

February 2001
FACT SHEET
Bureau of Indians Affairs (BIA) - Hopi Agency
NPDES Permit No. AZ0022560

I. Introduction

The U.S. Bureau of Indians Affairs - Hopi Agency ("BIA-Hopi Agency") was issued an NPDES Permit (AZ0022560) for the BIA-Hopi Agency for the discharge from the Keams Canyon wastewater treatment lagoon facility. The permit became effective November 1, 1986 and expired at midnight October 31, 1991. The BIA-Hopi Agency submitted an application for continued coverage of the NPDES permit on August 28, 1992. The NPDES permit has not yet been re-issued by EPA. The 1986 permit has been administratively continued pending reissuance by EPA.

Applicant address: Hopi Agency
Bureau of Indians Affairs
U.S. Department of Interior
Keams Canyon Wastewater Lagoon Facility
P.O. Box 158
Keams Canyon, Arizona 86034

Facility contact: Wendell Honanie, Superintendent
(520) 738-2315

II. Background

The BIA Keams Canyon Sewage Lagoon facility is located in the community of Keams Canyon in Navajo County. The facility serves approximately 300 connections, including 150 homes. It receives only domestic sewage with a flow of 0.036 million gallons per day (MGD). The facility consists of one aerated lagoon and two facultative lagoons. Effluent is discharged to Keams Canyon Wash, a tributary to Polacca Wash, a tributary to Corn Creek Wash, an eventual tributary to the Little Colorado River. Any sampling and monitoring under the proposed permit shall be performed at Outfall No. 1.

The BIA Keams Canyon facility has had a long and continuing history of noncompliance with its NPDES permit and the requirements of the Clean Water Act. On May 13, 1996, EPA sent to the BIA-Hopi Agency a letter documenting violations with discharge limits for flow, BOD, TSS, fecal coliform bacteria and pH for the period covering January 1994 through March 1996. That letter requested that BIA-Hopi Agency respond with a written report that discusses the cause(s) of the violations and proposes both specific corrective measures to be undertaken and an implementation schedule to correct the

violations' cause(s). On March 5, 1997, EPA followed up with the issuance of a Notice of Violation (NOV) Docket No. CWA-309-FY97-14 for the lack of response from the BIA-Hopi Agency. To date, EPA has not yet received any response from the BIA-Hopi Agency.

EPA has previously issued NOVs for the facility, with dates and docket numbers as follows:

- July 16, 1986 (Docket No. IX-FY86-85),
- September 2, 1987 (Docket No. IX-FY87-23),
- January 21, 1993 (Docket No. IX-FY93-16); and,
- August 19, 1993 (Docket No. IX-FY94-03).

On June 14, 1999, EPA conducted an NPDES inspection at the Keams Canyon facility and made the following observations: inadequate effluent flow measurement, 2 of 3 cells in service with the third one being dry; and, inadequate chlorination with chlorine tablets in a screen bucket submerged in the discharge channel. Planned improvements discussed during the inspection included rehabilitating the third lagoon cell, and adding an underground chlorine contact chamber with hyper chlorine injection.

EPA has determined that there are no endangered species of concern in the discharge area so no requirements specific to the protection of endangered species are in the proposed permit. A copy of the permit and fact sheet is being sent to the U.S. Fish and Wildlife Service for review during the public comment period.

The proposed permit will contain similar conditions as the previous permit with the addition of new requirements for biosolids monitoring.

III. Hopi Water Quality Standards

Pursuant to the Water Quality Act of 1987 and the "EPA Policy for the Administration of Environmental Programs on Indian Reservations" (November 8, 1987), EPA will work directly with Indian Tribal governments on a one to one basis. This conforms with the Federal Indian Policy of January 24, 1983. The Hopi Tribe has received Treatment as a State (TAS) for Section 106 of the Clean Water Act (CWA) but has not yet received TAS under Section 303. Section 106 grant money is used to develop water quality standards and use designations, which must be approved under Section 303 by EPA Region 9. The Hopi Tribe adopted water quality standards for all Hopi waters, inclusive of all waters within the exterior boundaries of the Hopi Indian Reservation, and water situated wholly or partly within or bordering upon the Reservation. These water quality standards, along with a TAS application under Section 303, were submitted to EPA on August 29, 1997. EPA has recently public noticed its intent to approve the TAS. The Hopi's adopted water quality standards are currently under review by EPA. In the interim, until such time as there are

approved water quality standards in place, the Hopi water quality standards will be used on a best professional judgment basis for purposes of developing water quality based effluent limitations.

IV. Basis of Proposed Permit Requirements

The proposed discharge limitations are based on:

- A. Secondary Treatment Regulations contained in 40 CFR Part 133, Sections 133.101 through 133.105, promulgated September 20, 1984, and most recently amended on January 27, 1989. EPA used these regulations and its best professional judgment (BPJ) to develop limits for this facility.
- B. Hopi Water Quality Standards, August 29, 1997.

V. Designated Uses for Receiving Water

The designated uses of the receiving waters (Keams Canyon Wash, tributary to Polacca Wash, tributary to Corn Creek Wash, eventual tributary to the Little Colorado River), as defined by the Hopi water quality standards, are aquatic and wildlife (warm water habitat), partial body contact, agricultural livestock watering, agricultural irrigation, and groundwater recharge.

VI. Determination of Effluent Limitations, Monitoring, and Reporting Requirements

A. Flow Rates

Under the proposed permit, there is no flow limit but the monthly and daily maximum flows must be monitored and reported. The monitoring frequency is once/month. This is consistent with the previous permit.

B. Five-Day Biochemical Oxygen Demand (BOD₅)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and a monthly average of 30 mg/l BOD₅, and shall achieve no less than a monthly average rate of 85% removal. These limits are required under 40 CFR Section 133.102(a). The limits are designated as 30-day and 7-day averages since the facility operates similarly to a POTW [40 CFR 122.45(d)]. These limits are the same as those in the previous permit.

Under 40 CFR Section 122.45(f), mass limits are required for BOD₅. Based upon the 0.036 MGD flow, the mass limits for BOD₅ are based on the following calculations:

Monthly average

$$\frac{0.036 \text{ MG}}{\text{day}} \times \frac{30 \text{ mg}}{1} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 4.1 \text{ kg/day}$$

Weekly average

$$\frac{0.036 \text{ MG}}{\text{day}} \times \frac{45 \text{ mg}}{1} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 6.1 \text{ kg/day}$$

These limits are identical to those in the previous permit. The monitoring frequency is once/month.

C. Total Suspended Solids (TSS)

Under the proposed permit, the discharge shall not exceed a weekly average of 135 mg/l and monthly average of 90 mg/l TSS, and shall achieve no less than a monthly average rate of 65% removal. These limitations are consistent with 40 CFR 133.101(f), 133.103(c) and 133.102(b). Mass limit requirements in accordance with 40 CFR 122.45(f) have also been set in the proposed permit. Mass loadings are based upon the same calculation shown above for BOD₅ and shall not exceed a 7-day average of 18.3 kg/day and a 30-day average of 12.2 kg/day for TSS. The limits are identical to those in the previous permit. The monitoring frequency is once/month.

D. Fecal Coliform

In the proposed permit, the monthly logarithmic mean of fecal bacteria shall not exceed 200/100 ml, as a geometric mean calculation based on a minimum of five samples collected over a maximum of 30 days, and 800/100 ml as a single sample maximum. These limits are identical to those in the previous permit. The monitoring frequency is once/month.

E. Total Residual Chlorine (TRC)

The facility does not disinfect but limits are proposed in the event chlorination is ever used. If chlorination is used as part of the treatment process, the proposed permit requires a monthly TRC limit of 11 ug/l, the Hopi Water Quality Standards for aquatic and wildlife (warm water habitat) for support and propagation of animals, plants, or other organisms. The proposed permit will require the use of dechlorination if chlorination is used. The monitoring frequency is once/day. Sampling is to begin at the initiation of dechlorination.

F. Dissolved Oxygen (DO)

The proposed permit requires a minimum of 6 mg/l dissolved oxygen, the Hopi Water Quality Standards for aquatic and wildlife (warm water habitat) for support and propagation of animals, plants, or other organisms. The monitored frequency is once/month.

G. Ammonia (as un-ionized NH₃)

The proposed permit requires a monthly un-ionized NH₃ limit of 0.04 mg/l, the Hopi Water Quality Standards for aquatic and wildlife (warm water habitat) for support and propagation of animals, plants, or other organisms. The monitoring frequency is once/month. If analytical results for the first four quarters reveal ammonia levels are below EPA's National Water Quality Criteria for ammonia, the monitoring frequency will decrease to once/year. The regulations at 40 CFR 122.44(i) allow requirements for monitoring as determined to be necessary.

H. pH

The proposed permit requires that effluent pH not fall below 6.5 or above 9.0 standard pH units, identical to those in the previous permit and consistent with the Hopi Water Quality Standards. The monitoring frequency is once/week.

I. Reporting

The proposed permit requires discharge data obtained during the previous three months to be summarized and reported monthly. If there is no discharge for the month, indicate "Zero Discharge". These reports are due January 28, April 28, July 28, and October 28 of each year. Signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator.

J. General Standards

The proposed permit sets general standards that are narrative water quality standards contained in the Hopi Water Quality Standards. These general standards are set forth in Section B. General Discharge Specifications of the permit.

VII. Permit Reopener

At this time, there is no reasonable potential to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursions above water quality criteria, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. The proposed permit may be modified, in accordance with the requirements set forth at 40 CFR 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

VIII. Biosolids Requirements

The permittee shall submit a report 60 days prior to disposal of biosolids.

The report shall discuss the quantity of biosolids produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Zinc, and Selenium, and for organic-N, ammonium-N, and nitrate-N, all expressed in mg/kg biosolids on a 100% dry weight basis. The permittee shall comply with all standards for biosolids use and disposal of Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

IX. Written Comments

Persons who wish to comment upon, object to the proposed action, or request a public hearing pursuant to 40 CFR Section 124.11 should submit their comments and requests in writing within thirty (30) days from the date of the Public Notice, either in person or by mail to:

U.S. Environmental Protection Agency, Region IX
CWA Standards and Permits Office (WTR-5)
Attn: Linh Tran
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 744-1901

X. Information and Copying

The Administrative Record, which contains the draft NPDES permit, the fact sheet, comments received, and other relevant documents, is available for review and may be obtained by calling or writing to the above address.

All comments or objections received within thirty (30) days from the date of the Public Notice, will be retained and considered in the formulation of the final determination regarding the permit issuance.

XI. Public Hearing

When public interest warrants, the Regional Administrator shall hold a public hearing and such notice of hearing shall be issued by public notice at least thirty (30) days prior to the hearing date. A request for a public hearing must be in writing and must also state the nature of the issue proposed to be raised in the hearing.