



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0028011

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"),

Village of Jemez Springs
P. O. Box 269
Jemez Springs, NM 87025

14609 Highway 4, approximately 2 miles south of Jemez Springs, Sandoval County, New Mexico,

to receiving waters named Jemez River, thence to the Rio Grande in Segment No. 20.6.4.107 of the Rio Grande Basin, from

Outfall 001: Latitude 35° 43' 36" North, Longitude 106° 42' 48" West

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

This permit supersedes and replaces NPDES Permit No. NM0028011 issued December 14, 2006.

This permit shall become effective on

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

Issued on

Prepared by

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – 0.075 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 wastewater to the Jemez River, in Segment Number 20.6.4.107, from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Standard Units			
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.6	8.8	Daily	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
		lbs/day, unless noted			mg/l, unless noted (*1)				
POLLUTANT	STORET CODE	30-DAY AVG	DAILY MAX	7-DAY AVG	30-DAY AVG	DAILY MAX	7-DAY AVG	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	Report MGD	***	***	***	Continuous	Totalizing Meter
Biochemical Oxygen Demand, 5-day	00310	11.3	N/A	14.1	30	N/A	45	Once/Month	Grab
Total Suspended Solids	00530	11.3	N/A	14.1	30	N/A	45	Once/Month	Grab
E. Coli Bacteria	51040	N/A	N/A	N/A	126 (*2)	410 (*2)	N/A	Once/Month	Grab
Nitrate Nitrogen, Total as N (*8)	00620	Report	Report	N/A	N/A	N/A	N/A	Two/Month (*3)	Grab
Nitrate Nitrogen, Total as N (*9)	00620	Report	2.97	N/A	N/A	4.75	N/A	Two/Month (*3)	Grab
Phosphorus, Total (*8)	00665	Report	Report	N/A	N/A	N/A	N/A	Two/Month (*3)	Grab
Phosphorus, Total (*9)	00665	Report	0.626	N/A	N/A	1.0	N/A	Two/Month (*3)	Grab
Arsenic, Total	01002	Report	N/A	N/A	Report	N/A	N/A	Once/Month	Grab
Boron, Total	01022	Report	N/A	N/A	Report	N/A	N/A	Once/Month	Grab
Total Residual Chlorine	50060	N/A	N/A	N/A	N/A	19 ug/l	N/A	Daily (*4)	Instantaneous Grab (*4)

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-DAY AVG MINIMUM	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Whole Effluent Toxicity Testing (48 Hr. Static Renewal) (*5)				
Daphnia pulex	Report	Report	Once/Term (*6, 7)	Grab
Pimephales promelas	Report	Report	Once/Term (*6, 7)	Grab

Footnotes:

- *1 See **Appendix A of Part II** of the permit for the required Minimum Quantification Level.
- *2 Colony forming units (cfu) per 100 ml.
- *3 The first sample event of any reporting period shall be at least 7-days from the second sample event of the previous reporting period. The second sample event of any reporting period shall be at least 10-days from the first sample event of the same reporting period.
- *4 The maximum total residual chlorine (TRC) shall be monitored by instantaneous grab sample once per day **ONLY** when using chlorine for **EITHER** bacteria control in the effluent **OR** when chlorine is being used in any of the wastewater treatment systems for cleaning and/or filamentous bacteria control in the settling basins. Prior to final disposal, the effluent shall contain **NO MEASURABLE TRC** at any time. **NO MEASURABLE** will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR 136. If during the term of this permit the minimum quantification level for TRC becomes less than 19 ug/l, then 19 ug/l shall become the effluent limitation. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
- *5 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.
- *6 Once per 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 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. (See Part II, Section D).
- *7 Sampling for the whole effluent toxicity test shall occur between the first period between November 1 and April 30, after the permit effective date.
- *8 Beginning on the effective date of this permit and lasting through one-day prior to four-years after the permit effective date.
- *9 Effective on the fourth-year after the permit effective date and lasting until the expiration date of this permit

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge after the final treatment unit and prior to the receiving stream.

B. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the **Total Nitrogen and Total Phosphorus** effluent limitations specified for discharges in accordance with the following schedule:

<u>ACTIVITY</u>	<u>DATE OF COMPLETION</u>
Commence Construction	30 months after permit effective date
Complete Construction	42 months after permit effective date
Achieve Final Effluent Limitations	48 months after permit effective date

- a. The permittee shall submit a progress report outlining the status of the activities during the months of January, April, July, and October until compliance is achieved as stated above.
- b. No later than 14 calendar days following the date for compliance for **Total Nitrogen and Total Phosphorus**, the permittee shall submit a written notice of compliance or noncompliance.
- c. Where the project completion reported is less than would be required to assure completion of construction by the required date, the report of progress shall also include an explanation for this delay and proposed remedial actions.

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring information shall be on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part III.D.4 of this permit and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

1. Reporting periods shall end on the last day of the months March, June, September, and December.

2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.
3. 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.
4. 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.
5. Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for five-day Biochemical Oxygen Demand (BOD₅) or for 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.
6. 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 to EPA at (214) 665- 6595 and NMED Surface Water Quality Bureau at (505) 827-0187, within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment shall be provided to EPA and NMED within 5 days of the time the permittee becomes aware of the circumstance.
7. **CONTRIBUTING INDUSTRIES**

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 discharges;
- 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.

D. 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)

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

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached **Appendix A of Part II**. Results of analyses that are less than the listed MQL maybe reported as "non detect" (ND).

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

E. coli Bacteria
TRC

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 water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(s)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

D. 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 (%): 35%

EFFLUENT DILUTION SERIES (%): 15%, 20%, 26%, 35%, and 47%

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.

Pimephales promelas (Fathead minnow) 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) for: *Daphnia pulex* survival test; and Fathead minnow survival test.
- iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: *Daphnia pulex* survival test; and Fathead minnow survival test.

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

b. Statistical Interpretation

For the *Daphnia pulex* survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods 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 both 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. *Pimephales promelas* (Fathead minnow)
 - (A) 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. TEM6C.
 - (B) Report the NOEC value for survival, Parameter No. TOM6C.
 - (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

- ii. *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."