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
Abiquiu Mutual Domestic Water & Sewer Works Association
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DATE PREPARED:

December 8th, 2022

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued July 27, 2017, with an effective date of September 1, 2017, and an expiration date of August 31, 2022.

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
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
E. coli	Escherichia coli
FCB	Fecal coliform bacteria
FWS	United States Fish and Wildlife Service
ug/l	Micrograms per liter (one part per billion)
mg/l	Milligrams per liter (one part per million)
MGD	Million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
ng/l	Nanograms per liter (one part per trillion)
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
USGS	United States Geological Service
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 July 27, 2017, with an effective date of September 1, 2017, and an expiration date of August 31, 2022, are:

A. BOD and TSS influent data monitoring and reporting requirement has been added on DMRs.
B. One time sample for the new approved NMWQS pollutants during the 1st year of the permit has been added to the limitations and monitoring requirements.

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 345. It also serves a restaurant and a gas station or a small store. 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 headworks, wastewater enters the facility via gravity flow with two main collection lines converging on-site into a single pipe, which directs flow into the aeration basin. Influent passes through the bar screen, which is manually cleaned when needed. When cleaned, the grit and screenings are bagged and transferred to the landfill for final disposal.

From the headworks, influent flows into an aeration chamber with two blowers that provide diffused air through a series of tubing situated at the bottom of the unit. The diffused air is controlled throughout the aeration chamber through a series of valves that can be manually opened and closed. One of the two blowers is always in use and the two units are alternated on a monthly basis.

After the aeration basin, wastewater enters the clarifier. The clarifier is 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 a 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.

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 twenty years.

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC, amended through July 24, 2020). 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 primary contact.

The Rio Chama flows through the Ohkay Owingeh Reservation downstream of the facility's discharge location. Ohkay Owingeh has WQS that have been approved by the EPA and are effective as of May 8, 2017. 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.

On May 19th, 2022 a New Mexico state audit observed deficiencies in the Abiquiu WWTP, listing "Potential failure to follow a permit condition(s)" and "Potential failure to complete or submit a notification, report, certification, or manifest" as the problems. The audit gave the facility an "unsatisfactory" rating.

On March 24th, 2022 an administrative order was issued by the EPA for the Abiquiu WWTP for permit effluent limit violations. The enforcement action is ongoing.

On June 26th, 2019 a federal evaluation conducted by the EPA observed deficiencies in the Abiquiu WWTP, listing "Potential failure to follow a permit condition(s)" and "Potential failure to follow or develop a require management practice or procedure" as the problems.

On November 1st, 2018 an administrative order was issued by the EPA for Abiquiu WWTP for permit effluent limit violations. The enforcement action was closed March 27th, 2019.

On August 25th, 2017 a federal evaluation conducted by the EPA observed deficiencies in the Abiquiu WWTP, listing "Potential failure to follow a permit condition(s)", "Potential failure to follow a required sample monitoring procedure or laboratory procedure", and "Potential failure to follow or develop a required management practice or procedure" as the problems.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received August 26, 2022, are presented below in Table 1:

POLLUTANT TABLE – 1

Parameter	Max	Avg
	(mg/l unless noted)	
Flow, million gallons/day (MGD)	0.042	0.034
Temperature, winter	5 ℃	19 ℃
Temperature, summer	26 ℃	22 ℃
pH, minimum, standard units (s.u.)	6.61 su	N/A
pH, maximum, standard units (s.u.)	7.89 su	N/A
Biochemical Oxygen Demand, (BOD)	110	69.33
E. coli (bacteria/100 ml)	24,196	1,475
Total Suspended Solids (TSS)	300	188

DMR submissions from the last 24 months (06/20 – 06/22) of available pollutant data show 13 exceedances for BOD5, 13 exceedances for TSS, 2 exceedances for TRC, 13 exceedances for *E. coli*, 10 exceedances for BOD5% Removal, and 13 exceedances for TSS % Removal. As of writing, DMR data for 05/22 and 06/22 have not been submitted and are overdue.

Effluent data from the past two years has demonstrated exceedances of limits for TRC, *E. Coli*, BOD5, BOD5% Removal, TSS, TSS% Removal. However, the data also indicate that they can meet these limits when the system is properly operated. The management recently hired a new operator and believe that the facility will be able to reach full compliance.

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 permit renewal application was received on August 26, 2022. The previous permit expired August 31, 2022. 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

BOD5	10	15	30	45
BOD5, % 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 July 24, 2020). 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 8, 2017. 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

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. 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. The Pueblo of Isleta WQS for E. coli bacteria are 47 cfu/100 ml daily monthly geometric mean and 88 cfu/100 ml daily maximum. This limit is used at a WWTP facility similar to Abiquiu, and is protective of both primary contact ceremonial use and primary contact recreational use. Therefore, 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. 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 identical to the limits used in the previous permit. Effluent data from the past two years has demonstrated exceedances of limits for *E. Coli*. However, results also indicate that the disinfection system is showing they can meet these limits when properly operated. It is proposed that monitoring frequency be continued at twice/month.

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 a continuation of the limit set by 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 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. USGS Gauge Station 08287000 at Rio Chama below Abiquiu Dam, NM was used to determine the 4Q3 (28.835 cfs) and harmonic mean (134.36 cfs).

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:

$CD = Qe/(F \cdot Qa + Qe)$, where:

Qe = facility flow (0.04 MGD/0.06 cfs)
Qa = critical low flow of the receiving waters (18.6 MGD / 28.8 cfs)
F = fraction of stream allowed for mixing (1.0)

CD = 0.04 MGD/[(1.0)(18.6) + 0.04]
= 0.002
= 0.2 %

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.

Acute critical dilution = 0.2% * 10= 2%

iii. TRC

For Total Residual Chlorine (TRC), New Mexico 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 continue the previous permits TRC limit of 3 µg/L.

d. DO

The plant design flow is 0.04 MGD; the anticipated CD is 2% as mentioned in Section E (WET) below. EPA believes this discharge will not have a significant effect, in terms of the DO standard (6 mg/l), in the aforementioned segment of the receiving water.

5. TMDL Requirements

N/A

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. Changes have also been made to sample frequencies based on compliance history.

Technology based pollutants; BOD and TSS are proposed to be monitored once per month by grab sample, which is consistent with the current permit. Influent data for BOD and TSS which is needed to calculate percent removal has been proposed to be monitored once per month by grab sample. Percent removal of BOD and TSS are proposed to be monitored once per month. Flow is proposed to be monitored daily by instantaneous grab.

Water quality-based pollutant monitoring frequency for *E. coli* shall be twice per month by grab sample. The pollutants TRC and pH shall be monitored five times per week, as recommended by the NMIP and the same frequency as 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.

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. 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. The following pollutants may not be introduced into the treatment facility: 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; 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; Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference; 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; 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; Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through; 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 any trucked or hauled pollutants, except at discharge points designated by the POTW.

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.

Electronic Reporting Rule

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 monthly.

Sufficiently Sensitive Analytical Methods (SSM)

The permittee must use sufficiently sensitive EPA-approved analytical methods (SSM) (under 40 CFR part 136 or required under 40 CFR chapter I, subchapters N or 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 SSM with the lowest method detection limit (MDL) must be used as defined under 40 CFR 122.44(i)(1)(iv)(A). If no analytical laboratory is able to perform a test satisfying the SSM in the region, the most SSM with the lowest MDL must be used after adequate demonstrations by the permittee and EPA approval.

VII. 303(d) LIST

The Rio Chama, from Ohkay Owingeh to Abiquiu Dam, is listed on the "2022-2024 State of New Mexico Clean Water Act Section 303(d) / 305(b) Integrated 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 and there are no TMDLs.
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, pH, and *E. coli*. 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 US Fish and Wildlife Service (USFWS), Information for Planning and Consultation (IPaC), https://ipac.ecosphere.fws.gov/, Rio Arriba County has fourteen candidate, threatened, or endangered species listed. Species listed as "endangered" include the Jemez Mountains salamander (*Plethodon neomexicanus*), southwestern willow flycatcher (*Empidonax traillii extimus*), New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*), Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), Rio Grande silvery minnow (*Hybognathus amarus*), Knowlton's cactus (*Pediocactus knowltonii*), and mancos milk-vetch (*Astragalus humillimus*). Species listed as "threatened" include the Mexican spotted owl (*Strix occidentalis lucida*), yellow-billed cuckoo (*Coccyzus americanus*), Canada Lynx (*Lynx Canadensis*), and Mesa Verde cactus (*Sclerocactus mesae-verdae*). The species listed as "candidate" are the Rio Grande cutthroat trout (*Oncorhynchus clarkii virginalis*) and monarch butterfly (*Danaus plexippus*). This county has critical habitat listed for the Jemez Mountains salamander (*Plethodon neomexicanus*), Mexican spotted owl (*Strix occidentalis lucida*), southwestern willow flycatcher (*Empidonax traillii extimus*), and yellow-billed cuckoo (*Coccyzus americanus*).

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. The Jemez Mountains salamander is found in mixed conifer and spruce-fir forests above 7,200 feet in specific microhabitat conditions. Preferred microhabitat is generally characterized by relatively high humidity and soils with specific rock structure. Abiquiu WWTP sits at an elevation of ~ 6,000 feet and the area is largely clear of vegetation. It is not likely that the species occurs in the area of the facility, given that the location is unlikely to be a viable habitat for this species.
2. The Mexican spotted owl inhabits hardwood and coniferous forest habitats, nesting in trees and rock crevices and preying upon small mammals and birds. The primary reason for its threatened status is alteration of its habitat by timber management practices. Abiquiu WWTP is situated in a valley floor in an area that is largely clear of vegetation. It is not likely that the species occurs in the area of the facility and the permitted discharge is not anticipated to affect its critical habitat.

3. The southwestern willow flycatcher inhabits riparian deciduous thickets, primarily feeding on insects. Abiquiu WWTP is situated in an area that is largely clear of vegetation. Effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The permitted discharge is not anticipated to affect the species.

4. The yellow-billed cuckoo inhabits deciduous woodland areas, foraging for insects among the shrubs and trees. Abiquiu WWTP is situated in an area that is largely clear of vegetation. The permitted discharge is not anticipated to affect the species.

6. The New Mexico Meadow Jumping Mouse inhabits dense riparian herbaceous vegetation, feeding on a wide variety of plants. Abiquiu WWTP is situated in an area that is largely clear of vegetation. Effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The permitted discharge is not anticipated to affect the species.

7. The Monarch Butterfly is a candidate species. The species feeds on various species of Milkweed, which grow in a variety of environments including streamside. Abiquiu WWTP is situated in an area that is largely clear of vegetation. Effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The permitted discharge is not anticipated to affect the species.

8. The Rio Grande Cutthroat Trout is a candidate species. It inhabits high-elevation headwater streams and lakes, eating a variety of insects and fish. The greatest factor for species decline is the introduction of non-native trout species. Effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The permit is for a minor facility and no changes from the previous permit are proposed. The permitted discharge is not anticipated to affect the species.

9. The Colorado pikeminnow was once widespread throughout the Colorado River Basin, with the species feeding on insects and other fish. Human impacts, such as river damming and habitat loss, as well as predation and competition from non-native fish species have driven the species decline. The species range does not overlap with the facility location. Effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The permit is for a minor facility and no changes from the previous permit are proposed. The permitted discharge is not anticipated to affect the species.

10. The razorback sucker was once widespread throughout the Colorado River Basin, feeding on algae, insect larvae, plankton, and detritus. Populations have declined due to human impacts, such as river damming, habitat loss, and commercial fishing, as well as predation from non-native fish species. The species range does not overlap with the facility location. Effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The permit is for a minor facility and no changes from the previous permit are proposed. The permitted discharge is not anticipated to affect the species.

11. The Rio Grande silvery minnow currently occupies only 5% of its former range along the Rio Grande. The fish feeds on river plants and invertebrates. Populations have declined due to habitat alteration and degradation. The species range does not overlap with the facility location. Effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The permit is for a minor facility and no changes from the previous permit are proposed. The permitted discharge is not anticipated to affect the species.

12. The Knowlton’s cactus is a small cactus which grows in a small patch of habitat on the Colorado border. A popular cactus among collectors, overharvesting has severely reduced its numbers in the wild. Habitat alteration and disruption has also had an impact on the

surviving population. The species range does not overlap with the facility location. The permitted discharge is not anticipated to affect the species.

13. The Mancos milk-vetch is a small perennial herb that is known to grow in only thirteen sites in southwestern Colorado and northwestern New Mexico. The species is threatened by habitat disturbance, primarily from vehicles and heavy machinery. The species range does not overlap with the facility location. The permitted discharge is not anticipated to affect the species.

14. The Canada lynx is a medium-sized cat adapted for hunting in deep snow. The species can primarily found in boreal and subalpine forests, in areas that experience deep snow and have an abundant population of snowshoe hares. The species range does not overlap with the facility location. The permitted discharge is not anticipated to affect the species.

15. The Mesa Verde cactus is a small cactus which grows in the northwestern-most corner of New Mexico. The species has been affected by habitat disruption and illegal collecting. The species range does not overlap with the facility location. The permitted discharge is not anticipated to affect the species.

16. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

17. No changes from the previous permit have been made for the proposed permit.

18. EPA determines that Items 1-16 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 received August 23, 2022, and a revised application received August 26, 2022.

B. 40 CFR CITATIONS

Citations to 40 CFR 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 July 24, 2020.

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, March 2012.

2020-2022 State of New Mexico Clean Water Act 303(d)/305(b) Integrated Report

D. OHKAY OWINGEH REFERENCES

Ohkay Owingeh Surface Water Quality Standards, effective May 8, 2017.

E. ADDITIONAL CORRESPONDENCE

Jennifer Viereck, Abiquiu Water & Sewer Association, emailed Matias Fernandez, EPA, an NPDES permit reapplication cover letter and Form 2A on 08/23/2022. Matias Fernandez, EPA, called Barton Thom, Abiquiu Water & Sewer Association, on 08/25/2022 regarding Table A of the application. Jennifer Viereck, Abiquiu Water & Sewer Association, emailed Matias Fernandez, EPA, a revised Form 2A on 08/26/2022.

Matias Fernandez, EPA, found the application to be administratively complete on 08/29/2022 and emailed a Letter of Completeness to Jennifer Viereck and Barton Thom, Abiquiu Water & Sewer Association, that same day.

Matias Fernandez, EPA, called Barton Thom, Abiquiu Water & Sewer Association, on 09/13/2022 regarding Form 2S and was informed that Mr. Thom's participation in the permit reapplication process was on a short-term bases and had concluded. Randy Garcia was now the new operator for the Abiquiu WWTP and would take over for Mr. Thom with regards to the permit reapplication. Mr. Thom informed me that Mr Garcia was still in training and would be available starting 09/19/2022.

Matias Fernandez, EPA, called Randy Garcia, Abiquiu Water & Sewer Association, on 09/19/2022 but received no response and left a message. Several calls were made afterwards, but contact was not made until 10/11/2022.

Matias Fernandez, EPA, called Jennifer Viereck, Abiquiu Water & Sewer Association, on 9/26/2022 regarding the facility's Form 2S. An email follow up was sent.

Matias Fernandez, EPA, called Randy Garcia, Abiquiu Water & Sewer Association, on 10/11/2022 and the facility's Form 2S was discussed.

Matias Fernandez, EPA, emailed Randy Garcia, Abiquiu Water & Sewer Association, on 10/14/2022 regarding the facility's Form 2S.

Matias Fernandez, EPA, emailed Randy Garcia, Abiquiu Water & Sewer Association, on 11/9/2022 regarding the facility's Form 2S. An email response was received 11/10/2022 and replied to the same day.