

NPDES PERMIT NO. NM0029238

FACT SHEET

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

APPLICANT

CDS Rainmakers Waste Water Treatment Plant
PO BOX 11288
Alto, NM 88312

ISSUING OFFICE

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

PREPARED BY

Nelly Smith
Environmental Engineer
NPDES Permits & Technical Branch (6WQ-PP)
Water Quality Protection Division
VOICE: 214-665-7109
FAX: 214-665-2191
EMAIL: smith.nelly@epa.gov

DATE PREPARED

July 17, 2012

PERMIT ACTION

Proposed reissuance of the current permit issued February 27, 2007 with an effective date of April 1, 2007 and an expiration date of March 31, 2012.

RECEIVING WATER -- BASIN

Little Creek; thence to Eagle Creek; thence to Rio Ruidoso of the Pecos River Basin. The Little Creek is considered an intermittent waterbody with WQS reference of 20.6.4.98.

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
FCB	Fecal coliform bacteria
F&WS	United States Fish and Wildlife Service
mg/L	Milligrams per liter
µg/L	Micrograms per liter
MGD	million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES Permit Implementation Procedures
NMWQS	New Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES	National Pollutant Discharge Elimination System
SQL	Minimum quantification level
O&G	Oil and grease
PCB	Polychlorinated Biphenyl
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
WLA	Wasteload allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plant

In this document, references to State WQS and/or rules shall mean the State of New Mexico.

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued on February 27, 2007, with an effective date of April 1, 2007, and an expiration date of March 31, 2012, are:

- A. Increase monitoring frequency for flow
- B. Increase monitoring frequency for pH
- C. Add percent (minimum) removal for BOD and TSS
- D. Correct pH limits based on NMWSQ reference (20.6.4.98) for Little Creek
- E. Correct *E. coli* limits based on NMWSQ reference (20.6.4. 98) for Little Creek

II. APPLICATION LOCATION and ACTIVITY

As described in the application, the wastewater treatment plant is located eight miles north-northeast of the City of Ruidoso in Lincoln County, New Mexico. The effluent from the treatment plant is discharged into the Little Creek; thence to Eagle Creek; thence to Rio Ruidoso in Segment 20.6.4.208 of the Pecos River Basin. The discharge is located on that water at latitude 33° 25' 22" N and longitude 105° 34' 25.6" W in Segment 20.6.4. 98.

Under the Standard Industrial Classification (SIC) Code 4952, the applicant currently operates an extended aeration activated sludge process with a plant flow design of .040 MGD. The treatment consists of seven aeration tanks, one denitrification tank, one re-aeration tank, two final clarifiers, a chlorine contact chamber, three bag filters, and a UV disinfection unit. Additionally, the facility utilizes a lined evaporation pond which also serves as a polishing and holding pond. Effluent from the plant contact chamber is routed through the pond before it's filtered, metered, and disinfected.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received March 26, 2012, are presented below:

TABLE 1 - POLLUTANT

Parameter	Max	Avg
	(mg/L unless noted)	
Flow, million gallons/day (MGD)	0.03	0.02
pH, minimum, standard units (su)	6.6	N/A
pH, maximum, standard units (su)	8.8	N/A
Biochemical Oxygen Demand, 5-day (BOD ₅)	11.2	8.46
Fecal Coliform (# bacteria /100 mL)	46.2	25.4
Total Suspended Solids (TSS) (mg/L)	11.2	6.56
Temperature (Winter) (C)	10.4	8.9
Temperature (Summer) (C)	24.10	22.30

A summary of 24-months of available pollutant data: January 2010 through March 2012, taken from DMRs shows no exceedances of permit limits for BOD₅, TRC, and TSS (See Pollutant Table 2). pH and *E. coli* show exceedances of permit limits. Sampling events for BOD₅ and TSS were not conducted or reported during the months of July 2010 thru February 2011. Sampling events for *E. coli* was not conducted or reported during the months of July 2010 thru November 2010 and during the month of February 2011.

TABLE 2 - POLLUTANT

Date	BOD ₅			pH		TSS			TRC	E. coli	
	30 DAY AVG	30 DAY AVG	7 DAY AVG	Min.	Max	30 DAY AVG	30 DAY AVG	7 DAY AVG	Max.	30 DAY AVG	Daily Max
	lbs/day	mg/L	mg/L	s.u.	s.u.	lbs/day	mg/L	mg/L	mg/L	cfu/100 mL	cfu/100 mL
Limit	10	30	45	6.6	8.8	10	30	45	11	126	410
1/31/10	3.39	13.95	14.8	6.92	7.44	1.41	5.8	6.8	0	*322	*1120
2/28/10	3.88	14.45	14.9	6.6	7.87	2.2	8.2	10.8	0	54	91
3/31/10	3.02	13.93	18.1	7	7.92	1.26	5.8	7.2	0	6	8
4/30/10	.89	7.56	8.98	6.65	8.21	.71	6	6	0	27	49
5/31/10	1.56	10.04	10.7	6.87	8.46	1.09	7	8.3	0	9	13
6/30/10	1.79	18.4	18.4	7	8.21	.71	7.25	7.2	0	*168	261
7/31/10	NODI=E	NODI=E	NODI=E	7	8.68	NODI=E	NODI=E	NODI=E	0	NODI=E	NODI=E
8/31/10	NODI=X	NODI=X	NODI=X	*6.52	8.8	NODI=X	NODI=X	NODI=X	0	NODI=X	NODI=X
9/30/10	2.77	15.3	15.3	7	7.98	1.66	9.2	9.2	0	101	197
10/31/10	NODI=E	NODI=E	NODI=E	6.69	7.44	NODI=E	NODI=E	NODI=E	0	NODI=E	NODI=E
11/30/10	NODI=E	NODI=E	NODI=E	7	8.32	NODI=E	NODI=E	NODI=E	0	NODI=E	NODI=E
12/31/10	1.49	6.85	6.85	7.54	8.66	.87	4	4	0	*1901	*2419
1/31/11	NODI=E	NODI=E	NODI=E	7.75	8.71	NODI=E	NODI=E	NODI=E	0	90.5	90.5
2/28/11	NODI=E	NODI=E	NODI=E	7.49	7.87	NODI=E	NODI=E	NODI=E	0	NODI=E	NODI=E
3/31/11	3.88	15.5	15.5	7.99	8.67	4.12	16.5	16.5	0	115.2	115.2
4/30/11	4.74	21.9	21.9	7.27	7.62	1.21	5.6	5.6	0	*1986.3	*1986.3
5/31/11	2.69	12.4	12.4	7.22	8.6	1.6	9.6	9.6	0	*268.2	268.2
6/30/11	1.7	10.6	10.6	6.69	8.21	1.07	6.8	6.8	0	56.3	56.3
7/31/11	2.33	11.2	11.2	6.62	8.42	1.16	5.6	5.6	0	23.8	23.8
8/31/11	1.23	5.28	5.28	6.67	7	1.08	5.2	5.2	0	12.1	12.1
9/30/11	.82	4.7	4.7	6.75	7.93	1.96	11.2	11.2	0	31.5	31.5
10/31/11	2.71	13	13	6.8	8.22	1.08	5.2	5.2	0	13.4	13.4
11/30/11	1.49	8.15	8.15	7.64	8.79	1.02	5.6	5.6	0	46.2	46.2
12/31/11	1.26	6.58	6.58	7.8	8.54	.46	2.4	2.4	0	86.2	86.2
1/31/12	1.54	8.43	8.43	7.8	8.7	.66	3.6	3.6	0	66.3	66.3
2/29/12	2.02	8.11	8.11	8.21	8.78	1	4	4	0	71.9	71.9
3/31/12	1.19	5.99	5.99	8.5	8.8	1.6	8	8	0	43.7	43.7

* Denotes exceedance of permit limit

NODI-E = Analysis not conducted/No sample

NODI-X = Parameter/Value Not Reported

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 existing NPDES permit initially issued February 27, 2007 with an effective date of April 1, 2007, and an expiration date of March 31, 2012 is administratively continued until this permit is reissued.

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 require that 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, BOD₅ and percent removal for each. 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 operates a system that is similar to a POTW. POTW has technology-based ELG's established at 40 CFR Part 133, Secondary Treatment Regulation. Pollutants with ELG's established in this Chapter are BOD, TSS, and percent removal for each. BOD 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 POTW's, the plant's design flow is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

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 * 8.34 lbs/gal * 0.04 MGD

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

7-day average BOD₅/TSS loading = 45 mg/L * 8.34 lbs/gal * 0.04 MGD

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

TABLE 3 - TECHNOLOGY-BASED EFFLUENT LIMITS - 0.04 MGD design flow.

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

(*) Percent removal is calculated using the following equation: [(average monthly influent concentration - average monthly effluent concentration) ÷ average monthly influent concentration] x 100.

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 tribal, federal, or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with the NNWQS, 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. Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC amended through January 14, 2011, USEPA approved on April 30, 2012). The facility discharges into the Little Creek; thence to Eagle Creek; thence to Rio Ruidoso in Segment 20.6.4.208 of the Pecos River Basin. The Little Creek is an intermittent waterbody with WQS reference of 20.6.4. 98. The designated uses of the receiving water are livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact.

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

The State of New Mexico WQS require pH to be between 6.6 and 9 s.u. The draft permit shall establish 6.6 to 9 s.u. for pH based on the State's WQS, based on both marginal water and primary contact.

pH has been corrected according to the NMWQS reference (20.6.4.98) for the receiving water (Little Creek).

b. Bacteria

New Mexico stream WQS require *E. coli* of 206 cfu/100 mL monthly geometric mean and 940 cfu/100 ml daily maximum, end-of-pipe.

The draft permit corrects the *E. coli* bacteria limits of 126 cfu/100 mL monthly geometric average and 410 cfu/day daily maximum previously established by the expired permit using NMWQS reference 20.6.4.208. Because a compliance schedule was included in the previous permit for *E. coli*, no compliance schedule will be granted in the draft permit to meet the *E. coli* limits.

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 to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to POTWs, but also to facilities that are similar to POTWs, but which do not meet the regulatory definition of "publicly owned treatment works" (like private domestics, or similar facilities on Federal property). The forms were designed and promulgated to "make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities," per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the FRL.

The facility is designated as a minor, and does not need to fill out the expanded pollutant testing section Part D of Form 2A.

(ii) Critical Conditions

Critical conditions are used to establish certain permit limitations and conditions. The State of New Mexico WQS allow a mixing zone for establishing pollutant limits in discharges. Both states 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. NMED SWQB has not assessed

the unclassified Little Creek. The receiving water is considered intermittent probably due to the facility's batch wastewater discharge. Therefore, there is not a calculated 4Q3 and a harmonic mean low flow for the facility. For this case the critical dilution is 100 % according to the NMIP.

(iii) TRC

The draft permit shall maintain the 11 µg/l limit contained in the present permit. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.

5. 303(d) List Impacts

The effluent from the treatment plant discharges into receiving waters named Little Creek (intermittent); thence to Eagle Creek (intermittent); thence to Rio Ruidoso in Segment 20:6.4.208 of the Pecos River Basin. The Rio Bonito (Rio Ruidoso to Angus Canyon) is included in the "2012-2014 State of New Mexico Integrated Clean Water Act Section 303 (d) / 305 (b) Report." The report indicates designated use as fully supporting for irrigation, livestock watering, primary contact, and wildlife habitat. Coldwater fishery is not supported for this segment. Fish culture was not assessed. Probable cause of impairment is low flow alterations. There is a final TMDL for Rio Ruidoso (Rio Bonito to US Highway 70), assessment unit ID NM-2208_20. Per the 2006 TMDL document, there is not a WLA assigned to the facility. Probable source of impairment is flow alterations from water diversions. If and when a TMDL for sedimentation /siltation is later established for the receiving stream, the permit may be reopened, and new limitations based on the TMDL may be incorporated into the 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). Technology based pollutants; BOD₅ and TSS, are proposed to be monitored one (1) times a month. Sample type for BOD₅ and TSS is a grab sample. Flow shall be sampled daily instantaneous grab, which is consistent with the NMIP.

Water quality-based pollutant monitoring frequency for *E. coli* shall be sampled one (1) times per month using grab samples. TRC shall be measured five (5) times per week by instantaneous grab (field measurement). The pollutant pH shall be monitored five (5) times per week by instantaneous grab (field measurement) sample. Regulations at 40 CFR Part 136 define instantaneous grab as being analyzed within 15-minutes of collection. All of these monitoring frequencies are consistent with the NMIP.

E. WHOLE EFFLUENT TOXICITY LIMITATION REQUIREMENTS

OUTFALL 001

In Section V.C.4.c.(ii) above; "Critical Conditions", it was shown that the critical dilution, CD, for the facility is 100%, because the discharge is to an intermittent water body. Based on the nature of the discharge; POTW, the design flow; less than 0.1 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* at a once per permit term frequency consistent with the NMIP. The test series will be 0% (control), 32%, 42%, 56%, 75%, and 100%.

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%. The low-flow effluent concentration (critical low-flow dilution) is defined as 100% effluent.

The one test performed during the last permit term did not fail for either the *Ceriodaphnia dubia* or *Pimephales promelas* test species. The EPA Reasonable Potential Analyzer (Appendix A) indicates that RP exists for both endpoints for *Ceriodaphnia dubia* and *Pimephales promelas* but since reasonable potential for an excursion of the narrative criterion to protect the aquatic life against toxicity does not actually exist because lethal and sublethal (chronic test) toxic events were not demonstrated, WET limits will not be established in the proposed permit for *Ceriodaphnia dubia* and *Pimephales promelas*.

According to the NMIP, for the above referenced permittee, a single WET sample event is to be included with the permit application. The one test was taken on March 2, 2012 and did not fail for either species. Therefore, EPA concludes with a finding of no "reasonable potential" to create a toxic condition in the receiving stream. Consistent with the NMIP, since the permittee has received a written notice of significant noncompliance of a permit limitation within the last 5 years, the facility will be required to test again during the proposed permit term. The permittee is required to WET test as soon as possible upon permit issuance but within the time frame of November 1st and April 30th.

Since the test frequency is less than 1 time a year, 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 time frame will be defined as between November 1st and April 30th.

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 Little Creek (WQS reference Segment 20.6.4.98) thence to Eagle Creek, and thence to Rio Ruidoso in segment 20.6.4.208 of the Pecos River Basin.

EFFLUENT CHARACTERISTIC DISCHARGE MONITORING

30-DAY AVG MINIMUM 7-DAY MINIMUM

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

<i>Ceriodaphnia dubia</i>	REPORT	REPORT
<i>Pimephales promelas</i>	REPORT	REPORT

EFFLUENT CHARACTERISTIC MONITORING REQUIREMENTS

FREQUENCY TYPE

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

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

VI. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE PRACTICES

The sludge that is generated by the clarifiers and digesters is pumped as needed and disposed of at a privately owned disposal site. The facility uses a biological treatment additive in the treatment system to help liquefy solids, increase overall treatment efficiency, and reduce sludge accumulation.

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 Section 307(b) of the CWA and 40 CFR Part 403.

D. OPERATION AND REPORTING

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

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)(2)(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 mass loading requirements of the previous permit for BOD₅ and TSS. The limits for pollutants pH and *E. coli* have been corrected according to the WSQ reference for the receiving water (Little Creek). This action is subject to antibacksliding provisions per 40 CFR 122.44(l)(i)(B)(2) which states *The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b)*. All of the changes represent permit 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), Southwest Region 2 website, <http://www.fws.gov/endangered/>, two species in Lincoln County are listed as Endangered or Threatened. One of the species is avian, the Mexican spotted owl, and the other listed species is one flowering plant, the Kuenzler hedgehog cactus. Based on the following discussion, EPA has determined that the reissuance of this permit will have no effect on these federally listed threatened or endangered species.

Research of available material finds that the primary cause for the population decreases leading to threatened or endangered status for the Mexican spotted owl. Issuance of this permit is found

to have no impact on the habitat of the listed species, since no construction is authorized by this permitting action. No pollutants are identified by the permittee-submitted application at levels which might affect species habitat or prey species. Catastrophic fires and elimination of riparian habitat also were identified as threats to species habitat. The National Pollution Discharge Elimination System (NPDES) program regulates discharge of pollutants and does not regulate forest management practices and agricultural practices, which contribute to catastrophic fires and elimination of riparian habitat, and thus, species habitat. Issuance of this permit is found to have no impact on the habitats of this species.

The Kuenzler hedgehog cactus is in demand by cactus collectors, and removal by commercial suppliers and private collectors has caused a severe decline in the natural populations, even though it is available in cultivation. Populations are also subject to potential destruction from general urban growth. The reissuance of this permit will not contribute to these causes of endangerment.

XI. 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.

XII. 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.

XIII. VARIANCE REQUESTS

No variance requests have been received.

XIV. CERTIFICATION

The permit is in the process of certification by the State of New Mexico 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 Form 2A received March 26, 2012.

B. 40 CFR CITATIONS

Citations to 40 CFR as of June 30, 2012.

Sections 122, 124, 125, 133, 136

C. STATE WATER QUALITY REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, EPA approval date April 30, 2012.

Procedures for Implementing NPDES Permits in New Mexico, March 2012.

Statewide Water Quality Management Plan, December 17, 2002.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2012 -2014.

Reasonable Potential Analyzer

Facility Name Rancho Ruidoso Valley Estates WWTP Appendix A
 NPDES Permit Number NM0029238 Outfall Number 001
 Proposed Critical Dilution* 100

***Critical Dilution in draft permit, do not use % sign.**

Enter data in yellow shaded cells only. Fifty percent should be entered as 50, not 50%.

Test Data

Date (mm/yyyy)	VERTEBRATE				INVERTEBRATE			
	Lethal NOE	Sublethal NOE	Lethal TU	Sublethal TU	Lethal NOE	Sublethal NOE	Lethal TU	Sublethal TU
Mar-12	100	100	1.00	1.00	100	100	1.00	1.00

	100	100	1.00	1.00	100	100	1.00	1.00
Count			1	1			1	1
Mean			1.000	1.000			1.000	1.000
Std. Dev.								
CV			0.6	0.6			0.6	0.6

RPMF			6.2	6.2			6.2	6.2
------	--	--	-----	-----	--	--	-----	-----

	1	Reasonable Potential Acceptance Criteria
Vertebrate Lethal	6.200	Reasonable Potential exists, Permit requires WET monitoring and WET limit.
Vertebrate Sublethal	6.200	Reasonable Potential exists, Permit requires WET monitoring and WET limit.
Invertebrate Lethal	6.200	Reasonable Potential exists, Permit requires WET monitoring and WET limit.
Invertebrate Sublethal	6.2	Reasonable Potential exists, Permit requires WET monitoring and WET limit.

Reasonable Potential Analyzer

Determining "Reasonable Potential" for Excursions Above Ambient Criteria Using Effluent Data Only

EPA recommends finding that a permittee has "reasonable potential" to exceed a receiving water quality standard if it cannot be demonstrated with a high confidence level that the upper bound of the lognormal distribution of effluent concentrations is below the receiving water criteria at specified low-flow conditions.

Step 1 Determine the number of total observations ("n") for a particular set of effluent data (concentration or toxic units [TUs]), and determine the highest value from that data set.

Step 2 Determine the coefficient of variation for the data set. For a data set where $n < 10$, the coefficient of variation (CV) is estimated to equal 0.6, or the CV is calculated from data obtained from a discharger. For a data set where $n > 10$, the CV is calculated as standard deviation/mean. For less than 10 items of data, the uncertainty in the CV is too large to calculate a standard deviation or mean with sufficient confidence.

Step 3 Determine the appropriate ratio from the table below.

Step 4 Multiply the highest value from a data set by the value from the table below. Use this value with the appropriate dilution to project a maximum receiving water concentration (RWC).

Step 5 Compare the projected maximum RWC to the applicable standard (criteria maximum concentration, criteria continuous concentration [CCC], or reference ambient concentration). EPA recommends that permitting authorities find reasonable potential when the projected RWC is greater than an ambient criterion.

key1	10	11	12	13	14	15	16	17	18	19	20
0.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
0.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1
0.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2
0.4	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.2
0.5	1.6	1.6	1.5	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3
0.6	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.4
0.7	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.4
0.8	2	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.5
0.9	2.2	2.1	2	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.5
1	2.3	2.2	2.1	2	1.9	1.8	1.8	1.7	1.7	1.6	1.6
1.1	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8	1.7	1.7	1.7
1.2	2.6	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8	1.8	1.7
1.3	2.7	2.5	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8	1.8
1.4	2.8	2.7	2.5	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8
1.5	3	2.8	2.6	2.5	2.3	2.2	2.1	2	2	1.9	1.8
1.6	3.1	2.9	2.7	2.5	2.4	2.3	2.2	2.1	2	2	1.9
1.7	3.2	3	2.8	2.6	2.5	2.4	2.3	2.2	2.1	2	1.9
1.8	3.3	3.1	2.9	2.7	2.6	2.4	2.3	2.2	2.1	2	2
1.9	3.4	3.2	3	2.8	2.6	2.5	2.4	2.3	2.2	2.1	2
2	3.6	3.3	3	2.9	2.7	2.5	2.4	2.3	2.2	2.1	2