NPDES PERMIT NO. NM0030392 FACT SHEET

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

APPLICANT:

Village of Ruidoso Grindstone Dam Raw Water Treatment and Reuse Facility 313 Cree Meadows Dr Ruidoso, NM 88345

ISSUING OFFICE:

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

PREPARED BY:

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DATE PREPARED:

November 10, 2011

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued May 30, 2006, with an effective date of July 1, 2006, and an expiration date of June 30, 2011.

RECEIVING WATER - BASIN

Grindstone Reservoir-Pecos River 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
BĂT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPJ	Best professional Judgment
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
WŴTP	Wastewater treatment plant

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued May 30, 2006, with an effective date of July 1, 2006, and an expiration date of June 30, 2011, are:

1. Limitation requirements for total copper have been removed based on data obtained from the renewal application.

2. Monitoring requirements for pH and total copper have been changed from weekly and monthly respectively to 3 days per week, based on BPJ.

3. A new Outfall, Outfall 002, has been established. Outfall 002 is discharges from second collection gallery to Grindstone Canyon.

4. Biomonitoring requirements at Outfall 001 have been changed from 7-day chronic test to 48-hour acute test.

5. A 7-day chronic test using *Ceriodaphnia dubia* and *Pimephales promelas* has been established for Outfall 002.

6. Limitations and monitoring requirements for total silver, total cadmium, total lead, total zinc and total thallium have been established for both Outfalls 001 and 002.

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located at 500 Resort Drive in Ruidoso, Lincoln County, New Mexico.

Under the Standard Industrial Classification Code 4941, the applicant operates a drinking water supply storage reservoir. The facility described in the application is returning water leaking from Grindstone Reservoir/Dam back to the reservoir. A water collection gallery (also called the pumpback system) is installed to collect dam seepage water. The current location of the water collection gallery ensures that the pH level in the dam is reduced. A portion of the seepage is collected, pumped back through the chemical treatment building and returned back to the Grindstone Canyon Reservoir, Outfall 001. Flow enters a concrete vault located next to the treatment building. A portion of the effluent may be diverted from the vault into a plastic tube on the opposite side of the treatment building. Samples for compliance monitoring are collected from this sampling port, Outfall 001. From the vault, flow is pumped uphill into a large concrete settling basin located on the northeast side of the reservoir just above the dam. Sulfuric acid mixes with calcium carbonate thereby producing precipitates.

The chemical treatment building is located between the dam and the drinking water treatment plant. The facility no longer conducts pH treatment and automatic process control testing of the pH before discharging back into Grindstone Canyon Reservoir. However, the facility adds acid during the winter months on as needed basis when the pH of the seepage tends to increase. Copper Sulfate (CuSO4) treatments of the reservoir lake are conducted on as needed basis. CuSO4 is used for algae control in the reservoir during the periods beginning March through October. A Solar Bee lake rotation device was installed to help in algae control i.e. reduced need to perform CuSO4 treatments.

Some seepage from Grindstone dam that is not returned to Grindstone Canyon Reservoir is allowed to flow to an unclassified Grindstone Canyon, thence to Carrizo Creek (approximately 3,000 ft below the dam), thence to the Rio Ruidoso. The discharge is to the receiving water, Outfall 002, named Grindstone Reservoir, in waterbody Segment Code 20.6.4.209 of the Pecos River Basin.

The discharges are located on that water at the following coordinates:

Outfall 001 & 002: Latitude 33° 19' 20" North; Longitude 105° 40' 55" West

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received June 6, 2011, September 8, 2011, November 03, 2011, and November 4, 2011 are presented below:

POLLUTANT TABLE - 1

Parameter	Avg	Max
	(mg/l unle	ess noted)
Flow, million gallons/day (MGD) ^{*1}	0.229	0.293
Temperature, winter	10 °C	13.8 °C
Temperature, summer	18.9 °C	21 °C
pH, minimum, standard units (SU)	N/A	8.2
pH, maximum, standard units (SU)	N/A	8.4
Biochemical Oxygen Demand, (BOD)	N/A	N/A
Fecal Coliform (FCB) (bacteria/100 ml)	N/A	N/A
Total Suspended Solids (TSS)	3.33	3.33
Ammonia (NH3)	N/A	N/A
Dissolved Oxygen	N/A	N/A
Total Kjeldahl Nitrogen (TKN)	N/A	N/A
Nitrate plus Nitrite Nitrogen	N/A	N/A
Oil and grease	N/A	N/A
Phosphorus, Total	N/A	N/A
Total Dissolved Solids (TDS)	N/A	N/A
Aluminum, ug/l	10	10
Antimony, ug/l	ND	ND
Arsenic. ug/l	0.5	0.5
Barium, ug/l	45	48
Bervllium, ug/l	1.0	1.0
Boron, ug/l	ND	ND
Cadmium. ug/l	1.0	1.0
Chromium, ug/l	ND	ND
Cobalt. ug/l	ND	ND
Copper, ug/l	3.0	3.0
Lead. ug/l	2.5	2.5
Manganese	0.00830	0.00830
Mercury, ugl/	0.1	0.1
Molvbdenum, ug/l	ND	ND
Nickel. ug/l	5	5
Selenium, ug/l	ND	ND
Silver, ug/l	ND	ND
Thallium, ug/l	0.5	0.5
Uranium, ug/l	0.5	0.5
Vanadium ug/l	ND	ND
Zinc ug/l	64	64
Cvanide ug/l	ND	ND
Total Phenolic Compounds ug/l	ND	ND
Hardness (as CaCO ₂)	380	380
Radium $226+228$ nci/l	1 777	1 777
Tritum nci/l	ND	ND
Gross Alpha pCi/l	ND	ND

Parameter	Avg	Max
	(mg/l unle	ess noted)
Gross Beta, pCi/l	2.724	2.724
Strontium-90, pCi/l	0.463	0.463
Acrolein, ug/l	ND	ND
Acrylonitrile, ug/l	ND	ND
Benzene, ug/l	ND	ND
Bromoform, ug/l	ND	ND
Carbon Tetrachloride, ug/l	ND	ND
Clorobenzene, ug/l	ND	ND
Chlorodibromo-Methane, ug/l	ND	ND
Chloroethane, ug/l	ND	ND
2-Chloro-ethylvinyl Ether	ND	ND
Chloroform	ND	ND
Dichlorobromo-Methane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
Trans-1,2-Dichloro-Ethylene	ND	ND
1,1-Dichloroethylene	ND	ND
1,2-Dichloropropane	ND	ND
1,3-Dichloro-Propylene	ND	ND
Ethylbenzene	ND	ND
Methyl Bromide	ND	ND
Methyl Chloride	ND	ND
Methylene Chloride	ND	ND
1,1,2,2-Tetrachlor-Ethane	ND	ND
Tetrachloro-Ethylene	ND	ND
Toluene	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethylene	ND	ND
Vinyl Chloride	ND	ND
P-Chloro-M-Cresol	ND	ND
2-Chlorophenol	ND	ND
2,4-Dichlorophenol	ND	ND
2,4-Dichlorophenol	ND	ND
2,4-Dimethylphenol	ND	ND
4,6-Dinitro-O-Cresol	ND	ND
2,4-Dinitrophenol	ND	ND
2-Nitrophenol	ND	ND
4-Nitrophenol	ND	ND
Pentachlorophenol	ND	ND
Phenol	ND	ND
2,4,6-Trichlorophenol	ND	ND
Acenaphthene	ND	ND
Anthracene	ND	ND
Benzidine	ND	ND
Benzo(A)anthracene	ND	ND
Benzo(A)pyrene	ND	ND
3,4 Benzo-fluoranthene	ND	ND
Benzo(GHI)perylene	ND	ND

Parameter	Avg	Max
	(mg/l unle	ess noted)
Benzo(k)fluoroanthene	ND	ND
Bis(2-chloroethoxy)methane	ND	ND
Bis(2-chloroethyl)ether	ND	ND
Bis(2-chloroiso-propyl)ether	ND	ND
Bis(2-ethylhexyl)phthalate	ND	ND
4-Bromophenyl phenyl ether	ND	ND
Butyl benzyl phthalate	ND	ND
2-chloronaphthalene	ND	ND
4-chlorophenyl phenyl ether	ND	ND
Chrysene	ND	ND
Di-N-butyl phthalate	ND	ND
Di-N-octyl phthalate	ND	ND
Dibenzo(A,H) anthracene	ND	ND
1,2-dichlorobenzene	ND	ND
1,3-dichlorobenzene	ND	ND
1,4-dichlorobenzene	ND	ND
3,3-dichlorobenzidine	ND	ND
Diethyl phthalate	ND	ND
Dimethyl phthalate	ND	ND
2,4-dinitrotoluene	ND	ND
2,6-dinitrotoluene	ND	ND
1,2-diphenylhydrazine	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Hexachlorobenzene	ND	ND
Hexachlorobutadiene	ND	ND
Hexachlorocyclopentadiene	ND	ND
Hexachloroethane	ND	ND
Indeno(1,2,3-CD)pyrene	ND	ND
Isophorone	ND	ND
Naphthalene	ND	ND
Nitrobenzene	ND	ND
N-Nitrosodi-N-propylamine	ND	ND
N-Nitrosodi-methylamine	ND	ND
N-Nitrosodi-phenylamine	ND	ND
Phenanthrene	ND	ND
Pyrene	ND	ND
1,2,4-Trichlorobenzene	ND	ND
2,3,7,8-TCDD, pg/l	ND	ND
Diazinon, ug/l	ND	ND
Nonylphenol	ND	ND

*1. Based on a review of flow measurements reported on DMRs, the highest monthly 30-day average for the most recent two years from July 2009 to June 2011 (or May 2009 to April 2011, which is one month before the application was submitted) is 0.229 MGD. The design flow for the facility is 0.8 MGD, not 0.6 MGD, per permittee's email of 9/8/11.

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 June 30, 2011, and a permit renewal application was received June 8, 2011, in accordance with provisions found at 40 CFR §122.21(d) and (e). Additional permit application information was received via email on 9/08/2011, 8/22/2011, 08/01/2011, 07/29/2011, 11/3/2011, and 11/4/2011. The permit application was deemed administratively complete on September 13, 2011.

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.

"Best Conventional Pollution Control Technology" (BCT) effluent limitations for TSS are not established in the proposed permit. Water quality-based limits for pH are established in the proposed permit.

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 permittee reported a TSS concentration of 3.33 mg/l in supplemental application information sent to EPA, Region 6 via email on November 4, 2011. It is the permit writer's BPJ that a TSS limit is not necessary as a "Best Conventional Pollution Control Technology" (BCT) limit.

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 Water Quality Standards

The New Mexico State Standards for Interstate and Intrastate Surface Waters are found at 20.6.4 NMAC, amended through January 14, 2011, and are found on the NMED's website at http://ftp.nmenv.state.nm.us/www/swqb/Standards/2011/20.6.4NMAC-IntegratedStandards-CWAStatus2011-04-18.pdf

The Grindstone Reservoir has designated uses of irrigation, livestock watering, wildlife habitat, high quality coldwater aquatic life, domestic water supply, public water supply and primary contact. For New Mexico, designated uses of irrigation, livestock watering, wildlife habitat, high quality coldwater aquatic life, domestic water supply, public water supply and primary contact need protective limits.

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. pH

Grindstone Reservoir stream segment WQS require pH to be between 6.6 and 8.8 su. The State of New Mexico limits are more limiting than the technology-based limits presented earlier. The draft permit shall establish 6.6 to 8.8 su's for pH based on State of New Mexico stream segment specific WQS.

b. 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.

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. The state 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. A critical low flow of 0 cfs was utilized in the Water Quality Screening calculation since the facility discharges to a publicly owned reservoir (Grindstone).

Based on the sample results submitted by the permittee, cadmium, lead, silver, thallium and zinc showed reasonable potential to violate NMWOS. Reasonable potential calculation performed for total copper showed that total copper does not have the potential to violate state WQS. However, information obtained from the Compliance Evaluation Inspection (CEI) report revealed that total copper composite samples did not meet the requirements of the current permit. The current permit had a 6-hour composite sample for total copper, but the collection times for each effluent portion were not recorded. Flow meter reading times were also not recorded. Totalized flow meter reading times are important to verify that the correct daily flow was used in loading calculations. Furthermore, analytical results and record keeping are inconsistent with data reported on DMRs, for example, total copper reporting on the June, 2011 DMRs submitted to EPA, Region 6 was incorrect. Also, record keeping for August, 2010 indicated that the maximum pH was 8.1, not 8.0 reported on the DMR. The number of exceedances was not always completed on DMRs according to instructions on USEPA's form. Based on the above discussion, reporting only requirements for total copper established in the previous permit are not removed in the proposed permit. The total copper data will be used for future WQS screening purpose. Because the monitoring only requirement is established based on application and CEI report information, it is not a backsliding in accordance with 40 CFR 122.62.

Aluminum, arsenic, beryllium, cadmium, copper, lead, mercury, nickel, silver, thallium, and uranium results were reported at less than detection levels, but the detection levels are greater than EPA's MQL. As a result, half of the detection levels were used for water quality screening. Based on the screening results, effluent limitations for cadmium, lead, silver, thallium and zinc showed reasonable potential to violate NMWQS. These limits are established based on data provided in the application. During the period of public notice, if the permittee provides one

data set for these parameters, by utilizing the more sensitive analytical methods, EPA may recalculate the effluent limitations based on the new reasonable potential for these parameters.

As noted above, some of the seepage from Grindstone dam is not returned to Grindstone Canyon Reservoir, but rather allowed to discharge occasionally to an unclassified Grindstone Canyon, Outfall 002. Since the facility no longer conducts pH treatment before discharging back into Grindstone Canyon Reservoir, Outfall 001, monitoring of pH at Outfall 001 would be representative to that of Outfall 002 discharges. Similarly, monitoring at Outfall 001 for copper, cadmium, lead, silver, thallium and zinc would be representative to that of Outfall 002 discharges.

The water quality screen is shown in <u>Appendix A</u> of the Statement of basis. See also <u>Appendix</u> <u>B</u> of the Statement of Basis for some DMR data.

5. 303(d) List Impacts

The Grindstone Reservoir, Segment 20.6.4.209 is not listed as impaired on the "State of New Mexico Part 303(d) List for Assessed Stream and River Reaches, 2010-2012." There are no additional requirements beyond the already proposed technology-based and/or water-quality based requirements are needed in the proposed permit.

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). Sample frequency for total copper, total cadmium, total lead, total silver, total thallium and total zinc is based on BPJ, considering the facility flow and type. Also since there is no more process control testing, more frequent monitoring of these parameters for discharges to Grindstone Canyon Reservoir is required. For Outfall 001 and 002, total copper, total cadmium, total lead, total silver, total thallium and total zinc shall be monitored three times per week using grab sample. pH for both Outfalls shall be monitored daily, when discharging.

Consistent with the May 3, 2011, NMIP, flow is proposed to be monitored daily, when discharging, using totalizing meter at Outfall 001. Flow at Outfall 002 shall also be monitored daily, when discharging, using grab sample.

Since flow from Outfall 001 discharges into Grindstone reservoir, and flow from the facility's second collection gallery, Outfall 002, discharges into Grindstone Canyon - an unclassified intermittent stream, biomonitoring requirements for both Outfalls are different. Biomonitoring requirements at Outfall 001 are 48-hour acute test, with once per six months monitoring frequency for Pimephales promelas and Daphnia pulex. Biomonitoring requirements at Outfall 002 are 7-day chronic test, with once per permit term monitoring frequency for Pimephales promelas and Ceriodaphnia dubia. EPA further notes that Outfall 002 is a new outfall and no data is available.

E. WHOLE EFFLUENT TOXICITY TESTING

OUTFALL 001

Based on the nature of the discharge; water treatment plant (industrial), the production flow; more than 0.1 MGD but less than 1.0 MGD, the nature of the receiving water; reservoir, and the critical dilution; 100%, the NMIP directs the WET test to be a 48 hour acute test using *Daphnia*

pulex and *Pimephales promelas*. The permittee failed a WET test for *Pimephales promelas* in January 2006 but retested and passed in November 2007. Since the failure is over 5 years old (69 months) and the failure barely failed at a dilution series point just below the critical dilution, EPA will not require a WET limit at this time but will require monitoring at a once per six (6) months frequency without the possibility of a frequency reduction for *Pimephales promelas*. If any tests fail for either test species (*Daphnia pulex* or *Pimephales promelas*) during the permit term, the frequency will revert to a once per three months frequency for the remainder of the permit term for the species that failed.

DMR reports reveal one (1) passing test for the *Ceriodaphnia dubia* test species during the last permit term. The EPA Reasonable Potential Analyzer (See Appendix C) indicates that RP exists. However, EPA is overruling this finding because the permittee has not failed a WET test for *Ceriodaphnia dubia* during their last permit term and is conducting tests at the maximum critical dilution. EPA concludes that this effluent does not cause or contribute to an exceedance of the State water quality standards for this test species. Therefore WET limits will not be established in the proposed permit for *Daphnia pulex* (invertebrate species).

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 32%, 42%, 56%, 75%, and 100% as the dilution series. The low-flow effluent concentration (critical low-flow dilution) is defined as 100% 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 Grindstone Reservoir of the Pecos River Basin. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC

DISCHARGE MONITORING

REPORT REPORT

30-DAY AVG MINIMUM 48-HR MINIMUM

Whole Effluent Toxicity Testing (48-hour Renewal) 1/

Daphnia pulex	REPORT
Pimephales promelas	REPORT

EFFLUENT CHARACTERISTIC

MONITORING REQUIREMENTS

FREQUENCY TYPE

Whole Effluent Toxicity Testing (48-hour Renewal) 1/

Daphnia pulex	1/6 months	24-Hr. Composite
Pimephales promelas	1/6 months	24-Hr. 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.

OUTFALL 002

Based on the nature of the discharge; water treatment plant (industrial), the production flow; more than 0.1 MGD but less than 1.0 MGD, the nature of the receiving water; intermittent, and the critical dilution; 100%, the NMIP directs the WET test to be a 7 day chronic test using *Ceriodaphnia dubia* and *Pimephales promelas*. A once per permit term frequency would be consistent with the NMIP. Since this is a new outfall, no data is available; EPA will not require a WET limit. According to the NMIP, when a test frequency is 1 time a year or less (like in this case), the test should occur in winter or springtime when most sensitive juvenile life forms are likely to be present in receiving water and colder ambient temperatures might adversely affect treatment processes. This will generally be defined as between November 1 and April 30.

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 32%, 42%, 56%, 75%, and 100% as the dilution series. The low-flow effluent concentration (critical low-flow dilution) is defined as 100% 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 002 - the discharge to the facility's second collection gallery to Grindstone Canyon, which is an intermittent and unclassified stream. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC

DISCHARGE MONITORING

30-DAY AVG MINIMUM 7-DAY MINIMUM

Whole Effluent Toxicity Testing (7 Day Static Renewal) 1/

Ceriodaphnia dubia	REPORT
Pimephales promelas	REPORT

REPORT REPORT

MONITORING REQUIREMENTS

EFFLUENT CHARACTERISTIC

FREQUENCY TYPE

Whole Effluent Toxicity Testing (7 Day Static Renewal) 1/

Ceriodaphnia dubia	1/ permit term	24-Hr. Composite
Pimephales promelas	1/ permit term	24-Hr. Composite

FOOTNOTES

 $\underline{1}$ / 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 facility does not generate any solid waste as well as sewage sludge. The Permit requirements for sewage sludge which are based on NPDES regulations, 40 CFR Part 503, does not apply to the facility.

VII. ANTIDEGRADATION

The NMAC, Section 20.6.4.8 "Antidegradation Policy and Implementation Plan" sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets 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, NMAC Section 20.6.4.8.A.2.

VIII. 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. All of the changes represent permit requirements that are consistent with the States WQS and WQMP.

IX. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, <u>http://www.fws.gov/southwest/es/EndangeredSpecies/lists/</u>, five species in Lincoln County are listed as endangered (E) or threatened (T). Three of the species are avian and include the bald eagle (*Haliaeetus leucophaeus*), northern aplomado falcon (*Falco femoralis septentrionalis*) and the Mexican spotted owl (*Strix occidentalis lucida*). There is also the black-footed ferret (*Mustela nigripes*), and the Kuenzler hedgehog cactus (*Echinocereus fendleri var. kuenzleri*). The American bald eagle (*Haliaeetus leucocephalus*) was previously listed in Lincoln County; 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).

The EPA made a "*no effect*" determination for federally listed species in the previous permit issued October 20, 2006.

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 changes have been made to the US Fish and Wildlife list of threatened and endangered species and critical habitat designation in the area of the discharge since prior issuance of the permit. 2. EPA made a "*no effect*" determination in the previous permit and 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.

X. 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.

XI. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of either States WQS are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the States Water Quality Standards are either revised or promulgated. Should either State adopt a new WQS, and/or develop or amend a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard and/or water quality management plan, in accordance with 40 CFR §122.44(d). Modification of the permit is subject to the provisions of 40 CFR §124.5.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. 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.

XIV. FINAL DETERMINATION

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

XV. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Permit Application received June 8, 2011.

Additional Permit Application information received via email on 9/08/2011, 8/22/2011, 08/01/2011, 07/29/2011, 11/03/2011, and 11/04/2011.

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 January 14, 2011.

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, November 2009.

Statewide Water Quality Management Plan, December 17, 2002.

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

http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

D. MISCELLANEOUS CORRESPONDENCE

Letter from Dorothy Brown, EPA, to Mr. Randall Camp, Utilities Director, Village of Ruidoso, dated September 13, 2011, informing applicant that its NPDES application received June 8, 2011, is administratively complete.

Letter from Jenaie Franke, EPA, to Mr. Randall Camp, Utilities Director, Village of Ruidoso, dated June 30, 2011, informing applicant that its NPDES application received June 8, 2011, is administratively incomplete.