

NPDES PERMIT NO. NM0030848

FACT SHEET

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

APPLICANT

City of Santa Fe
Buckman Direct Diversion
341 Caja del Rio Road
Santa Fe, NM 87506

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270

PREPARED BY

Quang Nguyen
Environmental Engineer
NPDES Permitting and Wetlands Section (WDPE)
Water Division
VOICE: 214-665-7238
EMAIL: Nguyen.Quang@epa.gov

DATE PREPARED

May 9, 2024

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued August 28, 2019, with an effective date of October 1, 2019, and an expiration date of September 30, 2024.

RECEIVING WATER – BASIN

Rio Grande

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 limitations 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
MQL	Minimum quantification level
O&G	Oil and grease
PCB	Polychlorinated Biphenyl
PFAS	Per and Polyfluoroalkyl Substances
POTW	Publicly 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

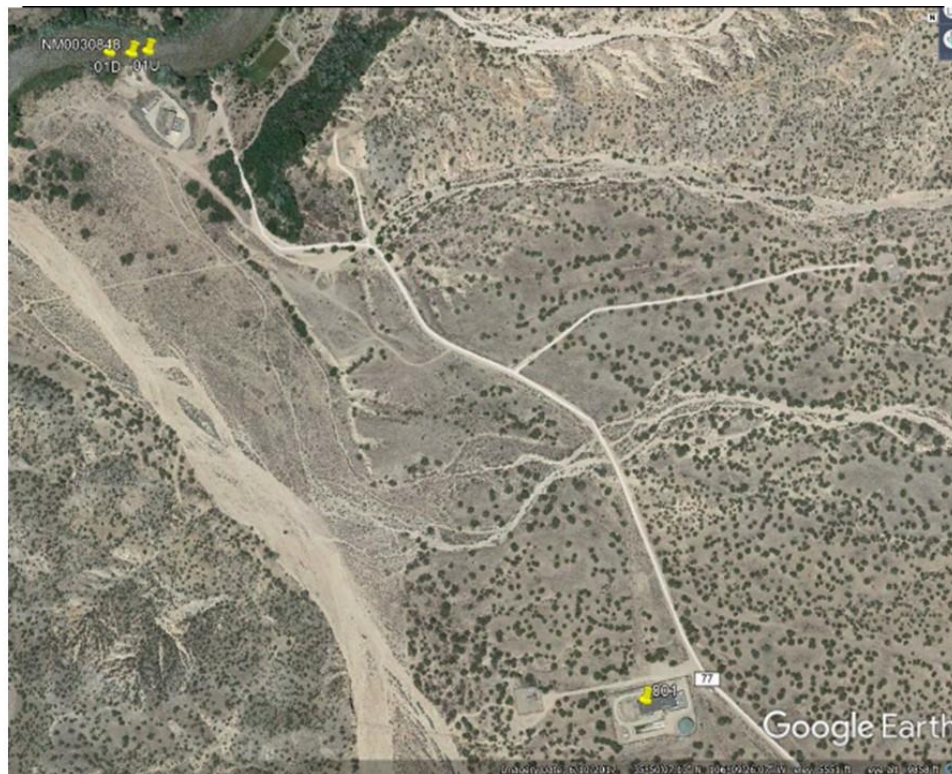
In this document, references to State WQS and/or rules shall collectively mean the State of New Mexico.

I. CHANGES FROM THE PREVIOUS PERMIT

None

II. APPLICATION LOCATION and ACTIVITY

As described in the application, the plant is located at 341 Caja del Rio Road, Santa Fe County, New Mexico. Under the SIC Code 4941, the applicant operates a Water Treatment Plant. This permitting action is specifically restricted to the discharge of materials back to the Rio Grande River by the Buckman Direct Diversion (BDD).



The BDD project diverts water from the Rio Grande through a large intake structure to provide up to 15 MGD of drinking water to the City and County of Santa Fe. Diverted water is pumped from the river approximately 11 miles to the Buckman Regional Water Treatment Plant. Water intake operations occur at varying dates and times depending on variables such as river flow and upstream turbidity. The grit/sand removal at BDD is accomplished with the single pass liquid-solid separation system “LAKOS”. The LAKOS system is a patented design that uses centrifugal forces to separate sand and grit from the raw water pumped into the units. No chemicals are added prior or during the pre-treatment of the influent. The efficiency of this separator depends on the specific gravity of the suspended solids and their particle size, being less efficient for lighter and finer particles, and more efficient for heavier and larger particles. The sand (about 40% of total sediment) is returned to the Rio Grande, which is expected to increase the sediment concentrations (TSS) by less than 2%. The near-river diversion facilities consist of a raw water pump station and a co-located booster station and sediment removal facility. The concentrated

sediment effluent generated from the gravity centrifuge process is collected in a sump which is then batch discharged utilizing additional dilution water from the river.

The discharge occurring at Outfall 001 consists of sand-sized sediment removed from the diverted river water, return flow from the continuous samplers in the mechanical building, and water from the sumps in the raw water lift station. The BDD effluent returns residuals to the Rio Grande at an average of 0.21MGD, which was based on the actual daily flows from the last 12 months. The City also believes it is the anticipated flow for the next permit term.

III. RECEIVING STREAM STANDARDS

The discharge is located at Latitude 35° 50' 10" North, Longitude 106° 9' 43" West. The discharge from the facility is to receiving waters named Rio Grande, in Waterbody Segment Code No. 20.6.4.114 NMAC of the Rio Grande Basin. The facility discharge point to Rio Grande is approximately 15 miles upstream of the Pueblo of Cochiti's boundary. The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters", (20.6.4 NMAC, effective September 24, 2022). The known uses of the receiving water(s) are irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, primary contact, and warmwater aquatic life, and public water supply on the main stem of the Rio Grande.

IV. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2C received April 18, 2024, are presented below in Table 1:

TABLE 1:

Parameter	Effluent Daily Max	
	Conc.	Mass
Flow, million gallons/day (MGD)	0.492	
pH, minimum, standard units (s.u.)	8.1 min	8.6 max
Biochemical Oxygen Demand (BOD ₅)	<2mg/L	<3.7kg
Chemical Oxygen Demand (COD)	<50 mg/L	<93.1kg
Total Organic Carbon	2.1mg/L	3.9 kg
Total Suspended Solids (TSS)	47mg/L	88 kg
Ammonia (as N) *	0.28mg/L	0.52 kg
Temperature, winter	23.1(°C)	
Temperature, summer	10.8 (°C)	

A summary of the last 36 months of available pollutant data from January 1, 2021, to January 1, 2024, taken from DMRs, shows no exceedances of permit limits.

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.

The applicant submitted a complete permit application on April 18, 2024. 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 August 28, 2019, with an effective date of October 1, 2019, and an expiration date of September 30, 2024.

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 limitation guidelines (ELGs), numerical and/or narrative water quality standard-based effluent limits, or the previous permit. Technology-based effluent limitations are not established in the draft permit. Water quality-based effluent limitations are established in the proposed draft permit for turbidity and pH.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. General Comments

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 BOD₅, 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.

2. Effluent Limitations Guidelines for TSS and Settleable Solids

There are currently no federal effluent limitation guidelines for a water treatment plant for water taken directly from a River. The BDD mechanically removes sediment out of the water taken directly from the Rio Grande, with no chemical treatment of sediment prior to discharge. Limits established in this permit are based on BPJ of the permit writer.

The discharge shall meet the New Mexico narrative standards as stated in subsection A, NMAC 20.6.4.13 which states that:

- (1) Surface waters of the state shall be free of water contaminants including fine sediment particles (less than two millimeters in diameter), precipitates or organic or inorganic solids from other than natural causes that have settled to form layers on or fill the interstices of the natural or dominant substrate in quantities that damage or impair the normal growth, function or reproduction of aquatic life or significantly alter the physical or chemical properties of the bottom.
- (2) Suspended or settleable solids from other than natural causes shall not be present in surface waters of the state in quantities that damage or impair the normal growth, function or reproduction of aquatic life or adversely affect other designated uses.

A summary of the technology-based limits for the Buckman Direct Diversion is:

Parameter	30-day avg.	7-day avg.	30-day avg.	7-day avg.
Flow	N/A	N/A	Measure MGD	Measure MGD
pH	N/A	N/A	6.0 - 9.0 s.u.* ¹	

Footnote:

*1 The pH based on stream segment specific WQS are more stringent than pH technology-based limits of 6.0-9.0 standard units. See C.4.a below

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301 (b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with the State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained, or attained. Permit limits will ensure downstream WQS will be met in accordance with 40 CFR §122.4(d).

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.

The facility discharge point to Rio Grande is approximately 15 miles upstream of the Pueblo of Cochiti's boundary. Since 40 CFR §122.4(d) requires NPDES permits be protective of the downstream state/tribal's water quality standards. The Pueblo of Cochiti currently does not have EPA approved water quality standards. In the absence of approved water quality standards, compliance with the State of New Mexico Water Quality Standards is expected to also be protective of Pueblo of Cochiti waters.

3. State of New Mexico Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC, effective September 24, 2022). General criteria are applicable as specified in 20.6.4.13 NMAC. The discharge is to Rio Grande, in Waterbody Segment Code No. 20.6.4.114 NMAC of the Rio Grande Basin (Cochiti Reservoir to San Ildefonso bnd). The known uses of the receiving water(s) are irrigation, livestock watering, wildlife habitat, marginal coldwater aquatic life, primary contact, and warmwater aquatic life; and public water supply on the main stem Rio Grande.

4. Permit Action – Water Quality-Based Limits

Regulations promulgated at 40 CFR 122.44(d) require limits in addition to, or more stringent than ELGs (technology based). State WQS that are more stringent than ELGs are as follows:

a. pH

The WQS criteria applicable to primary contact and warmwater aquatic life designated uses require pH to be between 6.6 and 9.0 s.u. This is more limiting than the technology-based limit presented above. The previous permit limits of 6.6 to 9.0 s.u. for pH will be continued in the draft permit.

b. Turbidity

According to 20.6.4.13.J. NMAC, which states that discharges shall not cause turbidity to increase more than 10 NTU over background turbidity when the background turbidity, measured at a point immediately upstream of the activity, is 50 NTU or less, nor to increase more than 20% when the background turbidity is more than 50 NTU. BDD does not divert water when the turbidity of the Rio Grande exceeds 600 NTU.

1. Reporting Turbidity Measurements at Instream Sampling Points 01U and 01D

Instream upstream sampling point, 01U, shall be at least 30 feet upstream but no greater than 100 feet away from Outfall 001. Instream downstream sampling point, 01D, shall be located at least 100 feet downstream but no greater than 150 feet away from Outfall 001. There are no other discharges or tributaries within this area that would add sediments or affect turbidity, so the difference in measurements is expected to be due primarily, if not exclusively, to the BDD discharge.

The permittee shall report all turbidity measurements taken at Instream Sampling Points 01U and 01D within the reporting period. Measurement data from Instream Sampling Point 01U shall be reported as STORET Code No. 52330 and from Instream Sampling Point 01D shall be reported as STORET Code No. 52350. These values shall not be averaged for reporting purposes.

2. Determining Turbidity Test Results

(a) Turbidity reported at Instream Sampling Point 01U is 50 NTU or less.

If the difference of the measured turbidity at Instream Sampling Points 01U and 01D is greater than 10 NTU, assign a "1" to the turbidity test; otherwise, assign a "0".

(b) Turbidity reported at Instream Sampling Point 01U is greater than 50 NTU.

If the difference of the measured turbidity at Instream Sampling Points 01U and 01D is greater than 20% of the turbidity recorded from Sampling Point 01U, assign a "1" to the turbidity test; otherwise, assign a "0".

3. Reporting Total Turbidity Test Failures

(a) Turbidity test failures occur during the reporting period.

Sum the numerical values assigned to each turbidity test taken within the reporting period. Enter this amount for STORET Code No. 51517 in the report.

(b) No turbidity test failures occur during the reporting period.

Enter a “0” for STORET Code No. 51517 in the report.

4. Example Calculations

In this example, the permittee is required to sample four (4) time within a reporting period:

Sample 1

Instream Sampling Point 01U turbidity measurement: 20 NTU

Instream Sampling Point 01D turbidity measurement: 25 NTU

Since Instream Sampling Point 01U turbidity is less than 50 NTU, the mentioned b.2(a) criteria will be used. The difference of the turbidity at Instream Sampling Points 01U and 01D is 5 NTU, which is less than the 10 NTU criteria. Therefore, this sample is a “Pass” and would have a value of “0”.

Sample 2

Instream Sampling Point 01U turbidity measurement: 20 NTU

Instream Sampling Point 01D turbidity measurement: 40 NTU

Since Instream Sampling Point 01U turbidity is less than 50 NTU, the mentioned b.2(a) criteria will be used. The difference of the turbidity at Instream Sampling Points 01U and 01D is 20 NTU, which is greater than the 10 NTU criteria. Therefore, this sample is a “Fail” and would have a value of “1”.

Sample 3

Instream Sampling Point 01U turbidity measurement: 100 NTU

Instream Sampling Point 01D turbidity measurement: 115 NTU

Since Instream Sampling Point 01U turbidity is greater than 50 NTU, the mentioned b.2(b) criteria will be used. Twenty percent (20%) of Instream Sampling Point 01U turbidity is 20 NTU. The difference of the turbidity at Instream Sampling Points 01U and 01D is 15 NTU, which is less than the 20 NTU criteria. Therefore, this sample is a “Pass” and would have a value of “0”.

Sample 4

Instream Sampling Point 01U turbidity measurement: 100 NTU

Instream Sampling Point 01D turbidity measurement: 150 NTU

Since Instream Sampling Point 01U turbidity is greater than 50 NTU, the mentioned b.2(b) criteria will be used. Twenty percent (20%) of Instream Sampling Point 01U turbidity is 20 NTU. The difference of the turbidity at Instream Sampling Points 01U and 01D is 50 NTU,

which is greater than the 20 NTU criteria. Therefore, this sample is a “Fail” and would have a value of “1”.

Sample Reporting

The permittee will report all turbidity measurements from Instream Sampling Points 01U and 01D. The permittee shall also sum each pass/fail test result. In this example:

Sample 1: 0
Sample 2: 1
Sample 3: 0
Sample 4: 1
Total: 2

Therefore, the permittee would enter a “2” for STORET Code No. 51517.

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 criterion, the permit must contain an effluent limit for that pollutant.

All applicable facilities are required to fill out appropriate sections of the Form 2C for Industrial Activity. 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 classified as an industrial facility, and the receiving water has been identified as classified perennial stream with a 4Q3 of 277.59 cfs provided by NMED.

ii. Critical Conditions

Critical conditions are used to establish certain permit limitations and conditions. The State of New Mexico WQS allows a mixing zone for establishing pollutant limits in discharges. Both the NMWQS and NMIP establish a critical low flow designated as 4Q3, as the minimum average four consecutive day flow which occurs with a frequency of once in three years. The draft permit establishes a critical dilution based on the 4Q3 utilized in the current permit.

For permitting purposes of certain parameters such as WET, the critical dilution of the effluent to the receiving stream is determined. The critical dilution, CD, is calculated as:

$$CD = Q_e / (F \cdot Q_a + Q_e)$$

where:

Q_e = facility flow (0.21 MGD/0.325 cfs)

Q_a = critical low flow of the receiving waters (277.59 cfs)

F = fraction of stream allowed for mixing (1.0)

$$\begin{aligned} CD &= 0.325 \text{ cfs} / [(1.0)(277.59 \text{ cfs}) + 0.325] \\ &= 0.00117 \\ &= 0.12\% \end{aligned}$$

The acute to chronic ratio of 10:1 shall be used to allow acute biomonitoring in lieu of chronic. Therefore, acute toxicity is proposed to be evaluated at a critical dilution of 1.2%. The critical dilution will be used for further toxic and WET permitting evaluations and requirements.

iii. Total Residual Chlorine

The Buckman Direct Diversion does not use chlorine in the process that can contribute to the discharge at Outfall 001.

5. 303(d) List Impacts

Rio Grande (Cochiti Reservoir to San Ildefonso boundary) – 20.6.4.114 NMAC, is listed in the “2022-2024 State of New Mexico Integrated Clean Water Act Section 303(d) / 305(b) Report”, this segment from has been identified as not supporting the livestock watering, wildlife habitat, marginal coldwater aquatic life, and warmwater aquatic life. The probable causes of impairment are Aluminum (Total Recoverable), Gross Alpha (Adjusted), Turbidity, Temperature, PCBs Selenium (Total Recoverable). Should be noted that the City of Santa Fe has procedures in place that do not allow public water supply withdrawal from the Buckman Diversion during significant storm events.

The facility will meet the published water quality standards for turbidity, which states that turbidity shall not exceed 10 NTU over background turbidity when the background turbidity is 50 NTU or less or increase more than 20 percent (20%) when the background turbidity is more than 50 NTU in order to meet the requirements of 40 CFR Part 122.44 (d). Meeting the water quality standards meets the regulatory requirement to not “cause or contribute” as discussed above.

A permit reopener clause has been added to the permit stating; “This permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with approved State Standards in accordance with 40 CFR 122.44(d)”. Modification of the permit is subject to the provisions of 40 CFR 124.5. Additionally, language has been added stating that the permit may be reopened and modified during the life of the permit if relevant portions of the State WQS are revised or

remanded. The permit may be reopened to include conditions of the completed TMDL. There are no additional permit requirements to be placed in the permit at this time.

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 March 12, 2012, NMIP and the previous permit.

Flow is proposed to be measured and reported continuously consistent with the current permit, using a totalizing meter. The pollutant pH shall be sampled and reported weekly using grab samples. Turbidity shall be monitored weekly, using grab samples like the current permit.

E. WHOLE EFFLUENT TOXICITY REQUIREMENTS

The State has established narrative criteria, which in part state that:

“...surface waters of the state shall be free of toxic pollutants from other than natural causes in amounts, concentrations or combinations that affect the propagation of fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food, or that will or can reasonably be expected to bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic organisms....” (NM WQS Section 20.6.4.13.F.)

Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP. Table 11 (page 42) of the NMIP outlines the type of WET testing for different types of discharges. The previous permit had a 48-hour acute WET testing requirement, and over the term of the permit, the facility had zero failures; therefore, RP does not exist. Based on the test results, the permit does not require WET limits. The EPA concludes based on the nature of the discharge described in activity section of this document that this effluent will not cause or contribute to an exceedance of the State of New Mexico Water Quality Standards. No WET limits will be established in the proposed permit. However, WET testing requirement will be continued in the draft permit.

The calculated critical dilution (CD) for the facility shown in Section VI.C.4.c. above is 0.12%. Because the CD is less than 10%, an acute-to-chronic ratio of 10:1 is used (referenced in the footnote 6 of Table 11 of the NMIP). As a result, the CD is 1.2%. Based on the nature of the discharge (industrial, primary treatment and no chemicals added), the discharge flow of 0.21 MGD, the design flow (intake) of 15 MGD, the nature of the receiving water (perennial stream), and the critical dilution of 1.2%, in accordance with the NMIP, EPA requires the facility to conduct a 48-hour acute WET testing using *Daphnia pulex* and *Pimephales promelas* once per quarter for the 1st year in the draft permit. If the facility passes all WET tests during the first year, then the permit may allow a frequency reduction of once per six-months and once per year

for *Daphnia pulex* and *Pimephales promelas*, respectively, for years two thru five, which are similar to the requirements in the current permit.

The proposed permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests based on a 0.75 dilution series. These additional effluent concentrations shall be 0.5%, 0.7%, 0.9%, 1.2% and 1.6%.

Discharges shall be limited and monitored by the permittee as specified below.

Whole Effluent Toxicity Testing (48-hour Static Renewal) *¹	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Daphnia pulex</i> (1 st year)	Report	Once/Quarter	3-hr Composite
<i>Pimephales promelas</i> (1 st year)	Report	Once/Quarter	3-hr Composite

Whole Effluent Toxicity Testing (48-hour Static Renewal) *¹	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Daphnia pulex</i> (years: 2 nd , 3 rd , 4 th , 5 th)	Report	Once/6 months	3-hr Composite
<i>Pimephales promelas</i> (years: 2 nd , 3 rd , 4 th , 5 th)	Report	Once/Year	3-hr Composite

FOOTNOTE:

*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. ANTIDegradation

The State of New Mexico has antidegradation requirements to protect existing uses through implementation of their WQS. The limitations and monitoring requirements set forth in the draft permit 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.

VIII. ANTIBACKSLIDING

The draft permit is consistent with the requirements to meet anti-backsliding provisions of the Clean Water Act, Section 402(o) and 40 CFR 122.44(l)(1), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless information is available which was not available at the time of permit issuance. The draft permit maintains the effluent limitations of the previous permit for pH, Turbidity and Whole Effluent testing.

IX. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at USFWS, Southwest Region 2 website, <https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=35049>, seven species in Santa Fe County are listed as endangered or threatened. Seven species include Silverspot (*Speyeria nokomis nokomis*) (T), Mexican wolf (*Canis lupus baileyi*) (E), Jemez Mountains salamander (*Plethodon neomexicanus*) (E), New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) (E), Southwestern willow flycatcher (*Empidonax traillii extimus*) (E), Mexican spotted owl (*Strix occidentalis lucida*) (T), and Yellow-billed Cuckoo (*Coccyzus americanus*) (T).

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 the listed threatened and endangered species nor will adversely modify designated critical habitat. The EPA makes this determination based on the following:

1. In the previous permit issued August 28, 2019, with an effective date of October 1, 2019, and an expiration date of September 30, 2024, EPA made a “no effect” determination for federally listed species mentioned above except for Silverspot (*Speyeria nokomis nokomis*), Mexican wolf (*Canis lupus baileyi*), Jemez Mountains salamander (*Plethodon neomexicanus*), and New Mexico meadow jumping mouse (*Zapus hudsonius luteus*).
2. The Silverspot is a relatively large butterfly with up to a 3-inch wingspan. Males typically have bright orange on the upper side of the wing, while females typically have cream or light yellow with brown or black. The underside of the wing of both sexes has silvery-white spots, giving the subspecies’ the common name of Silverspot butterfly. Populations of Silverspot occur between 5,200 feet (ft) (1,585 meters (m)) and 8,300 ft (2,530 m). The butterfly requires moist habitats in mostly open meadows with a variety of herbaceous and woody vegetation. Eggs are laid on or near the bog violet (*Viola nephrophylla*/V. *sororia* var. *affinis*), which the larvae feed on exclusively. A variety of flowering plants provide adult nectar sources. The butterfly completes its entire life cycle in one year. Habitat loss and fragmentation, human-caused hydrologic alteration (i.e., diversions for agricultural and domestic use; erosion and stream channel incision caused by livestock grazing, mining, roads, or dredging and filling of wetlands; removal of beaver dams; manipulation of waterways that minimizes flooding and reduces natural meander features; and creation and operation of large human-made dams), livestock grazing, genetic isolation, exotic plant invasion, climate change, climate events, larval desiccation, and collecting are all factors that influence or could influence the subspecies’ viability. The draft permit does not authorize activities that may cause destruction of the silverspot habitat, and issuance of the permit will have no effect on this species.
3. The Mexican wolf (*Canis lupus baileyi*) is a top predator native to the southwestern United States and Mexico that lives in packs and requires large amounts of forested terrain with adequate ungulate (deer and elk) populations to support the pack. Today, Mexican wolves again inhabit portions of the southwestern United States in Arizona and New Mexico, and the northern Sierra Madre Occidental of Chihuahua in Mexico. Mexican wolves are present in these areas due to ongoing reintroduction efforts in both

countries, supported by the binational captive breeding program. The threats to the Mexican wolf have generally remained consistent over time, including human- caused mortality and related legal protections, extinction risk due to small population size, and genetic issues. The draft permit does not authorize activities that may cause destruction of the Mexican wolf habitat, and issuance of the permit will have no effect on this species.

4. The Jemez Mountains salamander (*Plethodon neomexicanus*) is uniformly dark brown above, with occasional fine gold to brassy coloring with stippling dorsally (on the back and sides) and is sooty gray ventrally (underside). The salamander is slender and elongate, and it possesses foot webbing and a reduced fifth toe. The Jemez Mountains salamander is restricted to the Jemez Mountains in northern New Mexico, in Los Alamos, Rio Arriba, and Sandoval Counties, around the rim of the collapsed caldera (large volcanic crater), with some occurrences on topographic features (e.g., resurgent domes) on the interior of the caldera. The majority of salamander habitat is located on federally managed lands, including the U.S. Forest Service (USFS), the National Park Service (Bandelier National Monument), Valles Caldera National Preserve, and Los Alamos National Laboratory, with some habitat located on tribal land and private lands. Wildland fires have significantly degraded important features of salamander habitat, including removal of tree canopy and shading, increases of soil temperature, decreases of soil moisture, increased pH, loss or reduction of soil organic matter, reduced soil porosity, and short-term creation of hydrophobic (water-repelling) soils. These and other effects limit the amount of available above ground habitat, and the timing and duration when salamanders can be active above ground, which negatively impacts salamander behavior (e.g., maintenance of water balance, foraging, and mating) and physiology (e.g., increased dehydration, heart rate and oxygen consumption, and increased energy demands). The draft permit does not authorize activities that may cause destruction of the Jemez Mountains salamander habitat, and issuance of the permit will have no effect on this species.
5. New Mexico meadow jumping mouse (*Zapus hudsonius luteus*): The jumping mouse is a small, nocturnal, solitary mammal and an obligate riparian subspecies. Its historical distribution likely included riparian wetlands along streams in the Sangre de Cristo and San Juan Mountains from southern Colorado to central New Mexico, including the Jemez and Sacramento Mountains and the Rio Grande Valley from Española to Bosque del Apache National Wildlife Refuge, and into parts of the White Mountains in eastern Arizona. Ongoing and future habitat loss is expected to result in additional extirpations of more populations. Research indicates that the primary sources of past and future habitat losses are from grazing pressure (which removes the needed vegetation) and water management and use (which causes vegetation loss from mowing and drying of soils), lack of water due to drought (exacerbated by climate change), and wildfires (also exacerbated by climate change). Additional sources of habitat loss are likely to occur from scouring floods, loss of beaver ponds, highway reconstruction, coal-bed methane development, and unregulated recreation. The permit does not authorize activities that may cause destruction of the New Mexico Meadow Jumping Mouse habitat, and issuance of the permit will have no effect on this species.
6. The EPA has received no additional information since then which would lead to a revision of that "no effect" determination.

7. The draft permit is no less stringent from the previous permit. It is consistent with the States WQS and does not allow facility to increase pollutant loadings.
8. There is currently no information determining that the reissuance of this permit will have “effect” on the additional listed threatened and endangered species.

The EPA determines that this reissuance will not change the environmental baseline established by the previous permit, and therefore, EPA concludes that reissuance of this permit will have "no effect" on the listed species and designated critical habitat.

X. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of this permit should have no impacts on historical properties since no construction activities are proposed during its reissuance.

XI. ENVIRONMENTAL JUSTICE

Executive Order 13985, Advancing Racial Equity and Supporting for Underserved Communities through the Federal Government signed on January 20, 2021, directs each federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities.” The EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. “Overburdened” communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, the EPA Region 6 will consider prioritizing enhanced public involvement opportunities for EPA-issued permits that may involve activities with significant public health or environmental impacts on already overburdened communities. For more information, please visit <http://www.epa.gov/ejscreen>.

For fiscal year 2024, the NPDES Section is trying a new approach, conducting community meetings with overburdened communities in New Mexico and embedding Environmental Justice (EJ) early in the Permitting process. The focus is on enabling overburdened communities to have full and meaningful access to the permitting process. This effort will emphasize on communities that have an 80% percentile or higher for the Wastewater Discharge EJ Index. This will help Region 6 NPDES permit writers and managers decide early in the permitting process when and how to conduct an EJ analysis for an EPA-issued permit and what, if any, permit terms or other actions may be appropriate to address EJ concerns. Buckman Direct Diversion is one of the facilities in which the community does not have an EJ Index for Wastewater Discharge more than 80% percentile.

As part of the Permit development process, the EPA conducted a screening analysis to determine whether this Permit action could affect overburdened communities. The EPA used EJScreen 2.2, a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify Permits for which enhanced outreach may be warranted.

The study area was chosen at the proposed 001 discharge, 3-miles downstream path following the flow to Rio Grande, in Waterbody Segment Code No. 20.6.4.114 NMAC of the Rio Grande Basin (Cochiti Reservoir to San Ildefonso bnd). A 3-mile buffer around the path was selected to study the area with a population of 4577 persons. No EJ Indexes score for the state percentile of the facility was above the 80th percentile (80%) and 95% of the population speak only English at home. These results indicate that all the percentiles are well below the 80 percentile and most of the population speak English at home. From the EJSCREEN guidelines and trainings, this area will not be a concern for Environmental Justice issues at this time.

XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of the State 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 State Water Quality Standards are either revised or promulgated. Should the 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 draft permit:

A. APPLICATION(s)

EPA Permit Application Form 2C received April 18, 2024.

B. 40 CFR CITATIONS

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, effective September 24, 2022.

Procedures for Implementing NPDES Permits in New Mexico, March 15, 2012.

Statewide Water Quality Management Plan, December 17, 2002.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2022-2024.

D. OTHER

<https://ecos.fws.gov/endangered/>