

NPDES PERMIT NO. NM0024830

FACT SHEET

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT

Abiquiu WWTP
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ISSUING OFFICE

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DATE PREPARED

May 2, 2011

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued November 30, 2005, with an effective date of January 1, 2006, and an expiration date of December 31, 2010.

RECEIVING WATER – BASIN

Rio Chama – Rio Grande Basin

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
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
F&WS	United States Fish and Wildlife Service
mg/l	Milligrams per liter (one part per million)
ug/l	Micrograms per liter (one part per billion)
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
POTW	Publically owned treatment works
RP	Reasonable potential
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
USFWS	United States Fish & Wildlife Service
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

In this document, references to State WQS and/or rules shall collectively mean either or both the State of New Mexico and/or Ohkay Owingeh.

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued November 30, 2005, with an effective date of January 1, 2006, and an expiration date of December 31, 2010, are:

- A. Limits for pH have been made more stringent.
- B. Limits for FCB have been removed from the permit.
- C. Limits for TRC have been made more stringent.
- D. Limits for *E. coli* have been made more stringent.
- E. Limits for percent removal of BOD have been added to the permit.
- F. Limits for percent removal of TSS have been added to the permit.
- G. Monitoring frequency for pH has been modified
- H. Monitoring frequency for TRC has been modified.
- I. Monitoring frequency for flow has been modified.

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located north of US Highway 84 N in Abiquiu, Rio Arriba County, New Mexico.

Under the SIC Code 4952, the discharge is from a POTW with a design flow capacity of 0.04 MGD. The Abiquiu WWTP serves a residential population of approximately 125 and a restaurant. The activated sludge package plant is situated at ground level and consists of a bar screen, an aeration basin, a clarifier, chlorine contact chamber, and a sludge digester. The facility also includes two sludge drying beds and a sand filter.

Wastewater influent directly enters the facility via gravity flow with two main collection lines converging on-site into a single pipe, which directs flow into the headworks. Influent passes through a 1-inch gapped bar screen that is manually cleaned when necessary. From the headworks, influent flows into a narrow (approximately 2' wide) aeration channel with two blowers that provide diffused air through a series of tubing situated at the bottom of the unit. One of the two blowers is always in use and the two units are alternated on a weekly basis. A series of baffles are installed in the aeration trough to increase detention time.

Following the aeration basin, wastewater enters a single clarifier equipped with a surface skimmer through which 50% of floatable solids are routed via an air lift pump to an aerated digester and 50% is sent back to the aeration trough. Return Activated Sludge (RAS) from the clarifier is also equally split between the digester and the aeration trough. The digester is primarily intended to further treat the floatable solids (largely consisting of grease) and a slot in the digester wall allows return flow of RAS into the aeration channel. Wastewater in the clarifier flows over a weir, through a chlorine tablet box and into the chlorine contact chamber.

The chlorine contact chamber consists of metal baffles with staggered slots that extend to the base of the unit that serve to increase the detention time of effluent. After passing through the final slot, the effluent flows over a V-notch weir and into a smaller basin where the former

operator installed a plastic jug with holes punched in it to release sodium bisulfite solution for dechlorination.

After the dechlorination basin, a manually operated valve allows the operator to either route the effluent directly to the outfall pipe or to a sand filter where it undergoes further treatment prior to discharging. The former operator placed the sand filter in service for three consecutive weeks, after which, effluent was diverted to the outfall for the following two week period while the sand filter dried. Accumulated solids were then raked off and placed in the drying beds.

Once or twice per week, solids from the digester are pumped to one of two drying beds. Both beds have underdrains and the collected wastewater is pumped to the headworks. Sludge has been stockpiled onsite for at least fifteen years.

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC, amended through January 14, 2011). The facility discharges into the Rio Chama in Waterbody Segment No. 20.6.4.116 of the Rio Grande Basin. The designated uses of this receiving water are irrigation, livestock watering, wildlife habitat, coldwater aquatic life, warmwater aquatic life, and secondary contact.

The Rio Chama flows through the Ohkay Owingeh Reservation downstream of the facility's discharge location. Ohkay Owingeh has WQS approved by EPA on May 30, 2008. The Ohkay Owingeh WQS establish designed uses of the segment of the Rio Chama that passes through the Ohkay Owingeh Reservation as coldwater fishery use, warm water fishery use, primary contact ceremonial use, primary contact recreational use, secondary contact recreational use, agricultural water supply use, and industrial water supply use.

The discharge location is as follows:

Outfall 001: Latitude 36° 12' 50" North, Longitude 106° 19' 20" West.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received April 21, 2011 are presented below in Table 1:

POLLUTANT TABLE – 1

Parameter	Max	Avg
	(mg/l unless noted)	
Flow, million gallons/day (MGD)	0.0321	0.0163
Temperature, winter	10.8° C	ND
Temperature, summer	23.0° C	ND
pH, minimum, standard units (SU)	7.12 su	N/A
pH, maximum, standard units (SU)	7.44 su	N/A
Biochemical Oxygen Demand, (BOD)	3	3

E. coli (bacteria/100 ml)	45.7	3.57
Total Suspended Solids (TSS)	10	10

ND – no data received

A summary of the last 24 months of available pollutant data from October 2008 through September 2010, taken from DMRs shows no exceedances of permit limits for *E. coli* and BOD₅. During the same period, three exceedances were noted for both pH and mass limits for TSS. No exceedances were reported for pH or TSS mass limits during the last 12 months of the dataset. Ten exceedances were reported for TSS concentration limits, none of which occurred in the final eight months of the dataset. The data has also shown a consistent history of TRC permit limit exceedances. However, TRC was below the MQL (non-detect) for the last 12 months of this dataset, with the exception of August 2010.

POLLUTANT TABLE – 2

Outfall 001

Date	BOD ₅				pH		TSS				TRC	<i>E. coli</i>	
	30 DAY AVG	7 DAY AVG	30 DAY AVG	7 DAY AVG	Min.	Max.	30 DAY AVG	7 DAY AVG	30 DAY AVG	7 DAY AVG	Max.	30 DAY AVG	Daily Max
	lbs/day	lbs/day	mg/L	mg/L	s.u.	s.u.	lbs/day	lbs/day	mg/L	mg/L	µg/L	cfu/100 mL	cfu/100 mL
Limit	10	15	30	45	6	9	10	15	30	45	19	548	2507
10/31/08	1.75	1.75	12.6	12.6	5.18	5.31	12.26	12.26	88	88	1660	212	212
11/30/08	3.32	3.32	16.8	16.8	6.47	6.93	10.83	10.83	54.8	54.8	2200	39.2	39.2
12/31/08	2.16	2.16	8.9	8.9	7.12	7.12	7.09	7.09	29.2	29.2	1720	17.1	17.1
1/31/09	1.87	1.87	17.5	17.5	5.72	5.72	7.69	7.69	72	72	2200	25.3	25.3
2/28/09	0.477	0.477	2.7	2.7	6.98	6.98	3.18	3.18	18	18	80	7.5	7.5
3/31/09	0.245	0.245	2	2	7.07	7.07	0.87	0.87	7.1	7.1	40	4.2	4.2
4/30/09	2.5	2.5	27	27	6.97	6.97	3.31	3.31	35.8	35.8	30	73.7	73.7
5/31/09	0.214	0.214	2	2	6.93	6.93	3.86	3.86	36.2	36.2	990	1	1
6/30/09	1.07	1.07	7.7	7.7	5.76	5.76	5.08	5.08	36.5	36.5	0.17	1.5	1.5
7/31/09	1.79	1.79	4.3	4.3	7.45	7.45	13.15	13.15	31.6	31.6	1090	416.6	416.6
8/31/09	1.59	1.59	13	13	7.46	7.46	4.57	4.57	37.3	37.3	0.04	14.5	14.5
9/30/09	1.82	1.82	13.1	13.1	7.72	7.72	4.6	4.6	33	33	120	311	311
10/31/09	1.132	1.132	9.23	9.23	7.43	7.43	2.57	2.57	21	21	0.07	6.56	6.56
11/30/09	2.35	2.35	10.7	10.7	7.09	7.09	4.61	4.61	21	21	0.92	8.2	8.2
12/31/09	2.54	2.54	20.7	20.7	7.06	7.06	4.78	4.78	39	39	0	1.64	1.64
1/31/10	3.81	3.81	24.3	24.3	7.06	7.06	8	8	51	51	0.08	1.64	1.64
2/28/10	3.98	3.98	22.5	22.5	7.11	7.11	3.89	3.89	22	22	0.3	1.64	1.64
3/31/10	0.557	0.557	4	4	6.94	6.94	1.39	1.39	10	10	0.02	1.64	1.64
4/30/10	2.33	2.33	16.7	16.7	ND	7.04	3.76	3.76	27	27	0.75	ND	ND
5/31/10	1.59	1.59	11.4	11.4	ND	7.14	3.06	3.06	22	22	0.99	1.64	1.64
6/30/10	0.534	0.534	5	5	ND	7.37	1.17	1.17	11	11	2	1	1
7/31/10	0.593	0.593	3	3	7.41	7.41	1.98	1.98	10	10	20	1	1
8/31/10	0.418	0.418	3	3	7.12	7.12	1.393	1.393	10	10	460	45.7	45.7
9/30/10	0.368	0.368	3	3	7.44	7.44	1.226	1.226	10	10	0.2	1	1

ND- No data

IV. REGULATORY AUTHORITY/PERMIT ACTION

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water”; more commonly known as the “swimmable, fishable” goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). The previous permit expired December 31, 2010. The application was received on April 21, 2011. The existing permit will be administratively continued until this permit is issued.

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations contained in 40 CFR §122.44 NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for TSS and BOD₅. Water quality-based effluent limitations are established in the proposed draft permit for *E. coli* bacteria, TRC and pH.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

The facility is a POTW. POTWs have technology-based ELGs established at 40 CFR 133, Secondary Treatment Regulation. Pollutants with ELGs established in this Chapter are BOD, TSS and pH. BOD₅ limits of 30 mg/L for the 30-day average, 45 mg/L for the 7-day average, and 85% percent (minimum) removal are found at 40 CFR §133.102 (a). TSS limits of 30 mg/L for the 30-day average, 45 mg/L for the 7-day average, and 85% percent (minimum) removal are found at 40 CFR §133.102(b). ELGs for pH are between 6-9 s.u. and are found at 40 CFR §133.102 (c).

Regulations at 40 CFR § 122.45 (f)(1) require all pollutants limited in permits to have limits expressed in terms of mass such as pounds per day. When determining mass limits for POTWs or WWTPs, the plant’s design flow is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

0.04 MGD Design Flow

Loading in lbs/day = pollutant concentration in mg/L * 8.345 lbs/gal * design flow in MGD

30-day average BOD₅/TSS loading = 30 mg/L * 8.345 lbs/gal * 0.04 MGD

30-day average BOD₅/TSS loading = 10 lbs.

7-day average BOD₅/TSS loading = 45 mg/L * 8.345 lbs/gal * 0.04 MGD

7-day average BOD₅/TSS loading = 15 lbs.

A summary of the technology-based limits for the facility is included below:

Final Effluent Limits – 0.04 MGD design flow.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			
	lbs/Day		mg/l (unless noted)	
Parameter	30-Day Avg.	7-Day Avg.	30-Day Avg.	7-Day Avg.
Flow	N/A	N/A	Measure MGD	Measure MGD
BOD ₅	10	15	30	45
BOD ₅ , % removal, minimum	≥ 85% (*1)	---	---	---
TSS	10	15	30	45
TSS, % removal, minimum	≥ 85% (*1)	---	---	---
pH	NA	NA	6.0 - 9.0 s.u. (*2)	

Footnote: *1 – Percent removal is calculated using the following equation: (average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration.

*2 – See Section V.C.4.b below.

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained, or attained.

2. Implementation

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

3. State and Tribal Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC, amended through January 14, 2011). The facility discharges into the Rio Chama in Waterbody Segment No. 20.6.4.116 of the Rio Grande Basin. The designated uses of this receiving water are irrigation, livestock watering, wildlife habitat, coldwater aquatic life, warmwater aquatic life, and secondary contact.

The Rio Chama flows through the Ohkay Owingeh Reservation downstream of the facility's discharge location. Ohkay Owingeh has WQS approved by EPA on May 30, 2008. The Ohkay Owingeh WQS establish designed uses of the segment of the Rio Chama that passes through the Ohkay Owingeh Reservation as coldwater fishery use, warm water fishery use, primary contact ceremonial use, primary contact recreational use, secondary contact recreational use, agricultural water supply use, and industrial water supply use.

In this document, references to State WQS and/or rules shall mean collectively either or both Ohkay Owingeh and/or the State of New Mexico. Where different standards apply for a particular pollutant, the most stringent standard has been used to develop effluent limitations in order to protect for all applicable designated uses.

4. Permit Action - Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based). State WQS that are more stringent than effluent limitation guidelines are as follows:

a. BACTERIA

The previous permit had limits for fecal coliform bacteria (FCB) of 500 cfu/100 mL monthly geometric average and a 500 cfu/100 mL single maximum. Since the previous permit issuance, New Mexico has adopted *E. coli* as the State bacteria standard in lieu of FCB. New Mexico WQS require *E. coli* of 548 cfu/100 mL monthly geometric mean and 2507 cfu/100 mL daily maximum, end-of-pipe to protect the secondary contact designed use of the receiving stream, which were established as limits in the current permit. Ohkay Owingeh WQS stream specific criteria require a monthly geometric mean for FCB of 100 cfu/100 mL and single sample of 200 cfu/100 mL. However, the Ohkay Owingeh WQS note that FCB can vary suddenly and unpredictably. As an alternative to FCB, the following Ohkay Owingeh WQS for *E. coli* apply to the primary contact uses: Geometric mean maximum of 47 colonies/100 mL and a single sample maximum of 88 colonies/100 mL, in accordance with an illness rate of 4 per 1,000 exposures. The portion of the Rio Chama that flows through the Ohkay Owingeh Reservation has designated uses of both primary contact ceremonial use and primary contact recreational use. Therefore, the draft permit will propose *E. coli* limits of 47 cfu/100 mL monthly geometric mean and 88 cfu/100 mL daily maximum, which are more restrictive than those used in the previous permit.

b. pH

The NMWQS criteria applicable to coldwater aquatic life designed use and Ohkay Owingeh WQS stream specific criteria require pH to be between 6.6 to 8.8 s.u. and 6.5 to 8.5 s.u., respectively. The draft permit will propose a pH limit of 6.6 to 8.5 s.u., which is more restrictive than the technology-based limits presented earlier and those used in the previous permit.

c. TOXICS

i. General Comments

The CWA in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criteria, the permit must contain an effluent limit for that pollutant.

All applicable facilities are required to fill out appropriate sections of the Form 2A and 2S, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to POTWs, but also to facilities that are similar to POTWs, but which do not meet the regulatory definition of “publicly owned treatment works” (like private domestics, or similar

facilities on Federal property). The forms were designed and promulgated to “make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities,” per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the FRL. The facility is designated as a minor, and does not need to fill out the expanded pollutant testing section Part D of Form 2A. There are no toxics that need to be placed in the draft permit except for those presented below.

ii. Critical Conditions

Critical conditions are used to establish certain permit limitations and conditions. The State of New Mexico WQS allows a mixing zone for establishing pollutant limits in discharges. Both the NMWQS and NMIP establish a critical low flow designated as 4Q3, as the minimum average four consecutive day flow which occurs with a frequency of once in three years. The SWQB of the NMED provided EPA with the 4Q3 for Abiquiu WWTP.

For permitting purposes of certain parameters such as WET, the critical dilution of the effluent to the receiving stream is determined. The critical dilution, CD, is calculated as:

$CD = Q_e / (F \cdot Q_a + Q_e)$, where:

Q_e = facility flow (0.04 MGD/0.06 cfs)

Q_a = critical low flow of the receiving waters (17.3 MGD/26.8 cfs)

F = fraction of stream allowed for mixing (1.0)

$$\begin{aligned} CD &= 0.04 \text{ MGD} / [(1.0)(17.3) + 0.04] \\ &= 0.002 \\ &= 0.2 \% \end{aligned}$$

According to the NMIP, if it is determined that a facility is to receive chronic biomonitoring requirements at a critical dilution of 10% or less, then an acute to chronic ratio of 10:1 may be used in order to allow acute biomonitoring in lieu of chronic.

$$\text{Acute critical dilution} = 0.2\% * 10 = 2\%$$

iii. TRC

For TRC, State WQS establish acute end-of-pipe criteria of 19 µg/L and chronic in-stream criteria of 11 µg/L. For the segment of the Rio Chama that passes through the Ohkay Owingeh Reservation, Ohkay Owingeh WQS establish a maximum TRC standard of 3 µg/L. The draft permit will propose a TRC limit of 3 µg/L.

5. TMDL Requirements

NA

6. Other Requirements

NA

D. MONITORING FREQUENCY FOR LIMITED PARAMETERS

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). Changes to sample frequencies have been made based on the NMIP in order to ensure consistency with similar sized facilities.

Technology based pollutants; BOD and TSS are proposed to be monitored once per month by grab sample, which is consistent with the current permit. Percent removal of BOD and TSS are proposed to be monitored once per month. Flow is proposed to be monitored daily by instantaneous grab, as opposed to twice per week as established in the current permit.

Water quality-based pollutant monitoring frequency for *E. coli* shall be once per month by grab sample. The pollutants TRC and pH shall be monitored five times per week, which is greater than the once per month frequency of the previous permit, using instantaneous grab samples. Regulations at 40 CFR §136 define instantaneous grab as being analyzed within 15-minutes of collection.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

OUTFALL 001

In Section V.C.4.c.ii.(b) above; “Critical Conditions”, it was shown that the critical dilution, CD, for the facility is 2%, because the discharge is to a perennial. Based on the nature of the discharge; POTW, the design flow; less than 0.1 MGD, the nature of the receiving water; perennial, and the critical dilution; 2%, the NMIP directs the WET test to be a 48-hour acute test using *Daphnia pulex* and *Pimephales promelas* at a once per permit term frequency consistent with the NMIP. Based on the WET Recommendation shown in Appendix A, no WET limits will be established in the proposed permit.

The proposed permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests based on a 0.75 dilution series. These additional effluent concentrations shall be 0.8%, 1.1%, 1.5%, 2.0%, and 2.7%. The low-flow effluent concentration (critical low-flow dilution) is defined as 2.0% effluent.

During the period beginning the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge from Outfall 001 - the discharge to Rio Chama of the treatment system aeration basin. The aeration basin receives process area wastewater, process area stormwater, and treated sanitary wastewater. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC

DISCHARGE MONITORING

30-DAY AVG MINIMUM 48-Hr. MINIMUM

Whole Effluent Toxicity Testing
(48 Hr. Static Renewal) 1/

Daphnia pulex

REPORT

REPORT

Pimephales promelas

REPORT

REPORT

EFFLUENT CHARACTERISTIC

MONITORING REQUIREMENTS

FREQUENCY

TYPE

Whole Effluent Toxicity Testing
(48 Hr. Static Renewal) 1/

Daphnia pulex

Once/ Term

24-Hour Composite

Pimephales promelas

Once/ Term

24-Hour Composite

FOOTNOTES

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.

VI. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE

The permittee shall use only those sewage sludge disposal or reuse practices that comply with the federal regulations established in 40 CFR Part 503 "Standards for the Use or Disposal of Sewage Sludge". EPA may at a later date issue a sludge-only permit. Until such future issuance of a sludge-only permit, sludge management and disposal at the facility will be subject to Part 503 sewage sludge requirements. Part 503 regulations are self-implementing, which means that facilities must comply with them whether or not a sludge-only permit has been issued. Part IV of the draft permit contains sewage sludge permit requirements.

B. WASTE WATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs directed towards pollution prevention. The permittee will institute programs to improve the operating efficiency and extend the useful life of the treatment system.

C. INDUSTRIAL WASTEWATER CONTRIBUTIONS

The treatment plant has no non-categorical Significant Industrial User's (SIU) and no Categorical Industrial User's (CIU). The EPA has tentatively determined that the permittee will not be required to develop a full pretreatment program. However, general pretreatment provisions have been required. The facility is required to report to EPA, in terms of character and volume of pollutants any significant indirect dischargers into the POTW subject to pretreatment standards under §307(b) of the CWA and 40 CFR Part 403.

D. OPERATION AND REPORTING

The applicant is required to operate the treatment facility at maximum efficiency at all times; to monitor the facility's discharge on a regular basis; and report the results quarterly. The monitoring results will be available to the public.

VII. 303(d) LIST

The Rio Chama, from Ohkay Owingeh to Abiquiu Dam, is listed on the "2010-2012 State of New Mexico Integrated Clean Water Act Section 303(d) / 305(b) Report." The waterbody is classified as Category 1 with coldwater aquatic life, irrigation, livestock watering, secondary contact, warmwater aquatic life, and wildlife habitat as fully supporting. No pollutants are identified as an impairment to the waterbody.

The standard reopener language in the permit allows additional permit conditions if warranted by new or revised TMDLs.

VIII. ANTIDegradation

The State of New Mexico has antidegradation requirements to protect existing uses through implementation of its WQS. The limitations and monitoring requirements set forth in the proposed draft are developed from the appropriate State WQS and are protective of those designated uses. Furthermore, the policy's set forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements and the limits are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water.

IX. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR §122.44(l)(i)(A), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. The proposed permit maintains the limitations of the previous permit for BOD, TSS, TRC, and *E. coli*. Limitations

for pH are proposed to be more stringent than those included in the current permit. Any other changes to the permit represent requirements that are consistent with the States WQS and WQMP.

X. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at USFWS, Southwest Region 2 website, <http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>, five species in Rio Arriba County are listed as endangered or threatened. Species listed as endangered include the black-footed ferret (*Mustela nigripes*), the least tern (*Sterna antillarum*), the Rio Grande silvery minnow (*Hybognathus amarus*), and the southwestern willow flycatcher (*Empidonax traillii extimus*). The Mexican spotted owl (*Strix occidentalis lucida*) is listed as threatened. The American bald eagle (*Haliaeetus leucocephalus*) was previously listed as endangered; however, the USFWS removed the American bald eagle in the lower 48 states from the Federal List of Endangered and Threatened Wildlife Federal Register, July 9, 2007, (Volume 72, Number 130).

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. After review, EPA has determined that the reissuance of this permit will have “no effect” on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. No additions have been made to the USFWS list of threatened and endangered species and critical habitat designation in the area of the discharge since prior issuance of the permit.
2. EPA has received no additional information since the previous permit issuance which would lead to revision of its determinations.
3. EPA determines that Items 1 and 2 result in no change to the environmental baseline established by the previous permit, therefore, EPA concludes that reissuance of this permit will have “no effect” on listed species and designated critical habitat.

XI. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since construction activities are not planned in the reissuance.

XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if State Water Quality Standards are promulgated or revised. In addition, if the State amends a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

XIII. VARIANCE REQUESTS

No variance requests have been received.

XIV. CERTIFICATION

The permit is in the process of certification by the State Agency following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

XV. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XVI. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(S)

EPA Application Forms 1, 2A, and 2S received April 21, 2011.

Supplemental information received via mail April 27, 2011.

B. 40 CFR CITATIONS

Citations to 40 CFR are as of April 15, 2011.

Sections 122, 124, 125, 133, 136

C. STATE OF NEW MEXICO REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through January 14, 2011.

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, May 2011.

Statewide Water Quality Management Plan, December 17, 2002.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2010 - 2012.

D. OHKAY OWINGEH REFERENCES

Ohkay Owingeh Surface Water Quality Standards, Adopted March 19, 2008.

E. OTHER

NPDES Compliance Evaluation Inspection Report, Abiquiu MDWCA, April 28, 2011.