving stream. The sample point shall be clearly marked by the facility if it is not at the final outfall location. There shall be no flow from any source into the piping system after the sample point and prior to the final outfall.

B. SCHEDULES OF COMPLIANCE

The permittee shall comply with the following schedule of activities for the attainment of tribal/state water quality standards-based final effluent limitations for total ammonia:

Activity	Months from permit effective date unless noted
1. Determine exceedance causes, if applicable	12
2. Develop control options, if needed, evaluate and select control mechanisms	24
3. Construction of selected control mechanisms, if any	30
4. Attain final effluent limitations	36

The permittee shall submit quarterly progress reports to EPA and NMED in accordance with the following schedule. The permittee shall also include the following in its quarterly progress reports: design completion, construction start and construction completion if any. The requirement to submit quarterly progress reports shall expire after written final report has been submitted. No later than 14-days after the date compliance with the final limits have been met, the permittee shall submit a written final report to EPA, Pueblo of Sandia (POS) and NMED, stating that compliance has been completed. If at any time during the compliance periods the permittee determines that full compliance will not be met within the time allowed, a separate report shall be sent to EPA stating the explanation for this delay and proposed remedial actions.

PROGRESS REPORT DATES: January 30, April 30, July 30, October 30

The permittee should note that each date applies to the prior three-month period.

Progress and final reports shall be sent to the agencies (EPA, NMED and POS) mentioned in Part III.D.4.

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://netdmr.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 POS, NMED (under Part III.D.4 of the permit). Copies of DMR and other written reports shall be sent to Pueblo of Sandia via email:

ARosebrough@sandiapueblo.nsn.us. 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 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 Outfall 001 during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.
4. If any 7-day average or 30-day average value exceeds the effluent limitations specified in Part I.A, the permittee shall report the excursion in accordance with the requirements of Part III.D.
5. Any 7-day average or 30-day average value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.
6. Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for the five days Biochemical Oxygen Demand (BOD₅), or for the five-day Carbonaceous Biochemical Oxygen Demand (CBOD₅), as applicable, where the permittee can demonstrate long term correlation of the method with BOD₅ or CBOD₅ values, as applicable. Details of the correlation procedures used must be submitted and prior approval granted by the permitting authority for this procedure to be acceptable. Data reported must also include evidence to show that the proper correlation continues to exist after approval.

D. OVERFLOW REPORTING

The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary).

Overflows that endanger health or the environment shall be reported via email to EPA, Pueblo of Sandia at (505)867-4533 (within 8 hours) and NMED Surface Water Quality Bureau (Indicated under Part III.D.7) within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows that endanger health or the environment shall be provided to EPA, Pueblo of Sandia and the NMED Surface Water Quality Bureau within 5 days of the time the permittee becomes aware of the circumstance.

E. POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

- a. The influent loadings, flow and design capacity;
- b. The effluent quality and plant performance;
- c. The age and expected life of the wastewater treatment facility's equipment;
- d. Bypasses and overflows of the tributary sewerage system and treatment works;
- e. New developments at the facility;
- f. Operator certification and training plans and status;
- g. The financial status of the facility;
- h. Preventative maintenance programs and equipment conditions and;
- i. An overall evaluation of conditions at the facility.

F. POLLUTANTS SCAN

- a. The permittee shall submit test results of PFAS (via email to EPA, POS, NMED) during the permit term as follows:

Parameter	Test Result	Measurement Frequency ⁵	Sample Type
PFAS Analytes ¹ , effluent	Report ng/L ²	3/permit term (1-year apart)	Grab
PFAS Analytes ¹ , influent	Report ng/L ²	3/permit term (1-year apart)	Grab
PFAS Analytes ¹ , sewage sludge	Report ng/g ³	3/permit term (1-year apart)	Grab ⁴

Footnote:

1. Listed in attached Appendix B of Part II.
2. Report in nanograms per liter (ng/L). This reporting requirement for the 40 PFAS parameters takes effect on the effective date of the authorization to discharge under the permit. Until there is an analytical method approved in 40 CFR Part 136 for PFAS in wastewater, monitoring shall be conducted using Method 1633. The Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with Method 1633, if appropriate.

Additionally, report in NetDMR the results of all 40 PFAS analytes required to be tested as part of the method as shown in Appendix B of Part II. Any parameters that are removed from the method based on multi-lab validation of the method will not be required for reporting and the Permittee may report "NODI: 9" for any such parameters.

3. Report in nanograms per gram (ng/g). This reporting requirement for the 40 PFAS parameters takes effect on the effective date of the authorization to discharge under the permit. Until there is an analytical method approved in 40 CFR Part 136 for PFAS in sludge, monitoring shall be conducted using Method 1633. The Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with Method 1633, if appropriate.

Additionally, report in NetDMR the results of all 40 PFAS analytes required to be tested as part of the method, as shown in Appendix B of Part II. Any parameters that are removed from the method based on multi-lab validation of the method will not be required for reporting and the Permittee may report "NODI: 9" for any such parameters.

4. Sludge sampling shall be as representative as possible based on guidance found at <https://www.epa.gov/sites/production/files/2018-11/documents/potw-sludge-sampling-guidance-document.pdf>.
5. PFAS Analysis data should be submitted annually to NMED at SWQ.Reporting@env.nm.gov (See Part III.D.4) and NMENV-PFAS-DATA@env.nm.gov. The data submittal should include the electronic data deliverable and sampling narrative report provided by the analytical laboratory used to complete the analysis. NMED PFAS sampling standard operating procedures (SOPs) can be found at <https://www.env.nm.gov/surface-water-quality/sop/>.
- b. If there are no changes in treatment process and SIU, and the discharge flow is less than 1.0 MGD (with permittee's certification), the permittee may submit data required in Tables A and B of Form 2A for next permit renewal application. Otherwise, in addition to required data in Form 2A (Tables A through C), the permittee shall submit three scans for each parameter below; the test results shall be reported in Table D, Form 2A.

Pollutants (per POSWQS)	CAS Number	Pollutant	CAS Number	Pollutant	CAS Number
Lithium, dissolved		3-Methyl-4-Chlorophenol	59-50-7	Nitrosamines	
Cyanide, weak acid dissociable		TTHM (Sum of total Trihalomethanes)		Parathion	56-38-2
Chlorpyrifos	2921-88-2	Sulfates		Sulfide-Hydrogen sulfide	7783-06-4
Malathion	121-75-5	Bis(chloromethyl)Ether	542-88-1	Flouride	16984-48-8

Pollutants (per NMWQS)	CAS Number	Pollutant	CAS Number	Pollutant	CAS Number
Aluminum, dissolved	7429-90-5	Uranium, dissolved	7440-61-1	Dioxin	
Aluminum, total recoverable*	7429-90-5	Vanadium, dissolved	7440-62-2	alpha-Endosulfan	959-98-8
Asbestos	1332-21-4	Adjusted gross alpha		beta-Endosulfan	33213-65-9
Barium, dissolved	7440-39-3	Radium 226 + Radium 228		Endosulfan sulfate	1031-07-8
Boron, dissolved	7440-42-8	Strontium 90		Endrin	72-20-8
Chromium III, dissolved	16065-83-1	Tritium		Endrin aldehyde	7421-93-4
Chromium VI, dissolved	18540-29-9	Aldrin	309-00-2	Heptachlor	76-44-8
Cobalt, dissolved	7440-48-4	alpha-BHC	319-84-6	Heptachlor epoxide	1024-57-3
Manganese, dissolved	7439-96-5	beta-BHC	319-85-7	Nonylphenol	84852-15-3
Methylmercury	22967-92-6	Gamma-BHC (Lindane)	58-89-9		
Molybdenum, dissolved	7439-98-7	Chlordane	57-74-9	Toxaphene	8001-35-2
Molybdenum, total	7439-98-7	Diazinon	333-41-5	Dieldrin	60-57-1
Chloride	1688-70-06	4,4'-DDT and derivatives		Fluoranthene	
Iron	7439-89-6	Bis(chloromethyl) ether	542-88-1	Carbaryl	63-25-2
		Demeton	8065-48-3	2,4-Dichlorophenoxyacetic	94-75-7
Dichlorodiphenyldichloroethane (DDD)	72-54-8	Dichlorodipenyldichloroethylene (DDE)	72-55-9	Dichlorodiphenyltrichloroethane (DDT)	50-29-3
Guthion	86-50-0	Hexachlorocyclohexane (HCH)-Technical	608-73-1		
Methoxychlor	72-43-5	3-Methyl-4-chlorophenol	59-50-7	Mirex	2385-85-5
Nitrosodibutylamine	924-16-3	Nitrosodiethylamine	55-18-5	N-Nitrosopyrrolidine	930-55-2
Parathion	56-38-2	Pentachlorobenzene	608-93-5	1,2,4,5-Tetrachlorobenzene	95-94-3
Tributyltin (TBT)	Various	2,4,5-Trichlorophenol	95-95-4	2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	93-72-1

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

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	POLLUTANT	CAS Number
Total Residual Chlorine	7782-50-5	Benzo(a)pyrene	50-32-8
Cadmium	7440-43-9	3,4-Benzofluoranthene	205-99-2
Silver	7440-22-4	Benzo(k)fluoranthene (207-08-9)	207-08-9
Thallium	7440-28-0	Indeno(1,2,3-cd)pyrene (193-39-5)	193-39-5
Cyanide	57-12-5	Dibenzo(a,h)anthracene (53-70-3)	53-70-3
Acrolein	107-02-8	Aldrin	309-00-2
Acrylonitrile	107-13-0	Chlordane	57-74-9
4, 6-Dinitro-0-Cresol	534-52-1	Dieldrin	60-57-1
Pentachlorophenol	87-86-5	Heptachlor	76-44-8
Benzidine	92-87-5	Heptachlor epoxide	1024-57-3
Chrysene	218-01-9	Toxaphene	8001-35-2
Hexachlorobenzene	118-74-1	Toxaphene (8001-35-2)	8001-35-2
N-Nitrosodimethylamine	62-75-9	Dioxin (2,3,7,8-TCDD)	1764-01-6
Benzo(a)anthracene	56-55-3		

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, POS (within 8 hours) 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.

DO, TRC, E. coli bacteria, total ammonia

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 Pueblo of Sandia/State water quality standards are established and/or remanded by Pueblo of Sandia/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].

D. CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

Not applicable

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

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

1. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL(S) 001	
REPORTED AS FINAL OUTFALL	001
CRITICAL DILUTION (%)	4%
EFFLUENT DILTION SERIES (%)	1.7%, 2.3%, 3%, 4%, 5.3%
TEST SPECIES AND METHODS	Daphnia pulex/ Method 2021.0 (EPA/821/R-02-012 or latest version)
	Pimephales promelas/ Method 2000.0 (EPA-821-R-02-012 or latest version)
SAMPLE TYPE	Defined in PART I

- 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>	<i>Pimephales promelas</i>
# of replicates per concentration	4	2
# of organisms per replicate	5	10
# of organisms per concentration	20	20
# 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
Test Acceptability Criteria	≥90% survival of all control organisms.	≥90% survival of all control organisms.
Coefficient of Variation **	40% or less, unless significant effects are exhibited.	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 (WET Coordinator at mail code WDPN) and NMED (swq.reporting@env.nm.gov) 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 or NMED. 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 to EPA (WET Coordinator at mail code WDPN) and NMED (swq.reporting@env.nm.gov).

- 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>Daphnia pulex</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".	TEM3D	TEM6C
Report the NOEC value for survival	TOM3D	TOM6C
Report the highest (critical dilution or control) Coefficient of Variation	TQM3D	TQM6C
(If required) Retest 1 – Enter a "1" if the NOEC for survival is less than the critical dilution, otherwise enter "0".	22418	22415
(If required) Retest 2- Enter a "1" if the NOEC for survival is less than the critical dilution, otherwise enter "0".	22419	22416
(If required) Retest 3- Enter a "1" if the NOEC for survival is less than the critical dilution, otherwise enter "0".	51444	51443

4.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 or NMED.

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 (WET Coordinator at mail code WDPN) and NMED (swq.reporting@env.nm.gov) 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.

5. 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 mail code WDPN) and NMED (swq.reporting@env.nm.gov). 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 EPA (WET Coordinator at mail code WDPN) and NMED (swq.reporting@env.nm.gov) 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 (WET Coordinator at mail code WDPN) and NMED (swq.reporting@env.nm.gov) 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).