



Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

NPDES Permit No. **NM0030414**

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"),

Rio Del Oro Wastewater Treatment Facility
New Mexico Water Service Company
401 Horner Street
Belen, NM 87002

is authorized to discharge from the Rio Del Oro Wastewater Treatment Plant located at 1 PNM Access Road, Las Lunas in Section 26, Township 6 North Range 2 East, Valencia County, New Mexico, to the arroyo named La Canada de La Loma de Arena thence to La Constancia Ditch, thence to the Rio Grande in Segment 20.6.4.105 of the Rio Grande Basin, from a point located approximately

Outfall 001: Latitude 34° 43' 28.34" North, Longitude 106° 42' 21.46" West

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

This permit shall become effective on

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

Issued on

Prepared by

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

Ruben Alayon-Gonzalez
Environmental Engineer
NPDES Permit Section (6WQ-PP)

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DOCUMENT ABBREVIATIONS

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

| | |
|-------|---------------------------------------------------|
| Avg | Average |
| BOD5 | five-day biochemical oxygen demand |
| CFR | Code of Federal Regulations |
| cfu | colony forming units |
| COD | chemical oxygen demand |
| DMR | discharge monitoring report |
| EPA | United States Environmental Protection Agency |
| ft. | feet (measurement of distance) |
| FWS | United States Fish and Wildlife Service |
| lbs | pounds |
| Max | maximum |
| ug/L | micrograms per liter (one part per billion) |
| mg/L | milligrams per liter (one part per million) |
| MGD | million gallons per day |
| MQL | minimum qualification level |
| MPN | most probable number |
| NMAC | New Mexico Administrative Code |
| NMED | New Mexico Environment Department |
| NMIP | New Mexico NPDES permit implementation procedures |
| NOEC | No Observed Lethal Effect Concentration |
| NPDES | national pollutant discharge elimination system |
| POTW | publically owned treatment works |
| s.u. | standard units (for parameter pH) |
| TMDL | total maximum daily load |
| TN | total nitrogen |
| TP | total phosphorus |
| TRC | total residual chlorine |
| TSS | total suspended solids |
| WET | whole effluent toxicity |

PART I**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.****Table 1: Final Effluent limits – 0.3 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:

| EFFLUENT CHARACTERISTICS | DISCHARGE LIMITATIONS | | | | | MONITORING REQUIREMENTS | |
|---------------------------------------------|--------------------------------|------------|---------------------|------------|-----------|-------------------------|----------------------------|
| | lbs/day | | mg/l (unless noted) | | | Measurement Frequency | Sample Type |
| Parameter | 30-Day Avg. | 7-Day Avg. | 30-Day Avg. | 7-Day Avg. | Daily Max | | |
| Flow | N/A | N/A | MGD | MGD | MGD | Continuous | Totalizer |
| BOD ₅ | 75 | 113 | 30 | 45 | *** | 2/Month | Grab ¹ |
| TSS | 75 | 113 | 30 | 45 | *** | 2/Month | Grab ¹ |
| Percent Removal (minimum), BOD ₅ | ≥85% | *** | *** | *** | *** | 1/Month | Calculation ² |
| Percent Removal (minimum), TSS | ≥85% | *** | *** | *** | *** | 1/Month | Calculation ² |
| E. coli Bacteria ⁴ | 1.43 x 10 ⁹ cfu/day | *** | 126 | 126 | 126 | 2/Month | Grab ¹ |
| Total Residual Chlorine | *** | *** | *** | *** | 11µg/l | 5/Week | Instant. Grab ³ |

- Monitoring must be conducted according to test procedures approved under 40CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
- Percent removal is calculated using the following equation: [(average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration] x 100.
- Instantaneous grab a field measurement that is the analysis of a sample less than 15 minutes from the time of collection
- Bacteria reporting units MUST be either cfu/100mL or MPN.
- Loading in lbs/day = pollutant concentration in mg/L * 8.345 lbs/gal * design flow in MGD

Table 2

| Effluent Characteristics | | Discharge Limitations | | | |
|--------------------------|-------------|-----------------------|---------|-------------------------|---------------------------------|
| | | Standard Units | | Monitoring Requirements | |
| Pollutant | STORET Code | Minimum | Maximum | Measurement Frequency | Sample Type |
| pH | 00400 | 6.6 | 9.0 | 5/Week | Instantaneous Grab ¹ |

1. Instantaneous grab is a field measurement that is the analysis of a sample less than 15 minutes from the time of collection.

Table 3

| Whole Effluent Toxicity Testing (48 Hr. NOEC) ¹ | | | | |
|------------------------------------------------------------|----------------------|-----------|-------------------------|------------------|
| Effluent Characteristic | Discharge Monitoring | | Monitoring Requirements | |
| | 30-Day Average Min | 48-Hr Min | Frequency | Type |
| Daphnia pulex | Report | Report | Twice/term ² | 24-Hr. Composite |

1. Monitoring and reporting requirements begin on the effective date of this permit. See PART II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.
2. Twice per permit-term. The test shall take place between November 1 and April 30 during the first year and third year of the permit term. 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 failures. However, upon failure of any WET test, the permittee must report the results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification of the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the discharge into the receiving stream from the following approximate location: Outfall 001.

B. SCHEDULE OF COMPLIANCE

No compliance schedule is proposed.

C. MONITORING AND REPORTING.

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

Monitor reporting periods shall end on the last day of the month.

Monitoring information required shall be submitted on DMR Form EPA 3320-1 as required in Part III, D.4. and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

The first DMR shall represent facility operations from the effective date of the permit through the last day of the month.

Thereafter, the permittee is required to make regular monthly reports as described above and shall submit those reports no later than the 28th day of the month following the months: December, March, June and September.

If any 7-day average, weekly 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. Any 30-day average, monthly average, 7-day average, weekly average, or daily maximum value reported in the required DMR 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.

Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for BOD5 or for 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 DMR submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: date, time, duration, location, estimated volume, and cause of the overflow. They shall also include observed environmental impacts from the overflow; actions taken to address the overflow; and, the ultimate discharge location if not contained (e.g., storm sewer system, ditch, and tributary).

Overflows that endanger health or the environment shall be orally reported to EPA at (214) 665-6595 and NMED Surface Water Quality Bureau at (505) 827-0187, within 12 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 NMED Surface Water Quality Bureau within 5 days of the time the permittee becomes aware of the circumstance.

The permittee shall submit a copy of an annual summary of the data that results from whole effluent toxicity testing to:

U.S. Fish and Wildlife Service Field Supervisor
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, NM 87113

And

Compliance Assurance and Enforcement Division
EPA Water Enforcement Branch (6EN-W)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

And

Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
1190 Saint Francis Drive
Santa Fe, NM 87502-5469

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.

The permittee shall certify in writing, within three days of the effective date of the permit, that this information is available. This certification shall be submitted to: Environmental Protection Agency, 6EN-WC, 1445 Ross Ave, Dallas, Texas, 75202-2733.

F. COPY OF DMR REPORTS

The permittee shall send a copy of DMRs, all other reports required in the permit, as well as a copy of application for permit renewal to NMED and EPA at the corresponding mailing address listed below.

U.S Fish and Wildlife Service Field Supervisor
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, NM 87113

And

Compliance Assurance and Enforcement Division
EPA Water Enforcement Branch (6EN-W)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

And

Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
1190 Saint Francis Drive
Santa Fe, NM 87502-5469

PART II - OTHER CONDITIONS**A. MINIMUM QUANTIFICATION LEVEL (MQL)**

The permittee shall use sufficiently sensitive EPA-approved analytical methods (under 40 CFR part 136 and 40 CFR chapter I, subchapters N and O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the approved methods are not sufficiently sensitive to the limits, the most sufficiently sensitive methods must be used as defined under 40 CFR 122.44(i)(1)(iv)(A).

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

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, may be tested to the MQL, permit limit(s) or the state WQS. Results of analyses that are less than the listed MQL, permit limit(s) or the state WQS may be reported as "non detect".

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

B. PERMIT REOPENER CLAUSE

1. The permit may be reopened and modified during the life of the permit if relevant portions of State of New Mexico Water Quality Standards and/or State Water Quality Management Plans are revised, new water quality standards are established and/or remanded and any other policy, or if procedures and implementation guidelines are adopted by the State that change applicable water quality standards and permit implementation.
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.
3. If a TMDL is established for the receiving stream, the permit may be reopened, and new limitations based on the TMDL may be incorporated into the permit.

C. CONTRIBUTING INDUSTRIES

1. The following pollutants may not be introduced into the treatment facility:
 - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
 - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharge;
 - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
 - d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
 - e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
 - f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
 - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.
3. The permittee shall provide adequate notice of the following:

- a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and
- b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

D. POLLUTION PREVENTION REQUIREMENTS

The permittee shall continue a program 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.

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 ON DMR AS FINAL OUTFALL: 001
 CRITICAL DILUTION (%): 100%
 EFFLUENT DILUTION SERIES (%): 32%, 42%, 56%, 75%, 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 EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

- i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.
- ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent)-
- iii. 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 described in EPA-821-R-02-012 or the most recent update thereof.

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

c. Dilution Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;
 - (A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - (B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic

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

- (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
- (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);
- (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and
- (D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

- i. The permittee shall collect two flow-weighted composite samples from the outfall(s) listed at Item 1.a above.
- ii. The permittee shall collect a second composite sample for use during the 24-hour renewal of each dilution concentration for the tests. 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.
- iii. 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.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent 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.
 - i. Daphnia pulex
 - (A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.
 - (B) Report the NOEC value for survival, Parameter No. TOM3D.
 - (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.
- d. If retests are required by NMED, enter the following codes:

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