

NPDES PERMIT NO. NM0031046

STATEMENT of BASIS

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

I. APPLICANT

Santa Fe County Judicial Complex
901 West Alameda, Suite C-20
Santa Fe, NM 87501

II. ISSUING OFFICE

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

III. PREPARED BY

Laurence E. Giglio
Environmental Engineer
NPDES Permits & Technical Branch (6WQ-PP)
Water Quality Protection Division
VOICE: 214-665-6639
FAX: 214-665-2191
EMAIL: giglio.larry@epa.gov

IV. DATE PREPARED

November 21, 2008

V. PERMIT ACTION

Proposed first-time issuance of a National Pollutant Discharge Elimination System (NPDES) permit.

Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed in Title 40, Code of Federal Regulations, revised as of November 7, 2008.

VI. CHANGES FROM THE PREVIOUS PERMIT

This is a first-time issuance.

VII. DISCHARGE LOCATION

As described in the application, the facility is located at 333 Sandoval Street in Santa Fe, Santa Fe County, New Mexico. The effluent from the site is discharged into a drainage ditch thence to the Santa Fe River in Segment 20.6.4.98 of the Rio Grande Basin. The discharge is on that water at Latitude 35° 41' 05" N and Longitude 105° 56' 37" W.

VIII. RECEIVING STREAM STANDARDS

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC, amended through August 1, 2007).

The waterbody is an intermittent stream. 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. EPA does not expect the State to adopt uses for intermittent waters that cannot be attained, but in those instances, the State must submit a use and attainability analysis (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). Lacking a UAA, the determination of coldwater or warmwater aquatic uses is based on the first downstream designation from the stream segment. The Santa Fe River downstream of the Santa Fe Wastewater Treatment Plant is the first designated stream, and it is designated as a marginal coldwater aquatic use and also a warmwater aquatic use. The WQS for marginal coldwater are more restrictive than warmwater aquatic use, so the discharge will be evaluated for marginal coldwater aquatic use.

IX. APPLICANT ACTIVITY

Under the Standard Industrial Classification (SIC) Code 1799, the applicant is discharging petroleum fuel contaminated groundwater from a construction site. The wastewater treatment process uses a granular activated carbon treatment system.

X. EFFLUENT CHARACTERISTICS

The system is not yet operational. A preliminary but incomplete pollutant analysis was provided as part of the application. Pollutants analyzed with concentrations either at the minimum quantification levels (MQL) or at levels exceeding MQL's were boron at 78 ug/l and zinc at 60 ug/l. Other metals analyzed but not exceeding MQL's are chromium and cobalt. The remainder of pollutants submitted; several other metals and pesticides, were not tested to Region 6 MQL, and will need to be retested on first discharge. The draft permit will require those pollutants to be tested and depending on those results permit limits may be added to the permit.

XI. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

The proposed effluent limitations for those pollutants proposed to be limited are based on regulations promulgated at 40 CFR 122.44. The draft permit limits are based on either technology-based effluent limits pursuant to 40 CFR 122.44(a), on best professional judgment (BPJ) in the absence of guidelines, NM WQS and/or requirements pursuant to 40 CFR 122.44(d), whichever are more stringent.

A. REASON FOR PERMIT ISSUANCE

It is proposed that the permit be issued for approximately a 5-year term following regulations promulgated at 40 CFR 122.46(a). The proposed permit expiration date will coordinate with the EPA Basin Statewide Management Approach to Permitting in New Mexico, adopted March 2, 2000.

B. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at 40 CFR 122.44, the draft permit limits are based on either technology-based effluent limits pursuant to 40 CFR 122.44(a) or on State WQS and requirements pursuant to 40 CFR 122.44(d), whichever are more stringent.

Technology-based effluent limitations are established in the proposed permit for total suspended solids (TSS), benzene, total BTEX, (the sum of benzene, toluene, ethylbenzene and xylene), lead, no visible oil sheen and chemical oxygen demand (COD).

Water quality-based effluent limitations are established in the proposed permit for pH.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

There are no effluent guidelines for groundwater cleanup processes. EPA Region 6, however, issued an NPDES general permit authorizing discharges resulting from implementing Corrective Action Plans for Cleanup of Petroleum UST System in Texas, Louisiana, Oklahoma and New Mexico. The technology that was the basis of this general permit was a combined air stripper and an activated carbon system. Because of the similar nature of pollutants, and the proposed treatment system, these technology based effluent limitations are established, as best available technology economically achievable (BAT), based on the best professional judgment (BPJ) of the permit writer. The parameters that shall be limited by the technology-based limits are:

| <u>Pollutant</u> | <u>Monthly Avg</u> |
|--------------------------|--------------------|
| Benzene | 5 ug/l |
| Total BTEX* ¹ | 100 ug/l |
| Lead | 50 ug/l |
| COD | 125 mg/l |
| TSS | 30 mg/l |
| pH | 6.0 - 9.0 s.u. |

Footnote:

*1 BTEX is the sum of benzene, toluene, ethyl benzene, and xylene.

No Visible Oil Sheen - shall be determined using a grab sample of the effluent collected in a wide mouth glass container of at least 500 ml capacity. The oil sheen observations must be reported and recorded.

Loading limits are not established for technology-based limits since the flow is variable.

D. MONITORING FREQUENCY FOR LIMITED PARAMETERS

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR 122.48(b), and to assure compliance with permit limitations, 40 CFR 122.44(i)(1). Technology based pollutants; TSS, benzene, total BTEX, lead, no visible oil sheen and COD, are proposed to be monitored twice per month. Flow is proposed to be monitored continuously using a totalizing meter. Sample type for these pollutants is grab.

E. OPERATION AND REPORTING

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

F. WATER QUALITY BASED LIMITATIONS

1. General Comments

Effluent limitations and/or conditions established in the draft permit are in compliance with State water quality standards and the applicable water quality management plan.

2. Post Third Round Policy and Strategy

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants 49 FR 9016-9019, March 9, 1984." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. The Regional policy and strategy are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in nonconformance with the provisions of 40 CFR 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

3. Implementation

The Region is currently implementing its post third round policy in conformance with the Regional strategy. 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.

4. State Water Quality Numerical Standards

a. GENERAL COMMENTS

Stated previously, the Santa Fe River has designated uses of warmwater and marginal coldwater aquatic life, livestock watering, wildlife habitat and primary contact.

b. WATER QUALITY STANDARDS

The NM WQCC adopted WQS for the State of New Mexico. The WQS are available on the NMED's website at <http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0004.pdf>. The WQCC established the WQS in accordance with, and under authority of, the NM Water Quality Act [Chapter 74, Article 6, NMSA 1978 Annotated].

c. 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). NM WQS that are applicable for this discharge are based on 20.6.4 NMAC.

i. pH

Since marginal coldwater pH requirements for streams without site specific limitations are 6.6 to 9.0 standard units (20.6.4.900.H.3) and are more restrictive than the technology-based limits presented earlier, the draft permit will propose these water quality limits in the draft permit.

ii. Toxics

The Clean Water Act 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 applicant will be required to submit analysis of NMED human health pollutants and aquatic life pollutants listed at 20.6.4.900.J NMAC. This testing shall be to the MQL listed in Appendix A of Part II of the Permit.

Lead as a motor fuel additive was removed from gasoline in the mid 1970's. Since the contaminated groundwater could have had leaded gasoline, lead could be present in the groundwater.

Aquatic life needs to be protected in the discharge to the intermittent Santa Fe River. Some of the pollutants that were tested as previously pointed out above in section X were to a higher MQL than what EPA now uses. When a pollutant is tested as non-detect at a MQL higher than the currently specified EPA MQL, screening will be done based on that higher MQL level. The attached Fact Sheet Appendix shows the results of this screening, the pollutants arsenic, cadmium, copper, lead, selenium, silver and zinc are at levels that demonstrate a reasonable potential to exceed WQS. These pollutants will be limited in the draft permit. Since the flow is at times intermittent, no mass limitations will be limited as the concentration limits will be protective of WQS.

5. 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). The pollutants arsenic, cadmium, copper, lead, selenium, silver and zinc will be sampled by grab samples at a frequency of two times per month. The monitoring frequency for pH is twice per month by grab sample. Flow shall be estimated daily. Flow measurements are not subject to the accuracy provisions established at Part III.C.6 of the permit. Flow may be estimated using sound analytical techniques.

6. Whole Effluent Toxicity Limitations

a. GENERAL COMMENTS

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.)

In a letter from Marcy Leavitt, NMED, to Claudia Hosch, EPA, December 16, 2005, NMED provided Narrative Toxics Implementation Guidance – Whole Effluent Toxicity, (NTIG-WET), an update to the 1995 Implementation Guidance. The discharge of the effluent is to an intermittent stream with zero low-flow ($4Q3 = 0$). The critical dilution for this discharge for purposes of WET testing is 100%. The dilution series for this test shall be 100%, 75%, 56%, 42% and 32%.

The procedures in the NTIG-WET plan provide that for this type of discharge, a one-time chronic test using *Ceriodaphnia dubia* and *Pimephales promelas* at first discharge will be required. If this test does not pass however, the permit may be reopened and additional WET requirements may be added to the permit.

The permittee shall conduct separate whole effluent toxicity tests in accordance with the following table:

| <u>EFFLUENT CHARACTERISTIC</u> | <u>DISCHARGE</u> <u>30-DAY AVG MINIMUM</u> | <u>MONITORING</u> <u>7-DAY MINIMUM</u> |
|--|---|---|
| Whole Effluent Toxicity Testing (7-Day Static Renewal) (*1) | | |
| Ceriodaphnia dubia | REPORT | REPORT |
| Pimephales promelas | REPORT | REPORT |

| <u>EFFLUENT CHARACTERISTIC</u> | <u>MONITORING</u> <u>FREQUENCY</u> | <u>REQUIREMENTS</u> <u>TYPE</u> |
|--|---------------------------------------|------------------------------------|
| Whole Effluent Toxicity Testing (7-Day Static Renewal) (*1) | | |
| Ceriodaphnia Dubia | 1/Permit Term | 24 Hr. Composite |
| Pimephales promelas | 1/Permit Term | 24-Hr. Composite |

FOOTNOTES

*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.

XII. 303(d) LIST

The Santa Fe River between the Santa Fe WWTP downstream to Nichols Reservoir upstream, in Segment 20.6.4.98 of the Rio Grande Basin, has been identified as impaired on the “State of New Mexico Part 303(d) List for Assessed Stream and River Reaches, 2006-2008.” The waterbody is assessed as Category 5/5C with livestock watering and secondary/primary body contact as not having been assessed but aquatic life and wildlife habitat not supported with probable causes of impairment due to PCB’s from stormwater sampling only. The facility will meet the published water quality standards for PCB’s for this segment and will meet the requirements of 40 CFR 122.44(d). The standard reopener language in the permit allows additional permit conditions if a future TMDL is done.

XIII. 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.

XIV. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, <http://ifw2es.fws.gov/EndangeredSpecies/lists/>, four species in Santa Fe County are listed as endangered (E) or threatened (T). Two of the species are avian and include the Mexican spotted owl (T) (*Strix occidentalis lucida*) and Southwestern willow flycatcher (E) (*Empidonax traillii extimus*). The lone aquatic species is the Rio Grande silvery minnow (E) (*Hybognathus amarus*). Lastly the black-footed ferret (E) (*Mustela nigripes*) is the lone mammal but is extirpated in the county. The American bald eagle (*Haliaeetus leucocephalus*) was previously listed in Santa Fe County, however, in the Federal Register, July 9, 2007, (Volume 72, No. 130), the USFWS removed the American bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife.

Section 7 of the Endangered Species Act (Act) of 1973, [16 U.S. C. 1531 et seq.], outlines procedures for Federal interagency cooperation for the conservation of federally listed species and designated critical habitats. EPA will fulfill its consultation obligation, under the Act and its implementing regulations, relevant to the issuance of this NPDES permit.

XV. 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.

XVI. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised or remanded by the New Mexico Water Quality Control Commission. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the Water Quality Standards are either revised or promulgated by the New Mexico Environment Department. Should the State adopt a State water quality standard, 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.

XVII. VARIANCE REQUESTS

No variance requests have been received.

XVIII. 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.

XIX. FINAL DETERMINATION

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

XX. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Application Form 2A received October 3, 2008.

B. 40 CFR CITATIONS

Sections 122, 124, 125, 133, 136

C. STATE OF NEW MEXICO REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through August 1, 2007.

Region 6 Implementation Guidance for State of New Mexico Standards for Interstate and Intrastate Stream, May 1995.

Statewide Water Quality Management Plan, December 17, 2002.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2006 - 2008.

D. MISCELLANEOUS REFERENCES

EPA Region 6 "Policy for Post Third Round NPDES Permitting" and "Post Third Round NPDES Permit Implementation Strategy," October 1, 1992.

E. COMMUNICATIONS

E-mail from Michelle Gallagher-Hunter, R. T. Hicks Consultants, to Larry Giglio, EPA, November 7, 2008, submitting pollutant data.