

NPDES PERMIT NO. NM0030384
STATEMENT of BASIS

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

APPLICANT

Person Generating Station
Alvarado Square MS-2104
Albuquerque, NM 87158

ISSUING OFFICE

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

PREPARED BY

Paul Juarez
Environmental Scientist
NPDES Permits & Technical Branch (6WQ-PP)
Water Quality Protection Division
VOICE: 214-665-7247
FAX: 214-665-2191
EMAIL: juarez.paul@epa.gov

DATE PREPARED

April 14, 2010

PERMIT ACTION

Proposed reissuance of the current NPDES permit initially issued October 2, 2004, with an effective date of November 1, 2004, and an expiration date of July 31, 2009.

RECEIVING WATER- BASIN

Ephemeral drainage to Albuquerque Metro Arroyo Flood Control Authority (AMAFCA) South Diversion Channel to 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	day 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
EPA	United States Environmental Protection Agency
ELG	Effluent Limitation Guidelines
ESA	Endangered Species Act
FCB	Fecal coliform bacteria
F&WS	United States Fish and Wildlife Service
µg/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
NMWQS	New Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES	National Pollutant Discharge Elimination System
MQL	minimum quantification level
O&G	oil and grease
POTW	Publically owned treatment works
RP	reasonable potential
SIC	standard industrial classification
s.u.	Standard Units (for parameter pH)
SWQB	Surface Water Quality Bureau
TDS	total dissolved solids
TMDL	total maximum daily load
TRC	total residual chlorine
TSS	total suspended solids
UAA	use attainability analysis
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Service
WLA	Wasteload allocation
WET	whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	wastewater treatment plant

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

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued October 2, 2004, with an effective date of November 1, 2004, and an expiration date of July 31, 2009, are:

- A. WET monitoring requirements added.
- B. PCB report only requirement added.
- C. Temperature report only requirement added.
- D. Dissolved Oxygen report only requirement added.

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located at 701 Electric Ave. SW, in Albuquerque, Bernalillo County, New Mexico.

Under the Standard Industrial Classification Code 4911, the applicant operates a groundwater treatment system facility with a flow of 0.144 MGD. The site location is 0.2 miles west of Interstate 25 and approximately 1.5 miles southwest of the Albuquerque International Airport. The arroyo discharges to the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), South Diversion Channel (approximately 225 feet from the outfall). The South Diversion Channel reaches the Rio Grande approximately 2 miles from the confluence with the arroyo.

Based on the low flow of the facility, and on the BPJ of the permit writer, the discharge will reach the Rio Grande River in direct response to precipitation events. The facility reported a one time flow data point in the application which is 0.144 MGD (0.223 CFS). The discharge through Outfall 001 is located at Latitude 35° 01' 45" North and Longitude 106° 38' 31" West. An aerial view of the facility and a schematic is provided in Appendix 1 below.

A. Treatment plant description

As described in the application and the November 17, 2005 Compliance Evaluation Inspection, significant elements of the ground water treatment system (GTS) include around 80 extraction wells, two surge tanks (influent and effluent), bag filters, and two granulated activated carbon (GAC) units. Treated effluent is pumped to the University of New Mexico (UNM) South Golf Course east irrigation storage pond. UNM installed a pipe that drains a portion of the water from the east pond into the west pond via gravity flow. Water from both ponds is used to spray irrigate the golf course grounds under regulation of the NMED, Ground Water Quality Bureau (GWQB) Discharge Permit (DP) 1006.

Ground water recovered from five active extraction wells are routed to a treatment system housed in an enclosed, on-site structure. Influent is combined into an equalization tank then gravity flows to a 785-gallon surge tank. From the influent surge tank, water is pumped through four bag filters that are designed to remove suspended solids. Following the bag filters, water is pumped through two GAC units connected in series, which function as the treatment component for volatile organic compound (VOC) removal. As water passes through the GAC units, VOCs adhere to surface areas of the carbon media. Sampling ports are situated in the line after each

GAC unit. Based on monitoring results of the ports, most notably the port between the units, facility personnel determine treatment capability remaining on the primary GAC. When sampling analyses from the port directly after the primary GAC unit indicate detectable levels of VOCs (i.e. breakthrough), it is replaced with a new unit containing fresh media. Typically, the GAC unit in the primary position is replaced every four to five months. Following the GAC units, effluent enters a surge tank and is pumped to the golf course via an underground PVC pipe. The effluent surge tank is the final treatment unit housed in the GTS enclosure. To date, no mechanism or plumbing is in place to discharge effluent to NPDES Outfall 001 and the permittee maintains the permit as a contingency in the event various circumstances (e.g. modification or termination of the GWQB DP) temporarily or permanently preclude discharges to the golf course ponds. NPDES Outfall 001 (as noted in the permit) is located adjacent to both the Delta-Person Generating Station NPDES outfall and the storm water outfall from the permittee site.

Other components of the GTS include:

- Pressure monitoring points before and after the carbon units that provide an indication of potential media fouling and/or line clogging (from solids accumulation) or biofouling; operators may replace the GAC unit(s) or backwash it. Pressure monitoring points are also located before and after the bag filters.
- Electronic controls that automatically shut down the system in response to high or low surge tank water levels, high east pond water level, and/or high water level in the building floor sump. In addition, manual system shutdown mechanisms are installed.
- Flow totalizers situated in various points in the treatment system that allow monitoring of total system flows and total volume of water treated.

B. Background Information

The Public Service Company of New Mexico facility is a decommissioned, non-operational electric power generating station and held an NPDES individual permit (NM0029564) that allowed discharge of cooling tower blowdown. This permit was terminated in 1991 when the facility ceased electric power generating operations. Currently, the facility is engaged in remediation of an aquifer that was contaminated with chlorinated volatile organic compounds (VOCs) as a result of electric power generating operational activities. In 2001, and again in 2004, the facility applied for, and received an NPDES permit to discharge treated ground water. Since the treated effluent is discharged to an irrigation pond under NMED discharge plan (DP-1006), Outfall 001 has not been constructed. Analytical results reported in the application are for samples collected from the final GAC unit which would be identical to the Outfall 001 wastewater characteristics should it ever be constructed and put into service. According to the applicant, this permit is maintained for backup and/or emergency purposes only. The most recent NPDES permit for the pollution control plant was issued on October 22, 2004, became effective on November 1, 2004 and expired on July 31, 2009.

C. Receiving Water

Discharges of treated contaminated groundwater go to the University of New Mexico Championship Golf Course irrigation pond under a NMED discharge plan (DP-1006). If in the event that the Public Service Company of New Mexico (PNM) needs to discharge treated

wastewater into the water of the U.S., the discharge goes into an ephemeral drainage, an unnamed tributary thence to Albuquerque Metropolitan Arroyo Flood Control Authority's (AMAFCA) South Diversion Channel, thence to the Rio Grande in segment 20.6.4.105 of the Rio Grande Basin.

III. RECEIVING WATER STANDARDS and DESIGNATED USES

The New Mexico State Standards for Interstate and Intrastate Surface Waters are found at 20.6.4 NMAC, amended through August 1, 2007.

The facility discharges into an unlined, non-classified, otherwise ephemeral, and unnamed arroyo thence to AMAFCA South Diversion Channel, reaching the Rio Grande, in segment number 20.6.4.105 of the Rio Grande Basin only in direct response to precipitation events. The designated uses of this arroyo, in Water Quality Segment No. 20.6.4.97A, are wildlife habitat, livestock watering, limited aquatic life and secondary contact. However, for this segment, EPA was unable to approve section 20.6.4.97A of the NM WQS because the State did not submit a Use Attainable Assessment (UAA) to support an aquatic life designation that does not meet the CWA §101(a)(2) objective as required by 40 CFR 131.10(j)(1). The CWA sections 101(a)(2) and 303(c) require water quality standards to provide, wherever attainable, water quality for the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water, functions commonly referred to as "fishable/swimmable" uses. EPA's current water quality regulation effectively establishes a rebuttable presumption that "fishable/swimmable" uses are attainable and therefore should apply to a water body unless it can be demonstrated that such uses are not attainable. Prior to submittal of UAA, the designated uses of warmwater aquatic community and primary contact recreation are applicable to the receiving water.

IV. EFFLUENT CHARACTERISTICS

NMIP, November 2009, has adopted human health criteria. To ensure human health is protected, the effluent must be analyzed for reasonable potential by screening for those pollutants which have numeric human health criteria. This policy applies to all industrial dischargers.

The facility was provided a list of the current MQLs to be used in pollutant testing for the application. A quantitative description of the discharge described in the EPA Permit Application Form 2C received March 4, 2009, are presented below:

POLLUTANT TABLE - 1

Parameter	Avg.	Max
	(mg/L unless noted)	
Flow, million gallons/day (MGD)	0.144	0.144
Temperature, winter	59 °F	59 °F
Temperature, summer	68 °F	68 °F
pH, minimum, standard units (SU)	6.5	6.5
pH, maximum, standard units (SU)	7.5	7.5
Biochemical Oxygen Demand (BOD)	<4	<4
Chemical Oxygen Demand (COD)	<5	<5
Total Organic Carbon (TOC)	<0.5	<0.5

Total Suspended Solids (TSS)	<10	<10
Ammonia (NH ₃)	<0.5	<0.5

*D= dissolved

POLLUTANT TABLE – 2 – Expanded Pollutant List

Parameter	Avg. (mg/L unless noted)	Max
Hardness (As CaCO ₃)	380	380
Total Residual Chlorine	ND	ND
Total Aluminum	0.0055	0.0055
Total Barium	ND	ND
Total Boron	0.12	0.12
Total Cobalt	ND	ND
Total Molybdenum	0.107	0.107
Antimony, (D)	ND	ND
Arsenic, (D)	0.00721	0.00721
Total Beryllium	ND	ND
Total Cadmium	ND	ND
Total Chromium	ND	ND
Total Copper	0.0115	0.0115
Total Lead	ND	ND
Total Mercury	ND	ND
Total Nickel, (D)	0.00066	0.00066
Total Selenium, (D)	ND	ND
Total Silver	ND	ND
Thallium, (D)	ND	ND
Zinc, (D)	ND	ND
Total Cyanide	ND	ND
Total Phenols	ND	ND
2,3,7,8-Tetrachlorodibenzo-P-Dioxin	ND	ND
Acrolein	ND	ND
Acrylonitrile	ND	ND
Benzene	ND	ND
Bromoform	ND	ND
Carbon Tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chlorodibromomethane	ND	ND
Chloroform	ND	ND
Dichlorobromomethane	ND	ND
1,1-Dichloroethane	0.63	0.63
1,2-Dichloroethane	ND	ND
1,1-Dichloroethylene	ND	ND
1,2-Dichloropropane	ND	ND
1,3-Dichloropropylene	ND	ND
Ethylbenzene	ND	ND
Methylene Chloride	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethylene	ND	ND

Toluene	ND	ND
1,2-trans-Dichloroethylene	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethylene	ND	ND
Vinyl Chloride	ND	ND
2-Chlorophenol	ND	ND
2,4-Dichlorophenol	ND	ND
2,4-Dimethylphenol	ND	ND
4,6-Dinitro-o-Cresol	ND	ND
2,4-Dinitrophenol	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-Benzofluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Bis(2-chloroethyl)Ether	ND	ND
Bis(2-chloroisopropyl)Ether	ND	ND
Bis(2-ethylhexyl)Phthalate	ND	ND
Butyl Benzyl Phthalate	ND	ND
2-Chloronaphthalene	ND	ND
Chrysene	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
Di-n-Butyl Phthalate	ND	ND
2,4-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
Nitrobenzene	ND	ND
n-Nitrosodimethylamine	ND	ND
n-Nitrosodi-n-Propylamine	ND	ND
n-Nitrosodiphenylamine	ND	ND

Pyrene	ND	ND
1,2,4-Trichlorobenzene	ND	ND
Aldrin	ND	ND
α -BHC	ND	ND
β -BHC	ND	ND
γ -BHC	ND	ND
Chlordane	ND	ND
4,4'-DDT and derivatives	ND	ND
Dieldrin	ND	ND
α -Enosulfan	ND	ND
β -Enosulfan	ND	ND
Endosulfan Sulfate	ND	ND
Endrin	ND	ND
Endrin Aldehyde	ND	ND
Heptachlor	ND	ND
Heptachlor Epoxide	ND	ND
PCB-1242	ND	ND
PCB-1254	ND	ND
PCB-1221	ND	ND
PCB-1232	ND	ND
PCB-1248	ND	ND
PCB-1260	ND	ND
PCB-1016	ND	ND
Toxaphene	ND	ND

*D= dissolved

**ND= Non detect (Reading was below MQL so concentration is considered 0.)

The effluent from the facility has been monitored under the conditions of the previous permit with a November 1, 2004 effective date. However, there has been no discharge since the previous permit was made effective. Therefore, there is no DMR data from the last permit term to report.

The NMIP, dictate the flow to be used for establishing limits for industrial facilities as the highest monthly average flow discharged from the facility over the past 24-months. Since no DMR data is available in the last 2 years, the reported flow value from the application will be used. This value was determined by taking a sample reading from the final GAC unit which would be identical to Outfall 001. This flow is 0.144 MGD and will be used to establish loading limits and determining critical dilutions in the permit.

V. 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 July 31, 2009, and a timely complete permit renewal application was received March 4, 2009. The existing permit is administratively continued until this permit is reissued.

VI. 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 limitations 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 1,2-dichloroethane, 1,1-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, and chloroform. Water quality-based effluent limitations are established in the proposed draft permit for 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 effluent limitations guidelines 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 the 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.

Person Generating Station is a decommissioned, non-operational electric generating station. Since the discharge source is a groundwater treatment system (GTS) located on the facility’s property, BPJ will be used to determine technology based limitations.

The current permit contains technology-based limitations for 1,1-dichloroethane, 1,1-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, and chloroform because these pollutants were found in the well water even though they were not detected in the effluent. Based on BPJ, a condition of “non-detectable” of these pollutants was established (refer to Appendix A of Part II). To ensure that the discharge will not contribute chlorinated volatile compounds to surface water, these limitations will be maintained. Flow and pH shall be monitored only.

Technology-Based Effluent Limits- 0.144 MGD flow

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			
	lbs/Day		mg/l (unless noted)	
Parameter	30-Day Avg.	Daily Max.	30-Day Avg.	Daily Max
Flow	N/A	N/A	Measure MGD	Measure MGD
1,1-dichloroethane	ND	ND	ND	ND
1,1-dichloroethene	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND
1,1,1-trichloroethane	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND
pH	N/A	N/A	6.0-9.0 standard units	

*ND- Non detectable relative to MQL found in Appendix A of Part II.

C. WATER QUALITY BASED LIMITATIONS/REPORTING

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 general and specific stream standards are provided in NMWQS (20.6.4 NMAC amended through August 1, 2007). The facility discharges into an unlined, non-classified, otherwise ephemeral, and unnamed arroyo thence to AMAFCA South Diversion Channel, reaching the Rio Grande, in segment number 20.6.4.105 of the Rio Grande Basin only in direct response to precipitation events. The designated uses of the receiving stream are livestock watering, wildlife habitat, limited aquatic life, and secondary 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

Water quality-based effluent limitations are established in the proposed permit for pH. The previous permit established technology-based effluent limitations for pH. Stream segment specific (20.6.4.113 NMAC) WQS for pH, 6.6 to 9.0 s.u., are more restrictive than the technology-based limits presented. The draft permit shall establish 6.6 to 9.0 s.u. for pH.

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.

The facility discharges to a generally dry arroyo with some flow after some storm events during the year. The 4Q3 for the receiving water is zero (0) cfs. Effluent limitations and/or conditions established in the proposed permit are in compliance with State WQS. Standards require that the discharge protect acute aquatic toxicity. In order to implement this WQS, the end-of-pipe discharge will have to meet applicable acute. For permitting purposes of certain parameters such as WET, the critical dilution of the effluent to the receiving stream is determined. Since the receiving stream is ephemeral the critical dilution is 100%.

ii. Hardness Data

The proposed permit will use a hardness value of 380 mg/l; expressed as CaCO₃, based on the permit application sent by the facility. Based on the pollutant data in Part III of this Fact Sheet, a water quality screen has been run to determine if discharged pollutant concentrations demonstrate RP to exceed WQS for the various designated uses. If RP exists, the screen would also calculate the appropriate permit limit needed to be protective of such designated uses. The

screen is based on the NMIP as of November 30, 2009. For hardness dependent WQS, the geometric mean hardness calculated above; 380 mg/l, expressed as CaCO₃, was used. This screen is shown as Appendix 2 of the Fact Sheet. The mathematical equation for hardness based criteria for certain pollutants is found on Pages 2 and 3 of Appendix 2 of the Fact Sheet. As shown in Appendix 2 of the Fact Sheet, none of the pollutants demonstrate RP to violate WQS consistent with the designated uses for the receiving water

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 is based on the November, 2009, NMIP. Since the facility is considered an industrial discharger, the NMIP requires that all limited parameters have daily monitoring frequency requirements (daily only for continuous, 1/week for this type of facility when discharging). Flow is proposed to be monitored continuously by totalizing meter. The pollutants 1,2-dichloroethane, 1,1-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, chloroform, and pH shall use grab samples, which is consistent with the previous permit. All shall be monitored weekly with the exception of flow and pH which will be measured daily. Regulations at 40 CFR §136 define instantaneous grab as being analyzed within 15-minutes of collection.

E. Whole Effluent Toxicity Requirements

Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP, November 2009. Table 11 of Section V of the NMIP, November 2009 outlines the type of WET testing for different types of discharges.

The previous permit did not establish WET monitoring requirements. In Section VI. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS, C. WATER QUALITY BASED LIMITATIONS/REPORTING, b. TOXICS, i. General Comments above, it was shown that the critical dilution, CD, for the facility is 100%. Based on NMIP, November 2009 48-hour acute biomonitoring will be required for discharges to ephemeral streams and will use the *Daphnia pulex* test species at a once per year frequency for the life of the permit. According to July 2009, Procedures for Implementing NPDES Permits in New Mexico if test frequency is 1/year or less, 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 30th. Historically, this facility operates between the months of April and August so the WET testing month will be set to April or the first discharge after this month of every year beginning 2010. 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 critical dilution is defined as 100% effluent.

OUTFALL 001: 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 non-classified, unnamed arroyo/AMAFCA South Diversion Channel 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:

The permittee shall conduct separate WET tests in accordance with the following table:

EFFLUENT CHARACTERISTIC	DISCHARGE MONITORING	
Whole Effluent Toxicity Testing (48 Hr. Static Renewal) 1*	30-DAY AVG MINIMUM	48-Hr. MINIMUM
Daphnia pulex	REPORT	REPORT

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
Whole Effluent Toxicity Testing (48 Hr. Static Renewal) 1*	FREQUENCY	TYPE
Daphnia pulex	1/YEAR	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.

VII. 303(d) LIST IMPACTS

The Rio Grande, Stream Segment 20.6.4.105, Isleta Pueblo boundary upstream to the Alameda Street Bridge, is listed as impaired on the “State of New Mexico Part 303(d) List for Assessed Stream and River Reaches, 2010-2012.” The waterbody is assessed as Category 5/5A with irrigation, livestock watering and wildlife habitat as fully supporting but secondary contact and marginal warmwater aquatic life as being impaired. Probable causes of impairments are listed as *E. coli*, water temperature; PCB’s in fish tissue and dissolved oxygen.

The PCB is a listed pollutant since currently NMED has issued a fish consumption advisories for the reach. These advisories demonstrate non-attainment with “fishable” CWA goals and require further investigation. The NMED released results of a study conducted in 2009 of Rio Grande water quality near the Santa Fe Buckman Direct Diversion and in Albuquerque during storm flow conditions, April 19, 2010, stating that “...storm water events in the Albuquerque area have the potential to carry concentrations of PCBs into the Rio Grande that can harm wildlife and humans consuming PCB contaminated fish.” The press release added that “Since the focus of the sampling events was river water, it is not known at this time if the contaminants were present in the stormwater itself or if the volume and velocity of the stormwater flow disturbed contaminants already present and bound in sediments.” Previous studies conducted since 2003 by local storm water management agencies have not detected PCBs in stormwater. These earlier tests were conducted using EPA Method 608; a gas-chromatograph with electron capture sometimes referred to as the Arochlor method having a MQL of 0.2 ug/l. This latest stormwater testing of PCBs testing by NMED however, were analyzed using EPA Method 1668; also referred to as the Congener Method. The Congener Method has detection capabilities of 200 pg/L, significantly lower than the Arochlor Method. Although EPA Method 1668 has been

proposed, it has not been approved under 40 CFR 136 for use in compliance monitoring for NPDES permits. The spread between the Arochlor and Congener Method's MQLs are where PCB criteria for the NMWQS for human health are. So while the early indications lead back to PCB's being in stormwater, it is prudent that discharges from this facility be evaluated at the Congener levels to determine if the facility has any contributing role in the pollutants impact. However, use of this more sensitive EPA method will provide lower detection levels necessary to determine if PCBs are in discharges to or from the facility at levels that have reasonable potential to cause or contribute to an exceedance of State or Tribal water quality standards. Since the waterbody is listed for PCB's in the State's portion of the river, an assessment of potential PCB contamination using the sensitive Congener Method will be required. The draft permit will propose a one-time analysis of effluent using the Congener Method. The test shall be required to be performed within the first year of issuance.

The *E. coli* TMDL has just recently been approved and loadings have been previously addressed in the Fact Sheet above. See Section V. C. 4. b above.

The DO TMDL is scheduled for 2013. NMWQS require a 5 mg/L DO minimum. A DO model was completed by the EPA in late 2009 that concluded that 95% percentile flow runs would not cause a violation of these WQS. However, a Report Only requirement will be placed in the permit for future evaluation.

The temperature TMDL is scheduled for 2013. NMWQS require a 32.2 °C (90°F) or less temperature. A Report Only requirement will be placed in the permit.

The standard reopener language in the permit allows additional permit conditions if warranted by the additional data based on these requirements and/or new or revised TMDLs.

VIII. 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.

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 mass loading requirements of the previous permit for 1,1-dichloroethane, 1,1-

dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, and chloroform. 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/southwest/es/EndangeredSpecies/lists/>, four species in Bernalillo County are listed as endangered (E) or threatened (T). The lone aquatic species is the Rio Grande silvery minnow (*Hybognathus amarus*) (E). Two species are birds and include the southwestern willow flycatcher (*Empidonax traillii extimus*) (E) and the Mexican spotted owl (*Strix occidentalis lucida*) (T). The only mammal is the black-footed ferret *Mustela nigripes* (E). The American bald eagle (*Haliaeetus leucocephalus*) was previously listed in Bernalillo 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).

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 previous permit initiated Formal Consultation with the FWS for the discharge from the facility. EPA provided a Biological Evaluation (BE) to FWS March 27, 2001. The FWS responded to EPA’s BE, August 20, 2001, Consultation # 2-22-01-I-592, concurring with EPA’s “no effect” determination for the Southwestern flycatcher and its “may affect, but not likely to adversely affect” the Rio Grande silvery minnow.

2. 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.

3. EPA has received no additional information since its March 27, 2001, BE, which would lead to revision of its determinations. Effluent limitations have not been changed to become less stringent.

4. EPA determines that Items 1, 2, and 3 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 relating to the previously established baseline.

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 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 Form 2C received March 4, 2009.

B. 40 CFR CITATIONS

Citations to 40 CFR are as of January 20, 2010
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, as amended through August 1, 2007.

Procedures for Implementing NPDES 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, 2008 -2010.