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Hazardous Waste Bureau

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RON CURRY
Secretary

SARAH COTTRELL
Deputy Secretary

MEMORANDUM

TO: Glenn Saums, Acting Chief
Surface Water Quality Bureau

FROM: James P. Bearzi, Chief *BLZ*
Hazardous Waste Bureau

SUBJECT: APPLICATION TO DISCHARGE TO WATERS OF THE
UNITED STATES NPDES PERMIT NO. NM0021071
WESTERN REFINING SOUTHWEST INC., GALLUP REFINERY

DATE: May 11, 2010

The Hazardous Waste Bureau (HWB) received a copy of the proposed National Pollution Discharge Elimination System (NPDES) Permit for Western Refining Company Southwest, Inc., Gallup Refinery (Permittee). HWB submits the following comments for your consideration.

Comment 1

On page 1 of 18, the NPDES Permit provides a Table that describes discharges from the facility. The Outfall reference number is 001 and the discharge from this point will include "process wastewater including process stormwater; sanitary wastewater, and reverse osmosis unit reject water." The existing wastewater treatment system treats hazardous waste (D018 and F037/F038 listed wastes). If the NPDES Permit is granted, as drafted, the Permittee will be allowed to discharge hazardous waste to the evaporation ponds, which is prohibited under RCRA and potentially off site to the Rio Puerco. HWB does not consider this to be protective of human health and the environment, or protective of New Mexico Water Quality standards.

Comment 2

The NPDES Permit, page 3 of 18, Section II (Discharge Description), last paragraph states "[t]he facility is designated not to discharge, but under extreme emergency may discharge process wastewater including process stormwater; sanitary wastewater, and reverse osmosis unit reject water via a series of evaporation ponds. Under such circumstances, the facility intends to use appropriate temporary treatment systems to meet

permit requirements.” References to “extreme emergencies” are made throughout the NPDES Permit (e.g., Page 5). Page 11 of the NPDES Permit, under **Technology-Based Limits for Outfall 001 (0.0778 MGD)**, states “[s]anitary wastewater flows into the aeration basins and then into the evaporation ponds. Outfall 001 shall be subject to secondary treatment requirements.”

The NPDES Permit does not define extreme emergencies, temporary treatment systems, or secondary treatment requirements. The duration of extreme emergencies is also undefined. These definitions should be included in the Permit for clarity, and to facilitate timely and appropriate enforcement should these conditions arise through the term of the Permit.

Comment 3

The NPDES Permit, page 3 of 18, Section II (Discharge Description), last paragraph states “[t]he facility is designated not to discharge, but under extreme emergency may discharge process wastewater including process stormwater; sanitary wastewater, and reverse osmosis unit reject water via a series of evaporation ponds. Under such circumstances, the facility intends to use appropriate temporary treatment systems to meet permit requirements.”

HWB has the following concerns related to the temporary treatment system:

- a. The temporary treatment system is not described nor are the treatment objectives defined.
- b. A time limit for installation of the temporary treatment system(s) is not established.
- c. The Outfall for the temporary treatment system(s) is not identified.

Comment 4

Page 5 of the NPDES Permit, item B. Technology-Based Effluent Limitations/Conditions, paragraph 6 states “[a]ccording to the additional information submitted by the permittee, Western Refining is a crude oil refining and petroleum products manufacturing facility. The refinery receives and processes crude oil and other feedstocks, and then produces various finished products. These include propane, butane, naphtha, unleaded gasoline, diesel (low sulfur and ultra-low sulfur), and residual fuel. Amonium Thiosulfate and elemental sulfur are also produced as by-products through desulfurization process. As a result, Western Refining is subject to Refinery Guidelines at 40 CFR 419, Subpart B, Cracking Subcategory. Other sources of technology based limits include sanitary permit requirements and/or NMED water quality standards.” Throughout the NPDES Permit, Outfall 001 and Internal Outfall 101 have certain effluent guidelines and limits and required analyses that must be conducted.

HWB is concerned that the NPDES Permit does not include the analyses of common refinery contaminants and hazardous constituents such as gasoline range organics (GRO), diesel range organics (DRO), toluene, ethylbenzene, and xylenes, other volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and the Skinner List inorganics. Additional analytical testing should be conducted on samples collected from the Discharge Outfall 001 and Internal Outfall 101 to include the Skinner List inorganics, VOCs, SVOCs to include the VOCs and SVOCs listed on the Skinner List, GRO and DRO, and oil range organics (ORO).

Comment 5

Page 5 of the NPDES Permit, below **Calculation of Technology-Based Limits**, is the following: "**Internal Outfall 101** - Process wastewater including process stormwater; and reverse osmosis unit reject water flows into the oil/water separator, then into the Benzene air strippers via a series of aeration basins and finally into the evaporation ponds. Discharges are proposed to be authorized from internal Outfall 101 into the aeration lagoons, and finally into the evaporation ponds. Internal Outfall 101 shall be subject to [Effluent Elimination Guidelines] ELG for petroleum Refinery, Subpart B-Cracking Subcategory." HWB has the following concerns and questions regarding this passage:

- a. Internal Outfall 101 would allow for discharge of hazardous waste to the aeration lagoons that are slated to be closed under RCRA and then to the evaporation ponds. The benzene strippers also are slated for removal.
- b. If the NPDES Permit is issued, the Permittee will be allowed to discharge hazardous waste from Internal Outfall 101. Currently, effluent (process wastewater), leaving the benzene strippers receives treatment in Aeration Lagoon 1 and Aeration Lagoon 2 for hazardous waste (benzene and F037/F038 listed hazardous waste).
- c. The Permit should be modified to remove the condition allowing Internal Outfall 101 unless a wastewater treatment system is required under the Permit.

Comment 6

On page 11, the paragraph under **Stormwater Pollution Prevention Requirements** states "[s]tormwater has been identified by the permittee as a component of the discharge through Outfall No. 001. In an email dated February 19, 2010, the permittee indicated that all stormwater originating within its process areas is contaminated. These contaminated stormwaters are subject to ELGs as calculated above. In addition, the permittee stated that the maximum contaminated stormwater daily rate is 216,000 GPD. This facility also has coverage under the [Multi-Sector General Permit] MSGP for allowable "uncontaminated" stormwater discharges, not subject to ELG." HWB is concerned that the ELGs do not account for RCRA hazardous constituents. In addition,

as stated, the Permittee's stormwater is contaminated with process wastewater; therefore it is not clear how the Permittee would also be covered under the MSGP for allowable uncontaminated stormwater discharge. The Permit should prohibit discharge of stormwater mixed with process wastewater at Outfall 001.

Comment 7

Page 11, states "[a] daily maximum effluent limitation for Benzene of 0.005 mg/L is also proposed at Outfall 001." Page 12 of the NPDES Permit, paragraph 1 states "[i]t is proposed that the facility conduct annual inspections to identify areas contributing to the storm water discharge and identify potential sources of pollution which may affect the quality of storm water discharges from the facility" and in paragraph 2 states that "[i]t is proposed that all spilled product and other spilled waste be immediately cleaned up and properly disposed."

HWB is concerned with the use of the term "proposed," which implies the Permittee can choose to perform an activity rather than being required to implement the activity. HWB recommends the Permittee be required to meet the benzene daily effluent limitation of 0.005 mg/L, and conduct annual inspections and inspections after every storm event. The Permittee should be required to clean up spills immediately.

Comment 8

Page three, Section II. Discharge Description, states "[t]he facility does not currently discharge to a water of the state and does not have pollutant data to conduct analysis on and page 13, item i. (General Comments) states "[t]here is no data to perform reasonable potential calculations since the facility has not had a discharge within the last three years." To obtain the pollutant data, samples could be collected from the existing location of designated Internal Outfall 101 (a continuous discharge point), from the Evaporation Pond that is proposed as discharge point for Outfall 001, and from the Old API separator that collects the process storm water. These locations should be used to conduct pollutant data analyses prior to issuance of this Permit.

Comment 9

Page 14, paragraph 2 states "[s]hould any discharge occur from Outfall 001, the discharge shall be sampled within one hour of beginning for the pollutants listed at 40 CFR 122, Appendix D, Tables III and IV, plus pH, hardness, TDS, oil & grease, and TSS and the results submitted to EPA and NMED-SWQB. Should the discharge continue for more than one day, additional samples and analyses results shall be submitted for each additional day. These pollutants are listed in Part 2 of the proposed permit." All samples collected from Outfall 001 should be analyzed for the constituents identified in Comment 4.

Comment 10

Page 14, paragraph 5 states "TSS, BOD5, pH and E. coli bacterial shall be monitored daily at final Outfall 001, if discharge occurs. Benzene shall be monitored twice/week at Outfall 001, when discharge occurs." HWB recommends that benzene be analyzed daily at the discharge of Outfall 001. The duration of an extreme emergency discharge should be defined. See also Comment 2.

Comment 11

Page 1, Part I-Requirements for NPDES Permits, Section A. Limitations and Monitoring Requirements, Internal Outfall 101-0.402 MGD states "[d]uring the period beginning on the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee **is authorized** to discharge process wastewater including process stormwater, and reverse osmosis unit reject water into a series of aeration lagoon, and finally into a series of evaporation ponds." A table is also present that provides effluent characteristics and includes frequency of sampling. HWB has the following concerns:

- a. Sanitary wastewater was not listed as part of the discharge.
- b. HWB recommends the following analysis for this discharge point: Skinner List inorganics, VOCs, SVOCs to include the VOCs and SVOCs listed on the Skinner List, GRO, DRO, and ORO.

Comment 12

Page 2, Part I, item 2. Final Effluent Limits Outfall-0.004 MGD, states "[d]uring the period beginning on the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee **is NOT authorized** to discharge process wastewater including process stormwater; sanitary wastewater, and reverse osmosis unit reject water via a series of evaporation ponds into an unnamed arroyo, thence to Puerco River, an ephemeral waterbody Segment No. 20.6.4.97 of the Lower Colorado River Basin, from Outfall 001. The Permittee shall take all reasonable steps to prevent a discharge. In the event of emergency discharges, the permittee shall be subject to the limitations and monitoring requirements specified below in Part II. A.:" A table is also present that provides effluent characteristics and includes frequency of sampling. HWB recommends the following analysis for this discharge point: Skinner List inorganics, VOCs, SVOCs to include the VOCs and SVOCs listed on the Skinner List, GRO, DRO, ORO and chlorides.

Comment 13

On page 6 of Part II, under item E. Storm Water Pollution Prevention, states "[s]tormwater has been identified by the applicant/permittee as a component of the discharge through Outfall 001. This section applied to all stormwater discharges from the facility through permitted outfalls."

Glenn Saums
May 11, 2010
Page 6 of 6

The term "process stormwater" was previously referenced but was not included in this section, incorrectly implying it is not contaminated with process wastewater. In addition, it should be noted that Outfall 001 will also emit process wastewater, sanitary wastewater, and reverse osmosis reject water, if a discharge occurs.

Comment 14

On page 6 of Part II, under item E. Storm Water Pollution Prevention, item 2.c. states "[w]here experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition of (e.g., precipitation), or other circumstances which result in significant amounts of pollutants reaching surface waters, the SWP3 should include a prediction of the direction, rate of flow and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance." The Permit should prohibit routine releases from routine equipment failures and releases to the environment from natural conditions because the wastewater treatment system should be designed to handle upsets.

Comment 15

HWB recommends the NPDES Permit not be issued until the facility has installed the new wastewater treatment system required by EPA, HWB and the New Mexico Energy, Minerals And Natural Resources Department Oil Conservation Division (OCD).

Please consider these comments when certifying the final Permit.

cc: Marcy Leavitt, NMED WWMD
Carl Chavez, OCD
File: Reading File and WRG
HWB-GRCC-09-006

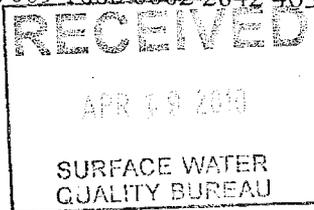


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733
APR 16 2010

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7009 1680.0002-2842-4630)

REPLY TO: 6WQ-NP

Mr. Mark B. Turri
Western Refining Gallup Refinery
Route 3 Box 7
Gallup, NM 87301



Re: Application to Discharge to Waters of the United States NPDES Permit No. NM0031071 –
Western Refining - Gallup Refinery

Dear Mr. Turri:

Enclosed is a copy of a proposed National Pollutant Discharge Elimination System permit developed in accordance with the requirements of the Clean Water Act. Also enclosed is a statement of basis explaining the permit conditions and the public notice for this permit.

Any comments you wish to make may be submitted in writing by the due date stated in the public notice to Ms. Diane Smith at the above address. After all comments have been received, the Agency will make a final permit issuance decision. Subsequently, a copy of the final permit will be mailed to you. Should you have any questions regarding the final permit, please feel free to contact Maria Okpala of the NPDES Permits Branch at the above address or Voice: (214) 665-3152, Fax: (214) 665-2191, or E-mail: okpala.maria@epa.gov.

Sincerely yours,

Willie G. Lane, Jr.
Chief
NPDES & Technical Permits Section

Enclosures
cc w/enclosures:

Sandra Gabaldon, NMED

**U.S. Environmental Protection Agency
Public Notice of Draft NPDES Permit(s)**

April 17, 2010

This is to give notice that the U.S. Environmental Protection Agency, Region 6, has formulated a Draft Permit for the following facility (facilities) under the National Pollutant Discharge Elimination System (NPDES). Development of the draft permit(s) was based on a preliminary staff review by EPA, Region 6, and consultation with the State of New Mexico. The State of New Mexico is currently reviewing the draft permit(s). The permit(s) will become effective no sooner than 30 days after the close of the comment period unless:

- A. The State of New Mexico denies certification, or requests an extension for certification prior to that date.
- B. Comments received by May 17, 2010, in accordance with §124.20, warrant a public notice of EPA's final permit decision.
- C. A public hearing is held requiring delay of the effective date.

EPA's contact person for submitting written comments, requesting information regarding the draft permit, and/or obtaining copies of the permit and the Statement of Basis or Fact Sheet is:

**Ms. Diane Smith
U.S. Environmental Protection Agency
Permit Processing Team (6WQ-NP)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733
(214) 665-2145**

EPA's comments and public hearing procedures may be found at 40 CFR 124.10 and 124.12 (48 Federal Register 14264, April 1, 1983, as amended at 49 Federal Register 38051, September 26, 1984). The comment period during which written comments on the draft permit may be submitted extends for 30 days from the date of this Notice. During the comment period, any interested person may request a Public Hearing by filing a written request which must state the issues to be raised. A public hearing will be held when EPA finds a significant degree of public interest.

EPA will notify the applicant and each person who has submitted comments or requested notice of the final permit decision. A final permit decision means a final decision to issue, deny, modify, revoke or reissue, or terminate a permit. Any person may request an Evidentiary Hearing on the Agency's final permit decision. However, the request must be submitted within 30 days of the date of the final permit decision and be in accordance with the requirements of 40 CFR 124.74. Any condition(s) contested in a request for an evidentiary hearing are granted on a New Source, New Discharger, or Recommencing Discharger, the applicant shall be without a permit.

Further information including the administrative record may be viewed at the above address between 8 a.m. and 4:30 p.m., Monday through Friday. It is recommended that you write or call to the contact above for an appointment, so the record(s) will be available at your convenience.

NPDES authorization to discharge to waters of the United States, Permit No. NM0031071
The applicant's mailing address is:

Western Refining Gallup Refinery
Route 3
Box 7
Gallup, NM 87301

The discharges from this facility are as described in the table below:

Outfall Reference Number	Discharge Coordinates Latitude Deg° Min' Sec" Longitude Deg° Min' Sec"	Type of Discharge	Discharge Volume MGD	Receiving Water	Water Body Segment
001	Latitude 35° 29' 26.3"; Longitude 108° 26' 26.01"	Discharge process wastewater including process stormwater; sanitary wastewater, and reverse osmosis unit reject water	0.004	Unnamed arroyo, thence to Puerco River, an ephemeral waterbody	Segment No. 20.6.4.97 of the Lower Colorado River Basin

This is a first-time issuance. A Statement of Basis is available, and describes the rationale for permit conditions. Under the SIC Code 2911, the applicant operates a Petroleum Refinery. The refinery has an overall capacity to process up to 32,200 barrels per day of crude oil and additional feedstocks.

**NPDES PERMIT NO. NM0031071
STATEMENT OF BASIS**

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

APPLICANT:

Western Refining Gallup Refinery
Route 3
Box 7
Gallup, NM 87301

ISSUING OFFICE:

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

PREPARED BY:

Maria E. Okpala
Environmental Engineer
NPDES Permits Branch (6WQ-PP)
Water Quality Protection Division
Voice: 214-665-3152
Fax: 214-665-2191
Email: okpala.maria@epa.gov

DATE PREPARED:

April 1, 2010

PERMIT ACTION

It is proposed that the facility be issued a first-time NPDES permit for a 5-year term in accordance with regulations contained in 40 Code of Federal Regulations (CFR) 122.46(a).

40 CFR CITATIONS: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of March 5, 2010.

RECEIVING WATER – BASIN

An unnamed arroyo, thence to Puerco River, an ephemeral waterbody Segment No. 20.6.4.97 of the Lower Colorado River Basin.

DOCUMENT ABBREVIATIONS

For brevity, Region 6 used acronyms and abbreviated terminology in this Statement of Basis document whenever possible. The following acronyms were used frequently in this document:

BAT	Best Available Technology Economically Achievable)
BOD ₅	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
F&WS	United States Fish and Wildlife Service
GPM	Gallon per minute
µg/l	Micrograms per liter (one part per billion)
mg/l	Milligrams per liter (one part per million)
MGD	Million gallons per day
MSGP	Multi-Sector General Permit
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
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
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WQS	Water Quality Standards

I. APPLICANT LOCATION and ACTIVITY

Under the SIC Code 2911, the applicant operates a Petroleum Refinery. The refinery has an overall capacity to process up to 32,200 barrels per day of crude oil and additional feedstocks.

This permit includes petroleum refinery operations as regulated under [40 CFR 419], "Petroleum Refining Point Source Category," process stormwater and reverse osmosis unit reject water. The process wastewater collection system is a network of curbing, paving, catch basins, and underground piping that collects wastewater and stormwater from various processing areas within the refinery and then conveys the wastewater to a wastewater treatment system.

As described in the application, the facility is located along Interstate-40, Exit 39, Jamestown, McKinley County, New Mexico. Wastewater discharges from the facility flows into an unnamed arroyo, thence to Puerco River, an ephemeral waterbody Segment No. 20.6.4.97 of the Lower Colorado River Basin.

Discharges are located on that water at:

Outfall 001: Latitude 35° 29' 26.3"; Longitude 108° 26' 26.01"

II. DISCHARGE DESCRIPTION

The Gallup Refinery wastewater system is made up of the process wastewater system and the process area storm water system. These two streams are comingled and treated as process wastewater. The average flow rate from the wastewater system is 185 GPM (0.266 MGD). The process wastewater flows into the API separator which utilizes gravity and residence time to separate wastewater into three components namely sludge layer, oil layer and a clarified layer. The clarified effluent flows into the benzene air stripper columns. At the air stripper columns, ambient air is blown upwards through a falling cascade of clarified wastewater and as a result, dissolved gases and light hydrocarbons are disengaged and vented. After oil recovery and stripping of benzene from the wastewater, the wastewater enters the aeration basins. In the aeration basins, the treated wastewater is mixed with air in order to oxidize any remaining organic constituents and increase the dissolved oxygen concentration available in the water for growth of bacteria and other microbial organisms. The microbes degrade hydrocarbons into carbon dioxide and water. Effluent from the aeration basins flows into several evaporation ponds of various sizes. At the evaporation pond, wastewater is converted into vapor via solar and mechanical wind-effect evaporation.

Sanitary wastewater from the refinery as well as other wastewater from several houses and a local travel center also flows into the aeration basins. The average flowrate from the sanitary wastewater is 54 GPM (0.0778 MGD). Effluent from the aeration basins flows into the evaporation ponds. At the evaporation ponds, wastewater is converted into vapor via solar and mechanical wind-effect evaporation.

The refinery does not intend to change its operation or modify its facility as to create any new discharges. The facility does not currently discharge to a water of the state, and does not have pollutant data to conduct analysis on. The facility is designed not to discharge, but under extreme emergency may discharge process wastewater including process stormwater; sanitary wastewater, and reverse osmosis unit reject water via a series of evaporation ponds. Under such circumstances, the facility intends to use appropriate temporary treatment systems to meet permit

requirements. The refinery is subject to ELG prior to the process wastewater system and the process area storm water system comingling with sanitary wastewater at the aeration basins.

Table 1: Facility's Average Daily Productions

The table below shows facility's average daily application obtained from the permit application.

Quantity per day	Units of Measure	Operation	Affected outfall
20	1000 barrels feedstock per stream day	Crude (atmospheric)	001
20	1000 barrels feedstock per stream day	Crude (desalter)	001
5	1000 barrels feedstock per stream day	Fluidized Catalytic Cracking unit	001

In an email dated February 19, 2010, the facility updated its current production rate as follows: daily maximum estimated production rate – 32,200 BPD; crude desalter feedstock rate – 25,000 BPD; and Fluidized Catalytic Cracking Unit – 8,500 BPD.

III. 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 issued for a 5-year term following regulations promulgated at 40 CFR 122.46(a). This is a first-time permit issuance. An NPDES Application for a Permit to Discharge (Form 1 & 2C) was received on June 25, 2009. The application was deemed administratively incomplete on January 26, 2010. Additional permit application information was submitted on February 16, 2010; February 23, 2010; March 2, 2010, and March 5, 2010. The application was deemed administratively complete on March 5, 2010.

IV. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITION REASON FOR PERMIT ISSUANCE

Regulations contained in 40 CFR §122.44 NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, on best professional judgment (BPJ) in the absence of guidelines, and/or requirements pursuant to 40 CFR 122.44(d), whichever are more

stringent. Technology-based effluent limitations are established in the proposed draft permit for BOD5, TSS, Oil and grease, COD, ammonia, sulfide, total phenolics, Total Chromium and Hexavalent Chromium. Water quality-based effluent limitations are established in the proposed draft permit for E. coli bacteria and pH. A BPJ limit is established in the proposed permit for benzene.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

Based on available information, wastewater is not discharged from the refinery to surface water of the state because all the wastewater is evaporated. Wastewater evaporation represents best available technology economically achievable (BAT), and EPA proposes a no discharge permit for the facility. As a result, the facility is not authorized to discharge to a surface water of the State except in extreme emergencies.

According to the additional information submitted by the permittee, Western Refining is a crude oil refining and petroleum products manufacturing facility. The refinery receives and processes crude oil and other feedstocks, and then produces various finished products. These include propane, butane, naphtha, unleaded gasoline, diesel (low sulfur and ultra-low sulfur), and residual fuel. Ammonium Thiosulfate and elemental sulfur are also produced as by-products through desulfurization process. As a result, Western Refining is subject to Refinery Guidelines at 40 CFR 419, Subpart B, Cracking Subcategory. Other sources of technology based limits include sanitary permit requirements and/or NMED water quality standards.

Calculation of Technology-Based Limits

Internal Outfall 101 - Process wastewater including process stormwater; and reverse osmosis unit reject water flows into the oil/water separator, then into the Benzene air stripper via a series of aeration basins and finally into the evaporation ponds. Discharges are proposed to be authorized from internal Outfall 101 into the aeration lagoons, and finally into the evaporation ponds. Internal Outfall 101 shall be subject to ELG for Petroleum Refinery, Subpart B – Cracking Subcategory. See calculation of technology-based limits from the ELG below. The

concentration based limit for benzene is based on the BPJ of the permit writer and is consistent with limits given in other oil and gas industry permits.

Table 2: Calculation of Unit Process Rates and Unit Configuration Factors

Refinery Processes	EPA Process Number (*1)	Unit Process Rate K bbl/day (*2)	Total Feedstock Rate K bbl/day (*3)	Unit Process Rate to Feedstock Rate Ratio (*4)	Process Weighting Factor(*5)	Unit Process Configuration Factor (*6)
Atmospheric Crude Distillation	1	32.2	32.2	1	1	1.0
Crude Desalting	2	25	32.2	0.776398	1	0.776398
Fluidized Catalytic Cracking, FCC	6	8.5	32.2	0.2639752	6	1.5838
Hydrofluoric Alkylation Unit		3				Not Applicable to Refinery Process Configuration Factor
Platformer Unit		7.3				
Isomerization Unit		5				
Diesel Hydrotreater, DH	54	4				
Kerosene Hydrotreater, KH		5				

Total crude feedstock rate = 32.2 K bbl/day

Total coking and cracking feedstock rate = 8.5+4+5= 17.5 K bbl/day (i.e FCC +DH+KH.

Coking feedstock rate is zero because refinery does not perform coking operation.)

Total Reforming and Alkylation Unit = 7.3 +3=10.3 K bbl/day

Total Refinery Process Configuration = 1.0+0.776398+1.5838 = 3.36

Size Factor Input: Feedstock, K bbl/day = 32.2

According to 419.23(b), PROCESS FACTOR = 0.63; SIZE FACTOR = 0.95

Multiplier = Feedstock * Process Factor * Size Factor

Multiplier = 32.2* 0.63* 0.95 = 19.2717

Footnotes:

(*1) EPA Process numbers are found in 40 CFR 419, Appendix A. They can be cross-referenced in the *Development Document, New Source Performance Standards, and Pretreatment Standards for the Petroleum Refinery Point Source Category* (EPA 440/1-82/014), Table III-7, pp.49-54.

(*2) Data obtained from additional permit application information

(*3) Data obtained from additional permit application information

(*4) is (*2) divided by (*3)

(*5) Process weighting factor is specified at 40 CFR 419.42 (b) (3), Subpart D

(*6) The product in this column is the result of multiplying the "Unit Process Rate to Feedstock Rate Ratio" in column (*4) times the process factor specified in column (*5). These values are summed to obtain the total refinery process configuration factor.

Table 3A: Technology-Based Limits Calculation for Conventional, non-conventional, and toxic refinery loading calculations found at 40 CFR 419, Subpart B – Cracking Category: *Process Wastewater*

PROCESS WASTEWATER PARAMETER	References	Treatment Technology	Factors	Factors	Multiplier	Discharge Fractions through Outfall	LOADINGS:	
			Subpart B Avg (lb/K bbl)	Subpart B Max (lb/K bbl)			Subpart B Avg (lb/day)	Subpart B Max (lb/day)
Conventional:								
BOD ₅	419.24(a)	BCT	5.5	9.9	19.2717	1	105.9944	190.7898
TSS	419.24(a)	BCT	4.4	6.9	19.2717	1	84.79548	132.9747
Oil & Grease	419.24(a)	BCT	1.6	3.0	19.2717	1	30.83472	57.8151
Nonconventional:								
COD	419.23(a)	BAT	38.4	74	19.2717	1	740.0333	1426.106
Ammonia	419.23(a)	BAT	3.0	6.6	19.2717	1	57.8151	127.1932
Sulfide	419.23(a)	BAT	0.029	0.065	19.2717	1	0.558879	1.252661
BPT Calculations for Total Recoverable Phenolics, Total Chromium, and Hexavalent Chromium								
Total Phenolics	419.22(a)	BPT	0.036	0.074	19.2717	1	0.693781	1.426106
Chromium Total	419.22(a)	BPT	0.088	0.15	19.2717	1	1.69591	2.890755
Hexavalent Chromium	419.22(a)	BPT	0.0056	0.012	19.2717	1	0.107922	0.23126

Table 3B: BAT Calculations for Total Recoverable Phenolics, Total Chromium, and Hexavalent Chromium

PROCESS WASTEWATER PARAMETER	References	Treatment Technology	Factors		Rate K bbl/day	Discharge Fractions through Outfall	LOADINGS:	
			Subpart B Avg (lb/K bbl)	Subpart B Max (lb/K bbl)			Subpart B Avg (lb/day)	Subpart B Max (lb/day)
BAT Calculations for								
Total Phenolics								
Crude Processes	419.23(c)	BAT	0.003	0.013	32.2	1	0.0966	0.4186
Cracking and Coking	419.23(c)	BAT	0.036	0.147	17.5	1	0.63	2.5725
Reforming and Alkylation	419.23(c)	BAT	0.032	0.132	10.3	1	0.3296	1.3596
Total Phenolics BAT:							1.0562	4.3507
Chromium (Total)								
Crude Processes	419.23(c)	BAT	0.004	0.011	32.2	1	0.1288	0.3542
Cracking and Coking	419.23 (c)	BAT	0.041	0.119	17.5	1	0.7175	2.0825
Reforming and Alkylation	419.23(c)	BAT	0.037	0.107	10.3	1	0.3811	1.1021
Total Chromium BAT:							1.2274	3.5388
Hexavalent Chromium								
Crude Processes	419.23 (c)	BAT	0.0003	0.0007	32.2	1	0.00966	0.02254
Cracking and Coking	419.23 (c)	BAT	0.0034	0.0076	17.5	1	0.0595	0.133
Reforming and Alkylation	419.23(c)	BAT	0.0031	0.0069	10.3	1	0.03193	0.07107
Hexavalent Chromium BAT:							0.10109	0.22661

For Total Recoverable Phenolics, Total Chromium, and Hexavalent Chromium, apply most stringent (BAT or BPT) calculation.

Table 4A: Technology-Based Limits Calculation for Conventional, non-conventional, and toxic refinery loading calculations found at 40 CFR 419, Subpart B – Cracking Category: *Stormwater*

	References	Treatment Technology	Factors	Factors	Rate K gal/day	Discharge Fractions through Outfall	LOADINGS:	
STORMWATER PARAMETER			Subpart B Avg (lb/K gal)	Subpart B Max (lb/K gal)			Subpart B Avg (lb/day)	Subpart B Max (lb/day)
Conventional:								
BOD5	419.24(e)	BCT	0.22	0.40	216	1	47.52	86.4
TSS	419.24(e)	BCT	0.18	0.28	216	1	38.88	60.48
Oil and Grease	419.24(e)	BCT	0.067	0.13	216	1	14.472	28.08
Non-Conventional:								
COD	419.23(f)	BAT	1.5	3.0	216	1	324	648
Total Phenolics	419.23(f)	BAT	0.0014	0.0029	216	1	0.3024	0.6264
Metals:								
Total Chromium	419.23(f)	BAT	0.0018	0.0050	216	1	0.3888	1.08
Hexavalent Chromium	419.23(f)	BAT	0.00023	0.00052	216	1	0.00497	0.1123

Table 5A: Calculations of Total Allocations for Internal Outfall 101

Total Allocation = Process wastewater + Ballast water + Contaminated Stormwater (lbs/day)

Ballast water is not applicable to the refinery. As a result, no allocation is given to ballast water.

PARAMETER	PROCESS WASTEWATER		BALLAST WATER		CONTAMINATED STORMWATER		TOTAL ALLOCATION	
	Subpart B Avg (lb/K bbl)	Subpart B Max (lb/K bbl)	Subpart B Avg (lb/K bbl)	Subpart B Max (lb/K bbl)	Subpart B Avg (lb/K gal)	Subpart B Max (lb/K gal)	Subpart B Avg (lb/day)	Subpart B Max (lb/day)
Conventional:								
BOD ₅	105.9944	190.7898			47.52	86.4	153.5144	277.1898
TSS	84.79548	132.9747			38.88	60.48	123.6755	193.4547
Oil & Grease	30.83472	57.8151			14.472	28.08	45.30672	85.8951
Nonconventional:								
COD	740.0333	1426.106			324	648	1064.033	2074.106
Ammonia	57.8151	127.1932					57.8151	127.1932
Sulfide	0.558879	1.252661					0.558879	1.252661
Apply most stringent BAT or BPT for Total Recoverable Phenolics, Total chromium and Hexavalent Chromium i.e process wastewater								
Nonconventional:								
Total Phenolics	0.693781	1.426106			0.3024	0.6264	0.996181	2.052506
Metals:								
Total Chromium	1.2274	2.89055			0.3888	1.08	1.3351	3.7917
Hexavalent Chromium	0.10109	0.22661			0.00497	0.1123	0.12634	0.28536

Technology-Based Limits for Outfall 001 (0.0778 MGD)

Sanitary wastewater flows into the aeration basins and then into the evaporation ponds. Outfall 001 shall be subject to the secondary treatment requirements.

The 30-day and daily maximum loadings for BOD₅ and TSS are based on the facility's average flow of 0.0778 MGD as shown below:

$$\text{Loading, lbs/day} = \text{Flow (MGD)} * 8.34 \text{ lb/gal} * \text{Concentration (mg/l)}$$

$$30\text{-day Avg. (lbs/day) BOD}_5, \text{TSS} = 0.0778 \text{ MGD} * 8.34 \text{ lb/day} * 30 \text{ mg/l} = 19.4656 \text{ lbs/day}$$

$$\text{Daily Max. (lbs/day) BOD}_5, \text{TSS} = 0.0778 \text{ MGD} * 8.34 \text{ lb/day} * 45 \text{ mg/l} = 29.1983 \text{ lbs/day}$$

The final loadings for BOD₅ and TSS are loadings from the effluent guidelines and loadings due to the sanitary wastewater. TSS and BOD₅ 30-day average and maximum concentrations of 30 mg/l and 45 mg/l respectively are proposed in the final Outfall 001. E.coli bacteria limits of 126 cfu per 100 ml monthly average and 410 cfu per 100 ml daily maximum are also proposed in the permit based on the current NMWQS.

A daily maximum effluent limitation for Benzene of 0.005 mg/L is also proposed at Outfall 001. This is based on the BPJ of the permit writer and is consistent with limits given in other oil and gas industry permits.

Table 5B: Calculations of Total Allocations for Final Outfall 001

PARAMETER	SANITARY WASTEWATER LOADINGS		ELG LOADINGS		TOTAL LOADINGS	
	30-Day Avg (lbs/day)	Daily Max (lbs/day)	30-Day Avg (lbs/day)	Daily Max (lbs/day)	30-Day Avg (lbs/day)	Daily Max (lbs/day)
BOD ₅	19.4656	29.1983	153.5144	277.1898	172.98	306.3881
TSS	19.4656	29.1983	123.6755	193.4547	143.1411	222.653

Stormwater Pollution Prevention Requirements

Stormwater has been identified by the permittee as a component of the discharge through Outfall No. 001. In an email dated February 19, 2010, the permittee indicated that all stormwater originating within its process areas is contaminated. These contaminated stormwaters are subject to ELGs as calculated above. In addition, the permittee stated that the maximum contaminated stormwater daily rate is 216,000 GPD. This facility also has coverage under the MSGP for allowable "uncontaminated" stormwater discharges, not subject to ELG. Stormwater pollution prevention requirements are proposed in the draft permit, and shall apply whether discharge occurs or not.

It is proposed that the facility conduct annual inspections to identify areas contributing to the storm water discharge and identify potential sources of pollution which may affect the quality of storm water discharges from the facility.

The proposed permit requires the permittee to maintain a site map. The site map shall include all areas where storm water may contact potential pollutants or substances which can cause pollution. It is also proposed that all spilled product and other spilled wastes be immediately cleaned up and properly disposed. The permit prohibits the use of any detergents, surfactants or other chemicals from being used to clean up spilled product. Additionally, the permit requires all waste fuel, lubricants, coolants, solvents or other fluids used in the repair or maintenance of vehicles or equipment be recycled or contained for proper disposal. All diked areas surrounding storage tanks or stormwater collection basins shall be free of residual oil or other contaminants so as to prevent the accidental discharge of these materials in the event of flooding, dike failure, or improper draining of the diked area. The permittee shall amend the SWP3 whenever there is a change in the facility or change in operation of the facility.

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 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 unnamed arroyo, thence to Puerco River, an ephemeral waterbody Segment No. 20.6.4.97 of the Lower Colorado River Basin.

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 ephemeral waters that cannot be attained, but in those instances, the State must submit a

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 New Mexico State Standards for Interstate and Intrastate Surface Waters are found at 20.6.4 NMAC, amended through August 1, 2007 and are found on the NMED's website at <http://www.nmcpr.state.nm.us/nmac/parts/title20/20.006.0004.pdf>. The designated uses of Segment No. 20.6.4.97 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. BACTERIA

Outfall 001 shall be subject to E. coli requirement for primary body contact uses. WQS require limits for E. coli of 126 cfu/100 ml monthly geometric mean and 410 cfu/100 ml single sample maximum.

b. pH

The water quality-based standard for primary contact pH range of 6.6 – 9.0 standard units is more restrictive than the technology-based pH range of 6.0 – 9.0 standard units. The pH range shall be 6.6 – 9.0 standard units at all times, when discharging.

c. TOXICS

i. General Comments

The CWA in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criteria, the permit must contain an effluent limit for that pollutant.

There is no data to perform reasonable potential calculation since the facility has not had a discharge within the last three years.

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are listed in Part II of the permit

Solids and Foam

The prohibition of the discharge of floating solids or visible foam in other than trace amounts is proposed in the draft permit. In addition, there shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

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 NMIP and is consistent with other facilities of similar size.

Should any discharge occur from Outfall 001, the discharge shall be sampled within one hour of beginning for the pollutants listed at 40 CFR 122, Appendix D, Tables III and IV, plus pH, hardness, TDS, oil & grease, and TSS and the results submitted to EPA and NMED-SWQB. Should the discharge continue for more than one day, additional samples and analyses results shall be submitted for each additional day. These pollutants are listed in Part 2 of the proposed permit.

Flow shall to be estimated, using sound scientific methods, such as a "V" notch weir, and reported daily when discharge occurs at Outfall 001; and twice per week at internal Outfall 101. BOD5, TSS, Oil and grease, COD, ammonia, sulfide, and total phenolics shall be monitored and reported monthly at internal Outfall 101. pH shall be monitored twice per week at internal Outfall 101.

Total Chromium, and Hexavalent Chromium – Gallup Refinery does not use or generate chromium at its facility, therefore a monitoring frequency of 1/year for total chromium and hexavalent chromium is considered adequate for the protection of the receiving water and its designated uses.

TSS, BOD5, pH and E. coli bacteria shall be monitored daily at final Outfall 001, if discharge occurs. Benzene shall be monitored twice/week at Outfall 001, when discharge occurs.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP, July 2009. Table 11 of Section V of the NMIP outlines the type of WET testing for different types of discharges. Since discharges are authorized in the event of emergency, no low flow situations are expected. As a result, an LC₅₀ test, which is a shorter test, is appropriate for the discharge. The receiving water is described as being an ephemeral waterbody; flowing only under periods of snowmelt or when rainfall of long enough duration and/or intensity occur. Biomonitoring of the effluent is, therefore, required to assess potential toxicity, if and when there is a discharge. Biomonitoring requirements are stated in Part II.D of the draft permit.

OUTFALL 001

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is **NOT authorized** to discharge process wastewater including process stormwater; sanitary wastewater, and reverse osmosis unit reject water via a series of evaporation ponds into an unnamed arroyo, thence to Puerco River, an ephemeral waterbody Segment No. 20.6.4.97 of the Lower Colorado River Basin, from Outfall 001. The permittee shall take all reasonable steps to prevent a discharge. In the event of emergency discharges, the permittee shall be subject to the limitations and monitoring specified below and in Part II.D of the permit.

EFFLUENT CHARACTERISTIC	DISCHARGE MONITORING	
	30-DAY AVG MINIMUM	24-Hr. MINIMUM
Whole Effluent Toxicity Testing (24 Hr. Static Non-Renewal) 1/		
<u>Daphnia pulex</u>	REPORT	REPORT

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS	
	FREQUENCY	TYPE
Whole Effluent Toxicity Testing (24 Hr. Static RNon-ewal) 1/		
<u>Daphnia pulex</u>	1/ 6 months	Grab

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.

F. FINAL EFFLUENT LIMITATIONS

See the draft permit for limitations.

V. FACILITY OPERATIONAL PRACTICES

A. WASTE WATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs directed towards pollution prevention. The permittee will institute programs to improve the operating efficiency and extend the useful life of the treatment system.

B. OPERATION AND REPORTING

The permittee must submit Discharge Monitoring Report's (DMR's) quarterly, beginning on the effective date of the permit, lasting through the expiration date of the permit or termination of the permit, to report on all limitations and monitoring requirements in the permit.

VI. IMPAIRED WATER - 303(d) LIST AND TMDL

Wastewater discharges from the facility flows into an unnamed arroyo thence to Puerco River, an ephemeral waterbody Segment No. 20.6.4.97 of the Lower Colorado River Basin. The receiving stream is not listed as impaired in the 2008 - 2010 State of New Mexico 303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs).

VII. ENDANGERED SPECIES

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/>, five species are listed as threatened or endangered in McKinley County. These are the Bald eagle, Black-footed ferret, Mexican spotted owl, Southwestern willow flycatcher, and Zuni fleabane.

On August 9, 2007, the bald eagle was removed from the federal list of threatened and endangered species. After nearly disappearing from most of the United States decades ago, the bald eagle is now flourishing across the nation and no longer needs the protection of the Endangered Species Act.

Research of available information finds that the primary cause for the population decreases leading to the threatened or endangered status for the avian species (Bald eagle, Mexican spotted owl, and Southwestern willow flycatcher) is destruction of habitat. Issuance of this permit is found to have no impact on the habitat of the listed species since no construction is authorized by this permitting action. Additionally, no pollutants were identified by the permittee, hence, issuance of this permit is found to have no impact on the identified avian species. EPA believes that the issuance of the permit will have no effect on these species as effluent from this refinery is not expected to contain detectable concentrations of the contaminants of concern nor did the permit application indicate the discharge is expected to contain concentrations of these chemicals of concern. Research of the Black-footed Ferret finds that the species has diminished, due to the eradication of the prairie dog, the primary food source and provider of shelter (burrows) for the ferret. Issuance of this permit should have no effect on the food source or habitat of the prairie dog or the ferret, nor is it associated with predator control programs. The Zuni fleabane, a flowering plant, is listed as threatened in McKinley County. Zuni fleabane flowers from mid to late May into early June. Fruiting time varies from mid June to early July. The major threat is surface disturbance activity associated with mineral development. Off-road vehicle (ORV) activities are a potential threat to the fragile habitat of this species. This permitting action is found to have no impact on mineral exploration or development or ORV use.

The Environmental Protection Agency has evaluated the potential effects of issuance of this permit upon listed or proposed endangered or threatened species. The facility is designed not to discharge, but may discharge under extreme emergency, and therefore, EPA has determined there will be no effects on endangered and threatened species.

VIII. HISTORICAL AND ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The no-discharge permit would have no impact on historical and/or archeological sites.

IX. CERTIFICATION

This 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.

X. FINAL DETERMINATION

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

XI. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION

NPDES Application for Permit to Discharge, Form 1 & 2C, received on June 25, 2009.

B. 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.

Procedures for Implementing National Pollutant Discharge Elimination System in New Mexico, November 30, 2009.

Narrative Toxics Implementation Guidance – Whole Effluent Toxicity, December 16, 2005.
2008 – 2010 State of New Mexico CWA § 303(d) / § 305 (b) Integrated Report, Appendix A.

C. Other References

Post Third Round NPDES Permit Implementation Strategy, adopted October 1, 1992.

<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>

Guide for the Application of Effluent Limitations Guidelines for the Petroleum Refining Industry, USEPA, Industrial Technology Division, June 1985.

D. 40 CFR CITATIONS

Sections 122, 124, 125, 133, and 136

E. MISCELLANEOUS CORRESPONDENCE

Letter from Dorothy Brown, EPA, to Mr. Mark B. Turri, Refinery Manager, Western Refining - Gallup Refinery, dated March 5, 2010, informing applicant that its' NPDES application received June 25, 2009, is administratively complete.

Emails from Rajen Gaurav, Western Refining – Gallup Refinery, to Maria Okpala, EPA, dated 2/19/2010, 2/23/10, 3/02/10, & 3/05/10 submitting additional refinery information.

Letter from Mark Turri, Refinery manager, Western Refining- Gallup Refinery, to Jenaie Franke, EPA, dated February 8, 2010, submitting additional permit application information.

Email from Carl Chavez J. (Oil Conservation Division, New Mexico Energy, Minerals & Natural Resources Department) to Hope Monzeglio, NMED and to Dave Cobrain, NMED, dated January 13, 2010 on major modification to discharge and NPDES update.

Letter from Dorothy Brown, EPA, to Mr. Mark B. Turri, Refinery Manager, Western Refining - Gallup Refinery, dated January 26, 2010, informing applicant that its' NPDES application received June 25, 2009, is administratively incomplete.



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

**PROPOSED
PERMIT**

NPDES Permit No NM0031071

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Western Refining Gallup Refinery
Route 3
Box 7
Gallup, NM 87301

is NOT authorized to discharge from a facility located at I-40, Exit 39, in the City of Jamestown, in McKinley County, New Mexico.

to an unnamed arroyo leading to Puerco River in Segment No. 20.6.4. 97 of the Lower Colorado River Basin, from

Outfall 001: Latitude 35° 29' 26.3"; Longitude 108° 26' 26.01"

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II and Part III.

This is a first-time permit.

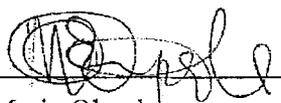
This permit shall become effective on

This permit and the authorization to not discharge shall expire at midnight,

Issued on

Prepared by

Miguel I. Flores
Director
Water Quality Protection Division (6WQ)



Maria Okpala
Environmental Engineer
Permits & Technical Section (6WQ-PP)

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

Internal Outfall 101 – 0.402 MGD

During the period beginning on the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is **authorized** to discharge process wastewater including process stormwater^{*1}, and reverse osmosis unit reject water into a series of aeration lagoon, and finally into a series of evaporation ponds.

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Standard Units			
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
PH	00400	6.6	9.0	2/ week	Grab

EFFLUENT CHARACTERISTICS		MONITORING REQUIREMENTS					
		Lbs/day, unless noted		mg/l unless noted			
POLLUTANT	STORET CODE	MONTHLY AVG	DAILY MAX	MONTHLY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	MGD	MGD	***	***	2/week	Estimate
BOD ₅	00310	153.514	277.189	N/A	N/A	Monthly	Grab
TSS	00530	123.676	193.455	N/A	N/A	Monthly	Grab
Oil & Grease	00556	45.307	85.895	N/A	N/A	Monthly	Grab
COD	00340	1064.033	2074.106	N/A	N/A	Monthly	Grab
Ammonia as N	00610	57.815	127.193	N/A	N/A	Monthly	Grab
Sulfide as S	00745	0.559	1.253	N/A	N/A	Monthly	Grab
Total Phenolics	32730	0.996	2.053	N/A	N/A	Monthly	Grab
Total Chromium ⁽⁺³⁾	01034	1.335	3.792	N/A	N/A	1/year	Grab
Hexavalent Chromium ⁽⁺⁶⁾	01032	0.126	0.285	N/A	N/A	1/year	Grab

Footnotes:

- *1 Process stormwater is contaminated and is subject to Effluent Limitation Guidelines (see Statement of Basis for calculation). This facility also has coverage under the Multi-Sector General Permit for allowable "uncontaminated" stormwater discharges, not subject to ELG.
- *2 See Part II for MQL.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Internal Outfall 101, at the point of discharge from the final treatment, prior to combining with effluent from the sanitary wastewater.

2. FINAL Effluent Limits Outfall 001- 0.004 MGD

During the period beginning on the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is **NOT authorized to** discharge process wastewater including process stormwater^{*1}; sanitary wastewater, and reverse osmosis unit reject water via a series of evaporation ponds into an unnamed arroyo, thence to Puerco River, an ephemeral waterbody Segment No. 20.6.4.97 of the Lower Colorado River Basin, from Outfall 001. The permittee shall take all reasonable steps to prevent a discharge. In the event of emergency discharges, the permittee shall be subject to the limitations and monitoring requirements specified below and in Part II. A:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Standard Units			
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.6	9.0	Once/day ^(*)	Grab

EFFLUENT CHARACTERISTICS		MONITORING REQUIREMENTS					
		Lbs/day, unless noted		mg/l unless noted			
POLLUTANT	STORET CODE	MONTHLY AVG	DAILY MAX	MONTHLY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report, MGD	Report, MGD	***	***	Once/Day ^(*)	Estimate
BOD ₅	00310	172.98	306.388	30	45	Once/Day ^(*)	Grab
TSS	00530	143.141	222.653	30	45	Once/Day ^(*)	Grab
E. coli Bacteria ^(*)	51040	N/A	N/A	126	410	Once/Day ^(*)	Grab
Benzene	34030	N/A	N/A	N/A	0.005	Twice/week ^(*)	Grab

Footnotes:

- *1 Process stormwater is contaminated and is subject to Effluent Limitation Guidelines (see Statement of Basis for calculation). This facility also has coverage under the Multi-Sector General Permit for allowable "uncontaminated" stormwater discharges, not subject to ELG.
- *2 If discharge occurs
- *3 Colony forming units (cfu) per 100 ml.

OUTFALL 001

During the period beginning on the effective date of the permit and lasting through the expiration date of the permit, the permittee is **NOT authorized** to discharge process wastewater including process stormwater; sanitary wastewater, and reverse osmosis unit reject water via a series of evaporation ponds into an unammed arroyo, thence to Puerco River, an ephemeral waterbody Segment No. 20.6.4.97 of the Lower Colorado River Basin, from Outfall 001. The permittee shall take all reasonable steps to prevent a discharge. In the event event of emergency, the permittee shall be subject to the limitations and monitoring requirements specified below and in Part II.D:

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE MONITORING</u>	
	<u>30-DAY AVG MINIMUM</u>	<u>24-Hr. MINIMUM</u>
Whole Effluent Toxicity Testing (24 Hr. Static Non-Renewal) 1/		
<u>Daphnia pulex</u>	REPORT	REPORT

<u>EFFLUENT CHARACTERISTIC</u>	<u>MONITORING REQUIREMENTS</u>	
	<u>FREQUENCY</u>	<u>TYPE</u>
Whole Effluent Toxicity Testing (24 Hr. Static RNon-ewal) 1/		
<u>Daphnia pulex</u>	1/ 6 months	Grab

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.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment from Outfalls 001 prior to the receiving stream.

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

B. SCHEDULE OF COMPLIANCE

None, compliance with the terms and conditions of the permit shall start on the permit effective date.

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring information shall be on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part III.D.4 of this permit and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

1. Reporting periods shall end on the last day of the months March, June, September, and December.
2. The permittee is required to submit regular monthly reports as described above postmarked no later than the 28th day of the month following each reporting period.

3. NO DISCHARGE REPORTING

If there is no discharge from any outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

PART II - OTHER CONDITIONS

A. DISCHARGE REPORTING

Should any discharge occur, the permittee is required to sample within one hour of beginning of discharge for the pollutants listed in 40 CFR 122, Appendix D, Tables III and Table IV (See list below), plus flow, pH, hardness, TDS, and TSS and the results submitted to EPA and NMED/SWQB. Should the discharge continue for more than one day, additional samples and analyses results shall be submitted for each additional day.

Other Toxic Pollutants (Metals and Cyanide) and Total Phenols

Pollutant	MLL ug/l	Pollutant	MLL ug/l
Antimony, Total	60	Nickel, Total	0.5
Arsenic, Total	0.5	Selenium, Total	5
Beryllium, Total	0.5	Silver, Total	0.5
Cadmium, Total	1	Thallium, Total	0.5
Chromium, Total	10	Zinc, Total	20
Chromium (6+)	10	Cyanide, Total	10
Copper, Total	0.5	Phenols, Total	10
Lead, Total	0.5		
Mercury, Total*	0.0005		
	0.005		

Conventional and Nonconventional Pollutants Required to Be Tested by Existing Dischargers if Expected to be Present

Pollutant	MLL ug/l	Pollutant	MLL ug/l
Bromide		Sulfite	
Chlorine, Total Residual	33	Surfactants	
Color		Aluminum, Total	2.5
Fecal Coliform		Barium, Total	100
Fluoride		Boron, Total	100
Nitrate-Nitrite		Cobalt, Total	50
Nitrogen, Total Organic		Iron, Total	
Oil & Grease		Magnesium	
Phosphorus		Molybdenum, Total	10
Radioactivity		Manganese, Total	
Sulfate		Tin, Total	
Sulfide		Titanium, Total	

Footnotes:

*1 Default MQL for Mercury is 0.005 unless Part I of your permit requires the more sensitive Method 1631 (Oxidation / Purge and Trap / Cold vapor Atomic Fluorescence Spectrometry), then the MQL shall be 0.0005.

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR 136. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to the EPA Region 6 NPDES Permits Branch (6WQ P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

B. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), 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 new State of New Mexico water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(s)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

C. AFFIRMATIVE DEFENSE FOR EMERGENCY DISCHARGE

This is a "No Discharge" permit. The permittee shall take all reasonable steps to prevent a discharge. In case a discharge occurs due to emergency conditions, the permittee shall submit an affirmative defense which includes:

The cause of emergency conditions occurring;
The operating logs or relevant evidences which demonstrate that the facility was at the time being properly operated;
Documentation showing that all reasonable steps have been taken to minimize the discharge; and
Whether or not any flow reached the Puerco River.

D. WHOLE EFFLUENT TOXICITY TESTING (24-HOUR ACUTE NOEC FRESHWATER)

In the case of emergency discharge, the permittee shall collect a sample for evaluation of whole effluent toxicity.

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	001
REPORTED AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	100%
EFFLUENT DILUTION SERIES (%):	0%, 100%
SAMPLE TYPE:	Grab
TEST SPECIES/METHODS:	40 CFR Part 136

Daphnia pulex acute static non-renewal 24-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

- b. The LC₅₀ is defined as the effluent concentration which causes 50% or greater mortality at the end of the exposure period. Test failure is defined as a demonstration 50% or greater mortality at test completion (24 hours).
- c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.
- d. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.
- ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent).
- iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

The statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the LC₅₀ EPA-821-R-02-012 or the most recent update thereof.

c. Samples and Composites

- i. The permittee shall collect one grab composite sample from the outfall(s) listed at Item 1.a above.
- ii. The maximum holding time for any effluent sample shall not exceed 36 hours. The toxicity test must be initiated within 36 hours after the collection of grab sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.
- iii. The permittee must collect samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

3. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA-821-R-02-012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The

permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

- b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for review.
- c. The permittee shall report the following results of each valid toxicity test. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.
 - i. Daphnia pulex
 - (A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.
 - (B) Report the NOEC value for survival, Parameter No. TOM3D.
 - (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.
- d. If retests are required by NMED, enter the following codes:
 - i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

E. STORM WATER POLLUTION PREVENTION

Stormwater has been identified by the applicant/permittee as a component of the discharge through Outfall 001. This section applies to all stormwater discharges from the facility through permitted outfalls. The language below has been included in this permit to control stormwater from the facility subject to NPDES regulation:

1. The permittee shall prepare, implement, and maintain a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. The terms and conditions of the SWP3 shall be an enforceable Part of the permit.
2. A visual inspection of the facility shall be conducted and a report made annually as described in Paragraphs E.2.d and E.2.e below. The annual report shall be retained on site and available upon request.

The following conditions shall be included in the SWP3 for this facility.

- a. The permittee shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the facility; describe and ensure implementation of practices which will be used to reduce pollutants in storm water discharges from the facility; and assure compliance with the terms and conditions of this permit.
- b. The permittee must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s). The permittee must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the 3 years prior to the date you prepare or amend your SWPPP.

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.

- c. Where experience indicates a reasonable potential for equipment failure (e.g. a tank overflow or leakage), natural condition of (e.g. precipitation), or other circumstances which result in significant amounts of pollutants reaching surface waters, the SWP3 should include a prediction of the direction, rate of flow and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

d. The permittee shall maintain for a period of three years a record summarizing the results of the inspection and a certification that the facility is in compliance with the SWP3 and the permit, and identifying any incidents of noncompliance. The summary report should contain, at a minimum, the date and time of inspection, name of inspector(s), conditions found, and changes to be made to the SWP3.

e. The summary report and the following certification shall be signed and attached to the SWP3 and provided to the Environmental Protection Agency and the New Mexico Environment Department, Surface Water Quality Bureau upon request.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signatory requirements for the certification may be found in Part III, Section D.11 of this permit.

f. The permittee shall make available to the Agency, the NMED, and/or the USFWS, upon request, a copy of the SWP3 and any supporting documentation.

3. The following shall be included in the SWP3, if applicable.

a. The permittee shall utilize all reasonable methods to minimize any adverse impact on the drainage system including but not limited to:

- i. maintaining adequate road and driveway surfaces;
- ii. removing debris and accumulated solids from the drainage system;
and
- iii. cleaning up prior to the next storm event, any spill by sweeping, absorbent pads, or other appropriate methods.

b. All spilled product and other spilled wastes shall be immediately cleaned up and disposed of according to all applicable regulations, Spill Prevention and Control (SPC) plans or Spill Prevention Control and Countermeasures (SPCC) plans. Use of detergents, emulsifiers, or dispersants to clean up spilled product is prohibited except where necessary to comply with State or Federal safety regulations (i.e., requirement for non-slippery work surface). In all such cases, initial cleanup shall be done by physical removal and chemical usage shall be minimized.

- c. All equipment, parts, dumpsters, trash bins, petroleum products, chemical solvents, detergents, or other materials exposed to stormwater shall be maintained in a manner which prevents contamination of stormwater by pollutants.
- d. All waste fuel, lubricants, coolants, solvents, or other fluids used in repair or maintenance of vehicles or equipments shall be recycled or contained for proper disposal. Spills of these materials are to be cleaned up by dry means whenever possible.
- e. Stormwater Pollution Prevention Plan must be consistent with the requirements of the current Oil Pollution Prevention regulations.
- f. Prior to discharge of uncontaminated stormwater from a secondary containment area, the permittee will conduct a visual inspection of the containment area for a visible sheen, an odor associated within the tanked products, and/or a stain pattern within the contained area that is indicative of a spill or leak into that area. No dewatering of the area is allowed under the condition of this permit, if evidence exists of a spill or leak, unless the discharge will not exceed 50 mg/l TOC, 15 mg/l Oil and Grease, or having a pH less than 6.0 or greater than 9.0 standard units.
- g. The permittee shall assure compliance with all applicable regulations promulgated under 40 CFR Part 257. Management practices required under regulations found in this Part shall be referenced in the SWP3.
- h. The permittee shall amend the SWP3 whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.
- i. If the SWP3 proves to be ineffective in achieving the general objectives preventing the release of significant amounts of pollutants to water of the state, then the specific objectives and requirements of the SWP3 shall be subject to modification to incorporate revised SWP3 requirements.

PART III - STANDARD CONDITIONS FOR NPDES PERMITSA. GENERAL CONDITIONS1. INTRODUCTION

In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the "Act") as well as ALL applicable regulations.

2. DUTY TO COMPLY

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3. TOXIC POLLUTANTS

- a. Notwithstanding Part III.A.5, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.
- b. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4. DUTY TO REAPPLY

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR Part 122.6 and any subsequent amendments.

5. PERMIT FLEXIBILITY

This permit may be modified, revoked and reissued, or terminated for cause in accordance with 40 CFR 122.62-64. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

7. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

8. CRIMINAL AND CIVIL LIABILITY

Except as provided in permit conditions on "Bypassing" and "Upsets", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.

9. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

10. STATE LAWS

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

11. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

B. PROPER OPERATION AND MAINTENANCE1. NEED TO HALT OR REDUCE NOT A DEFENSE

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators or retention of inadequately treated effluent.

2. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

3. PROPER OPERATION AND MAINTENANCE

a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

4. BYPASS OF TREATMENT FACILITIESa. BYPASS NOT EXCEEDING LIMITATIONS

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.B.4.b. and 4.c.

b. NOTICE(1) ANTICIPATED BYPASS

If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) UNANTICIPATED BYPASS

The permittee shall, within 24 hours, submit notice of an unanticipated bypass as required in Part III.D.7.

c. PROHIBITION OF BYPASS

(1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property

damage;

- (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,
 - (c) The permittee submitted notices as required by Part III.B.4.b.
- (2) The Director may allow an anticipated bypass after considering its adverse effects, if the Director determines that it will meet the three conditions listed at Part III.B.4.c(1).

5. UPSET CONDITIONS

a. EFFECT OF AN UPSET

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part III.B.5.b. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. CONDITIONS NECESSARY FOR A DEMONSTRATION OF UPSET

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated;
- (3) The permittee submitted notice of the upset as required by Part III.D.7; and,
- (4) The permittee complied with any remedial measures required by Part III.B.2.

c. BURDEN OF PROOF

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. REMOVED SUBSTANCES

Unless otherwise authorized, solids, sewage sludges, filter backwash, or other pollutants removed in the course of treatment or wastewater control shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. PERCENT REMOVAL (PUBLICLY OWNED TREATMENT WORKS)

For publicly owned treatment works, the 30-day average (or Monthly Average) percent removal for Biochemical Oxygen Demand and Total Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR 133.103.

C. MONITORING AND RECORDS

1. INSPECTION AND ENTRY

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by the law to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

2. REPRESENTATIVE SAMPLING

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. RETENTION OF RECORDS

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

4. RECORD CONTENTS

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) and time(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

5. MONITORING PROCEDURES

- a. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
- b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.
- c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

6. FLOW MEASUREMENTS

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

D. REPORTING REQUIREMENTS

1. PLANNED CHANGES

a. INDUSTRIAL PERMITS

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b); or,
- (2) The alteration or addition could significantly change the nature or increase the quantity of

pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements listed at Part III.D.10.a.

b. MUNICIPAL PERMITS .

Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violation of the effluent limitations specified herein.

2. ANTICIPATED NONCOMPLIANCE

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. TRANSFERS

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. DISCHARGE MONITORING REPORTS AND OTHER REPORTS

Monitoring results must be reported on Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form. The permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA at the address below. Duplicate copies of DMR's and all other reports shall be submitted to the appropriate State agency(ies) at the following address(es):

EPA:

Compliance Assurance and Enforcement Division
Water Enforcement Branch (6EN-W)
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New Mexico:

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5. ADDITIONAL MONITORING BY THE PERMITTEE

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased monitoring frequency shall also be indicated on the DMR.

6. AVERAGING OF MEASUREMENTS

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

7. TWENTY-FOUR HOUR REPORTING

- a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall be provided within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:

- (1) A description of the noncompliance and its cause;

- (2) The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and,
 - (3) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.
 - b. The following shall be included as information which must be reported within 24 hours:
 - (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
 - (2) Any upset which exceeds any effluent limitation in the permit; and,
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part II (industrial permits only) of the permit to be reported within 24 hours.
 - c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
8. OTHER NONCOMPLIANCE

The permittee shall report all instances of noncompliance not reported under Parts III.D.4 and D.7 and Part I.B (for industrial permits only) at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.7.
9. OTHER INFORMATION

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.
10. CHANGES IN DISCHARGES OF TOXIC SUBSTANCES

All existing manufacturing, commercial, mining, and silvacultural permittees shall notify the Director as soon as it knows or has reason to believe:

 - a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitro-phenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
 - (4) The level established by the Director.
 - b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) Five hundred micrograms per liter (500 µg/L);
 - (2) One milligram per liter (1 mg/L) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
 - (4) The level established by the Director.
11. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Director shall be signed and certified.

- a. ALL PERMIT APPLICATIONS shall be signed as follows:
- (1) FOR A CORPORATION - by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or,
 - (b) The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - (2) FOR A PARTNERSHIP OR SOLE PROPRIETORSHIP - by a general partner or the proprietor, respectively.
 - (3) FOR A MUNICIPALITY, STATE, FEDERAL, OR OTHER PUBLIC AGENCY - by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (a) The chief executive officer of the agency, or
 - (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- b. ALL REPORTS required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- (1) The authorization is made in writing by a person described above;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,
 - (3) The written authorization is submitted to the Director.
- c. CERTIFICATION
Any person signing a document under this section shall make the following certification:
- "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

12. AVAILABILITY OF REPORTS

Except for applications, effluent data, permits, and other data specified in 40 CFR 122.7, any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

E. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS1. CRIMINALa. NEGLIGENT VIOLATIONS

The Act provides that any person who negligently violates permit conditions implementing Section 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

b. KNOWING VIOLATIONS

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

c. KNOWING ENDANGERMENT

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

d. FALSE STATEMENTS

The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both. (See Section 309.c.4 of the Clean Water Act)

2. CIVIL PENALTIES

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$27,500 per day for each violation.

3. ADMINISTRATIVE PENALTIES

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

a. CLASS I PENALTY

Not to exceed \$11,000 per violation nor shall the maximum amount exceed \$27,500.

b. CLASS II PENALTY

Not to exceed \$11,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$137,500.

F. DEFINITIONS

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

1. ACT means the Clean Water Act (33 U.S.C. 1251 et. seq.), as amended.

2. ADMINISTRATOR means the Administrator of the U.S. Environmental Protection Agency.

3. APPLICABLE EFFLUENT STANDARDS AND LIMITATIONS means all state and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards or performance, toxic effluent standards and prohibitions, and pretreatment standards.

4. APPLICABLE WATER QUALITY STANDARDS means all water quality standards to which a discharge is subject under the Act.
5. BYPASS means the intentional diversion of waste streams from any portion of a treatment facility.
6. DAILY DISCHARGE means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day. "Daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be arithmetic average (weighted by flow value) of all samples collected during that sampling day.
7. DAILY MAXIMUM discharge limitation means the highest allowable "daily discharge" during the calendar month.
8. DIRECTOR means the U.S. Environmental Protection Agency Regional Administrator or an authorized representative.
9. ENVIRONMENTAL PROTECTION AGENCY means the U.S. Environmental Protection Agency.
10. GRAB SAMPLE means an individual sample collected in less than 15 minutes.
11. INDUSTRIAL USER means a nondomestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly owned treatment works.
12. MONTHLY AVERAGE (also known as DAILY AVERAGE) discharge limitations means the highest allowable average of "daily discharge(s)" over a calendar month, calculated as the sum of all "daily discharge(s)" measured during a calendar month divided by the number of "daily discharge(s)" measured during that month. When the permit establishes daily average concentration effluent limitations or conditions, the daily average concentration means the arithmetic average (weighted by flow) of all "daily discharge(s)" of concentration determined during the calendar month where C = daily concentration, F = daily flow, and n = number of daily samples; daily average discharge =

$$\frac{C_1F_1 + C_2F_2 + \dots + C_nF_n}{F_1 + F_2 + \dots + F_n}$$
13. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the Act.
14. SEVERE PROPERTY DAMAGE means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
15. SEWAGE SLUDGE means the solids, residues, and precipitates separated from or created in sewage by the unit processes of a publicly owned treatment works. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff that are discharged to or otherwise enter a publicly owned treatment works.
16. TREATMENT WORKS means any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature to implement Section 201 of the Act, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances, extension, improvement, remodeling, additions, and alterations thereof.
17. UPSET means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

18. FOR FECAL COLIFORM BACTERIA, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads.
19. The term "MGD" shall mean million gallons per day.
20. The term "mg/L" shall mean milligrams per liter or parts per million (ppm).
21. The term "µg/L" shall mean micrograms per liter or parts per billion (ppb).
22. MUNICIPAL TERMS
 - a. 7-DAY AVERAGE or WEEKLY AVERAGE, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
 - b. 30-DAY AVERAGE or MONTHLY AVERAGE, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.
 - c. 24-HOUR COMPOSITE SAMPLE consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
 - d. 12-HOUR COMPOSITE SAMPLE consists of 12 effluent portions collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
 - e. 6-HOUR COMPOSITE SAMPLE consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
 - f. 3-HOUR COMPOSITE SAMPLE consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.