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

**NPDES Permit No. NM0030457**

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"),

Doña Ana County Utilities Department
Salem Wastewater Treatment Plant
845 N. Motel Drive
Las Cruces, NM 88007

is authorized to discharge from the Salem Wastewater Treatment Plant located at 2800 B. B. Roming Drive, Doña Ana County, New Mexico, to the Rio Grande in Segment 20.6.4.101 NMACof the Rio Grande River Basin, from a point located approximately

Outfall 001: Latitude 32° 41’ 36” North, Longitude 107° 12’ 30” West

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III, and IV hereof.

This permit, prepared by Aron Korir, Physical Scientist, Permitting Section (6WQ-PP), supersedes and replaces NPDES Permit No. NM0030457 with an effective date of April 1, 2019.

This permit shall become effective on November 1, 2024

This permit and the authorization to discharge shall expire at midnight, October 31, 2029

Issued on September 27, 2024

MARK HAYES
Digitally signed by MARK HAYES
Date: 2024.09.27 13:58:11 -05'00'

(for) Troy C. Hill, P.E.
Director
Water Division

## DOCUMENT ABBREVIATIONS

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

| | |
|---|---|
| 4Q3 | Lowest four-day average flow rate expected to occur once every three-years |
| BAT | Best available technology economically achievable |
| BCT | Best conventional pollutant control technology |
| BPT | Best practicable control technology currently available |
| BMP | Best management plan |
| BOD | Biochemical oxygen demand (five-day unless noted otherwise) |
| BPJ | Best professional judgment |
| CBOD | Carbonaceous biochemical oxygen demand (five-day unless noted otherwise) |
| CD | Critical dilution |
| CFR | Code of Federal Regulations |
| cfs | Cubic feet per second |
| COD | Chemical oxygen demand |
| COE | United States Corp of Engineers |
| CWA | Clean Water Act |
| DMR | Discharge monitoring report |
| ELG | Effluent limitation guidelines |
| EPA | United States Environmental Protection Agency |
| ESA | Endangered Species Act |
| FCB | Fecal coliform bacteria |
| FWS | United States Fish and Wildlife Service |
| mg/l | Milligrams per liter |
| ug/l | Micrograms per liter |
| lbs | Pounds |
| MGD | Million gallons per day |
| NMAC | New Mexico Administrative Code |
| NMED | New Mexico Environment Department |
| NMIP | New Mexico NPDES Permit Implementation Procedures |
| NMWQS | New Mexico State Standards for Interstate and Intrastate Surface Waters |
| NPDES | National Pollutant Discharge Elimination System |
| MQL | Minimum quantification level |
| O&G | Oil and grease |
| PFAS | Per- and Polyfluoroalkyl Substances |
| 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 plant |

## PART I – REQUIREMENTS FOR NPDES PERMITS

## A. LIMITATIONS AND MONITORING REQUIREMENTS

1. OUTFALL 001 - FINAL Effluent Limits – 0.2 MGD Design Flow

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from outfall serial number 001. Such discharges shall be limited and monitored by the permittee 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 (*4) |

| 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 | MEASUREMENT FREQUENCY | SAMPLE TYPE |
|---|---|---|---|---|---|---|---|
| Flow | Report MGD | Report MGD | N/A | N/A | N/A | Daily | Totalized meter |
| Biochemical Oxygen Demand, 5-day | 50 | 75 | 30 | 45 | N/A | 2/Month | Grab |
| $BOD_5$ Influent | Report | N/A | N/A | N/A | N/A | 2/Month | Grab |
| BOD % removal, minimum | $\geq$ 85% | N/A | N/A | N/A | N/A | 1/Month | Calculation (*2) |
| Total Suspended Solids | 50 | 75 | 30 | 45 | N/A | 2/Month | Grab |
| TSS Influent | Report | N/A | N/A | N/A | N/A | 2/Month | Grab |
| TSS % removal, minimum | $\geq$ 85% | N/A | N/A | N/A | N/A | 1/Month | Calculation (*2) |
| *E. coli* Bacteria (cfu/100 ml or MPN/100 ml) | $9.55x10^8$ (*8) | N/A | 126 | N/A | 410 (*4) | 2/Month | Grab |
| Total Residual Chlorine | N/A | N/A | Report | N/A | 11 ug/l (*3) | 5/Week | Instantaneous Grab (*4) |
| Total Nitrogen (TN) (*12) | N/A | N/A | Report | Report | N/A | Quarterly | 3-hour Composite |
| Total Phosphorous (TP) | N/A | N/A | Report | Report | N/A | Quarterly | 3-hour Composite |
| Dissolved Oxygen (DO) | N/A | N/A | Report | N/A | N/A | Quarterly | Grab |

| EFFLUENT CHARACTERISTIC | DISCHARGE MONITORING | MONITORING REQUIREMENTS | |
|---|---|---|---|
| Whole Effluent Toxicity Testing (7 Day Static Renewal) (*6) | VALUE | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| *Ceriodaphnia dubia* | Report | 1st year (*5) | 24-hr Composite |
| *Pimephales promelas* | Report | 1st year (*5) | 24-hr Composite |

| EFFLUENT CHARACTERISTICS | DISCHARGE MONITORING | MONITORING REQUIREMENTS | |
|---|---|---|---|
| WHOLE EFFLUENT TOXICITY TESTING (*7) (48-hr Acute Test) | VALUE | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| *Daphnia pulex* (years: 2nd, 3rd, 4th, 5th) | Report | Once/Year | 24-hr Composite |

| EFFLUENT CHARACTERISTICS | 30-DAY AVG lbs/day, unless noted | DAILY MAX lbs/day, unless noted | 7-DAY AVG lbs/day, unless noted | 30-DAY AVG mg/L, unless noted | DAILY MAX mg/L, unless noted | 7-DAY AVG mg/L, unless noted | MEASUREMENT FREQUENCY | SAMPLE TYPE |
|---|---|---|---|---|---|---|---|---|
| PFAS Analytes, Influent (*9) | N/A | N/A | N/A | N/A | Report ng/L (*11) | N/A | Three/Permit Term | Grab |
| PFAS Analytes, Effluent (*9) | N/A | N/A | N/A | N/A | Report ng/L (*11) | N/A | Three/Permit Term | Grab |
| PFAS Analytes, Sludge (*10) | N/A | N/A | N/A | N/A | Report ng/g (*11) | N/A | Three/Permit Term | Grab |

Footnotes:

1 See Appendix A or Part II of the permit for Minimum Quantification Level (MQL).
2 $\{(\text{30-day Ave Conc})_{\text{inflow}} - (\text{30-day Ave Conc})_{\text{effluent}}\} \div (\text{30-day Ave Conc})_{\text{inflow}} \times 100\%$.
3 The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes taken during periods of chlorine use.
4 Analyzed within 15 minutes of collection.
5 The test shall take place between November 1 and April 30; during the 1st to 4th year of the permit term or as soon as possible. EPA may reopen the permit if the test fails.
6 Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit for WET testing requirements for additional WET monitoring and reporting conditions.
7 This 48-hr acute test is required if the 7-day chronic test pass in first year of the permit term. WET limits may be established where past monitoring indicates failure of WET tests, a likelihood of failure or where test results indicate effluent toxicity varies significantly over time.
8 Loading limit is calculated as follows: [Flow in MGD * measure cfu/100ml * $3.79 \times 10^7$ (conversion factor). To assist in clarification of the inclusion in the permit loading requirements for E.coli bacteria and how to perform the calculations, the information is in the Total Maximum Daily Load (TMDL) document available on the NMED website at: https://www.env.nm.gov/swqb/documents/swqbdocs/LRG/TMDL/04.pdf

9 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.

10 Sludge sampling shall be Reported 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 1621can 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 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.

11 PFAS samples must be collected and analyzed in three separate calendar years. PFAS Analysis data should be submitted annually to NMED (See Part III.D.IV) 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/.

12 Total Nitrogen (TN) is the sum of Total Kjeldahl Nitrogen (TKN) and nitrite plus nitrate (NO2 + NO3).

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

None

## C. MONITORING AND E- REPORTING (MINOR DISCHARGERS)

Applicable reports (DMRs, Biosolids/Sewage Sludge, Sewer Overflow/Bypass Event Pretreatment Program) shall be electronically reported to EPA at https://cdx.epa.gov/. The permittee may seek a waiver from electronic reporting or until approved for electronic reporting, the permittee shall first submit an electronic reporting waiver request to: U.S. EPA - Region 6, Water Enforcement Branch, New Mexico State Coordinator (6EN-WC), (214) 665-7179. If paper reporting is granted, the permittee shall submit reports on paper in accordance with signature and certification as required by Part III.D.11, and all other reports required by Part III.D. to the EPA and copies to NMED (under Part III.D.4 of the permit).

| Applicable e-Reporting Program | e-Reporting Compliance Date | Reporting Frequency |
|---|---|---|
| DMRs | Permit effective date | Quarterly |
| Pretreatment Program Reports | By 21 December 2025 | Annually |
| Sewer Overflow/Bypass Event Reports and Anticipated Bypass Notices | By 21 December 2025 | Quarterly |

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://usepa.servicenowservices.com/oeca_icis?id=netdmr_homepage. 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) 665-6468. 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). 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 monthly 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 daily maximum 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 30-day average, 7-day average, or daily maximum 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 five-day Biochemical Oxygen Demand ($BOD_5$) or for five-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), as applicable, where the permittee can demonstrate long-term correlation of the method with $BOD_5$ or $CBOD_5$ 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 orally reported at (214) 665-6595, and NMED Surface Water Quality Bureau at (505) 827-0187 or SWQ.Reporting@env.nm.gov (email preferred), 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 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.

## 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 0, 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. Oral notification shall also be made to the New Mexico Environment Department at (505) 827-0187 or SWQ.Reporting@env.nm.gov (email preferred) as soon as possible, but within 24 hours from the time the permittee becomes aware of the circumstance followed by a written report in five days.

- Total Residual Chlorine
- *E.coli* Bateria

## C. PERMIT MODIFICATION AND REOPENER

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

In accordance with [40 CFR Part 122.62(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].

## E. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC 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 ON DMR AS FINAL OUTFALL: | 001 |
| EFFLUENT DILUTION SERIES (%): | 32, 42, 56, 75 and 100 |
| CRITICAL DILUTION (%): | 100 |
| COMPOSITE SAMPLE TYPE: | Defined at PART I |
| TEST SPECIES/METHODS: | 40 CFR Part 136 |

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA 821 R 02 013, or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA 821 R 02 013 or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which lethality or sublethality 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 whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

d. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to NMED and EPA, Surface Water Quality Bureau and Water Division respectively, in writing, within 5 business days of notification the test failure. NMED and EPA will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

- The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- 60% of the surviving control females must produce three broods.
- The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

- The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

- A PMSD range of 13 - 47 for Ceriodaphnia dubia reproduction.

- A PMSD range of 12 - 30 for Fathead minnow growth.

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

b. Statistical Interpretation

- For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 or the most recent update thereof.

- For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, 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 EPA/821/R-02-013 or the most recent update thereof.

- If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 3 below.

c. Dilution Water

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

  - toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

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

- If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 2.a), the permittee may substitute synthetic dilution water

for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

- a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
- the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
- the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 3 below; and
- the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

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

3. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most

current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST lethal and sub-lethal effects results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for EPA review.

c. The permittee shall submit the results of each valid toxicity test as follows below. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.

- Pimephales promelas (Fathead Minnow)
  - If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP6C
  - Report the NOEC value for survival, Parameter No. TOP6C
  - Report the LOEC value for survival, Parameter No. TXP6C
  - Report the NOEC value for growth, Parameter No. TPP6C
  - Report the LOEC value for growth, Parameter No. TYP6C
  - If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP6C
  - Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6C
- Ceriodaphnia dubia
  - If the NOEC for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP3B
  - Report the NOEC value for survival, Parameter No. TOP3B
  - Report the LOEC value for survival, Parameter No. TXP3B
  - Report the NOEC value for reproduction, Parameter No. TPP3B

- Report the LOEC value for reproduction, Parameter No. TYP3B
- If the No Observed Effect Concentration (NOEC) for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP3B
- Report the higher (critical dilution or control) Coefficient of Variation, Parameter No. TQP3B

d. If retests are required by EPA, enter the following codes:

- For retest number 1, Parameter 22415, enter a '1' if the NOEC for survival is less than the critical dilution; otherwise, enter a '0'
- For retest number 2, Parameter 22416, enter a '1' if the NOEC for survival is less than the critical dilution; otherwise, enter a '0'
- For retest number 3, Parameter 51443, enter a '1' if the NOEC for survival is less than the critical dilution; otherwise, enter a '0'

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

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 ON DMR AS FINAL OUTFALL: | 001 |
| EFFLUENT DILUTION SERIES: | 32%, 42%, 56%, 75%, and 100% |
| CRITICAL DILUTION: | 100% |
| COMPOSITE SAMPLE TYPE: | Defined at PART I |
| TEST SPECIES/METHODS: | 40 CFR Part 136 |

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

b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.

e. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

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

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

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

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

b. Statistical Interpretation

The statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as de-scribed in EPA 821 R 02 012 or the most recent update thereof.

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

c. Dilution Water

- 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;

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

- If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 2.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

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

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

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

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

d. Samples and Composites

- The permittee shall collect **two** flow-weighted composite samples from the outfall(s) listed at Item 1.a above.

- The permittee shall collect second composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

- The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed **36 hours**. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.

- If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum

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

3. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA 821 R 02 012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for EPA review.

c. The permittee shall report the following results of each valid toxicity test. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.

<u>Daphnia pulex</u>

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

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

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