NPDES PERMIT NO. NM0030520
STATEMENT OF BASIS

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

1. APPLICANT

Jicarilla Apache Utility Authority
Dulce Wastewater Treatment Plant
P.O. Box 916
Dulce, NM 87528

2. ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

3. PREPARED BY

Isaac Chen
Environmental Engineer
NPDES Permits Branch (6WQ-PP)
Water Quality Protection Division
VOICE: 214-665-7364
FAX: 214-665-2191
EMAIL: chen.isaac@epa.gov

4. DATE PREPARED

December 24, 2008

5. PERMIT ACTION

Proposed reissuance of the current National Pollutant Discharge Elimination System (NPDES) permit issued October 31, 2003, with an effective date of December 1, 2003, and an expiration date of August 30, 2008.

Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed in Title 40, Code of Federal Regulations, revised as of November 7, 2008.

6. DISCHARGE LOCATION

As described in the application the discharger is a publicly owned treatment works (POTW). The site is located at 590 Narrow Gauge Road, Dulce, in Rio Arriba County, New Mexico. The facility is located in the Jicarilla Apache Nation. The discharge is to Amargo Creek, in the Water Quality Segment number 20.6.4.407 of the San Juan River Basin. The single outfall of the facility is located in the Amargo Creek at:

Latitude 36° 52' 30" North, Longitude 106° 52' 30" West

7. RECEIVING STREAM STANDARDS

The discharge is within the exterior boundaries of Jicarilla Apache Nation land and the Jicarilla Apache Nation does not have EPA approved water quality standards (WQS). In the absence of Tribal WQS, EPA has applied the downstream State WQS to the discharge. The New Mexico general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (NM WQS), 20.6.4 NMAC, as amended through August 1, 2007.

8. APPLICANT ACTIVITY

Under the Standard Industrial Classification (SIC) Code 4952, the applicant currently operates a domestic wastewater treatment facility. The Dulce wastewater treatment plant consists of headworks, two sequencing batch reactors (SBR's), a flow-through ultraviolet (UV) system and an aerobic digester. The facility has a design flow capacity of 0.6 million gallons per day (MGD).

9. EFFLUENT CHARACTERISTICS

The facility submitted information in its application that describes the nature of the permitted discharge. The following is a summarization of effluent characteristics.

Parameter	Avg. Monthly (mg/l unless noted)	Max. Daily (mg/l unless noted)
Flow, million gallons/day (MGD)	0.30	0.42
pH, minimum, standard units (su)	N/A	6.3
pH, maximum, standard units (SU)	N/A	7.6
Biochemical Oxygen Demand, 5-day ($BOD_{(5)}$)	5.6	13.5
Fecal Coliform (FCB) (bacteria/100 ml)	1.57	3.0
Total Suspended Solids (TSS)	6.7	19
Dissolved Oxygen,	9.2*	
Oil & Grease	ND*	
Total Dissolved Solids	371*	
Nitrate, as N	0.99*	
Nitrite, as N	ND*	

Total Kjeldahl Nitrogen	1.4*
Ammonia, as N	ND*
Total Phosphorous, as P	0.17*

* Based on one reported data

10. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

The proposed effluent limitations for those pollutants proposed to be limited are based on regulations promulgated at 40 CFR 122.44. The draft permit limits are based on either technology-based effluent limits pursuant to 40 CFR 122.44(a), on BPJ in the absence of guidelines, NM WQS and/or requirements pursuant to 40 CFR 122.44(d), whichever are more stringent.

a. Reason For Permit Issuance

It is proposed that the permit be issued for a 5-year term following regulations promulgated at 40 CFR 122.46(a). The initial permit renewal application was received on June 18, 2008, and complete on November 19, 2008.

b. Operation and Reporting

(1) Regulatory Basis
At a minimum, the facility will be required to meet to the equivalent of "secondary treatment" for domestic sewage, found at 40 CFR 133.102.

(2) 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.

(3) Sewage Sludge Practices
Sludge produced at the treatment plant passes through an aerobic digester and a drying bed, then is disposed at San Juan County Regional Landfill.

(4) Waste Water Pollution Prevention Requirements
The permittee shall institute or continue programs directed towards pollution prevention. The facility shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility.

(5) Industrial Wastewater Contributions
Based on information provided by the applicant, the facility does not receive significant industrial wastewater. EPA has determined that the permittee will not be required to develop a full pretreatment program. However, general pretreatment provisions have been included in the permit.

c. Technology Based Effluent Limitations/Conditions

Regulations promulgated at 40 CFR 122.44(a) require that technology-based effluent limitations be placed in NPDES permits based on effluent limitations guidelines where applicable, on best professional judgment (BPJ) in the absence of guidelines, or on a combination of the two.

Limitations on 5-day biochemical oxygen demand, (BOD_5), or 5-day carbonaceous biochemical oxygen demand, ($CBOD_5$), and total suspended solids, (TSS), are in accordance with "secondary treatment requirements" established at 40 CFR 133.102 (a) and 133.102 (b). Limitations on maximum and minimum pH are in accordance with 40 CFR 133.102(c).

d. Water Quality Based Limitations

In order to protect the water of the downstream State, the NM WQS is used to establish effluent limitations if appropriate. The NM WQCC adopted new WQS for the State of New Mexico. The revised WQS as amended through August 1, 2007, are available on the NMED's website at http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0004.pdf. The WQS have been approved by EPA in accordance with Section 303 of the CWA.

e. Post Third Round Policy and Strategy

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants (49 FR 9016-9019, 3/9/84)." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992, and the EPA Region 6 WET Permitting Strategy on May 1, 2005. The Regional policy and strategies are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in nonconformance with the provisions of 40 CFR 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

f. Implementation

The Region is currently implementing its post third round policy in conformance with the Regional strategies. 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.

g. Reasonable Potential

All applicable facilities are required to fill out appropriate sections of the Form 2A, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to Publicly Owned Treatment Works (POTW's), but also to facilities that are similar to POTW's, 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 amount of information required for minor facilities was limited to specific sections of these forms, because they are unlikely to discharge toxic pollutants in amounts that would impact state water quality standards. Supporting information for this decision was published as "Evaluation of the Presence of Priority Pollutants in the Discharges of Minor POTW's," June 1996, and was sent to all state NPDES coordinators by EPA Headquarters. In this study, EPA collected and evaluated data on the types and quantities of toxic pollutants discharged by minor POTW's of varying sizes from less than 0.1 MGD to just under 1 MGD. The Study consisted of a query of the EPA Permit Compliance System (PCS) database from 1990 to present, an evaluation of minor POTW data provided by the State agencies, and on-site monitoring for selected toxics at 86 minor facilities across the nation.

Due to the limited information required by the application, the Agency has determined that no reasonable potential exists for this discharge to violate applicable NM WQS except for E. coli due to the nature of discharge.

h. Final Effluent Limitations

Technology-based effluent limitations are established in the proposed permit for the following pollutants: pH, BOD_5, and TSS. Water quality-based effluent limitations are established in the proposed permit for the following pollutants: E. coli. Because the discharge is to the water in the tribal land, thence to the water of the State, EPA considers that the technology-based pH range of 6.0 – 9.0 is sufficiently protective for the water of NM. Effluent limitations for E. coli are

proposed to replace limitations for fecal coliform in the expired permit in accordance with the current NM WQS.

i. Monitoring Frequency

Regulations require that permits 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)). The monitoring frequencies are based on BPJ, taking into account the nature of the facility and its design flow and the previous permit. Monitoring frequency for BOD, TSS and E. coli (which replaces fecal coliform) is reduced from 1/week to 2/month because the discharge has no reasonable potential to exceed limitations of those parameters. Monitoring frequency of daily is proposed for flow and pH. Because the facility uses UV to disinfect the treated wastewater, monitor of total residual chlorine is not proposed in the draft permit.

j. Whole Effluent Toxicity (WET) Testing

Because the facility is unlikely to discharge toxic pollutants in amounts that would impact state water quality standards as discussed in section 10.g. above, WET testing is not proposed in the draft permit.

k. Significant Changes from the Existing Permit

There are significant changes of permit conditions from the existing permit issued October 31, 2003, and expired August 30, 2008:

(i) Add effluent limitations and monitoring requirements for E. coli;
(ii) Delete effluent limitations and monitoring requirements for fecal coliform; and
(iii) Change monitoring frequency for flow, pH, BOD, TSS, and E. coli.

11. 303(d) LIST

The receiving water, Amargo Creek, and the downstream water, Navajo River are not impaired according to 2008-2010 State of New Mexico CWA §303(d)/§305(b) Integrated Report. Therefore, no other permit conditions are established to address impairment.

12. ANTIDEGRADATION AND ANTIBACKSLIDING

Jicarilla Apache Nation does not have an approved water quality standards, nor an antidegradation policy. The receiving stream, Amargo Creek, is an intermittent stream and its downstream Navajo River are not impaired. The continued introduction of treated municipal wastewater to the creek may not degrade or adversely impact its existing uses. The reissuance of this permit does not increase waste loads to the receiving stream. Monitoring requirements for pollutants established in the proposed permit will collect data for further analysis.

The replacement of effluent limitations for fecal coliform with E. coli is in accordance with State revised WQS.

11. ENDANGERED SPECIES CONSIDERATIONS

Five species in Rio Arriba County are listed as Endangered or Threatened, according to the U.S. Fish & Wildlife Service's (USFWS) website. The lone aquatic specie is the Rio Grande silvery minnow. Three of the species are avian and include the least tern, Mexican spotted owl, and the southwestern willow flycatcher. Additionally, the black footed ferret is listed as endangered. When EPA reissued the permit in 2003, EPA has evaluated all these species and determined that the reissuance of the permit had no effect on these species. EPA determined that the environmental baseline has not been changed and, based on the information available to EPA, that the reissuance of this permit will have ***no effect*** on these federally listed threatened or endangered species.

12. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since no construction activities are planned in the reissuance.

13. CERTIFICATION

EPA has the jurisdiction to certify this permit because the discharge occurs in Indian Country. 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.

14. FINAL DETERMINATION

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

15. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

a. Application(s)

The initial permit renewal application Form 2A was received on June 18, 2008, and complete on November 19, 2008.

b. State of New Mexico References

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through December 29, 2006.

Region 6 Implementation Guidance for State of New Mexico Standards for Interstate and Intrastate Stream, May 5, 1995.