GW - 54

GENERAL CORRESPONDENCE

YEAR(S):

2000 - 1994

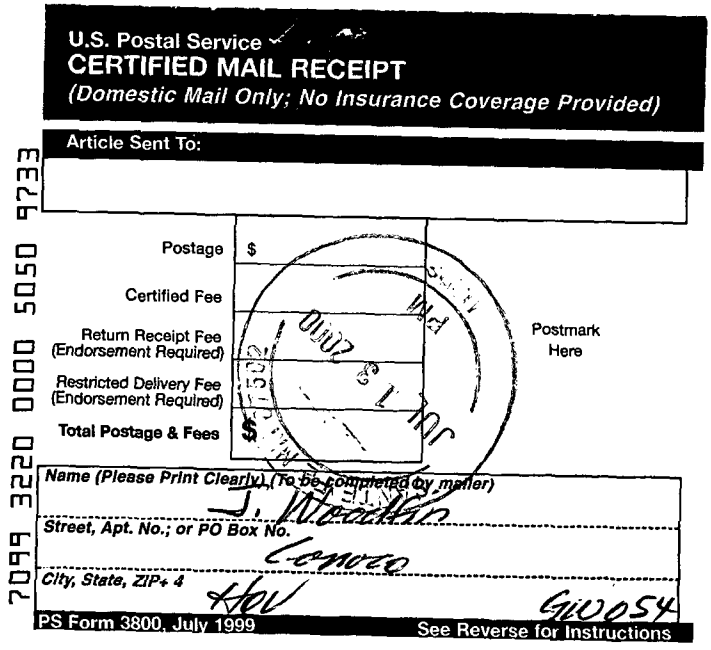
NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

July 11, 2000

CERTIFIED MAIL
RETURN RECEIPT NO. 5050 9733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Name (Please Print Clearly) (To be completed by mailer)
J. Woodfin
Street, Apt. No.; or PO Box No.
Conoco
City, State, ZIP+ 4
Hou
GW054
PS Form 3800, July 1999
See Reverse for Instructions

Ms. Joyce M. Woodfin
Conoco, Inc.
P.O. Box 2197 HU3036
Houston, Texas 77252

RE: Disposal of Sulfa Scrub
Wingate Plant (GW-54)
McKinley County, New Mexico

Dear Ms. Woodfin:

The New Mexico Oil Conservation Division (OCD) has completed a review of the Conoco, Inc. (Conoco) request, received on July 5, 2000, for disposal of 35 barrels of Sulfa Scrub. The requested site for disposal is Key Energy Disposal facility at Aztec, New Mexico. Based on the information provided, the Conoco disposal request is approved.

Please be advised that OCD approval does not relieve Conoco of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please feel free to call me at (505) 827-7156.

Sincerely,

W. Jack Ford, C.P.G.
Oil Conservation Division

xc: OCD Aztec Office

Joyce M. Woodfin
Environmental Consultant
Engineering and Compliance
Natural Gas & Gas Products Department

Conoco Inc.
600 N. Dairy Ashford Rd.
P.O. Box 2197, HU3036
Houston, TX 77252
Telephone: (281) 293-4498
Facsimile: (281) 293-1214

June 1, 2000

Certified Mail No. 7099 3220 0005 0587 1316
Return Receipt Requested

Mr. Denny Foust
District 3
Oil Conservation Division
1000 Rio Brazos Road,
Aztec, New Mexico 88240

Re: Disposal of Sulfa Scrub
Wingate Fractionator
Conoco Inc., Natural Gas & Gas Products Department

Dear Mr. Foust

Conoco Inc. submits the following information in accordance with OCD discharge plan requirements for disposing of oilfield wastes. The Wingate Fractionator generated approximately 35 barrels of Sulfa Scrub which was used for treating natural gasoline. Conoco Inc. has chosen Key Energy as the disposal location.

Generator Name:	Conoco Inc., Natural Gas & Gas Products Department Wingate Fractionator
Location:	68 El Paso Circle Gallup, New Mexico 87301
Waste Hauler Name:	Key Energy
Waste Stream:	Sulfa Scrub
Approximate Quantity:	35 BBLs.
Disposal site:	Key Disposal
Disposal Location:	345 County Road 3500 Aztec, New Mexico 87410

Conoco Inc. appreciates your cooperation in this matter. If you have any questions concerning this information, please call Mr. Louis E. Ferrari at (505) 863-1028 or myself at (281) 293-4498. Thank you for your assistance.

Sincerely,

Joyce M. Woodfin

cc: Jack Ford
Environmental Bureau
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Certified Mail No. 7099 3220 0005 0587 1323
Return Receipt Requested

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-138
Revised March 17, 1999

Submit Original
Plus 1 Copy
to Appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☐ Verbal Approval Received: Yes ☐ No ☐	4. Generator 5. Originating Site
2. Management Facility Destination	6. Transporter
3. Address of Facility Operator	8. State
7. Location of Material (Street Address or ULSTR)	

9. Circle One:

A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.

B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved

All transporters must certify the wastes delivered are only those consigned for transport.

BRIEF DESCRIPTION OF MATERIAL:

Estimated Volume _____cy Known Volume (to be entered by the operator at the end of the haul) _____cy

SIGNATURE _____ TITLE: _____ DATE: _____
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: _____ TELEPHONE NO. _____

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____

APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Conoco Inc. Wingate Fractionator #68 El Paso Circle Gallup NM 87301	Key Disposal #345 Co. Rd. 3500 Aztec NM.
3. Originating Site (name): Conoco Wingate Fractionator #68 El Paso Circle Gallup NM. 87301 Attach list of originating sites as appropriate	**Location of the Waste (Street address &/or ULSTR):**
4. Source and Description of Waste Sulfa Scrub HSW 0710L used to treat natural Gasoline.	

I, Louis E. Ferrari (Print Name) representative for:

Conoco Inc. do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1988, regulatory determination, the above described waste is: (Check appropriate classification)

X **EXEMPT** oilfield waste

___ **NON-EXEMPT** oilfield waste which is non-hazardous by characteristic analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For **NON-EXEMPT** waste only the following documentation is attached (check appropriate items):

___ MSDS Information
___ RCRA Hazardous Waste Analysis
___ Chain of Custody
___ Other (description):

Name (Original Signature): Louis E. Ferrari

Title: Process Foreman

Date: 06/27/00

PETROLITE

MATERIAL SAFETY DATA SHEET

Petrolite Corporation

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SULFA-SCRUB ® HSW0700F

MANUFACTURER/SUPPLIER	EMERGENCY TELEPHONE NUMBERS (24 HOUR):
Petrolite Corporation 369 Marshall Ave St. Louis, Mo 63119-1897 CUSTOMER CARE: 1-800-872-1916 8:00am-5:00pm Monday-Friday (CST)	Chemtrec: 800-424-9300
Preparer: Irv Knepper	Date of Last Revision: 01/02/97
Title: Sr. Product Manager	Supercedes MSDS Dated: 12/28/96

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	HAZARDOUS INGREDIENTS	CAS #	WT/WT %
01	Methanol	67-56-1	5-10
02	Ethanolamine	141-43-5	1-5
03	Alkanolamine/aldehyde condensate	Trade Secret	30-60

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-STEL	COMPANY TLV-TWA	SKIN
01	200 ppm	250 ppm	200 ppm	N.E.	N.E.	Y
02	3ppm	6ppm	3ppm	N.E.	N.E.	N
03	N.E.	N.E.	N.E.	N.E.	N.E.	N

LEGEND: N.A.: Not Applicable; N.E.: Not Established; N.D.: Not Determined; (C): Ceiling Limit; Y: Skin absorption is significant to overall exposure; N: Skin absorption is not significant

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE: Amber liquid ODOR: Amine odor

SIGNIFICANT HAZARDS:

FLAMMABLE liquid and vapor. Severely irritating to the eyes and skin. Irritating to the respiratory tract. Contains a material which can be absorbed through the skin. Contains a material which can cause visual disturbances. Contains a material which can cause nervous system effects. Contains a material which may cause embryo/fetotoxicity based on animal data.

POTENTIAL HEALTH EFFECTS

EYE CONTACT:
Direct eye contact may cause severe irritation or burns. If not immediately removed, may cause permanent eye damage.

SKIN CONTACT:
Direct skin contact may cause severe irritation. Prolonged and repeated skin contact may cause dermatitis, drying and defatting due to the solvent properties. Prolonged and repeated skin contact may cause moderate to severe skin irritation and possibly burns. A component(s) of

Product Name: SULFA-SCRUB ® HSW0700P	Date of Last Revision: 01/02/97

SECTION 3 - HAZARDS IDENTIFICATION - continued

this product can be absorbed through the skin upon direct contact, possibly resulting in toxic effects similar to those of inhalation. Repeated skin contact may produce an allergic sensitization. In such cases, incidental (minor) contact may cause allergic rashes.

INHALATION:
Inhalation of high concentrations may cause headache, nausea, giddiness and shortness of breath. Prolonged, repeated, or high exposures to the vapor of a component(s) of this product may cause visual disturbances and eye damage. Vapors are intensely irritating to the mucous membranes, and may be harmful or even fatal if inhaled at high concentrations. Severe cases may result in severe and delayed lung irritation and pulmonary edema.

INGESTION:
Harmful if swallowed. May cause severe gastrointestinal disturbance with headache, nausea, vomiting and diarrhea. May be readily absorbed through the gastrointestinal tract. May result in irritation or burns to the mouth and digestive system. Effects of ingestion are similar to those of inhalation.

CHRONIC EFFECTS:
Ingestion or inhalation of high concentrations of a component(s) of this product may result in visual disturbances. In extreme cases, may cause temporary or permanent blindness, metabolic acidosis, and central nervous system depression which can possibly lead to death. Studies have shown that inhalation of a component in this product has produced teratogenic effects in laboratory animals. Animal studies have shown that a component(s) of this product is associated with adverse effects of embryo/fetotoxicity at non-maternally toxic dosage levels.

CARCINOGENICITY:
No known information.

SECTION 4 - FIRST AID MEASURES

FIRST AID PROCEDURES

EYES:
If material gets into eyes, flush with water immediately for 15 minutes. Consult a physician.

SKIN:
In case of contact, immediately flush skin with plenty of water while removing contaminated clothing and shoes. If rash, irritation or burns develop, consult a physician. Launder clothing before reuse.

INHALATION:
If inhaled, remove to fresh air. Administer oxygen if necessary. Consult a physician if symptoms persist or exposure was severe.

INGESTION:
If ingested, DO NOT induce vomiting. If conscious, drink 8-10 oz. of water promptly. Call a physician immediately.

NOTE TO PHYSICIAN

NOTE TO PHYSICIAN:
Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsion may be necessary.

SECTION 5 - FIRE-FIGHTING MEASURES

Flashpoint and Method:	52 C (126 F) SPCC ASTM D-3828	Autoignition Temperature: N.D.
Flammable Limits:	LEL: 6.0 %	UEL: 36.5 %

HAZARDOUS COMBUSTION PRODUCTS:
Oxides of nitrogen. Carbon monoxide. Carbon dioxide.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Flammable liquid. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flash back.

EXTINGUISHING MEDIA: Alcohol Foam, CO2, Dry Chemical, Foam, Water Fog

Product Name: SULFA-SCRUB ® HSW0700P	Date of Last Revision: 01/02/97

SECTION 5 - FIRE-FIGHTING MEASURES - continued

FIRE-FIGHTING INTRUCTIONS:
Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. Flammable. Cool fire-exposed containers using water spray.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

LEAKS OR SPILLS:
Use personal protective equipment as necessary. Absorb with suitable chemical absorbent. Dispose of material in accordance with all federal, state and local regulations. Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container.

OTHER:
No known information.

Refer to Section 15 for regulatory reporting requirements in the event of an accidental release.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE:
Flammable liquid. Avoid heat, sparks and open flames. Avoid breathing vapor and contact with eyes, skin and clothing. Keep container closed when not in use. Chemical residue may remain in emptied container. Do not reuse empty containers without commercial cleaning or reconditioning. Use in well ventilated area.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:
General ventilation should be provided to maintain ambient concentrations below nuisance levels. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE):
Chemical resistant gloves and chemical goggles should be used to prevent skin and eye contact.

RESPIRATORY PROTECTION:
When concentrations exceed the exposure limits specified, use of a NIOSH approved supplied air respirator with full facepiece is recommended. Where the protection factor of the respirator may be exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Solubility in Water: Soluble	pH @ 5.0% 75/25 Isopropanol/Water: 9.9 - 11.4
Density @ 60 F (16 C): 8.99 lb/USgal	Evaporation Rate: Is slower than Ether
Boiling Point ASTM D-86: N.D.	Vapor Density: Is heavier than air
Vapor Pressure: N.D.	Physical State: Liquid

Specific Gravity: 1.08

SECTION 10 - STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:
Keep away from strong oxidizing agents, heat and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS:
No known information.

Product Name: SULFA-SCRUB ® HSW0700F	Date of Last Revision: 01/02/97

SECTION 10 - STABILITY AND REACTIVITY - continued

SECTION 11 - TOXICOLOGICAL INFORMATION

PRODUCT TOXICOLOGICAL INFORMATION

No known information
OTHER:
A component(s) of this product has tested positive as a human skin sensitizer. A component(s) of this product has tested positive in an Ames study. However, follow-up "in-vivo" studies had negative results.

COMPONENT TOXICOLOGICAL INFORMATION:

Component	LD ∞ Dermal	LD ∞ Oral	LC ∞ Inhalation
Methanol	15800 mg/kg-RB	5628 mg/kg-R	64000 ppm/4H-R
Ethanolamine	1000 mg/kg-RB	1720-2740 mg/kg-R	N.D.
Alkanolamine/aldehyde condensate	>2000 mg/kg-RB	1788 mg/kg-R	0.62 mg/l/4H-R

LEGEND: R = Rat; RB = Rabbit; M = Mouse; GP = Guinea Pig

SKIN AND EYE SCORE: 1 = No Effect / Slight Irritant; 2 = Moderate Irritant; 3 = Strong Irritant; 4 = Skin: Extreme Irritant ; Eye: Extreme Irritant/Corrosive

SECTION 12 - ECOLOGICAL INFORMATION

An ECOTOX ®Report is available for this product. Please contact Petrolite Corporation for a copy of this report.

OTHER:
No known information.

SECTION 13 - DISPOSAL INFORMATION

DISPOSAL INFORMATION:
Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with applicable regulations. Note that these regulations may also apply to empty containers, liners, and rinsate. Processing, use, dilution, or contamination of this product may cause its physical and chemical properties to change.

SECTION 14 - TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (D.O.T.) INFORMATION

Proper Shipping Name: Flammable liquid, n.o.s. (contains Methanol and Monoethanolamine) 3 UN1993 III

D.O.T. Emergency Response Guide: 128	Marine Pollutant: N.A.

Product Name: SULFA-SCRUB ® HSW0700P	Date of Last Revision: 01/02/97

SECTION 14 – TRANSPORTATION INFORMATION – continued

INTERNATIONAL MARITIME ORGANIZATION (I.M.O.) INFORMATION

Proper Shipping Name: Flammable liquid, n.o.s., (contains Methanol and Monoethanolamine) 3.3 UN1993 III

IMDG Code Page: 3345	EMS Number: 3-06
MFAG Table Number 1: 306	MFAG Table Number 2: N.A.
Marine Pollutant: N.A.	

SECTION 15 – REGULATORY INFORMATION

CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES:
The Petrolite product contains the following components that are subject to the release reporting requirements of the Comprehensive Environmental Response, Compensation, and Liability Act. Also listed is the Reportable Quantity (RQ) in pounds for each such component, and the amount of product, in gallons, that must be released or spilled in order to exceed the RQ.

Chemical Name	CAS Number	RQ #	RQ, GAL.
Methanol	67-56-1	5,000	7,416

SARA TITLE III:
This Petrolite product contains the following components that are identified as extremely hazardous substances by the Superfund Amendments and Reauthorization Act. Also listed is the Reportable Quantity (RQ) in pounds for each such component, and the amount of product, in gallons, that must be released or spilled in order to exceed the RQ; and the Threshold Planning Quantity (TPQ) in pounds for each such component, and the amount of product in gallons that contains the TPQ.

Chemical Name	CAS Number	RQ (lbs.)	RQ (gal.)	TPQ (lbs.)	TPQ (gal.)

No SARA Extremely Hazardous Substances are present in this material.

Petrolite has determined that under Sections 311/312 of SARA Title III, the following hazard categories apply to this product:

Hazard: Immediate Health, Chronic Health, Fire

SARA SECTION 313:
This Petrolite product contains the following components that are subject to the annual toxic release inventory reporting requirements of Section 313 of SARA Title III. Also listed is the concentration of the component, in weight percent, in the product. A component is not listed if its concentration is less than the de minimis level.

Chemical Name	CAS Number	Weight Percent
Methanol	67-56-1	7.5 %

TOXIC SUBSTANCES CONTROL ACT (TSCA):
This product or its components, if a mixture, are listed on the TSCA inventory.

This Petrolite product contains the following components that are subject to the reporting requirements of TSCA Section 12(b) if exported from the United States:

Chemical Name	CAS Number

No TSCA 12(b) chemicals are present in the product.

SIGNIFICANT NEW USE RULES (SNUR):
This product does not contain any components that are subject to a Significant New Use Rule (SNUR).

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

Product Name: SULPA-SCRUB ® HSW0700P	Date of Last Revision: 01/02/97

SECTION 15 - REGULATORY INFORMATION - continued

Chemical Name	CAS Number
Water	7732-18-5

SECTION 16 - OTHER INFORMATION

NFPA HAZARD CLASSIFICATIONS:
Health: 3 Flammability: 2 Reactivity: 0 Special: COR

REVISION HISTORY:
03/27/96 updated sect. 11 toxicology, new base format, update sect. 8 resp prot
10/21/96 new format
11/96 updated RQ's, sect. 15

File 431

The information and recommendations contained hereon are believed to be accurate and reliable as of the date issued. However, we do not warrant their accuracy or reliability.

We only warrant to you, but no other persons, that the product referenced herein shall conform to our quality assurance specifications for the product on the date of shipment to you. WE EXPRESSLY DISCLAIM ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Any technical advice, information or recommendation given to you is given gratis without any warranty whatsoever as to the advice, information or recommendation given or results obtained.

You shall assume all risks and shall be solely responsible for the results obtained from the storage, handling or use of the product and any information or recommendation regarding the product, whether alone or in combination with other substances.

UNDER NO CIRCUMSTANCES SHALL WE BE LIABLE FOR ANY ECONOMIC, CONSEQUENTIAL (INCLUDING LOST PROFITS OR SAVINGS) OR INCIDENTAL DAMAGES, EVEN IF WE ARE INFORMED OF THEIR POSSIBLITY, EXEMPLARY OR PUNITIVE DAMAGES, REGARDLESS OF THE FORM OR ACTION, WHETHER IN CONTRACT OR TORT, INCLUDING OUR SOLE OR JOINT NEGLIGENCE AND STRICT LIABILITY.

THIS MSDS PRODUCED BY PETROLITE CORPORATION, ST. LOUIS, MO.

iml

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

Louis Ferrari
Conoco, Inc.
#68 El Paso Circle
Gallup, NM 87301

November 3,2000

Mr. Ferrari:

Enclosed please find the reports for the samples received by our laboratory for analysis on October 10, 2000.

If you have any questions about the results of these analyses, please don't hesitate to call at your convenience.

Thank you for choosing IML for your analytical needs!

Sincerely,

Sharon Williams
Organic Analyst/IML-Farmington

Enclosure

xc: File

iml Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

CONOCO, INC.
WINGATE PLANT

Case Narrative

On October 10, 2000, two water samples for were submitted to Inter-Mountain Laboratories - Farmington for analysis. The parameters performed on the samples are indicated on the accompanying Chain of Custody.

It is the policy of this laboratory to employ, whenever possible, preparatory and analytical methods which have been approved by regulatory agencies. The methods used in the analysis of the samples reported herein are found in: EPA: "Methods for Chemical Analysis of Water and Wastes (MCAWW)" – EPA/600/4-79-020 – March 1983, "Methods for the Determination of Metals in Environmental Samples", Supplement I-600/R-94-111 – May, 1994, SM- "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF, 18th Edition, 1992.

Quality control data appear at the end of the analytical report and may be identified by title. If there are any questions regarding the information presented in this report package, please feel free to contact us at your convenience.

Sincerely,

Sharon Williams
Organic Analyst/IML-Farmington

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

Client: Conoco, Inc. Gallup
Project: Wingate Plant
Sample ID: East Evap Pond
Lab ID: 0300W04417
Matrix: Water
Condition: Intact

Date Received: 10/10/00
Date Reported: 11/03/00
Date Sampled: 10/10/00
Time Sampled: 0830

Parameter	Analytical Result	Units		Units	PQL	Method	Analysis Date	Time	Init.
GENERAL PARAMETERS									
PH	8.9	s.u.			0.1	EPA 150.1	10/10/00	1500	WL
Electrical Conductivity	75,000	µmhos/cm			10	EPA 120.1	10/10/00	1500	WL
Solids - Total Dissolved	53,800	mg/L			10	EPA 160.1	10/12/00	0905	JP
Cyanide	<0.01	mg/L			0.01	SM 4500-CN E	10/25/00	1600	WL
Nitrogen - Nitrate/Nitrite	0.35	mg/L			0.05	EPA 353.2	10/11/00	0930	KA
Alkalinity (CaCO3)	198	mg/L			1	EPA 310.1	10/10/00	1300	KA
Hardness (CaCO3)	5,090	mg/L			1	EPA 200.7	11/01/00	1537	WL
MAJOR ANIONS									
Bicarbonate (HCO3)	178	mg/L	2.91	meq/L	1	EPA 310.1	10/10/00	1300	KA
Carbonate (CO3)	32	mg/L	1.05	meq/L	1	EPA 310.1	10/10/00	1300	KA
Hydroxide (OH)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	10/10/00	1300	KA
Bromide (Br)	<5	mg/L	<0.01	meq/L	5	EPA 300.0	10/20/00	1227	WL
Chloride	26,700	mg/L	753	meq/L	100	EPA 300.0	10/20/00	1227	WL
Fluoride	40	mg/L	1.99	meq/L	10	EPA 300.0	10/20/00	1227	WL
Sulfate	6,500	mg/L	136	meq/L	500	EPA 300.0	10/20/00	1227	WL
MAJOR CATIONS									
Calcium	1,020	mg/L	50.9	meq/L	0.2	EPA 200.7	11/01/00	1537	WL
Magnesium	618	mg/L	50.8	meq/L	0.2	EPA 200.7	11/01/00	1537	WL
Potassium	183	mg/L	4.68	meq/L	0.2	EPA 200.7	11/01/00	1537	WL
Sodium	14,500	mg/L	631	meq/L	0.2	EPA 200.7	11/01/00	1537	WL

Reference: EPA - "Methods for Chemical Analysis of Water and Wastes (MCAWW)" - EPA/600/4-79-020 - March, 1983.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,18th Edition, 1992.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By: _____

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

Client: Conoco, Inc. Gallup
Project: Wingate Plant
Sample ID: East Evap Pond
Lab ID: 0300W04417
Matrix: Water
Condition: Intact

Date Received: 10/10/00
Date Reported: 11/03/00
Date Sampled: 10/10/00
Time Sampled: 0830

Parameter	Analytical Result	Units	Units	PQL	Method	Analysis Date	Time	Init.
TOTAL METALS								
Arsenic	<0.005	mg/L		0.005	SM 3114B	10/20/00	1400	EJ
Barium	0.08	mg/L		0.01	EPA 200.7	10/25/00	1545	WL
Cadmium	0.013	mg/L		0.005	EPA 200.7	10/25/00	1545	WL
Chromium	<0.01	mg/L		0.01	EPA 200.7	10/25/00	1545	WL
Lead	<0.005	mg/L		0.005	EPA 200.9	10/21/00	0830	SW
Mercury	<0.001	mg/L		0.001	EPA 245.1	10/26/00	1600	EJ
Selenium	<0.005	mg/L		0.005	SM 3114B	10/21/00	1315	EJ
Silica	21.8	mg/L		0.1	EPA 200.7	10/25/00	1545	WL
Silver	<0.01	mg/L		0.01	EPA 200.7	10/25/00	1545	WL

Reference: SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,19th Edition, 1995.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By: _____

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

VOLATILES

EPA Method 624

Client:	**Conoco, Inc.**		
Project:	Wingate Plant	Date Reported:	11/03/00
Sample ID:	East Evap Pond	Date Sampled:	10/10/00
Laboratory ID:	0300W04417	Date Received:	10/10/00
Sample Matrix:	Water	Date Analyzed:	10/11/00

Parameter	Result	Reporting Limit	Units
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethylene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Dichloromethane	ND	3.0	ug/L
1,2 Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichlorpropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Methylene Chloride	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene (TCE)	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Vinyl Chloride	ND	2.0	ug/L

Reported By: _____ Reviewed: _____

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

BASE NEUTRALS & ACID EXTRACTABLES

EPA Method 625 (page1)

Client:	Conoco, Inc.		
Project:	Wingate Plant	Date Reported:	11/03/00
Sample ID:	East Evap Pond	Date Sampled:	10/10/00
Laboratory ID:	0300W04417	Date Received:	10/10/00
Sample Matrix:	Water	Date Analyzed:	10/19/00

Parameter	Result	Reporting Limit	Units
Acenaphthene	ND	10	ug/L
Acenapthylene	ND	10	ug/L
Aniline	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzidine	ND	20	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(g,h,i)perylene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzoic Acid	ND	50	ug/L
Benzyl Alcohol	ND	20	ug/L
bis(2-Chloroethoxy)methane	ND	10	ug/L
bis(2-Chloroethyl)ether	ND	10	ug/L
bis(2-Chloroisopropyl)ether	ND	10	ug/L
bis(2-ethylhexyl)phthalate	ND	10	ug/L
4-Bromophenyl-phenylether	ND	10	ug/L
Butylbenzylphthalate	ND	10	ug/L
4-Chloroaniline	ND	20	ug/L
4-Chloro-3-methylphenol	ND	20	ug/L
3-Chloronaphthalene	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
4-Chlorophenyl-phenylether	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,6-Dichlorophenol	ND	10	ug/L
Diethylphthalate	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L

Inter-Mountain Laboratories, Inc.
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2506 West Main Street, Farmington, NM 87401

BASE NEUTRALS & ACID EXTRACTABLES / EPA METHOD 625 (page 2)

Wingate Plant-East Evap Pond

Parameter	Result	Reporting Limit	Units
4,6-Dinitro-2-methylphenol	ND	50	ug/L
2,4-Dinitrophenol	ND	50	ug/L
Di-n-octylphthalate	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
Hexachlorocyclopentadiene	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Isophorone	ND	20	ug/L
2-Methylnaphthalene	ND	20	ug/L
2-Methylphenol	ND	20	ug/L
4-Methylphenol	ND	20	ug/L
Naphthalene	ND	10	ug/L
2-Nitroaniline	ND	50	ug/L
3-Nitroaniline	ND	50	ug/L
4-Nitroaniline	ND	20	ug/L
Nitrobenzene	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
N-Nitrosodimethylamine	ND	20	ug/L
N-Nitrosodi-n-propylamine	ND	10	ug/L
N-Nitrosodiphenylamine(1)	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Phenol	ND	10	ug/L
Pyrene	ND	10	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichloropheneol	ND	10	ug/L

Reported By: _____

Reviewed: _____

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

Client: Conoco, Inc. Gallup
Project: Wingate Plant
Sample ID: West Evap Pond
Lab ID: 0300W04418
Matrix: Water
Condition: Intact

Date Received: 10/10/00
Date Reported: 11/03/00
Date Sampled: 10/10/00
Time Sampled: 0830

Parameter	Analytical Result	Units		Units	PQL	Method	Analysis Date	Time	Init.
GENERAL PARAMETERS									
PH	7.9	s.u.			0.1	EPA 150.1	10/10/00	1500	WL
Electrical Conductivity	193,000	µmhos/cm			10	EPA 120.1	10/10/00	1500	WL
Solids - Total Dissolved	299,000	mg/L			10	EPA 160.1	10/12/00	0905	JP
Cyanide	<0.01	mg/L			0.01	SM 4500-CN E	10/25/00	1600	WL
Nitrogen - Nitrate/Nitrite	0.43	mg/L			0.05	EPA 353.2	10/11/00	0930	KA
Alkalinity (CaCO3)	860	mg/L			1	EPA 310.1	10/10/00	1300	KA
Hardness (CaCO3)	57,600	mg/L			1	EPA 200.7	11/01/00	1539	WL
MAJOR ANIONS									
Bicarbonate (HCO3)	1,050	mg/L	17.2	meq/L	1	EPA 310.1	10/10/00	1300	KA
Carbonate (CO3)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	10/10/00	1300	KA
Hydroxide (OH)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	10/10/00	1300	KA
Bromide (Br)	37	mg/L	0.46	meq/L	5	EPA 300.0	10/20/00	1227	WL
Chloride	75,200	mg/L	2,120	meq/L	100	EPA 300.0	10/20/00	1227	WL
Fluoride	150	mg/L	8.02	meq/L	10	EPA 300.0	10/20/00	1227	WL
Sulfate	34,000	mg/L	708	meq/L	500	EPA 300.0	10/20/00	1227	WL
MAJOR CATIONS									
Calcium	98.2	mg/L	4.90	meq/L	0.2	EPA 200.7	11/01/00	1539	WL
Magnesium	13,900	mg/L	1,150	meq/L	0.2	EPA 200.7	11/01/00	1539	WL
Potassium	1,940	mg/L	49.6	meq/L	0.2	EPA 200.7	11/01/00	1539	WL
Sodium	64,700	mg/L	2,810	meq/L	0.2	EPA 200.7	11/01/00	1539	WL

Reference: EPA - "Methods for Chemical Analysis of Water and Wastes (MCAWW)" - EPA/600/4-79-020 - March, 1983.
SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,18th Edition, 1992.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By:

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

Client: Conoco, Inc. Gallup
Project: Wingate Plant
Sample ID: West Evap Pond
Lab ID: 0300W04418
Matrix: Water
Condition: Intact

Date Received: 10/10/00
Date Reported: 11/03/00
Date Sampled: 10/10/00
Time Sampled: 0830

Parameter	Analytical Result	Units	Units	PQL	Method	Analysis Date	Time	Init.
TOTAL METALS								
Arsenic	<0.005	mg/L		0.005	SM 3114B	10/20/00	1400	EJ
Barium	0.01	mg/L		0.01	EPA 200.7	10/25/00	1548	WL
Cadmium	0.021	mg/L		0.005	EPA 200.7	10/25/00	1548	WL
Chromium	<0.01	mg/L		0.01	EPA 200.7	10/25/00	1548	WL
Lead	0.005	mg/L		0.005	EPA 200.9	10/21/00	0830	SW
Mercury	0.002	mg/L		0.001	EPA 245.1	10/26/00	1600	EJ
Selenium	<0.005	mg/L		0.005	SM 3114B	10/21/00	1315	EJ
Silica	7.1	mg/L		0.1	EPA 200.7	10/25/00	1545	WL
Silver	0.06	mg/L		0.01	EPA 200.7	10/25/00	1548	WL

Reference: SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,19th Edition, 1995.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By: _____

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

VOLATILES

EPA Method 624

Client:	**Conoco, Inc.**		
Project:	Wingate Plant	Date Reported:	11/03/00
Sample ID:	West Evap Pond	Date Sampled:	10/10/00
Laboratory ID:	0300W04418	Date Received:	10/10/00
Sample Matrix:	Water	Date Analyzed:	10/11/00

Parameter	Result	Reporting Limit	Units
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Carbon Tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethylene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Dichloromethane	ND	3.0	ug/L
1,2 Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichlorpropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Methylene Chloride	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene (TCE)	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Vinyl Chloride	ND	2.0	ug/L

Reported By: _____ Reviewed: _____

imL Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182 2506 West Main Street, Farmington, NM 87401

BASE NEUTRALS & ACID EXTRACTABLES

EPA Method 625 (page1)

Client:	**Conoco, Inc.**		
Project:	Wingate Plant	Date Reported:	11/03/00
Sample ID:	West Evap Pond	Date Sampled:	10/10/00
Laboratory ID:	0300W04418	Date Received:	10/10/00
Sample Matrix:	Water	Date Analyzed:	10/19/00

Parameter	Result	Reporting Limit	Units
Acenaphthene	ND	100	ug/L
Acenapthylene	ND	100	ug/L
Aniline	ND	100	ug/L
Anthracene	ND	100	ug/L
Benzidine	ND	200	ug/L
Benzo(a)anthracene	ND	100	ug/L
Benzo(a)pyrene	ND	100	ug/L
Benzo(b)fluoranthene	ND	100	ug/L
Benzo(g,h,i)perylene	ND	100	ug/L
Benzo(k)fluoranthene	ND	100	ug/L
Benzoic Acid	ND	500	ug/L
Benzyl Alcohol	ND	200	ug/L
bis(2-Chloroethoxy)methane	ND	100	ug/L
bis(2-Chloroethyl)ether	ND	100	ug/L
bis(2-Chloroisopropyl)ether	ND	100	ug/L
bis(2-ethylhexyl)phthalate	ND	100	ug/L
4-Bromophenyl-phenylether	ND	100	ug/L
Butylbenzylphthalate	ND	100	ug/L
4-Chloroaniline	ND	200	ug/L
4-Chloro-3-methylphenol	ND	200	ug/L
3-Chloronaphthalene	ND	100	ug/L
2-Chlorophenol	ND	100	ug/L
4-Chlorophenyl-phenylether	ND	100	ug/L
Chrysene	ND	100	ug/L
Dibenz(a,h)anthracene	ND	100	ug/L
Dibenzofuran	ND	100	ug/L
Di-n-butyl phthalate	ND	100	ug/L
1,2-Dichlorobenzene	ND	100	ug/L
1,3-Dichlorobenzene	ND	100	ug/L
1,4-Dichlorobenzene	ND	100	ug/L
2,4-Dichlorophenol	ND	100	ug/L
2,6-Dichlorophenol	ND	100	ug/L
Diethylphthalate	ND	100	ug/L
2,4-Dimethylphenol	ND	100	ug/L
Dimethyl phthalate	ND	100	ug/L

imL Inter-Mountain Laboratories, Inc.
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BASE NEUTRALS & ACID EXTRACTABLES / EPA METHOD 625 (page 2)

Wingate Plant-West Evap Pond

Parameter	Result	Reporting Limit	Units
4,6-Dinitro-2-methylphenol	ND	500	ug/L
2,4-Dinitrophenol	ND	500	ug/L
Di-n-octylphthalate	ND	100	ug/L
2,4-Dinitrotoluene	ND	100	ug/L
Fluoranthene	ND	100	ug/L
Fluorene	ND	100	ug/L
Hexachlorobenzene	ND	100	ug/L
Hexachlorobutadiene	ND	100	ug/L
Hexachlorocyclopentadiene	ND	100	ug/L
Hexachloroethane	ND	100	ug/L
Indeno(1,2,3-cd)pyrene	ND	100	ug/L
Isophorone	ND	200	ug/L
2-Methylnaphthalene	ND	200	ug/L
2-Methylphenol	ND	200	ug/L
4-Methylphenol	ND	200	ug/L
Naphthalene	ND	100	ug/L
2-Nitroaniline	ND	500	ug/L
3-Nitroaniline	ND	500	ug/L
4-Nitroaniline	ND	200	ug/L
Nitrobenzene	ND	100	ug/L
2-Nitrophenol	ND	100	ug/L
4-Nitrophenol	ND	500	ug/L
N-Nitrosodimethylamine	ND	200	ug/L
N-Nitrosodi-n-propylamine	ND	100	ug/L
N-Nitrosodiphenylamine(1)	ND	100	ug/L
Pentachlorophenol	ND	500	ug/L
Phenanthrene	ND	100	ug/L
Phenol	ND	100	ug/L
Pyrene	ND	100	ug/L
1,2,4-Trichlorobenzene	ND	100	ug/L
2,4,5-Trichlorophenol	ND	100	ug/L
2,4,6-Trichloropheneol	ND	100	ug/L

Reported By:_____ Reviewed:_____

imd Inter-Mountain Laboratories, Inc.
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QUALITY CONTROL / QUALITY ASSURANCE

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

Quality Control / Quality Assurance

Client:	**Conoco, Inc.**	Date Reported:	03/23/99
Project:	Wingate	Date Analyzed:	03/19/99
Sample Matrix:	Water	Date Received:	03/15/99

625

Spike Compound	Sample Amount	Spike Amount	Spike Recovery %	Dup Spike Recovery %	RPD
Phenol	<10	200	38	45	16
2-Chlorophenol	<10	200	66	70	6
1,4-Dichlorobenzene	<10	100	57	61	7
n-Nitro-di-n-propylamine	<10	100	73	72	1
1,2,4-Trichlorobenzene	<10	100	69	71	3
4-Chloro-3 methylphenol	<20	200	76	78	3
Acenaphthene	<10	100	69	74	7
4-Nitrophenol	<10	200	38	45	18
2,4-Dinitrotoluene	<10	100	72	77	7
Pentachlorophenol	<10	200	73	75	2
Pyrene	<10	100	102	95	7

Reported by _____

Reviewed by _____

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

Quality Control / Quality Assurance

Spike Analysis / Blank Analysis

TOTAL METALS

Client: **Conoco, Inc.**
Project: Wingate Plant
Sample Matrix: Water

Date Reported: 11/03/00
Date Analyzed: 10/25/00
Date Received: 10/10/00

Spike Analysis

Parameter	Spike Result (mg/L)	Sample Result (mg/L)	Spike Added (mg/L)	Percent Recovery
Arsenic	0.038	<0.005	0.040	**95%**
Barium	0.97	<0.01	1.000	**97%**
Cadmium	1.000	<0.001	1.000	**100%**
Chromium	0.09	<0.01	0.10	**91%**
Lead	0.024	<0.005	0.025	**97%**
Mercury	0.002	<0.001	0.002	**93%**
Selenium	0.045	<0.001	0.040	**113%**
Silver	0.09	<0.01	0.10	**94%**

Method Blank Analysis

Parameter	Result	Detection Limit	Units
Arsenic	**ND**	0.005	mg/L
Barium	**ND**	0.01	mg/L
Cadmium	**ND**	0.001	mg/L
Chromium	**ND**	0.01	mg/L
Lead	**ND**	0.005	mg/L
Mercury	**ND**	0.001	mg/L
Selenium	**ND**	0.001	mg/L
Silver	**ND**	0.01	mg/L

Reference: Method 200.2: Acid Digestion for Water and Waste Water, SW-846, Revison 1, July, 1992.

Comments:

Reported by _____

Reviewed by _____

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

Quality Control / Quality Assurance

KNOWN ANALYSIS
TOTAL METALS

Client:	**Conoco, Inc.**	Date Reported:	11/03/00
Project:	Wingate Plant	Date Analyzed:	10/25/00
Sample Matrix:	Water	Date Received:	10/10/00

Known Analysis

Parameter	Found Result	Known Result	Percent Recovery	Units
Arsenic	0.041	0.040	**103%**	mg/L
Barium	1.960	2.000	**96%**	mg/L
Cadmium	1.95	2.00	**98%**	mg/L
Chromium	1.95	2.00	**98%**	mg/L
Lead	0.047	0.050	**95%**	mg/L
Mercury	0.002	0.002	**95%**	mg/L
Selenium	0.043	0.040	**108%**	mg/L
Silver	0.24	0.25	**97%**	mg/L

Reference: Method 200.2: Acid Digestion for Water and Waste Water, SW-846, Revision 1, July, 1992.

Comments:

Reported by _____

Reviewed by _____

Joyce M. Woodfin
Environmental Consultant
Natural Gas & Gas Products

Conoco Inc
Humber 3036
P.O. Box 2197
Houston, TX 77252-2197
(281) 293-4498
Fax: (281) 293-1214

Certified Mail No: Z 413 451 644
Return Receipt Requested

January 13, 2000

Mr. Jack Ford
Environmental Bureau
Energy, Minerals & Natural Resources Department
Oil Conservation Division
P.O. Box 6429
Santa Fe, NM 87505

Re: Discharge Plan GW-054 Compliance
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Mr. Ford:

Please find attached the results from the annual evaporation pond sampling event and the annual groundwater monitoring well sampling event at Conoco's NGGP's Wingate facility.

The ponds were sampled pursuant to Discharge Plan GW-54 Approval Condition #17 (November 21, 1997) and analyzed by Inter-Mountain Laboratories, Farmington New Mexico. The monitoring wells were sampled according to our agreement and follow-up letter dated June 23, 1999 reducing the sampling of MW-1, MW-2, MW-3 and WMW-4 to an annual basis. Monitoring wells were sampled on September 22, 1999 and analyzed by NEL Laboratories, Las Vegas, Nevada. Water level measurements were taken on December 28, 1999.

If you have any questions or require any additional information, please contact Joyce Woodfin at (281) 293-4498. Thank you for your time and consideration.

Sincerely,

Joyce Woodfin

Joyce M. Woodfin

cc: Chuck White – Wingate
File: ENV 215-5-6

iml

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

OCT 18 1999

Date: 10/13/99

Client: Conoco, Inc. Bloomfield

Lab ID: 0399W04866 - 67

Project: Wingate Plant

Dear Client:

The samples were received for analysis at Inter-Mountain Laboratories (IML), Farmington, New Mexico. Enclosed are the results of these analyses.

Comment:

Analytical results were obtained by approved methods. Sample analyses were obtained within the method specific holding times. Practical Quantitation Limits (PQL's) are based on method requirements, and any dilutions necessary to maintain proper method response without matrix interference.

If you have any questions, please call me at (505) 326-4737.

William Lipps
IML-Farmington, NM

jml

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

Client: Conoco, Inc. Gallup
Project: Wingate Plant
Sample ID: East Evap. Pond
Lab ID: 0399W04866
Matrix: Water
Condition: Cool/Intact

Date Received: 09/28/99
Date Reported: 10/13/99
Date Sampled: 09/27/99
Time Sampled: 1000

Parameter	Analytical Result	Units		Units	PQL	Method	Analysis Date	Analysis Time	Analysis Init.
GENERAL PARAMETERS									
PH	8.9	s.u.			0.1	EPA 150.1	09/28/99	1630	JP
Electrical Conductivity	46,400	µmhos/cm			10	EPA 120.1	09/28/99	1630	JP
Solids - Total Dissolved	31,800	mg/L			10	EPA 160.1	09/30/99	0800	GD
Cyanide (Total) - RFA	<0.01	mg/L			0.01	EPA 335.3	10/11/99	0800	AP
Alkalinity (CaCO3)	209	mg/L			1	EPA 310.1	10/04/99	0900	JP
Hardness (CaCO3)	1,750	mg/L			0.2	Calculation	10/11/99	1500	BJ
MAJOR ANIONS									
Bicarbonate (HCO3)	116	mg/L	1.90	meq/L	1	EPA 310.1	10/04/99	0900	JP
Carbonate (CO3)	68	mg/L	2.28	meq/L	1	EPA 310.1	10/04/99	0900	JP
Hydroxide (OH)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	10/04/99	0900	JP
Bromide (Br)	<10+	mg/L	<0.01	meq/L	10	EPA 300.0	10/12/99	0800	BJ
Chloride	15,300	mg/L	432	meq/L	1	EPA 300.0	10/12/99	0800	BJ
Fluoride	0.74	mg/L	0.04	meq/L	0.05	EPA 340.2	09/30/99	0809	JP
Nitrogen - Nitrate	<0.05	mg/L	<0.01	meq/L	0.05	EPA 353.2	10/05/99	1620	WL
Sulfate	3,790	mg/L	79.1	meq/L	5	EPA 300.0	10/12/99	0800	BJ
MAJOR CATIONS									
Calcium	67.3	mg/L	3.36	meq/L	0.2	EPA 200.7	10/13/99	1100	WL
Magnesium	384	mg/L	31.6	meq/L	0.2	EPA 200.7	10/13/99	1100	WL
Potassium	97.6	mg/L	2.50	meq/L	0.2	EPA 200.7	10/13/99	1100	WL
Sodium	9,860	mg/L	429	meq/L	0.2	EPA 200.7	10/13/99	1100	WL
CATION/ANION BALANCE QC INFORMATION									
Anion Sum			515	meq/L	0.1	Calculation	10/12/99	1100	BJ
Cation Sum			466	meq/L	0.1	Calculation	10/12/99	1100	BJ
Cation/Anion Balance			4.96	%	N/A	N/A	10/12/99	1100	BJ

+ - High PQL due to matrix interference

Reference: EPA - "Methods for Chemical Analysis of Water and Wastes (MCAWW)" - EPA/600/4-79-020 - March, 1983.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By: _____

imL

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

Client: Conoco, Inc. Gallup
Project: Wingate Plant
Sample ID: East Evap. Pond
Lab ID: 0399W04866
Matrix: Water
Condition: Cool/Intact

Date Received: 09/28/99
Date Reported: 10/13/99
Date Sampled: 09/27/99
Time Sampled: 1000

Parameter	Analytical Result	Units	Units	PQL	Method	Analysis Date	Time	Init.
TOTAL METALS								
Arsenic	<0.005	mg/L		0.005	SM 3114B	10/13/99	1020	HR
Barium	0.09	mg/L		0.01	EPA 200.7	10/12/99	1235	WL
Cadmium	<0.001	mg/L		0.001	EPA 200.9	11/01/99	0900	SW
Chromium	<0.01	mg/L		0.01	EPA 200.7	10/12/99	1235	WL
Lead	<0.005	mg/L		0.005	EPA 200.9	10/11/99	1420	SW
Mercury	<0.001	mg/L		0.001	EPA 245.1	10/12/99	1450	HR
Selenium	<0.005	mg/L		0.005	SM 3114B	10/08/99	1325	HR
Silica	11.8	mg/L		0.1	EPA 200.7	10/12/99	1235	WL
Silver	<0.01	mg/L		0.01	EPA 200.7	10/12/99	1235	WL

Reference: SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,19th Edition, 1995.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By: _____

jml

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

Client: Conoco, Inc. Gallup
Project: Wingate Plant
Sample ID: West Evap. Pond
Lab ID: 0399W04867
Matrix: Water
Condition: Cool/Intact

Date Received: 09/28/99
Date Reported: 10/13/99
Date Sampled: 09/27/99
Time Sampled: 1000

Parameter	Analytical Result	Units		Units	PQL	Method	Analysis Date	Time	Init.
GENERAL PARAMETERS									
PH	7.9	s.u.			0.1	EPA 150.1	09/28/99	1630	JP
Electrical Conductivity	216,000	µmhos/cm			10	EPA 120.1	09/28/99	1630	JP
Solids - Total Dissolved	247,000	mg/L			10	EPA 160.1	09/30/99	0800	GD
Cyanide (Total) - RFA	<0.01	mg/L			0.01	EPA 335.3	10/11/99	0800	AP
Alkalinity (CaCO3)	528	mg/L			1	EPA 310.1	10/04/99	0900	JP
Hardness (CaCO3)	21,500	mg/L			0.2	Calculation	10/11/99	1500	BJ
MAJOR ANIONS									
Bicarbonate (HCO3)	644	mg/L	10.6	meq/L	1	EPA 310.1	10/04/99	0900	JP
Carbonate (CO3)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	10/04/99	0900	JP
Hydroxide (OH)	<1	mg/L	<0.01	meq/L	1	EPA 310.1	10/04/99	0900	JP
Bromide (Br)	<10+	mg/L	<0.01	meq/L	10	EPA 300.0	10/12/99	0800	BJ
Chloride	127,000	mg/L	3,590	meq/L	1	EPA 300.0	10/12/99	0800	BJ
Fluoride	0.77	mg/L	0.04	meq/L	0.05	EPA 340.2	09/30/99	0809	JP
Nitrogen - Nitrate	<0.05	mg/L	<0.01	meq/L	0.05	EPA 353.2	10/05/99	1620	WL
Sulfate	23,500	mg/L	490	meq/L	5	EPA 300.0	10/12/99	0800	BJ
MAJOR CATIONS									
Calcium	734	mg/L	36.6	meq/L	0.2	EPA 200.7	10/13/99	1100	WL
Magnesium	4,780	mg/L	393	meq/L	0.2	EPA 200.7	10/13/99	1100	WL
Potassium	720	mg/L	18.4	meq/L	0.2	EPA 200.7	10/13/99	1100	WL
Sodium	77,200	mg/L	3,360	meq/L	0.2	EPA 200.7	10/13/99	1100	WL
CATION/ANION BALANCE QC INFORMATION									
Anion Sum			4,090	meq/L	0.1	Calculation	10/12/99	1100	BJ
Cation Sum			3,800	meq/L	0.1	Calculation	10/12/99	1100	BJ
Cation/Anion Balance			3.66	%	N/A	N/A	10/12/99	1100	BJ

+ - High PQL due to matrix interference

Reference: EPA - "Methods for Chemical Analysis of Water and Wastes (MCAWW)" - EPA/600/4-79-020 - March, 1983.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By: _____

imL

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

Client: Conoco, Inc. Gallup
Project: Wingate Plant
Sample ID: West Evap. Pond
Lab ID: 0399W04867
Matrix: Water
Condition: Cool/Intact

Date Received: 09/28/99
Date Reported: 10/13/99
Date Sampled: 09/27/99
Time Sampled: 1000

Parameter	Analytical Result	Units	Units	PQL	Method	Analysis Date	Time	Init.
TOTAL METALS								
Arsenic	0.007	mg/L		0.005	SM 3114B	10/13/99	1020	HR
Barium	0.06	mg/L		0.01	EPA 200.7	10/12/99	1238	WL
Cadmium	0.002	mg/L		0.001	EPA 200.9	11/01/99	0900	SW
Chromium	<0.01	mg/L		0.01	EPA 200.7	10/12/99	1238	WL
Lead	0.022	mg/L		0.005	EPA 200.9	10/11/99	1420	SW
Mercury	<0.001	mg/L		0.001	EPA 245.1	10/12/99	1450	HR
Selenium	<0.005	mg/L		0.005	SM 3114B	10/08/99	1325	HR
Silica	6.9	mg/L		0.1	EPA 200.7	10/12/99	1238	WL
Silver	<0.01	mg/L		0.01	EPA 200.7	10/12/99	1238	WL

Reference: SM - "Standard Methods for the Examination of Water and Wastewater", APHA-AWWA-WEF,19th Edition, 1995.
EPA - "Methods for the Determination of Metals in Environmental Samples" - Supplement I - 600/R-94-111 - May, 1994.

Reviewed By: _____

iml

Inter•Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

EPA METHOD 624
VOLATILE ORGANIC COMPOUNDS USING GC/MS
Method Blank Analysis

Sample ID:	Method Blank	Date Reported:	10/12/99
Laboratory ID:	V3MB99-280	Date Extracted:	NA
Sample Matrix:	Water	Date Analyzed:	10/07/99

Parameter	Analytical Result	Detection Limit	Units
1,1,1-Trichloroethane	ND	5	µg/L
1,1,2,2-Tetrachloroethane	ND	5	µg/L
1,1,2-Trichloroethane	ND	5	µg/L
1,1-Dichloroethane	ND	5	µg/L
1,1-Dichloroethene	ND	5	µg/L
1,2-Dichlorobenzene	ND	5	µg/L
1,2-Dichloroethane	ND	5	µg/L
1,2-Dichloropropane	ND	5	µg/L
1,3-Dichlorobenzene	ND	5	µg/L
1,4-Dichlorobenzene	ND	5	µg/L
2-Chloroethylvinyl ether	ND	5	µg/L
Benzene	ND	5	µg/L
Bromodichloromethane	ND	5	µg/L
Bromoform	ND	5	µg/L
Bromomethane	ND	5	µg/L
Carbon tetrachloride	ND	5	µg/L
Chlorobenzene	ND	5	µg/L
Chloroethane	ND	5	µg/L
Chloroform	ND	5	µg/L
Chloromethane	ND	5	µg/L
cis-1,3-Dichloropropene	ND	5	µg/L
Dibromochloromethane	ND	5	µg/L
Ethyl benzene	ND	5	µg/L
Methylene chloride	ND	20	µg/L
Tetrachloroethene (PCE)	ND	5	µg/L
Toluene	ND	5	µg/L
trans-1,2-Dichloroethene	ND	5	µg/L
trans-1,3-Dichloropropene	ND	5	µg/L
Trichloroethene (TCE)	ND	5	µg/L
Trichlorofluoromethane	ND	5	µg/L
Vinyl chloride	ND	5	µg/L

ND - Compound not detected at stated Detection Limit.

Surrogate Recovery

Method 624	%	Limits
Dibromofluoromethane	102	86 - 118
1,2-Dichloroethane-d4	97	80 - 120
Toluene-d8	88	88 - 110
4-Bromoflourobenzene	97	86 - 115

Reference:
Method 624, Volatile Organic Compounds using GC/MS. 40 CFR July 1992, Pt. 136, App. A

Analyst: [signature] **Reviewed:** [signature]

imL

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

EPA METHOD 624
VOLATILE ORGANIC COMPOUNDS USING GC/MS
Blank Spike/Blank Spike Duplicate

Sample ID: Blank Spike/Duplicate
Laboratory ID: V3BSD99-280
Sample Matrix: Water

Date Reported: 10/12/99
Date Extracted: NA
Date Analyzed: 10/07/99

Parameter	Analytical Result µg/L	Spike Added µg/L	Spike Results µg/L	Spike Recovery %	Duplicate Results µg/L	Duplicate Recovery %	Relative Difference %RSD
1,1,1-Trichloroethane	ND	50	63	126	60	120	5
1,1,2,2-Tetrachloroethane	ND	50	67	133	65	129	3
1,1,2-Trichloroethane	ND	50	64	129	65	130	1
1,1-Dichloroethane	ND	50	61	121	58	116	5
1,1-Dichloroethene	ND	50	46	92	44	87	5
1,2-Dichlorobenzene	ND	50	52	103	47	95	8
1,2-Dichloroethane	ND	50	67	134	65	130	3
1,2-Dichloropropane	ND	50	59	117	55	111	6
1,3-Dichlorobenzene	ND	50	49	97	45	91	7
1,4-Dichlorobenzene	ND	50	51	101	47	93	8
2-Chloroethylvinyl ether	ND	100	121	121	120	120	1
Benzene	ND	50	54	108	52	104	4
Bromodichloromethane	ND	50	67	135	64	128	5
Bromoform	ND	50	66	131	63	126	4
Bromomethane	ND	50	24	48	23	46	5
Carbon tetrachloride	ND	50	60	120	59	119	1
Chlorobenzene	ND	50	52	103	47	94	9
Chloroethane	ND	50	28	56	26	52	8
Chloroform	ND	50	64	127	61	122	4
Chloromethane	ND	50	9	17	10	20	18
cis-1,3-Dichloropropene	ND	50	63	126	60	120	4
Dibromochloromethane	ND	50	65	131	64	128	2
Ethyl benzene	ND	50	53	106	49	98	7
Methylene chloride	ND	50	55	109	52	105	4
Tetrachloroethene (PCE)	ND	50	56	111	52	104	7
Toluene	ND	50	57	113	53	107	6
trans-1,2-Dichloroethene	ND	50	53	106	51	103	3
trans-1,3-Dichloropropene	ND	50	58	117	55	109	7
Trichloroethene (TCE)	ND	50	55	111	52	105	6
Trichlorofluoromethane	ND	50	38	75	36	72	4
Vinyl chloride	ND	50	13	26	13	26	0

ND - Compound not detected at stated Detection Limit.

Surrogate Recovery

Method 624	%	Dup %	Limits
Dibromofluoromethane	107	107	86 - 118
1,2-Dichloroethane-d4	115	118	80 - 120
Toluene-d8	90	92	88 - 110
4-Bromoflourobenzene	102	102	86 - 115

Reference:
Method 624, Volatile Organic Compounds using GC/MS. 40 CFR July 1992, Pt. 136, App. A

Analyst

Reviewed

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

EPA METHOD 624
VOLATILE ORGANIC COMPOUNDS USING GC/MS

Client:	**Conoco**	Date Reported:	10/12/99
Sample ID:	E. Pond	Date Sampled:	09/27/99
Project ID:	Wingate Plant	Date Received:	09/28/99
Laboratory ID:	0399W04866	Date Extracted:	NA
Sample Matrix:	Water	Date Analyzed:	10/07/99

Parameter	Analytical Result	Detection Limit	Units
1,1,1-Trichloroethane	ND	5	µg/L
1,1,2,2-Tetrachloroethane	ND	5	µg/L
1,1,2-Trichloroethane	ND	5	µg/L
1,1-Dichloroethane	ND	5	µg/L
1,1-Dichloroethene	ND	5	µg/L
1,2-Dichlorobenzene	ND	5	µg/L
1,2-Dichloroethane	ND	5	µg/L
1,2-Dichloropropane	ND	5	µg/L
1,3-Dichlorobenzene	ND	5	µg/L
1,4-Dichlorobenzene	ND	5	µg/L
2-Chloroethylvinyl ether	ND	5	µg/L
Benzene	ND	5	µg/L
Bromodichloromethane	ND	5	µg/L
Bromoform	ND	5	µg/L
Bromomethane	ND	5	µg/L
Carbon tetrachloride	ND	5	µg/L
Chlorobenzene	ND	5	µg/L
Chloroethane	ND	5	µg/L
Chloroform	ND	5	µg/L
Chloromethane	ND	5	µg/L
cis-1,3-Dichloropropene	ND	5	µg/L
Dibromochloromethane	ND	5	µg/L
Ethyl benzene	ND	5	µg/L
Methylene chloride	ND	20	µg/L
Tetrachloroethene (PCE)	ND	5	µg/L
Toluene	ND	5	µg/L
trans-1,2-Dichloroethene	ND	5	µg/L
trans-1,3-Dichloropropene	ND	5	µg/L
Trichloroethene (TCE)	ND	5	µg/L
Trichlorofluoromethane	ND	5	µg/L
Vinyl chloride	ND	5	µg/L

ND - Compound not detected at stated Detection Limit.

Surrogate Recovery

Method 624	%	Limits
Dibromofluoromethane	111	86 - 118
1,2-Dichloroethane-d4	117	80 - 120
Toluene-d8	93	88 - 110
4-Bromoflourobenzene	105	86 - 115

Reference:
Method 624, Volatile Organic Compounds using GC/MS. 40 CFR July 1992, Pt. 136, App. A

Analyst

Reviewed

imi
Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

EPA METHOD 624
VOLATILE ORGANIC COMPOUNDS USING GC/MS

Client:	**Conoco**	Date Reported:	10/12/99
Sample ID:	W. Pond	Date Sampled:	09/27/99
Project ID:	Wingate Plant	Date Received:	09/28/99
Laboratory ID:	0399W04867	Date Extracted:	NA
Sample Matrix:	Water	Date Analyzed:	10/07/99

Parameter	Analytical Result	Detection Limit	Units
1,1,1-Trichloroethane	ND	5	µg/L
1,1,2,2-Tetrachloroethane	ND	5	µg/L
1,1,2-Trichloroethane	ND	5	µg/L
1,1-Dichloroethane	ND	5	µg/L
1,1-Dichloroethene	ND	5	µg/L
1,2-Dichlorobenzene	ND	5	µg/L
1,2-Dichloroethane	ND	5	µg/L
1,2-Dichloropropane	ND	5	µg/L
1,3-Dichlorobenzene	ND	5	µg/L
1,4-Dichlorobenzene	ND	5	µg/L
2-Chloroethylvinyl ether	ND	5	µg/L
Benzene	ND	5	µg/L
Bromodichloromethane	ND	5	µg/L
Bromoform	ND	5	µg/L
Bromomethane	ND	5	µg/L
Carbon tetrachloride	ND	5	µg/L
Chlorobenzene	ND	5	µg/L
Chloroethane	ND	5	µg/L
Chloroform	ND	5	µg/L
Chloromethane	ND	5	µg/L
cis-1,3-Dichloropropene	ND	5	µg/L
Dibromochloromethane	ND	5	µg/L
Ethyl benzene	ND	5	µg/L
Methylene chloride	ND	20	µg/L
Tetrachloroethene (PCE)	ND	5	µg/L
Toluene	ND	5	µg/L
trans-1,2-Dichloroethene	ND	5	µg/L
trans-1,3-Dichloropropene	ND	5	µg/L
Trichloroethene (TCE)	ND	5	µg/L
Trichlorofluoromethane	ND	5	µg/L
Vinyl chloride	ND	5	µg/L

ND - Compound not detected at stated Detection Limit.

Surrogate Recovery

Method 624	%	Limits
Dibromofluoromethane	111	86 - 118
1,2-Dichloroethane-d4	121	80 - 120
Toluene-d8	90	88 - 110
4-Bromoflourobenzene	97	86 - 115

Reference:
Method 624, Volatile Organic Compounds using GC/MS. 40 CFR July 1992, Pt. 136, App. A

Analyst

Reviewed

Inter-Mountain Laboratories, Inc.
Phone (505) 326-4737 Fax (505) 325-4182
2506 West Main Street, Farmington, NM 87401

EPA METHOD 625
GC/MS SEMI-VOLATILE COMPOUNDS
BASE/NEUTRAL/ACID EXTRACTABLES
Method Blank Analysis

Sample ID: Method Blank
Laboratory ID: MB99-273
Sample Matrix: Water

Date Reported: 10/12/99
Date Extracted: 09/30/99
Date Analyzed: 10/07/99

Parameter	Analytical Result	Detection Limit	Units
1,2,4-Trichlorobenzene	ND	10	µg/L
1,2-Dichlorobenzene	ND	10	µg/L
1,3-Dichlorobenzene	ND	10	µg/L
1,4-Dichlorobenzene	ND	10	µg/L
2,4,5-Trichlorophenol	ND	50	µg/L
2,4,6-Trichlorophenol	ND	10	µg/L
2,4-Dichlorophenol	ND	10	µg/L
2,4-Dimethylphenol	ND	10	µg/L
2,4-Dinitrophenol	ND	50	µg/L
2,4-Dinitrotoluene	ND	10	µg/L
2,6-Dinitrotoluene	ND	10	µg/L
2-Chloronaphthalene	ND	10	µg/L
2-Chlorophenol	ND	10	µg/L
2-Nitrophenol	ND	20	µg/L
3,3'-Dichlorobenzidine	ND	50	µg/L
4,6-Dinitro-2-methylphenol	ND	20	µg/L
4-Bromophenyl-phenylether	ND	10	µg/L
4-Chloro-3-methylphenol	ND	10	µg/L
4-Chlorophenyl-phenylether	ND	10	µg/L
4-Methylphenol	ND	10	µg/L
4-Nitrophenol	ND	50	µg/L
Acenaphthene	ND	10	µg/L
Acenaphthylene	ND	10	µg/L
Anthracene	ND	10	µg/L
Benzidine	ND	50	µg/L
Benzo[a]anthracene	ND	10	µg/L
Benzo[a]pyrene	ND	10	µg/L
Benzo[b]fluoranthene	ND	10	µg/L
Benzo[g,h,i]perylene	ND	20	µg/L
Benzo[k]fluoranthene	ND	10	µg/L
bis(2-Chloroethoxy)methane	ND	10	µg/L
bis(2-Chloroethyl)ether	ND	10	µg/L
bis(2-chloroisopropyl)ether	ND	10	µg/L
bis(2-Ethylhexyl)phthalate	ND	10	µg/L
Butylbenzylphthalate	ND	10	µg/L
Chrysene	ND	10	µg/L
Dibenz[a,h]anthracene	ND	20	µg/L
Diethylphthalate	ND	10	µg/L
Dimethylphthalate	ND	10	µg/L
Di-n-butylphthalate	ND	10	µg/L

jml

Inter-Mountain Laboratories, Inc.

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2506 West Main Street, Farmington, NM 87401

GC/MS SEMI-VOLATILE COMPOUNDS
BASE/NEUTRAL/ACID EXTRACTABLES
Blank Spike/Spike Duplicate Analysis

Sample ID: Blank Spike Duplicate
Laboratory ID: BSD99-273
Sample Matrix: Water

Date Reported: 10/12/99
Date Extracted: 09/30/99
Date Analyzed: 10/07/99

Parameter	Analytical Result ug/L	Spike Added ug/L	Spike Results ug/L	Spike Recovery %	Duplicate Results ug/L	Duplicate Recovery %	Relative Difference %RSD
1,2,4-Trichlorobenzene	ND	100	71	71	75	75	5
1,4-Dichlorobenzene	ND	100	66	66	68	68	3
2,4-Dinitrotoluene	ND	100	95	95	89	89	7
2-Chlorophenol	ND	200	158	79	159	80	1
4-Chloro-3-methylphenol	ND	200	173	87	179	90	3
4-Nitrophenol	ND	200	114	57	111	56	3
Acenaphthene	ND	100	97	97	95	95	2
N-Nitrosodi-n-propylamine	ND	100	125	125	122	122	2
Pentachlorophenol	ND	200	177	89	182	91	3
Phenol	ND	200	111	56	110	55	1
Pyrene	ND	100	113	113	112	112	1

ND - Compound not detected at stated Detection Limit.

QUALITY CONTROL:

Surrogate Recoveries	Spike %	Duplicate %	Water QC Limits
2-Fluorophenol	54	56	21 - 100
Phenol-d6	55	57	10 - 94
Nitrobenzene-d5	95	100	35 - 114
2-Fluorobiphenyl	77	78	43 - 116
2,4,6-Tribromophenol	74	77	10 - 123
Terphenyl-d14	97	96	33 - 141

Reference:

Method 625 - Base/Neutral and Acids, Methods for Organic Chemical Analysis of Municipal and Industrial Discharges, Federal Register, 40 CFR 136, Environmental Protection Agency, July 1, 1992

Analyst

Reviewed

jml

Inter-Mountain Laboratories, Inc.

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2506 West Main Street, Farmington, NM 87401

EPA METHOD 625
GC/MS SEMI-VOLATILE COMPOUNDS
BASE/NEUTRAL/ACID EXTRACTABLES

Client:	**Conoco**	Date Reported:	10/12/99
Sample ID:	E. Pond	Date Sampled:	09/27/99
Project ID:	Wingate Plant	Date Received:	09/28/99
Laboratory ID:	0399W04866	Date Extracted:	09/30/99
Sample Matrix:	Water	Date Analyzed:	10/07/99

Parameter	Analytical Result	Detection Limit	Units
1,2,4-Trichlorobenzene	ND	10	µg/L
1,2-Dichlorobenzene	ND	10	µg/L
1,3-Dichlorobenzene	ND	10	µg/L
1,4-Dichlorobenzene	ND	10	µg/L
2,4,5-Trichlorophenol	ND	50	µg/L
2,4,6-Trichlorophenol	ND	10	µg/L
2,4-Dichlorophenol	ND	10	µg/L
2,4-Dimethylphenol	ND	10	µg/L
2,4-Dinitrophenol	ND	50	µg/L
2,4-Dinitrotoluene	ND	10	µg/L
2,6-Dinitrotoluene	ND	10	µg/L
2-Chloronaphthalene	ND	10	µg/L
2-Chlorophenol	ND	10	µg/L
2-Nitrophenol	ND	20	µg/L
3,3'-Dichlorobenzidine	ND	50	µg/L
4,6-Dinitro-2-methylphenol	ND	20	µg/L
4-Bromophenyl-phenylether	ND	10	µg/L
4-Chloro-3-methylphenol	ND	10	µg/L
4-Chlorophenyl-phenylether	ND	10	µg/L
4-Methylphenol	ND	10	µg/L
4-Nitrophenol	ND	50	µg/L
Acenaphthene	ND	10	µg/L
Acenaphthylene	ND	10	µg/L
Anthracene	ND	10	µg/L
Benzidine	ND	50	µg/L
Benzo[a]anthracene	ND	10	µg/L
Benzo[a]pyrene	ND	10	µg/L
Benzo[b]fluoranthene	ND	10	µg/L
Benzo[g,h,i]perylene	ND	20	µg/L
Benzo[k]fluoranthene	ND	10	µg/L
bis(2-Chloroethoxy)methane	ND	10	µg/L
bis(2-Chloroethyl)ether	ND	10	µg/L
bis(2-chloroisopropyl)ether	ND	10	µg/L
bis(2-Ethylhexyl)phthalate	ND	10	µg/L
Butylbenzylphthalate	ND	10	µg/L
Chrysene	ND	10	µg/L
Dibenz[a,h]anthracene	ND	20	µg/L
Diethylphthalate	ND	10	µg/L
Dimethylphthalate	ND	10	µg/L
Di-n-butylphthalate	ND	10	µg/L

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

EPA METHOD 625
GC/MS SEMI-VOLATILE COMPOUNDS
BASE/NEUTRAL/ACID EXTRACTABLES

Client:	**Conoco**	Date Reported:	10/12/99
Sample ID:	E. Pond	Date Sampled:	09/27/99
Project ID:	Wingate Plant	Date Received:	09/28/99
Laboratory ID:	0399W04866	Date Extracted:	09/30/99
Sample Matrix:	Water	Date Analyzed:	10/07/99

Parameter	Analytical Result	Detection Limit	Units
Di-n-octylphthalate	ND	10	µg/L
Fluoranthene	ND	10	µg/L
Fluorene	ND	10	µg/L
Hexachlorobenzene	ND	10	µg/L
Hexachlorobutadiene	ND	10	µg/L
Hexachlorocyclopentadiene	ND	10	µg/L
Hexachloroethane	ND	20	µg/L
Indeno[1,2,3-cd]pyrene	ND	20	µg/L
Isophorone	ND	10	µg/L
Naphthalene	ND	10	µg/L
Nitrobenzene	ND	10	µg/L
N-nitrosodimethylamine	ND	50	µg/L
n-Nitroso-di-n-propylamine	ND	20	µg/L
n-Nitrosodiphenylamine	ND	20	µg/L
Pentachlorophenol	ND	50	µg/L
Phenanthrene	ND	10	µg/L
Phenol	ND	10	µg/L
Pyrene	ND	10	µg/L
Pyridine	ND	20	µg/L

ND - Compound not detected at stated Detection Limit.

QUALITY CONTROL:

Surrogate Recoveries	%	Water QC Limits
2-Fluorophenol	51	21 - 100
Phenol-d6	60	10 - 94
Nitrobenzene-d5	81	35 - 114
2-Fluorobiphenyl	59	43 - 116
2,4,6-Tribromophenol	78	10 - 123
Terphenyl-d14	71	33 - 141

Reference:

Method 625 - Base/Neutral and Acids, Methods for Organic Chemical Analysis of Municipal and Industrial Discharges, Federal Register, 40 CFR 136, Environmental Protection Agency, July 1, 1992

Analyst

Reviewed

imL

Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

EPA METHOD 625
GC/MS SEMI-VOLATILE COMPOUNDS
BASE/NEUTRAL/ACID EXTRACTABLES

Client:	**Conoco**	Date Reported:	10/12/99
Sample ID:	W. Pond	Date Sampled:	09/27/99
Project ID:	Wingate Plant	Date Received:	09/28/99
Laboratory ID:	0399W04867	Date Extracted:	09/30/99
Sample Matrix:	Water	Date Analyzed:	10/07/99

Parameter	Analytical Result	Detection Limit	Units
1,2,4-Trichlorobenzene	ND	10	µg/L
1,2-Dichlorobenzene	ND	10	µg/L
1,3-Dichlorobenzene	ND	10	µg/L
1,4-Dichlorobenzene	ND	10	µg/L
2,4,5-Trichlorophenol	ND	50	µg/L
2,4,6-Trichlorophenol	ND	10	µg/L
2,4-Dichlorophenol	ND	10	µg/L
2,4-Dimethylphenol	ND	10	µg/L
2,4-Dinitrophenol	ND	50	µg/L
2,4-Dinitrotoluene	ND	10	µg/L
2,6-Dinitrotoluene	ND	10	µg/L
2-Chloronaphthalene	ND	10	µg/L
2-Chlorophenol	ND	10	µg/L
2-Nitrophenol	ND	20	µg/L
3,3'-Dichlorobenzidine	ND	50	µg/L
4,6-Dinitro-2-methylphenol	ND	20	µg/L
4-Bromophenyl-phenylether	ND	10	µg/L
4-Chloro-3-methylphenol	ND	10	µg/L
4-Chlorophenyl-phenylether	ND	10	µg/L
4-Methylphenol	ND	10	µg/L
4-Nitrophenol	ND	50	µg/L
Acenaphthene	ND	10	µg/L
Acenaphthylene	ND	10	µg/L
Anthracene	ND	10	µg/L
Benzidine	ND	50	µg/L
Benzo[a]anthracene	ND	10	µg/L
Benzo[a]pyrene	ND	10	µg/L
Benzo[b]fluoranthene	ND	10	µg/L
Benzo[g,h,i]perylene	ND	20	µg/L
Benzo[k]fluoranthene	ND	10	µg/L
bis(2-Chloroethoxy)methane	ND	10	µg/L
bis(2-Chloroethyl)ether	ND	10	µg/L
bis(2-chloroisopropyl)ether	ND	10	µg/L
bis(2-Ethylhexyl)phthalate	ND	10	µg/L
Butylbenzylphthalate	ND	10	µg/L
Chrysene	ND	10	µg/L
Dibenz[a,h]anthracene	ND	20	µg/L
Diethylphthalate	ND	10	µg/L
Dimethylphthalate	ND	10	µg/L
Di-n-butylphthalate	ND	10	µg/L

jml

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2506 West Main Street, Farmington, NM 87401

EPA METHOD 625
GC/MS SEMI-VOLATILE COMPOUNDS
BASE/NEUTRAL/ACID EXTRACTABLES

Client:	**Conoco**	Date Reported:	10/12/99
Sample ID:	W. Pond	Date Sampled:	09/27/99
Project ID:	Wingate Plant	Date Received:	09/28/99
Laboratory ID:	0399W04867	Date Extracted:	09/30/99
Sample Matrix:	Water	Date Analyzed:	10/07/99

Parameter	Analytical Result	Detection Limit	Units
Di-n-octylphthalate	ND	10	µg/L
Fluoranthene	ND	10	µg/L
Fluorene	ND	10	µg/L
Hexachlorobenzene	ND	10	µg/L
Hexachlorobutadiene	ND	10	µg/L
Hexachlorocyclopentadiene	ND	10	µg/L
Hexachloroethane	ND	20	µg/L
Indeno[1,2,3-cd]pyrene	ND	20	µg/L
Isophorone	ND	10	µg/L
Naphthalene	ND	10	µg/L
Nitrobenzene	ND	10	µg/L
N-nitrosodimethylamine	ND	50	µg/L
n-Nitroso-di-n-propylamine	ND	20	µg/L
n-Nitrosodiphenylamine	ND	20	µg/L
Pentachlorophenol	ND	50	µg/L
Phenanthrene	ND	10	µg/L
Phenol	ND	10	µg/L
Pyrene	ND	10	µg/L
Pyridine	ND	20	µg/L

ND - Compound not detected at stated Detection Limit.

QUALITY CONTROL:

Surrogate Recoveries	%	Water QC Limits
2-Fluorophenol	67	21 - 100
Phenol-d6	91	10 - 94
Nitrobenzene-d5	97	35 - 114
2-Fluorobiphenyl	67	43 - 116
2,4,6-Tribromophenol	89	10 - 123
Terphenyl-d14	63	33 - 141

Reference:

Method 625 - Base/Neutral and Acids, Methods for Organic Chemical Analysis of Municipal and Industrial Discharges, Federal Register, 40 CFR 136, Environmental Protection Agency, July 1, 1992

Analyst **Reviewed**

Inter-Mountain Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Client/Project Name: Conoco Inc. Wingate TLT

Project Location: East Evap. Pond

Sampler: (Signature) D. Hart Han...

Chain of Custody Tape No.

ANALYSES / PARAMETERS

Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	As Per L. Lutz	Quote 980903			Remarks
625 Sian VOA #1	9/27/99	10:00	0399W04866	WATER		✓	✓			
625 Sian VOA #2	"	"								
Raw	"	"								Has. Del.
Cyanide	"	"								Cool & Intact
Nitrate	"	"								
Total M+	"	"								
624 VOA #1	"	"								
624 VOA #2	"	"								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
John R. Calert	9-28-99	3:28pm			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by laboratory: (Signature)	Date	Time
			Jean Clement	9/28/99	5:28

Inter-Mountain Laboratories, Inc.

☐ 555 Absaraka, Sheridan, Wyoming 82801, Telephone (307) 674-7506
☐ 1633 Terra Avenue, Sheridan, Wyoming 82801, Telephone (307) 672-8945
☐ 1701 Phillips Circle, Gillette, Wyoming 82718, Telephone (307) 682-8945
☑ 2506 West Main Street, Farmington, NM 87401, Telephone (505) 326-4737
☐ 11183 State Hwy. 30, College Station, TX 77845, Telephone (409) 776-8945

61607

Inter-Mountain Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Client/Project Name: Conoco Inc. WINGATE PLT.

Project Location: WEST B EVAP. POND

ANALYSES / PARAMETERS

Sampler: (Signature) D. Hat Hunter

Chain of Custody Tape No.

Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	As Per L.I.	9809030			Remarks
625 SEMI VOA #1	9/27/99	10:00	4867	WATER						
625 SEMI VOA #2	"	"								
RAW	"	"								
CYANIDE	"	"								Hand Del
Sulfide Pres/Nitrate	"	"								Cust Intact
TOTAL M4	"	"								
624 VOA #1	"	"								
624 VOA #2	"	"								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
John R. Calot	9-28-99	3:28pm.			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Relinquished by: (Signature)	Date	Time	Received by laboratory: (Signature)	Date	Time
			Dean Clemente	9/28/99	15:28

Inter-Mountain Laboratories, Inc.

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- ☐ 1633 Terra Avenue, Sheridan, Wyoming 82801, Telephone (307) 672-8945
- ☐ 1701 Phillips Circle, Gillette, Wyoming 82718, Telephone (307) 682-8945
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- ☐ 11183 State Hwy. 30, College Station, TX 77845, Telephone (409) 776-8945

61608

EL PASO ENERGY

January 4, 2000

Ms. Joyce Woodfin
Conoco, Inc.
P.O. Box 2197
Houston, TX 77252-2197

RE: Wingate Plant
Gallup, New Mexico
Annual Groundwater Sampling

Dear Ms. Woodfin:

Enclosed please find the above referenced analytical results for submittal to the New Mexico Oil Conservation Division (NMOCD). Groundwater samples were collected from one on-site monitoring well (WMW-4) and from three monitoring wells located off-site (MW-1through 3) on September 22, 1999. A duplicate sample was collected from MW-2.

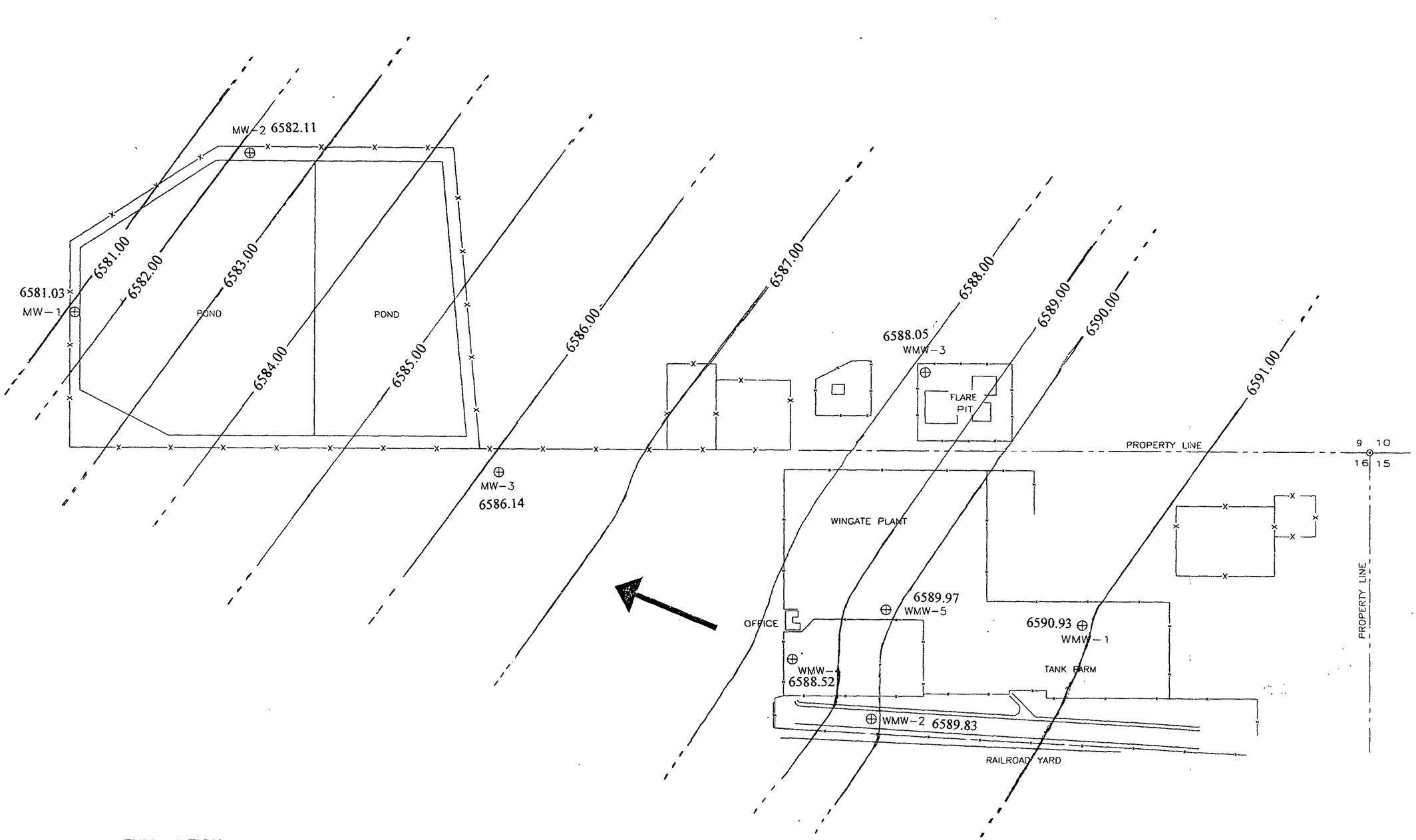
Water level measurements were taken on December 28, 1999. Groundwater elevations for all monitoring wells were calculated using the Top of Riser measurements, consistent with the data previously submitted to NMOCD. A new potentiometric surface map is enclosed for submittal to NMOCD, which includes the recently surveyed monitoring well WMW#5.

Please contact me at (713) 420-3827 if you have questions or comments.

Sincerely,

Gerry Garibay
Principal Environmental Scientist
Environmental Remediation Department

Enclosure



EXPLANATION

- RAILROAD
- FENCED AREA
- ⊕ APPROXIMATE MONITORING WELL LOCATION

0 400 800 1200

GRAPHIC SCALE

EL PASO ENERGY

WINGATE GROUNDWATER MONITORING WELL LOCATIONS

December 1999

ENV080

12/14/99

FM117 (7/90)

WINGATE PLANT
GROUNDWATER ELEVATIONS
December-99

WELL NUMBER	TOP OF RISER ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION
MW-1	6,584.66	3.63	6,581.03
MW-2	6,585.37	3.26	6,582.11
MW-3	6,589.84	3.70	6,586.14
WMW-1	6,596.04	5.11	6,590.93
WMW-2	6,593.69	3.86	6,589.83
WMW-3	6,593.91	5.86	6,588.05
WMW-4	6,594.50	5.98	6,588.52
WMW-5	6,596.98	7.01	6,589.97
Data provided in feet.			

TABLES

WINGATE PLANT
ANALYTICAL RESULTS

SAMPLE DATE	WELL ID	Sampled by	Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline	TPH	TDS	Chloride
			µg/L	µg/L	µg/L	µg/L		µg/L		
		Standard	10 µg/L	750 µg/L	750 µg/L	620 µg/L			1000	250
		MCLs	5 µg/L	1000 µg/L	700 µg/L	10000 µg/L				
09/14/94	MW-01	EPNG	<0.5	<0.5	<0.5	<1.0				
09/14/94	MW-01D	EPNG	<0.5	<0.5	1.4	1.1				
03/01/95	MW-01	MOI	<0.3	<0.3	<0.3	<0.6		<0.3	535	20.4
08/22/95	MW-01	EPNG	ND	87	9	49				
03/27/96	MW-01	MOI	ND	ND	ND	ND		ND	690	22.5
03/27/96	MW-01D	MOI	ND	ND	ND	ND		ND	650	25
08/27/96	MW-01	EPNG	ND	ND	ND	ND				
03/26/97	MW-01	CON	1.2	ND	ND	ND		0.6	660	24
08/27/97	MW-01	EPNG	ND	ND	ND	ND				
03/31/98	MW-01	CON	1.8	10	ND	11		ND	610	20
08/25/98	MW-01	EPNG	ND	ND	ND	ND				
08/25/98	MW-01D	EPNG	ND	ND	ND	ND				
09/22/99	MW-01	EPNG	ND	ND	ND	ND			550	28

WINGATE PLANT
ANALYTICAL RESULTS

SAMPLE DATE	WELL ID	Sampled by	Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline	TPH	TDS	Chloride
			µg/L	µg/L	µg/L	µg/L		µg/L		
		Standard	10 µg/L	750 µg/L	750 µg/L	620 µg/L			1000	250
		MCLs	5 µg/L	1000 µg/L	700 µg/L	10000 µg/L				
11/15/91	MW-02	MOI	ND	ND	ND	0.1	-	2.6		
01/22/92	MW-02	MOI	ND	ND	ND	ND	-	-		
02/25/93	MW-02	MOI	ND	ND	ND	ND	-	-		
01/22/92	MW-02	EPNG	<0.5	<0.5	<0.5	<0.5	-	-		
04/28/92	MW-02	EPNG	0.002	<1.0	<1.0	<1.0	<100	-		
01/93	MW-02	EPNG	-	-	-	-	-	-		
04/06/93	MW-02	EPNG	2.0	2.0	ND	1.0	-	-		
09/14/94	MW-02	EPNG	<0.5	<0.5	<0.5	<1.0				
03/01/95	MW-02	MOI	<0.3	<0.3	<0.3	<0.6		<0.3	1030	57
08/22/95	MW-02	EPNG	ND	ND	ND	ND				
03/27/96	MW-02	MOI	ND	ND	ND	ND		ND	1120	53.7
08/27/96	MW-02	EPNG	ND	ND	ND	ND				
03/26/97	MW-02	CON	2.0	ND	ND	ND		0.5	1100	56
08/27/97	MW-02	EPNG	ND	ND	ND	ND				
03/31/98	MW-02	CON	ND	ND	ND	ND		ND	1140	60.8
08/25/98	MW-02	EPNG	ND	ND	ND	ND				
09/22/99	MW-02	EPNG	ND	ND	ND	ND			980	70
09/22/99	MW-02D	EPNG	ND	ND	ND	ND			1000	66

WINGATE PLANT
ANALYTICAL RESULTS

SAMPLE DATE	WELL ID	Sampled by	Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline	TPH	TDS	Chloride
			µg/L	µg/L	µg/L	µg/L		µg/L		
		Standard	10 µg/L	750 µg/L	750 µg/L	620 µg/L			1000	250
		MCLs	5 µg/L	1000 µg/L	700 µg/L	10000 µg/L				
01/15/91	MW-03	MOI	0.2	0.2	0.4	1.7	ND	-		
01/21/92	MW-03	MOI	ND	3.9	0.6	4.4	-	-		
02/25/93	MW-03	MOI	ND	ND	ND	ND	-	-		
01/92	MW-03	EPNG	-	-	-	-	-	-		
04/28/92	MW-03	EPNG	<1.0	<1.0	<1.0	<1.0	<100	-		
01/12/93	MW-03	EPNG	<1.0	2.0	<1.0	<1.0	-	-		
04/06/93	MW-03	EPNG	ND	ND	ND	ND	-	-		
01/06/94	MW-03	EPNG	46	1.4	3.5	4.7				
01/06/94	MW-03	EPNG	1.5	1.4	1.2	3.4				
09/14/94	MW-03	EPNG	2	<0.5	<0.5	<1.0				
09/14/94	MW-03D	EPNG	1.4	<0.5	<0.5	<1.0				
03/01/95	MW-03	MOI	<0.3	<0.3	<0.3	<0.6		<0.3	481	18.7
08/22/95	MW-03	EPNG	ND	ND	ND	ND				
03/28/96	MW-03	MOI	ND	ND	ND	ND		ND	540	23.7
08/28/96	MW-03	EPNG	ND	ND	ND	ND				
03/26/97	MW-03	CON	9.2	ND	ND	ND		1.1	600	21
08/27/97	MW-03	EPNG	ND	ND	ND	ND				
03/31/98	MW-03	CON	ND	ND	ND	ND		ND	530	19.2
08/26/98	MW-03	EPNG	ND	ND	ND	ND				
09/22/99	MW-03	EPNG	ND	ND	ND	ND			750	59

WINGATE PLANT
ANALYTICAL RESULTS

SAMPLE DATE	WELL ID	Sampled by	Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline	TPH	TDS	Chloride
			µg/L	µg/L	µg/L	µg/L		µg/L		
		Standard	10 µg/L	750 µg/L	750 µg/L	620 µg/L			1000	250
		MCLs	5 µg/L	1000 µg/L	700 µg/L	10000 µg/L				
07/10/91	WMW-04	MOI	ND	ND	ND	ND	-	14.7		
10/28/91	WMW-04	MOI	1.3	ND	ND	ND	-	ND		
01/21/92	WMW-04	MOI	1.9	4.0	1.1	5.1	-	-		
02/25/93	WMW-04	MOI	7.6	3.0	ND	ND	-	-		
02/06/92	WMW-04	EPNG	0.7	<0.5	<0.5	<0.5		-		
04/29/92	WMW-04	EPNG	3.0	<1.0	<1.0	<1.0	<100	-		
01/12/93	WMW-04	EPNG	68.0	8.0	<1.0	4.0	-	-		
04/07/93	WMW-04	EPNG	ND	1.0	ND	ND	-	-		
01/05/94	WMW-04	EPNG	13	1.5	3.3	5.6				
09/13/94	WMW-04	EPNG	<0.5	<0.5	2	2				
03/01/95	WMW-04	MOI	0.9	0.8	<0.3	<0.6		<0.3	1470	123
08/23/95	WMW-04	EPNG	ND	ND	ND	ND				
03/28/96	WMW-04	MOI	ND	ND	ND	ND		ND	1500	110
08/27/96	WMW-04	EPNG	ND	ND	ND	ND				
08/27/96	WMW-04D	EPNG	ND	ND	ND	ND				
03/25/97	WMW-04	CON	ND	ND	ND	ND		0.4	1500	120
08/26/97	WMW-04	EPNG	ND	ND	ND	ND				
03/30/98	WMW-04	CON	3.6	ND	ND	ND		ND	1440	110
08/25/98	WMW-04	EPNG	ND	ND	ND	ND				
09/22/99	WMW-04	EPNG	ND	ND	ND	ND			1200	110

CHAIN OF CUSTODY

EL PASO NATURAL GAS

Vegas Lead 4 Only

CHAIN OF CUSTODY RECORD

Due 10/1

P9909079

Page 1 of 1

PROJECT NUMBER	PROJECT NAME				TOTAL NUMBER OF CONTAINERS	COMPOSITE OR GRAB	REQUESTED ANALYSIS						CONTRACT LABORATORY
SAMPLERS: (Signature)		DATE: 9/22/99											
LAB ID	DATE	TIME	MATRIX	SAMPLE NUMBER			BTEX	TPH 8015	MOD. FULL RANGE	TDS	CL		REMARKS
01	9/22/99	0830	H2O	M99-0105	5		X	X		X	X		TPH - 8015 Mod. Full Range
02	9/22/99	0840	H2O	M99-0106	5		X	X					Run 8260 per Wenusa A.
03	9/22/99	0950	H2O	M99-0107	5		X	X		X	X		
04	9/22/99	1130	H2O	M99-0108	5		X	X		X	X		
05	9/22/99	1445	H2O	M99-0109	5		X	X		X	X		
06	9/22/99	1445	H2O	M99-0110	5		X	X		X	X		
07	9/22/99	1645	H2O	M99-0111	5		X	X		X	X		
08	9/22/99	1715	H2O	M99-0112	5		X	X		X	X		
09	9/22/99	1720	H2O	M99-0113	5		X	X		X	X		
10	9/22/99	1725	H2O	M99-0114	5		X	X		X	X		
											CUSTODY SEAL		

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	9/23/99 1500				
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED FOR LABORATORY BY: (Signature)
		Via FED-X		9/24 1100	NFH-LV

REQUESTED TURNAROUND TIME:
☐ ROUTINE ☐ RUSH

SAMPLE RECEIPT REMARKS

RESULTS & INVOICES TO:

LABORATORY SERVICES
EL PASO NATURAL GAS COMPANY
8645 RAILROAD DRIVE
EL PASO, TEXAS 79904

915-759-2229 FAX: 915-759-2335

CARRIER CO.

BILL NO.:

CHARGE CODE

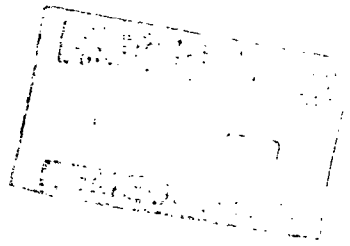
White - *Testing Laboratory* Canary - *EPNG Lab* Pink - *Field Sampler*

FM-08-0566 (Rev. 4-98)

ANALYTICAL DATA

SAMPLE KEY

SAMPLE NUMBER: M99-0105 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: PUMP BLANK EMP #1 BEFORE SAMPLING
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 08:20 SAMPLE DATE: 09/22/99



SAMPLE KEY

SAMPLE NUMBER: M99-0106 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: BAILER BLANK BEFORE SAMPLING
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 08:40 SAMPLE DATE: 09/22/99

SAMPLE KEY

SAMPLE NUMBER: M99-0107 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: WMW #4
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 09:50 SAMPLE DATE: 09/22/99

SAMPLE KEY

SAMPLE NUMBER: M99-0108 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: MW #3
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 11:30 SAMPLE DATE: 09/22/99

SAMPLE KEY

SAMPLE NUMBER: M99-0109 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: MW #2
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 14:45 SAMPLE DATE: 09/22/99

SAMPLE KEY

SAMPLE NUMBER: M99-0110 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: MW #2 DUPLICATE
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 14:45 SAMPLE DATE: 09/22/99

SAMPLE KEY

SAMPLE NUMBER: M99-0111 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: MW #1
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 16:45 SAMPLE DATE: 09/22/99

SAMPLE KEY

SAMPLE NUMBER: M99-0112 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: PUMP BLANK EMP #1 AFTER SAMPLING
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 17:15 SAMPLE DATE: 09/22/99

SAMPLE KEY

SAMPLE NUMBER: M99-0113 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: BAILER BLANK AFTER SAMPLING
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 17:20 SAMPLE DATE: 09/22/99

SAMPLE KEY

SAMPLE NUMBER: M99-0114 LOCATION: Wingate Plant
MATRIX: Water
SAMPLE DESCRIPTION: FIELD BLANK
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 17:25 SAMPLE DATE: 09/22/99

NEL LABORATORIES
Reno • Las Vegas
Phoenix • So. California

Las Vegas Division
4208 Arcata Way, Suite A • Las Vegas, NV 89030
(702) 657-1010 • Fax: (702) 657-1577
1-888-368-3282

CLIENT: El Paso Natural Gas Company
8645 Railroad Drive
El Paso, TX 79904
ATTN: Darrell Campbell

PROJECT NAME: NA
PROJECT NUMBER: NA

NEL ORDER ID: P9909079

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 9/24/99.

Should you have any questions or comments, please feel free to contact our Client Services department at (602) 437-0099.

Some results have been flagged as follows:
Jm – Result should be considered an estimated value due to probable matrix effects.
Some surrogate results have been flagged as follows:
Sf -- This surrogate was outside acceptance limits.

Stan Van Wagenen
Laboratory Manager

10/1/99
Date

CERTIFICATIONS:

	Reno	Las Vegas	S. California		Reno	Las Vegas	S. California
Arizona	AZ0520	AZ0518	AZ0605	Idaho	Certified	Certified	
California	1707	2002	2264	Montana	Certified	Certified	
US Army Corps of Engineers	Certified	Certified		Nevada	NV033	NV052	CA084
				L.A.C.S.D.			10228

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0105**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-01

TEST: **Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**

METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result		Reporting Limit
Benzene	22	µg/L	2. µg/L
Toluene	ND		2. µg/L
Ethylbenzene	ND		2. µg/L
Total Xylenes	ND		2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	106	86 - 115
Toluene-d8	99	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0106**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-02
TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	106	86 - 115
Toluene-d8	105	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0107**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-03
TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	104	86 - 115
Toluene-d8	104	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0108**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-04
TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	105	86 - 115
Toluene-d8	107	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0109**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-05
TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	103	86 - 115
Toluene-d8	105	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0110**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-06

TEST: **Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**

METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	105	86 - 115
Toluene-d8	107	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0111**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-07
TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	105	86 - 115
Toluene-d8	106	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0112**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-08

TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND Jm	2. µg/L
Toluene	ND Jm	2. µg/L
Ethylbenzene	ND Jm	2. µg/L
Total Xylenes	ND Jm	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery		Acceptable Range
4-Bromofluorobenzene	105		86 - 115
Toluene-d8	79	Sf	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0113**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-09
TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	105	86 - 115
Toluene-d8	107	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0114**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-10
TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
DILUTION:	1	ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	106	86 - 115
Toluene-d8	106	88 - 110

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**Method Blank**
PROJECT ID:	NA	DATE SAMPLED:	NA
PROJECT #:	NA	NEL SAMPLE ID:	990930BX60-BLK
TEST:	**Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**		
METHOD:	EPA 8260B	ANALYST:	SKV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	9/30/99
		ANALYZED:	9/30/99

PARAMETER	Result	Reporting Limit
MTBE	ND	5. µg/L
Benzene	ND	2. µg/L
Toluene	ND	2. µg/L
Ethylbenzene	ND	2. µg/L
Total Xylenes	ND	2. µg/L

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	103	86 - 115
Toluene-d8	105	88 - 110

ND - Not Detected

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

TEST: Total Extractable Petroleum Hydrocarbons by EPA Method 8015M, December 1996
METHOD: EPA 8015M
ORDER ID: P9909079

MATRIX: Aqueous ANALYST: JRW - Las Vegas Division

CLIENT SAMPLE ID	SAMPLE DATE	NEL SAMPLE ID	RESULT mg/L	C.R.	Reporting Limit	Surrogate Recovery*	EXTRACTED	ANALYZED
M99-0105	9/22/99	P9909079-01	0.53	G	0.5 mg/L	99 %	9/28/99	9/29/99
M99-0106	9/22/99	P9909079-02	ND	ND	0.5 mg/L	95 %	9/28/99	9/29/99
M99-0107	9/22/99	P9909079-03	ND	ND	0.5 mg/L	95 %	9/28/99	9/29/99
M99-0108	9/22/99	P9909079-04	ND	ND	0.5 mg/L	99 %	9/28/99	9/29/99
M99-0109	9/22/99	P9909079-05	ND	ND	0.5 mg/L	100 %	9/28/99	9/29/99
M99-0110	9/22/99	P9909079-06	ND	ND	0.5 mg/L	98 %	9/28/99	9/29/99
M99-0111	9/22/99	P9909079-07	ND	ND	0.5 mg/L	105 %	9/28/99	9/29/99
M99-0112	9/22/99	P9909079-08	ND	ND	0.5 mg/L	97 %	9/28/99	9/29/99
M99-0113	9/22/99	P9909079-09	ND	ND	0.5 mg/L	80 %	9/28/99	9/29/99
M99-0114	9/22/99	P9909079-10	ND	ND	0.5 mg/L	102 %	9/28/99	9/29/99

C.R.: Carbon Range

G Gas Range Organics (C4 to C14).

QUALITY CONTROL DATA (Total for Diesel Range):

Sample ID	Result	Acceptable Range	Surrogate Recovery*	Sample Number
Blank, 990928TP -BLK	ND	< 0.5 mg/L	95 %	NA
LCS, 990928TPHW-LCS	80 %	57 - 109 %	105 %	NA
LCSD, 990928TPHW-LCSD	80 %	57 - 109 %	93 %	NA

*** Surrogate used was Octacosane, acceptance limits 60-121%.**

ND - Not Detected

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA
TEST: **Volatile Organic Compounds by EPA SW846 Method 8260B, Dec. 1996**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Benzene	990930BX60-LCS	50	54	108	80 - 120	
Benzene	P9909079-10-MS	50	54	108	76 - 127	
Benzene	P9909079-10-MSD	50	55	110	76 - 127	1.8
Toluene	990930BX60-LCS	50	54	108	80 - 120	
Toluene	P9909079-10-MS	50	54	108	76 - 125	
Toluene	P9909079-10-MSD	50	58	116	76 - 125	7.1
Ethylbenzene	990930BX60-LCS	50	52	104	80 - 120	
Ethylbenzene	P9909079-10-MS	50	51	102	70 - 130	
Ethylbenzene	P9909079-10-MSD	50	52	104	70 - 130	1.9
Total Xylenes	990930BX60-LCS	150	160	107	80 - 120	
Total Xylenes	P9909079-10-MS	150	158	105	70 - 130	
Total Xylenes	P9909079-10-MSD	150	163	109	70 - 130	3.1

ND - Not Detected

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

CLIENT ID: **M99-0105**
DATE SAMPLED: 9/22/99
NEL SAMPLE ID: P9909079-01

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	22	5.	5	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	840	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**M99-0107**
PROJECT ID:	NA	DATE SAMPLED:	9/22/99
PROJECT #:	NA	NEL SAMPLE ID:	P9909079-03

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	110	50.	50	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	1200	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

CLIENT ID: **M99-0108**
DATE SAMPLED: 9/22/99
NEL SAMPLE ID: P9909079-04

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	59	10.	10	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	750	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

CLIENT ID: **M99-0109**
DATE SAMPLED: 9/22/99
NEL SAMPLE ID: P9909079-05

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	70	10.	10	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	980	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

CLIENT ID: **M99-0110**
DATE SAMPLED: 9/22/99
NEL SAMPLE ID: P9909079-06

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	66	10.	10	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	1000	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

CLIENT ID: **M99-0111**
DATE SAMPLED: 9/22/99
NEL SAMPLE ID: P9909079-07

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	28	5.	5	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	550	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

CLIENT ID: **M99-0112**
DATE SAMPLED: 9/22/99
NEL SAMPLE ID: P9909079-08

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	23	5.	5	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	980	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

CLIENT ID: **M99-0113**
DATE SAMPLED: 9/22/99
NEL SAMPLE ID: P9909079-09

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	18	2.	2	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	86	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company
PROJECT ID: NA
PROJECT #: NA

CLIENT ID: **M99-0114**
DATE SAMPLED: 9/22/99
NEL SAMPLE ID: P9909079-10

TEST: **Inorganic Non-Metals**
MATRIX: Aqueous

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	45	20.	20	EPA 300.0	mg/L	9/25/99
Total Dissolved Solids	270	15.	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**Method Blank**
PROJECT ID:	NA	DATE SAMPLED:	NA
PROJECT #:	NA	NEL SAMPLE ID:	092599-CL-BLK

TEST: **Non-Metals**

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Chloride	ND	1	1	EPA 300.0	mg/L	9/25/99

D.F. - Dilution Factor

ND - Not Detected

NEL LABORATORIES

CLIENT:	El Paso Natural Gas Company	CLIENT ID:	**Method Blank**
PROJECT ID:	NA	DATE SAMPLED:	NA
PROJECT #:	NA	NEL SAMPLE ID:	092799-TDS-BLK

TEST: **Non-Metals**

PARAMETER	RESULT	REPORTING LIMIT	D. F.	METHOD	UNITS	ANALYZED
Total Dissolved Solids	ND	15	1	SM 2540 C	mg/L	9/27/99

D.F. - Dilution Factor

ND - Not Detected

Conoco, Inc.
Wingate Plant
P.O. Box 119
Rehoboth, NM 87322
(505)863-3900
Fax: (505)863-1040

December 24, 1999

W. Jack Ford, C.P.G.
Environmental Bureau
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

RE: Discharge Plan GW-054 Compliance
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Mr. Ford

Conoco, Inc. Wingate Plant, apologizes for the delay in submitting test records to show that our underground drain lines meet the required mechanical integrity conditions.

We made numerous attempts to eliminate all unnecessary tie-ins into the drain system in an attempt to test only permitted pipes, however with no drawings showing all existing and abandoned lines these efforts proved futile. The old system inside the process area was totally abandoned. The only existing piping currently utilized was from the boiler house sump to the discharge ponds.

A new 6" steel main line was installed from the sump located on the southwest corner of the boiler house across the plant yard on the south side of the Butamer area turning north to the VRU flash tank. All lateral tie-ins from 6" main were made with 3" steel pipe with block valves at each source.

The system was pressure tested utilizing the block valves at each source. Air was compressed into the system bringing the system pressure to 42 psig. This pressure was held on the system for two hours. System pressure dropped 1 psig. This is easily explained by a 3 degree drop in ambient temperature. The existing piping from the boiler house sump to the discharge ponds was pressure tested for two hours at 20 psig with no drop in pressure.

If you have any questions contact Mike Neeley or Chuck White at (505) 863-3900.

Wingate Plant Manager: Chuck White
Attachments
cc: Joyce Woodfin
File

CONOCO, INC.
WINGATE GAS PLANT

PNEUMATIC PRESSURE TESTING

Date: 12/16/99 Inspector: RED CUNNINGHAM

System or Equipment Being Tested: CLOSED DRAIN SYSTEM

Plant ID Number: _____ Vessel or Equipment Serial No: _____

Maximum Working Pressure: 10 lbs.

Test Pressure: 42 lbs. (Maximum Working Pressure X 1.5)

Time	PSIG	Temp. °F
1:15 PM	42.0	40°
1:30	42.0	40°
1:45	42.0	41°
2:00	42.0	40°
2:15	41.5	39°
2:30	41.5	39°
2:45	41.5	38°
3:00	41.0	38°
3:15	41.0	37°

Comments: Partly cloudy - 10-30 MPH WINDS DITCH CONDITIONS MUDDY TO SATURATED WITH H2O

==========

Circulate: Process Foreman _____

Maintenance Foreman Mike Mulg

Plant Manager Chuck Mott

*File - SSF-333 Safety File

CONOCO, INC.
WINGATE GAS PLANT

HYDROSTATIC PRESSURE TESTING

Date: 12/23/99 Inspector: MIKE WEEKLY

System or Equipment Being Tested: EXISTING DRAIN LINES FROM SUMP AT S.W. CORNER OF BOILER HOUSE TO WATER PONDS.

Plant ID Number: 155 Vessel or Equipment Serial No: _____

Maximum Working Pressure: 12 PSIG

Test Pressure: 20 PSIG. (Maximum Working Pressure X 1.5)

Time	PSIG	Temp. °F
10:00 AM.	20 PSIG	32°
10:15 AM.	20 PSIG	32°
10:30 AM.	20 PSIG	32°
10:45 AM.	20 PSIG	33°
11:00 AM.	20 PSIG	33°
11:15 AM	20 PSIG	33°
11:30 AM.	20 PSIG	34°
11:45 AM	20 PSIG	35°
12:00 AM.	20 PSIG	35°

Comments: CLEAR SKIES NO WIND COLD. LINE IS BURRIED TEMP WONT MAKE MUCH DIFFERENCE.

==========

Circulate: Process Foreman _____

Maintenance Foreman Mike Neely

Plant Manager Chuck Mott

*File - SSF-333 Safety File

NEW DRAIN LINE DITCH
RUNNING EAST & WEST. SOUTH
OF BOILER HOUSE TO EXISTING
SUMP S.W. CORNER OF BOILER HOUSE.

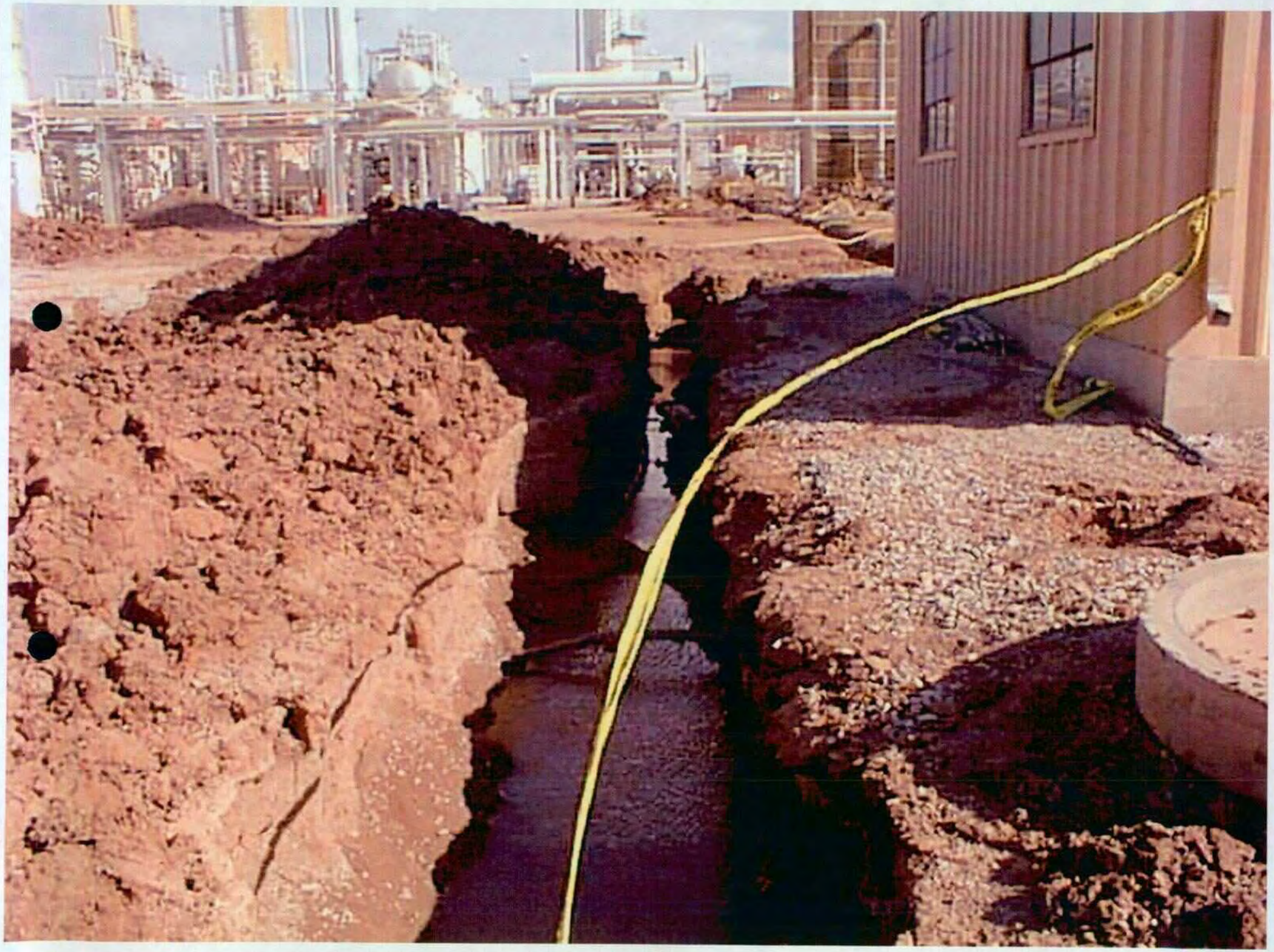
NEW DRAIN LINE DITCH.
RUNNING EAST & WEST.
LOCATED SOUTH OF #6 BOILER

NEW DRAIN LINE DITCH
SOUTH OF #6 BOILER

NEW DRAIN LINE
MAIN LINE 6" COATED PIPE

NEW 6" DRAIN LINE
RUNNING EAST & WEST
SOUTH OF #6 BOILER

NEW DRAIN LINE DITCH
WEST OF FIRE PUMP HOUSE.



NEW DRAIN LINE DITCH
NORTH OF FIRE WATER
PUMP HOUSE.

NEW DRAIN LINE
DITCH BETWEEN FIRE WATER PUMP
BLDG. & A/B. COOLING TOWER

DITCH FOR NEW DRAIN LINE
& BRANCH FOR #6 BOILER DRAIN.

Joyce M. Woodfin
Environmental Expert
Natural Gas & Gas Products

Conoco Inc
Humber 3036
P.O. Box 2197
Houston, TX 77252-2197
(281) 293-4498
Fax: (281) 293-1214

November 12, 1999

Mr. Jack Ford
Environmental Bureau
Energy, Minerals & Natural Resources Department
Oil Conservation Division
P.O. Box 6429
Santa Fe, NM 87505

Re: Discharge Plan GW-054 Compliance
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Mr. Ford:

This is in response to your letter dated October 26, 1999 and our attempts to satisfy discharge plan GW-054 requirements and discharge plan conditions dated November 21, 1997.

Conoco has attempted to perform the mechanical integrity tests of the underground lines as required. We have been able to get sections of the lines to hold pressure but have not been successful in getting the entire system to test tight at one time. Because of this, we have ordered new discharge pipe and are preparing to install a new line to replace the existing underground lines. We plan to install this new line as soon as the material arrives and will send you a copy of the test results by December 31, 1999.

If you have any questions or require any additional information, please contact Joyce Woodfin at (281) 293-4498. Thank you for your time and consideration.

Sincerely,

Joyce Woodfin

Joyce M. Woodfin

cc: Chuck White – Wingate
File: ENV 215-5-6

Conoco Inc.
P.O. Box 2197
Houston, TX 77252

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Mr. Jack Ford
Environmental Bureua
Energy, Minerals & Natural Resources Department
Oil Conservations Division
P. O. Box 6429
Santa Fe, NM 87505

87502-6429

Joyce M. Woodfin
Environmental Consultant
Natural Gas & Gas Products

Conoco Inc
Humber 3036
P.O. Box 2197
Houston, TX 77252-2197
(281) 293-4498
Fax: (281) 293-1214

October 25, 1999

Certified Mail
Return Receipt Requested

Ms. Tamera Long
Navajo Nation EPA
Air Quality Program
P.O. Box 529
Fort Defiance, Arizona 86504

Certified No: P 298 298 640

Mr. Patrick Antonio
Navajo Nation EPA
Water Quality Program
P.O. Box 339
Window Rock, Arizona 86515

Certified No: P 298 298 641

Re: Conoco Inc.
Wingate Fractionator
McKinley County, New Mexico

Dear Madam & Sir:

Conoco Inc. was asked this summer if we operated our above referenced facility on Indian Lands. At the time the question was asked Conoco believed that the facility was situated on private land in close proximity to the Navajo Nation. This question prompted some internal file research that indicated part of our facility acquisition on April 1, 1996 from Meridian Oil included a lease of 151 acres of land in Section 9, 10 & 15, Township 15 North, Range 17 West, McKinley County, New Mexico from the Navajo Nation.

Since we were not sure what portions of our operations, if any, were located on the leased land we hired a survey firm to determine equipment locations in respect to land section boundaries. This survey was recently completed and the preliminary results indicate that we have a candlestick flare (NMED Air Permit No. 1313-M1) and two water retention/discharge ponds (OCD Water Discharge Plan GW-54) on the leased land.

I would like your assistance in determining a path forward to establishing a working relationship with the Navajo Nation EPA. I am available to travel to your offices to discuss this issue and explain our operations, review past history of this equipment and get guidance on how to properly register these emission points with the Navajo Nation EPA.

If you have any questions, require any additional information or have a preference on when we could meet, please contact me at (281) 293-4498. Thank you for your time and consideration.

Sincerely,

Joyce M. Woodfin

cc: Ms. Sandra Ely — Certified No: P 298 298 642
State of New Mexico Environmental Department
Air Quality Bureau
Harold Runnels Building
1190 St. Francis Drive,
P.O. Drawer 26110
Santa Fe, New Mexico 87502-0110

Mr. Jack Ford — Certified No: P 298 298 643
New Mexico Energy, Minerals and Natural Resources Department
Environmental Bureau
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Mr. Clancy Tenley — Certified No: Z 413 451 641
Tribal Program Manager
EPA Region IX (E-4)
75 Hawthorne Street
San Francisco, California 94104

Chuck White – Wingate Plant Manager
Jeff Smail – Operations District Coordinator San Juan

File: ENV 214-2-37
File: ENV 215-5-6

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

October 26, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-274-520-546

Ms. Joyce M. Woodfin
Conoco Inc.
P.O. Box 2197 HU 3036
Houston, Texas 77252-2197

RE: Discharge Plan GW-054 Compliance
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Ms. Woodfin:

Conoco Inc. received the approved ground water discharge plan renewal GW-054, for the Conoco Inc. Wingate Fractionating Plant located in Sections 9, 10, 15, 16, 17 Township 15 North, Range 17 West, NMPM, McKinley County, New Mexico, on November 28, 1997. The approved discharge plan consisted of the original discharge plan as approved August 17, 1992, the renewal application dated April 16, 1997 **and** the attachment of discharge plan conditions dated November 21, 1997.

A review of the file indicates that Conoco Inc. may be in violation of its discharge plan. Condition number 10 requires that underground process/wastewater lines must be tested to demonstrate their mechanical integrity every five years or prior to discharge plan renewal. The OCD has no record that the underground lines were tested prior to renewal nor since renewal. If the underground lines have been tested furnish the OCD with test results and certification that the lines have met the required mechanical integrity conditions. If this testing has not been conducted a test must be performed prior to December 31, 1999 with the results and certification of their condition submitted to this office.

If you have any questions contact me at (505) 827-7156.

Sincerely,

W. Jack Ford, C.P.G.
Environmental Bureau
Oil Conservation Division

xc: OCD Aztec District Office

Z 274 520 546 OCD

Ford

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Jerry Wooten	
Street & Number Conoco	
Post Office, State, & ZIP Code Hobbs	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date GW-054	

PS Form **3800**, April 1995

Joyce M. Woodfin
Environmental Expert
Natural Gas & Gas Products

Conoco Inc
Humber 3036
P.O. Box 2197
Houston, TX 77252-2197
(281) 293-4498
Fax: (281) 293-1214

June 23, 1999

Mr. Jack Ford
Environmental Bureau
Energy, Minerals & Natural Resources Department
Oil Conservation Division
P.O. Box 6429
Santa Fe, NM 87505

Re: Modification to Monitoring Requirements
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Mr. Ford:

This letter is to follow-up our phone conversation from last month when we agreed on a frequency for monitoring the groundwater wells at the above referenced location. Conoco will continue to monitor MW-1, MW-2 and MW-3 on an annual basis as per the site's Discharge Plan GW-054 (April 1997). We will also monitor and sample WMW-4, which was installed as part of a property transfer environmental assessment, on an annual basis during this same sampling event.

If you have any questions or require any additional information, please contact Joyce Woodfin at (281) 293-4498. Thank you for your time and consideration.

Sincerely,

Joyce Woodfin

Joyce M. Woodfin

cc: Chuck White – Wingate
Gerry Garibay – El Paso Energy
File: ENV 215-5-6

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

February 2, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z-357-870-056

Ms. Larissa Forseth
Conoco, Inc.
P.O. Box 2197-HU3038
Houston, Texas 77252

RE: Modification to GW-054 Discharge Plan
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Ms. Forseth:

The New Mexico Oil Conservation Division has received a request, dated January 26, 1999, for a modification to the groundwater monitoring requirements specified in the approved discharge plan (GW-054), dated April 8, 1997, for the Wingate Fractionating Plant. The request to cease monitoring of WMH-1, WMH-2, WMH-3 and WMH-5 is **hereby approved.** The abandonment of any monitoring well must be approved by the OCD. This change to the approved discharge plan is considered a minor modification to the existing discharge plan.

Please note that Section 3104 of the regulations requires that **"When a plan has been approved, discharges must be consistent with the terms and conditions of the plan."** Pursuant to Section 3107.C Conoco, Inc. is required to notify the Director of any facility expansion, production increase, or process modification that would result in any change in the discharge of water quality or volume.

Please be advised this authorization does not relieve Conoco, Inc. of liability should the operations of this facility result in pollution of surface waters, ground waters or the environment. Further, OCD authorization does not relieve Conoco, Inc. from responsibility for compliance with other federal, state, and local permitting requirements, rules, and regulations.

Sincerely,

W. Jack Ford, C.P.G.
Environmental Bureau
Oil Conservation Division

xc: Aztec OCD District Office

Z 357 870 056

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Larissa Forseth	
Street & Number Conoco	
Post Office, State, & ZIP Code Hall	
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Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date GW-054	

PS Form **3800**, April 1995

Larissa Forseth
Environmental Engineer
Engineering & Compliance
Natural Gas & Gas Products
Conoco Inc.

Conoco Inc.
600 N. Dairy Ashford
P.O. Box 2197—HU3038
Houston, TX 77252
(281) 293-3149

Certified Mail No. P 365 861 344
Return Receipt Requested

January 26, 1999

Mr. Jack Ford
Environmental Bureau
Energy, Minerals and Natural Resource Department
Oil Conservation Division
P.O. Box 6429
Santa Fe, NM 87505

RE: Modification to Monitoring Requirements
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Mr. Ford,

As we discussed via telephone this afternoon, Conoco Inc. requests a modification to groundwater monitoring requirements specified in Wingate Plant's discharge plan (GW-054, April 1997). Currently, semi-annual groundwater monitoring is conducted on three wells (MW-1 through MW-3) near the evaporation ponds and five wells (WMH-1 through WMH-4 and WMW-5) up-gradient of the evaporation ponds. The latter five wells were installed as part of a property transfer environmental assessment and bear no relationship to the evaporation ponds.

Conoco requests permission to cease monitoring of WMH-1, WMH-2, WMH-3, and WMW-5; as you requested, well WMH-4 will continue to be monitored on account of regularly high benzene levels up-gradient of the well. Wells MW-1, MW-2, and MW-3 will continue to be monitored semi-annually according to discharge plan requirements. If you have any questions, please contact me at (281) 293-3149. Thank you for your time and consideration in this matter.

Sincerely,

Larissa Forseth

Larissa Forseth

Larissa Forseth
Environmental Engineer
Engineering & Compliance
Natural Gas & Gas Products
Conoco Inc.

Conoco Inc.
600 N. Dairy Ashford
P.O. Box 2197—HU3038
Houston, TX 77252
(281) 293-3149

Certified Mail No. P 365 861 339
Return Receipt Requested

August 21, 1998

Mr. Jack Ford
Environmental Bureau
Energy, Minerals and Natural Resource Department
Oil Conservation District
P.O. Box 6429
Santa Fe, NM 87505

RE: Spent Caustic Sample Results
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Mr. Ford:

The Attachment to Conoco Inc.'s Wingate Discharge Plan (GW-54) Renewal puts forth the condition that the spent caustic from the butamer unit be analyzed and the sample results be submitted to the OCD within 60 days of beginning operations at the butamer unit. The start-up date of the butamer was June 27th, 1998. A sample of the spent caustic was submitted to SPL Lab in Farmington on August 17, 1998. As we discussed on July 22nd, this sample was to be analyzed for pH; attached are the results of this analysis. The pH reading of 7.74 indicates that the spent caustic from the butamer is being neutralized effectively before being sent to the evaporation pond.

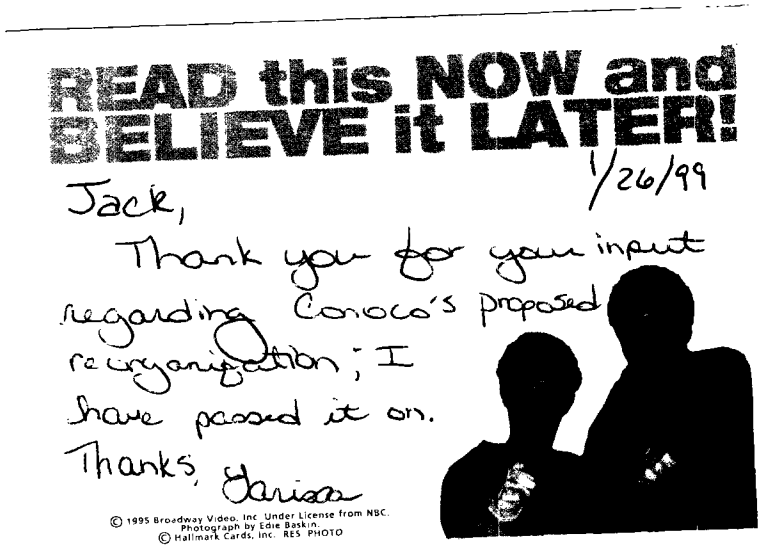
If you have any questions regarding this matter, please contact me at (281) 293-3149. Thank you for your time.

Sincerely,

Larissa Forseth

Larissa Forseth

Enclosure



FARMINGTON LABORATORY
807 S. CARLTON
FARMINGTON, NM 87499-1289
(505) 326-2588

Water Analysis
Conoco

Sample ID:	Cococo Wingate Plant	Date Reported:	08/21/98
Matrix:	Water	Date Sampled:	08/17/98
Lab ID:	9808082-01	Date Received:	08/17/98

Parameter	Result	Units
General		
pH	7.74	s.u.
Quality Control		
ERA QC Lot #9978	9.10	s.u.

Actual Value: 9.07

Acceptance Range: 8.87 - 9.27

Billy G. Rich, Lab Manager

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

July 30, 1998

Z 357 870 001

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Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date GW-054	

PS Form 3800, April 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-357-870-001

Ms. Larrisa Forseth
Conoco, Inc.
P.O. Box 2197-HU3038
Houston, Texas 77252

RE: Extension to Submittal of Sample Results
Wingate Fractionating Plant
McKinley County, New Mexico

Dear Ms. Forseth:

The New Mexico Oil Conservation Division has received a request, dated July 22, 1998 for an extension of submittal of sampling and laboratory results of water from the evaporation pond at the above captioned facility which was due January 21, 1998. It is OCD's understanding that this sampling will be conducted concurrently with the next scheduled semi-annual ground water sampling event. Based upon the information furnished with the request the extension is hereby approved.

Please be advised this authorization does not relieve Conoco of liability should the operations of this facility result in pollution of surface waters, ground waters or the environment. Further, OCD authorization does not relieve Conoco from responsibility for compliance with other federal, state, and local permitting requirements, rules, and regulations.

Sincerely,

W. Jack Ford, C.P.G.
Environmental Bureau
Oil Conservation Division

xc: Aztec OCD District Office

Larissa Forseth
Environmental Engineer
Engineering & Compliance
Natural Gas & Gas Products
Conoco Inc.

Conoco Inc.
600 N. Dairy Ashford
P.O. Box 2197—HU3038
Houston, TX 77252
(281) 293-3149

Certified Mail No. P 365 861 338
Return Receipt Requested

July 22, 1998

Mr. Jack Ford
Environmental Bureau
Energy, Minerals and Natural Resource Department
Oil Conservation District
P.O. Box 6429
Santa Fe, NM 87505

RE: Wingate Evaporation Pond Annual Sampling

Dear Mr. Ford,

The Attachment—dated November 21, 1997—to Conoco Inc.'s Wingate Discharge Plan (GW-54) Renewal puts forth the conditions that "samples from the evaporation ponds will be obtained annually," and "results will be submitted to the OCD by January 21, 1998." As we discussed via telephone this morning, Conoco experienced a change in project management during this period, and the sampling was unintentionally overlooked.

Conoco requests an extension for submitting the evaporation pond sampling results. As you and I discussed, these results will be submitted to the OCD concurrently with the results of the next semi-annual groundwater sampling event, which will be conducted in August or September 1998. If you have any questions regarding this matter, please contact me at (281) 293-3149. Thank you for your time and consideration.

Sincerely,

Larissa Forseth

Larissa Forseth

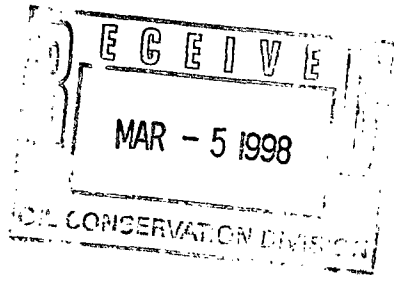
Larissa V. Forseth
Associate Engineer-Environmental
Safety & Environmental Services

Natural Gas & Gas Products

Conoco Inc.
600 N. Dairy Ashford
P.O. Box 2197 – HU3038
Houston, TX 77252
(281) 293-3149

Certified Mail No. 365 861 357
Return Receipt Requested

March 2, 1998



Mr. Mark Ashley
Oil Conservation Division
Environmental Bureau
2040 South Pacheco
Santa Fe, NM 87505

Dear Mark:

This letter is a follow-up to your conversation with Ed Kirk on Friday, February 27, 1998, in reference to the chemical additions at Conoco's Wingate fractionation facility and their impact on the discharge plan. Operation of the butamer unit requires storage of an additional 250 BBL of NaOH and 5,200 gallons of perchloroethylene at the Wingate site.

The NaOH is a liquid. The tank, surrounded by concrete secondary containment, stores the NaOH at atmospheric pressure. In the scrubber, the NaOH is added to the HCl and light hydrocarbons coming from the top of the stabilizer to produce a neutralized NaCl solution.

The other chemical, perchloroethylene, is injected into the reactors upstream of the butamer unit for use as a catalyst promoter. This tank, which is also surrounded by concrete secondary containment, holds the perchloroethylene under a 20-psi nitrogen blanket.

Additionally, water that will be removed from the mole sieve dehydrator and discharged to the evaporation pond is estimated to be 5,000 gallons per week. The high flow in an extreme case is estimated at 45,000 gal/wk. No exact numbers will be available until after start-up of the butamer.

If you have any questions, please contact me at (281) 293-3149 or Ed Kirk at ext. 2561.

Sincerely,

Larissa Forseth

Larissa Forseth

cc: ENV 215-5-6

Alan D. Higginbotham
Plant Manager
Wingate Plant
Natural Gas and Gas Products

Conoco Inc.
P.O. Box 1728
Gallup, NM 87305
(505) 863-1000

New Mexico EPA
Oil Conservation Division

Subject: NORM testing of asbestos insulated piping

Dear Mr. Roger Anderson,

We are in the process of disposing of some asbestos insulation we have removed from existing piping at the Wingate Plant in Gallup, New Mexico. As I was making disposal arrangements with the representative of Waste Management of Four Corners I was informed that a NORM survey of the piping would be required. I was referred to a Mrs. Martyne Kieling in Santa Fe for information on what steps would be required to satisfy the new regulation. She referred me to a Mr. Denny Foust, the local representative in Aztec.

Since this is a new regulation and there is no form currently available to fill out to meet the requirement Mr. Foust requested that I send you a letter notifying you of precautions we had taken to insure that no NORM was present on our piping.

We are very familiar with NORM and have previously performed a NORM survey in our Gallup plant. This test was done on March 12, 1997. Conoco uses 50 Microrems per hour as a threshold for equipment that is considered NORM contaminated. The only NORM detected was at several of our process pumps with 17 m/hour being the highest reading. We also did a NORM survey on the specific piping we have prepared for disposal and it showed no detectable NORM. The test was conducted with a Ludlum Model 3 Survey Meter.

We are trying to dispose of this asbestos as quickly as possible and would request your assistance in expediting your response to us. I would appreciate a verbal approval with a follow up letter if possible.

This waste will be disposed of at the Waste Management Denver Arapahoe Disposal Site located at Aurora, Colorado. This site is approved as an asbestos disposal site by Dupont, our parent company. When we receive your approval we will load the transporting containers and should ship them next week.

If you have any questions or I can be of assistance, please call me at (505) 863-1001.

Thank You,

Alan D. Higginbotham

Alan D. Higginbotham

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

February 13, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-259-019

Mr. Alan D. Higginbotham
Conoco, Inc.
P.O. Box 1728
Gallup, New Mexico 87305

RE: NORM Testing and Disposal of Asbestos Pipe Insulation
Wingate Plant (GW-54)
McKinley County, New Mexico

Dear Mr. Higginbotham:

The New Mexico Oil Conservation Division (OCD) has completed a review of the Conoco, Inc. (Conoco) request, received via fax on February 11, 1998, for out of state disposal of NORM tested asbestos pipe insulation. The requested site for disposal is Waste Management Denver Arapahoe Disposal Site located at Aurora, Colorado. Based on the information provided, the Conoco disposal request is approved.

Please be advised that OCD approval does not relieve Conoco of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please feel free to call me at (505) 827-7155.

Sincerely,

Mark Ashley
Geologist

xc: OCD Aztec Office

P 288 259 019

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

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Street & Number	
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Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, April 1995

Alan D. Higginbotham
Plant Manager
Wingate Plant
Natural Gas and Gas Products

Conoco Inc.
P.O. Box 1728
Gallup, NM 87305
(505) 863-1000

New Mexico EPA
Oil Conservation Division

Subject: NORM testing of asbestos insulated piping

Dear Mr. Roger Anderson,

We are in the process of disposing of some asbestos insulation we have removed from existing piping at the Wingate Plant in Gallup, New Mexico. As I was making disposal arrangements with the representative of Waste Management of Four Corners I was informed that a NORM survey of the piping would be required. I was referred to a Mrs. Martyne Kieling in Santa Fe for information on what steps would be required to satisfy the new regulation. She referred me to a Mr. Denny Foust, the local representative in Aztec.

Since this is a new regulation and there is no form currently available to fill out to meet the requirement Mr. Foust requested that I send you a letter notifying you of precautions we had taken to insure that no NORM was present on our piping.

We are very familiar with NORM and have previously performed a NORM survey in our Gallup plant. This test was done on March 12, 1997. Conoco uses 50 Microrems per hour as a threshold for equipment that is considered NORM contaminated. The only NORM detected was at several of our process pumps with 17 m/hour being the highest reading. We also did a NORM survey on the specific piping we have prepared for disposal and it showed no detectable NORM. The test was conducted with a Ludlum Model 3 Survey Meter.

We are trying to dispose of this asbestos as quickly as possible and would request your assistance in expediting your response to us. I would appreciate a verbal approval with a follow up letter if possible.

This waste will be disposed of at the Waste Management Denver Arapahoe Disposal Site located at Aurora, Colorado. This site is approved as an asbestos disposal site by Dupont, our parent company. When we receive your approval we will load the transporting containers and should ship them next week.

If you have any questions or I can be of assistance, please call me at (505) 863-1001.

Thank You,

Alan D. Higginbotham

Alan D. Higginbotham

Edward E. Kirk
Project Engineer - Environmental
Safety & Environmental Services

Natural Gas & Gas Products

Conoco Inc.
600 N. Dairy Ashford
P.O. Box 2197 - HU 3030
Houston, TX 77252
(281) 293-2561

September 23, 1997

Mr. Mark Ashley
Oil Conservation Division
Environmental Bureau
2040 South Pacheco
Sante Fe, NM 87505

Re: Wingate Butamer Spent Caustic

Dear Mark:

This letter is a follow up to our phone conversation on Sept. 23, 1997 in reference to the spent caustic from the Wingate Fractionator's butamer unit which is scheduled to be in operation in April 1998. We would like to add the spent caustic to the evaporation pond constituents in the Wingate Discharge Plan which you currently have for approval.

The spent caustic would be generated from the following process (see attached sketch). HCL gas and light hydrocarbons will leave the stabilizer and enter the scrubber where NaOH (about 10% by wt.) will be added to the HCL to produce NaCl. This liquid NaCl will go from the scrubber to the spent caustic tank where more HCL will be added to neutralize the solution. Once the solution is neutralized it will be sent to the evaporation pond essentially as a neutralized NaCl brine. Estimated volumes will be about 3,000 gallons per week. No hydrocarbons are expected in the solution.

Let me know if you need anymore information.

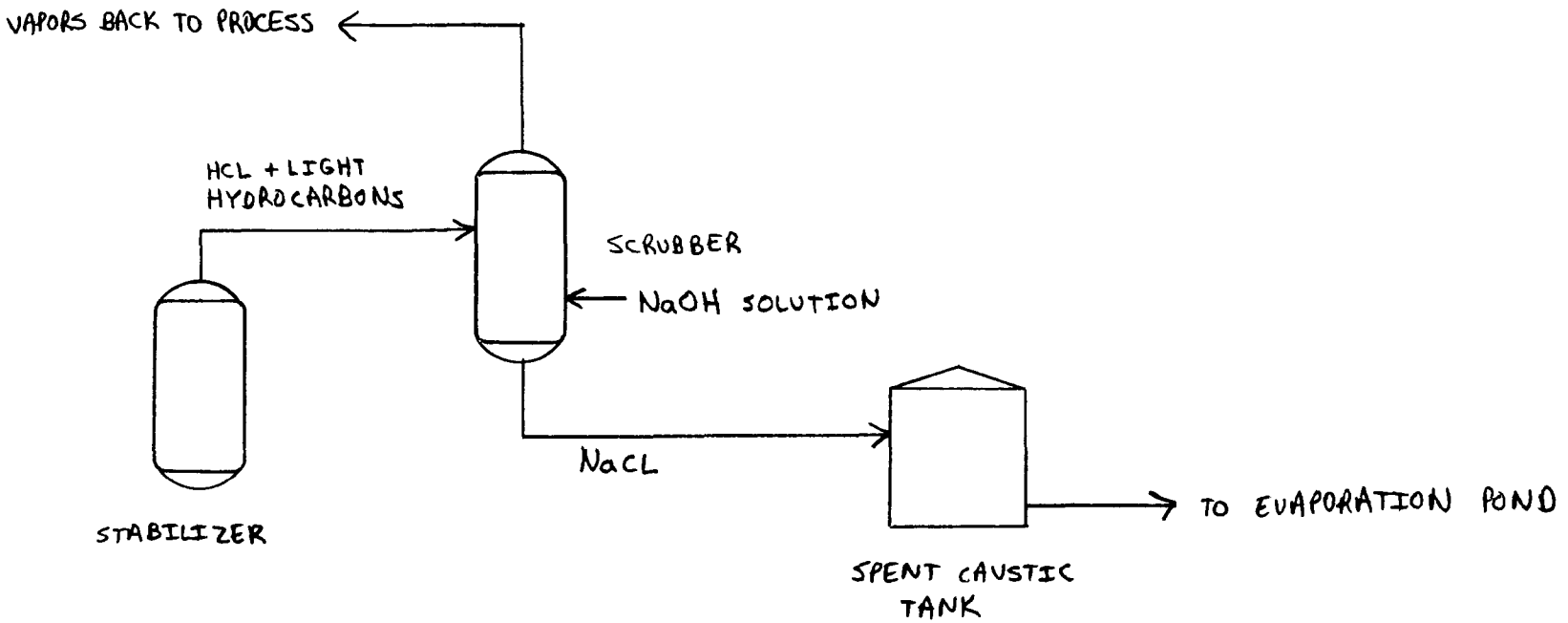
Sincerely,

Ed Kirk

Attachment

cc: ENV 215-5-6

WINGATE BUTAMER CAUSTIC FLOW DIAGRAM



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 8:15 AM	Date 9-2-97

Originating Party	Other Parties
ED KIRK - CONOCO (281) 293-2561	MARK ASHLEY

Subject: CONOCO - WINGATE

Discussion: HE WANTS TO ADD SPENT CAUSTIC WASH FROM BATTERY UNIT. IT'S AN HCL MIXTURE. PH IS IN NON-HAZ. RANGE. WANTS TO SEND IT TO THE EVAP. POND. THE WASH IS NEUTRALIZED PRIOR TO DISPOSAL.

Conclusions or Agreements: THIS WILL BE THE NOTIFICATION OF THE CONOCO'S REQUEST TO INCLUDE THIS IN THEIR EFFLUENT LIST OF THE DISCHARGE PLAN.

Distribution

Signed: Mark Ashley

Pat Sanchez

From: Denny Foust
Sent: Tuesday, June 17, 1997 2:30 PM
To: Pat Sanchez
Subject: CONOCO WINGATE PLANT GW-054
Importance: High

JUNE 17, 1997

MY CONCERNS ARE THE OPERATION OF THE EMERGENCY FLARE PITS (LINED?) AND THE INTEGRITY OF THE WASTE WATER PIPING AT THIS PLANT. THE EVAPORATION PONDS APPARENTLY ARE NOT RECEIVING ANYTHING TO FAR OUT OF LINE. THE LIMITED VOLUME OF CONTACT WATER MAY BE VERY HOT WITH LIQUID HYDROCARBONS. GENERAL CONSTRUCTION OF THE POND BERMS IN RELATION TO THE RIVER AND THE POSSIBILITY OF OVERTOPPING SHOULD BE CONSIDERED. WE NEED SOME GROUNDWATER QUALITY INFORMATION FROM THE SHALLOW ZONES AND SOME POND WATER QUALITY INFORMATION. I OBJECT TO SEPTIC TANK WASTE BEING ALLOWED TO GO TO EVAPORATION PONDS.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 761-4525 Fax: (505) 761-4542

May 30, 1997

William J. Lemay, Director
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Lemay:

This responds to your agency's public notices dated April 29, 1997, and May 6, 1997, regarding the discharge plan renewal applications for the three applicants described below:

(GW-126) - Weatherford Enterra US. Ms. Lesa Griffin has submitted an application for renewal of the company's approved discharge plan for the Farmington facility located in Section 19, Township 29 North, Range 12 West, San Juan County, New Mexico. Discharges will be stored in a closed-top receptacle.

(GW-054) - Conoco, Inc. Ms. Terry L. Killian has submitted an application for renewal of the company's approved discharge plan for the "Wingate" gas plant located in Sections 9, 10, 15, 16, and 17, Township 15 North, Range 17 West, McKinley County, New Mexico. Discharges of plant waste water are stored and disposed of in two evaporation ponds.

GW-042) - GPM Gas Services Company. Mr. Scott Seeby has submitted an application for renewal of the company's approved discharge plan for the Indian Hill Gas Plant located in Section 13, Township 21 South, Range 25 East, Eddy County, New Mexico. The facility is currently inactive with no discharges occurring.

The U.S. Fish and Wildlife Service (Service) heartily approves of discharge plans that utilize closed top receptacles or tanks (i.e., Discharge Plan GW -126). The installation of berms around these structures is also recommended to help prevent any contamination of the surface waters of New Mexico in the event that a tank or receptacle is accidentally ruptured.

The Service recommends the use of wildlife exclusion technology (nets, fences, enclosed tanks, etc.) to prevent migratory bird and other wildlife access to any brine or produced water storage ponds, lined or unlined evaporative ponds, open tanks, or lagoons that contain toxic chemicals, or that may harbor a surface oil sheen. During flight, migratory birds may not distinguish between an evaporation or storage pond and a natural water body: the artificial water body may serve as an "attractive nuisance" if measures are not taken to exclude migratory birds from access. Alternatively, the applicant may demonstrate that the retained waters are "bird-safe" (e.g., can meet New Mexico general water quality standards 1102.B, 1102.F, and 3101.K or 3101.L).

If the construction and operation of such structures results in migratory bird deaths and the problem is not addressed, the operator may be held liable under the enforcement provisions of the Migratory Bird Treaty Act (MBTA). Under the MBTA, the courts have held that an operator of process waste water storage facilities may be held liable for an "illegal take" of migratory birds. An "illegal take" has been interpreted to include accidental poisoning or accumulation of harmful concentrations of contaminants by migratory birds, which might occur as a result of access to the stored water. Hydrocarbon pollutants, for instance, can be carried to the nest on breast feathers, feet, or in nesting materials, where the eggs can subsequently become contaminated, leading to embryo death and reduced hatchability.

Our intent is to inform and intercede before any migratory bird deaths occur, since these birds constitute a legally protected resource. The Service would rather prevent a problem resulting from migratory bird access to contaminated ponds than take enforcement actions, which are expensive and disruptive to legitimate mineral extraction and energy production activities.

Thank you for the opportunity to review and comment on this discharge plan application. If you have any questions about these comments, please contact Dennis Byrnes at (505) 761-4525.

Sincerely,

Jennifer Fowler-Propst
Field Supervisor

cc:
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Geographic Manager, New Mexico Ecosystems, U.S. Fish and Wildlife Service, Albuquerque, New Mexico
Senior Resident Agent, U.S. Fish and Wildlife Service, Albuquerque, New Mexico
Migratory Bird Office, U.S. Fish and Wildlife Service, Albuquerque, New Mexico

Affidavit of Publicati

RECEIVED

MAY 15 1997

Environmental Bureau
Oil Conservation Division

STATE OF NEW MEXICO
) SS
COUNTY OF McKINLEY

RANGEL, LYDIA being duly sworn upon oath, deposes and says:

As LEGAL CLERK of The Independent, a newspaper published in and having a general circulation in McKinley County, New Mexico and in the City of Gallup, New Mexico and having a general circulation in Cibola County, New Mexico and in the City of Grants, New Mexico and having a general circulation in Apache County, Arizona and in the City of St. Johns and in the City of Window Rock, Arizona therein: that this affiant makes this affidavit based upon personal knowledge of the facts herein sworn to. That the publication, a copy of which is hereto attached was published in said newspaper during the period and time of publication and said notice was published in the newspaper proper, and not in a supplement thereof,

for one time, the first publication being on the 7th day of May, 19 97 the second publication being on the _____ day of _____, 19_____ the third publication on the _____ day of _____, 19_____.

and the last publication being on the _____ day of _____, 19_____.

That such newspaper, in which such notice or advertisement was published, is now and has been at all times material hereto, duly qualified for such purpose, and to publish legal notices and advertisements within the meaning of Chapter 12, of the statutes of the State of New Mexico, 1941 compilation.

Lydia Rangel
Affiant.

Sworn and subscribed to before me this 9th day of May, A.D., 19 97.

Notary Public

My commission expires
February 5, 2001

2735 2M BUTLER'S Gallup

LEGAL NOTICE
Gallup McKinley County
New Mexico

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Quality Control Commission Regulations, the following discharge plan renewal applications have been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505)827-7131:

(GW-126) - Weathford Enterra US, Ms. Lesa Griffin, (713)-693-4922, 515 Post Oak Blvd., Suite 600, Houston, TX, 77027, has submitted a Discharge Plan Renewal Application for their Farmington facility located in the SW/4 NW/4, Section 19, Township 29, North, Range 12 West, NMPM, San Juan County, New Mexico. Any potential discharge at the facility will be stored in a closed top receptacle. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 30 feet with a total dissolved solids concentration of approximately 1,000 to 2,000 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-054) - Conoco, Inc., Ms. Terry L. Killian, (281)-293-1188, P.O. Box 2197 - HU3036, Houston, TX, 77252, has submitted a Discharge Plan Renewal Application for their 'Wingate" gas plant located in Sections 9, 10, 15, 16, and 17, Township 15 North, Range 17 West, NMPM, McKinley County, New Mexico. Plant waste water is disposed of into two surface evaporation ponds. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 5 to 30 feet with a total dissolved solids concentration of approximately 480 to 1400 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan applications may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held of the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the discharge plan application and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 29th day of April, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
/s/ William J. LeMay, Director

Legal #13969 Published in The Independent May 7, 1997.

Okay to Pay
5-15-97

Affidavit of Publication

RECEIVED

MAY 15 1997

Environmental Bureau
Oil Conservation Division

STATE OF NEW MEXICO
) SS
COUNTY OF McKINLEY

RANGEL, LYDIA being duly sworn upon oath, deposes and says:

As LEGAL CLERK of The Independent, a newspaper published in and having a general circulation in McKinley County, New Mexico and in the City of Gallup, New Mexico and having a general circulation in Cibola County, New Mexico and in the City of Grants, New Mexico and having a general circulation in Apache County, Arizona and in the City of St. Johns and in the City of Window Rock, Arizona therein: that this affiant makes this affidavit based upon personal knowledge of the facts herein sworn to. That the publication, a copy of which is hereto attached was published in said newspaper during the period and time of publication and said notice was published in the newspaper proper, and not in a supplement thereof,

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Lydia Rangel
Affiant.

Sworn and subscribed to before me this 9th day of May, A.D., 19 97.

Gloria M Lopez
Notary Public

My commission expires
February 5, 2001

2735 2M BUTLER'S Gallup

LEGAL NOTICE
Gallup McKinley County
New Mexico

NOTICE OF PUBLICATION
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

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GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico; on this 29th day of April, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
/s/ William J. LeMay, Director
Legal #13969 Published in The Independent May 7, 1997.

Okay to Pay
DWG 5-15-97

The Santa Fe New Mexican

Since 1849. We Read You.

NM OIL DIVISION
ATTN: SALLY MARTINEZ
2040 S. PACHECO ST.
SANTA FE, NM 87505

AD NUMBER: 634754 ACCOUNT: 56689

LEGAL NO: 61661 P.O. #: 96-199-002997

206	LINES	ONCE	at $	82.40
Affidavits:				5.25
Tax:				5.48
Total:			$	93.13

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, BETSY PERNER being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily news paper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a Newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 61661 a copy of which is hereto attached was published in said newspaper once each WEEK for ONE consecutive week(s) and that the notice was published in the newspaper proper and not in any supplement; the first publication being on the 5 day of MAY 1997 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ Betsy Perner
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 5 day of MAY A.D. 1997

Notary Candace C. Ruiz
Commission Expires

OFFICIAL SEAL
Candace C. Ruiz
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 1/09/99

RECEIVED
MAY - 9 1997
Environmental Bureau
Oil Conservation Division

Okay to Pay
DWB
5-7-97

NOTICE OF PUBLICATION

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal applications have been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico, 87505, Telephone (505) 827-7131:

(GW-126) - Weatherford Enterra US, Ms. Lesa Griffin, (713)-693-4922, 515 Post Oak Blvd., Suite 600, Houston, TX 77027, has submitted a Discharge Plan Application for their Farmington facility located in the SW/4 NW/4, Section 19, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. Any potential discharge at the facility will be stored in enclosed top receptacles. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 30 feet with a total dissolved solids concentration of approximately 1,000 to 2,000 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-0[illegible] - Conoco, Inc., Ms. Terry L. Killian, (281)-2[illegible] 1188, P.O. Box 2197, HU3[illegible] Houston, TX, 77252, has submitted a Discharge Plan Renewal Application for their "Wingate" gas plant located in Sections 9, 10, 15, 16 and 17, Township 15 North, Range 17 West, NMPM, McKinley County, New Mexico. Plant waste water is disposed of into two surface evaporation ponds. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface is at a depth of approximately 5 to 8 feet with a total dissolved solids concentration of approximately 480 to 1400 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan applications may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the Director will approve or disapprove the proposed plan based on the information in the discharge plan application and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 29th day of April 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
WILLIAM J. LEMAY,
Director
Legal #61461
Pub. May 8, 1997

NOTICE OF PUBLICATION

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations, the following discharge plan renewal applications have been submitted to the Director of the Oil Conservation Division, 2040 South Pacheco, Santa Fe, New Mexico 87505, Telephone (505) 827-7131:

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If no public hearing is held, the Director will approve or disapprove the proposed plan based on information available. If a public hearing is held, the director will approve or disapprove the proposed plan based on information in the discharge plan application and information submitted at the hearing.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 29th day of April, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

SEAL

WILLIAM J. LEMAY, Director

WJL/pws

< OCD File Copy

CONOCO INC.

WINGATE FRACTIONATING PLANT

DISCHARGE PLAN
GW-054

APRIL 1997

C-K ASSOCIATES • INC
ENVIRONMENTAL & ENGINEERING CONSULTANTS

C-K ASSOCIATES, INC
ENVIRONMENTAL & ENGINEERING CONSULTANTS

17170 PERKINS ROAD
BATON ROUGE, LA 70810
PH (504) 755-1000
FAX (504) 751-2010

AREA OFFICES

LAKE CHARLES, LA 70601
PH (318) 479-0303
FAX (318) 479-1145

SHREVEPORT, LA 71105
PH (318) 797-8636
FAX (318) 798-0478

BEAUMONT, TX 77705
PH (409) 842-2265
FAX (409) 840-9116

AUSTIN, TX 78759
PH (512) 346-1048
FAX (512) 346-7320

SALES OFFICES

JACKSON, MS 39236
PH (601) 853-6987
FAX (601) 856-9784

PENSACOLA, FL 32574
PH (904) 934-8979
FAX (904) 934-6198

April 16,1997

New Mexico Energy Minerals and
Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
Attn: Mr. Roger C. Anderson

Ref: Final Discharge Plan Wingate Plant
C-K Associates Project No. 15-586

Dear Mr. Anderson:

Enclosed please find one original and one copy of the Final Discharge Plan for the Wingate Fractionating Plant. Also enclosed, please find a check in the amount of $50.00 to cover the filing fees. If you have any questions about the enclosed document, please feel free to call me at (504) 755-1000.

Very truly yours,
C-K Associates, Inc.

Bill Corbin

Bill Corbin
Groundwater and Remediation Services
Division Director

WLC/mgb

Attachment: As Stated

cc: Ms. Cindy Thompson
C-K Associates, Inc.

Ms. Terry L. Killian, P.E.
Conoco Inc.

Mr. Denny Foust
OCD - Aztec Office w/ 1 copy of Discharge Plan
w/o check

1541L01.DOC

CONOCO INC.
WINGATE FRACTIONATING PLANT

DISCHARGE PLAN
GW-054

APRIL 1997

RECEIVED
APR 17 1997
Environmental Bureau
Oil Conservation Division

CONOCO INC.
WINGATE FRACTIONATING PLANT

DISCHARGE PLAN
GW-054

APRIL 1997

PREPARED BY:

C-K ASSOCIATES, INC.
17170 PERKINS ROAD
BATON ROUGE, LOUISIANA 70810
(504) 755-1000

C-K ASSOCIATES' PROJECT NO. 15-586

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(Continued)

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List of Drawings

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5152	Water Equipment Diagram
5153 (sheets 1-4)	Wingate Plant and Area
5155	"A & B" Plant Cooling Water Equipment Diagram
5156	"C" Plant Cooling Water Equipment Diagram
5157	Steam System Equipment Diagram
5158	Process Flow Schematic

Drawings were previously submitted in the Discharge Plan from Meridian Oil, Inc. dated April 1992.

P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

NEW MEXICO
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Revised 12/1/
Submit Origi
Plus 1 Cop
to Santa
1 Copy to appropri
District Offi

Wingate: GW-054

DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS, REFINERIES, COMPRESSOR, AND CRUDE OIL PUMP STATIONS
(Refer to the OCD Guidelines for assistance in completing the application)

RECEIVED
APR 17 1997
Environmental Bureau
Oil Conservation Division

☐ New ☒ Renewal ☐ Modification

1. Type: Gas Plant
2. Operator: Conoco Inc., Wingate Fractionator
   Address: Post Office Box 1728 Gallup, New Mexico 87305
   Contact Person: Alan Higginbotham, Plant Manager Phone: (505) 863-1000
3. Location: See Figure 3.1 /4 /4 Section 9, 10, 15, 16, & 17 Township 15N Range 17W
   Submit large scale topographic map showing exact location.
4. Attach the name, telephone number and address of the landowner of the facility site.
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
6. Attach a description of all materials stored or used at the facility.
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
11. Attach a contingency plan for reporting and clean-up of spills or releases.
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
14. CERTIFICATION

I herby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Terry L. Killian Title: Director-Environmental

Signature: Terry L. Killian Date: April 15, 1997

1.0 TYPE OF OPERATION

Wingate Plant, is a processing plant which fractionates a mixed liquefied petroleum gas stream into usable products. Its feed stock is received via pipelines from four natural gas facilities and consists of hydrocarbons with the majority of molecules containing from two to six carbon atoms along with small amounts containing up to ten and higher carbon atoms. The products of the facility are propane, normal butane, isobutane, natural gas liquid (light gasoline) and mixed butane.

1.1 History of Operation

The Wingate Plant is currently owned and operated by Conoco Inc. (Conoco). The Wingate Plant was previously owned and operated by El Paso Natural Gas Company (EPNG) until October 1990 and by Meridian Oil, Inc. (Meridian) from October 1990 to April 1996. The initial section of the Conoco Wingate Plant was the "A" plant. It was designed by Fluor Corporation to process 338,991 gallons per day of natural gas liquids. It was placed in service on October 28, 1953 and modified in May 1962.

The "B" plant section was designed by Sterns-Roger and Fish Engineering Corporations to process 659,038 gallons per day of natural gas liquids. This section was placed in service on October 25, 1956.

A deisobutanaizer section was designed by Fish Engineering. It was placed in service in December 1957. A new deisobutanaizer section was built in May 1962 and the original section was abandoned in place. The deisobutanaizer section currently produces 250,000 gallons per day of normal butane and 115,000 gallons per day of isobutane.

The "C" plant section was designed by Sterns-Roger Corporation to process 330,000 gallons per day of natural gas liquids. It was placed in Service on April. 7, 1967.

A train loading facility capable of handling 82 cars was placed in service on September 15, 1959. A major fire occurred at this facility in 1982. As a result, a deluge system and lightning protection system were installed for both truck and train loading racks.

A company lodging camp consisting of 48 houses and 23 house trailers existed on the property and received utilities from the plant. The camp was retired and the houses and trailers were removed in 1986.

2.0 NAME OF OPERATOR OR LEGALLY RESPONSIBLE PARTY AND LOCAL REPRESENTATIVE

2.1 Name of Legally Responsible Party

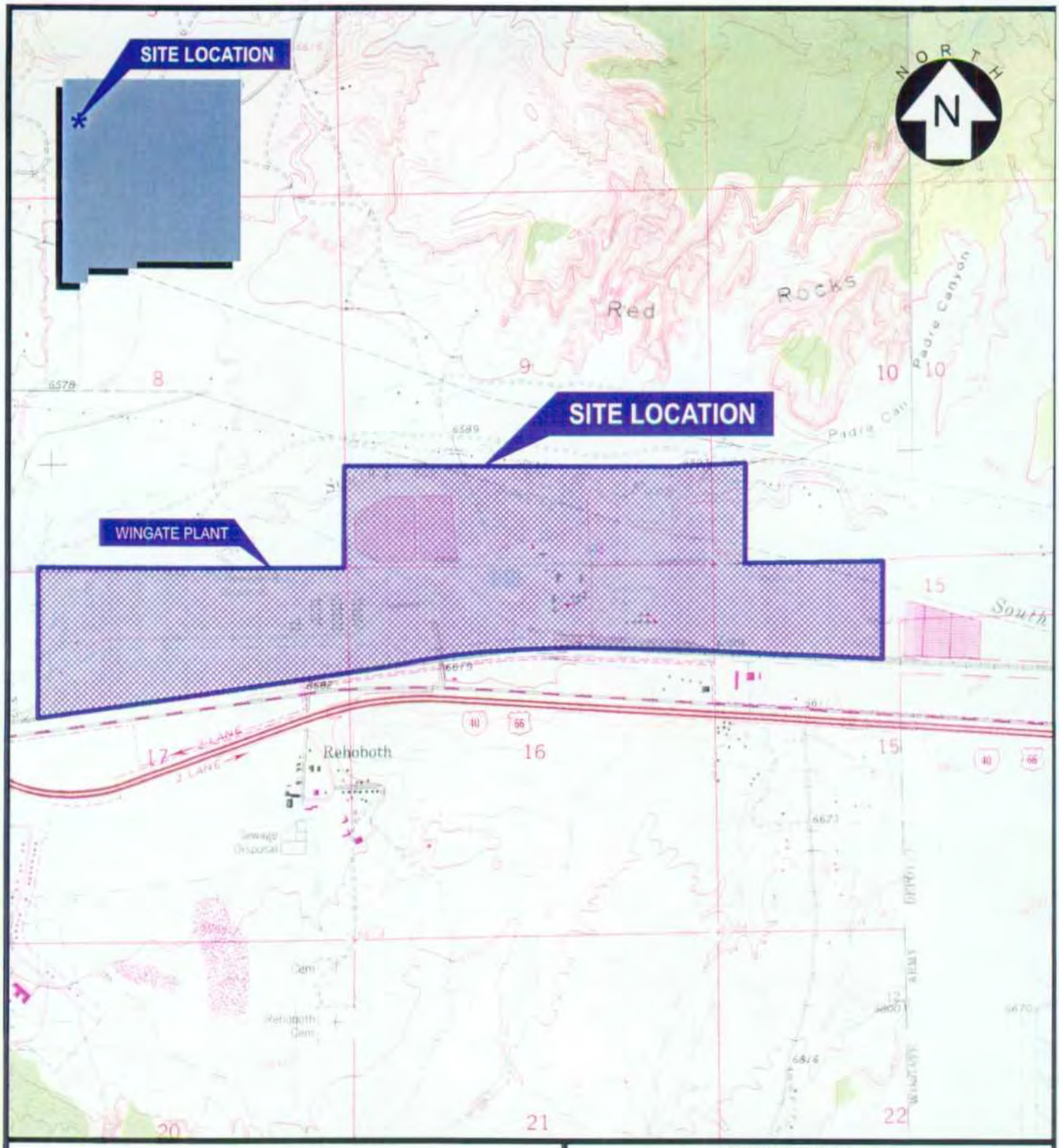
Conoco requests that all correspondence regarding this plan be sent to:

Ms. Terry L. Killian, P.E.
Director-Environmental
Conoco Inc.
P.O. Box 2197 - HU3036
Houston, Texas 77252
(281) 293-1188

2.2 Name of Local Representative

Conoco requests that copies of correspondence also be sent to:

Alan Higginbotham
Plant Manager
Conoco Inc.
Wingate Fractionator
Post Office Box 1728
Gallup, New Mexico 87305
(505) 863-1000



2000 0 2000

SCALE: 1" = 2000'

NOTE:
BASE MAP TAKEN FROM U.S.G.S. 7.5 MINUTE TOPOGRAPHIC MAPS, "GALLUP EAST, N. MEX.", DATED 1963, AND "CHURCH ROCK, N. MEX." DATED 1963, PHOTOREVISED 1979 AT A SCALE OF 1:24,000.

CONOCO INC.
GALLUP, NEW MEXICO

DISCHARGE PLAN

SITE LOCATION MAP

McKINLEY COUNTY

C-K ASSOCIATES · INC
BATON ROUGE, LOUISIANA

Drawn:	TPL/FH/PC
Checked:	BC
Approved:	BC
Date:	4/10/97A
Dwg. No.:	A15-586-01

FIGURE 1

IMAGE: 1558651

4.0 LANDOWNER

Conoco is the landowner of record. The facility address is as follows:

Conoco Inc.
Wingate Fractionator
Post Office Box 1728
Gallup, New Mexico 87305
(505) 863-1000

Portions of Section 9, 10 and 15 are leased from the Navajo Tribe. Their address is as follows:

The Navajo Tribal Council
Post Office Box 701
Window Rock, Arizona 86515

5.0 FACILITY DESCRIPTION

5.1 Overview

The Wingate Plant discharges approximately 30,000,000 gallons of wastewater per year. Virtually all of the wastewater is non-contact water. Approximately 22,500,000 gallons of the wastewater is blown-down from the plant boilers, cooling towers and water treatment equipment. The remaining 7,500,000 gallons is domestic wastewater. Less then 400 gallons per year of contact water from the inlet surge tanks is discharged with the wastewater. The total dissolved solids (TDS) of the wastewater stream averages less than 3,000 ppm.

Groundwater which may be affected by operations at the Wingate Plant is at a depth of 5 to 30 feet and is a non-potable water supply due to TDS levels.

The plant feedstock is split into the product components using a distillation chain. Three parallel and largely duplicate sections exist in the facility producing propane, mixed butane and natural gas liquid (light gasoline). They are called "A", "B", and "C" Plants. Typically "A" and "B" Plants run continuously and "C" Plant is used during peak demand. The mixed butane from these three sections are fed to a fourth section (deisobutanaizer plant) where normal butane and isobutane are produced.

Finished product is stored in a large tank farm. Spherical tanks are used for natural gas liquid (light gasoline) and part of the normal butane storage. These have containment dikes surrounding them. Other products which are gaseous under atmospheric pressure are stored in undiked horizontal tanks. There is no underground product storage.

Product is transported from the site via pipeline, tank trucks and railway tank cars. Giant Refinery, the largest customer, receives product via a pipeline extending approximately 15 miles to the east. Giant Refinery maintains a pumping station on the Wingate Plant property. Both the pipeline and the pumping station are property of Giant Refinery.

Natural gas from an El Paso Natural Gas Company (EPNG) transmission pipeline located north of the plant is used to provide utilities. Vapors recovered from product loading supplement gas from EPNG which is burned in boilers to produce steam. Electricity is produced by both steam driven turbines and natural gas fueled engines. The generating capacity of the plant is 2,094 kilovolt-amperage (KVA).

Underground piping is used extensively throughout the plant for water and wastewater. Process piping is aboveground except for areas between the shipping pumps and the truck and train loading rack. The product pipeline to Giant Refinery is also underground. Underground tanks have never been used at the Wingate Plant.

A vapor recovery system exists to recover all vapors vented during loading and from relief valves. Product tanks and tower relief valves vent to atmosphere. When this system is overloaded, the excess gas is fed to a candlestick flare and is burned. Two emergency flare pits exist to burn flammable liquid and gas caused by major upsets and to replace the candlestick flare when it requires maintenance.

Water is supplied to the plant by four deep (in excess of 1,000 feet) wells. Two wells are on Conoco property and two wells are six miles east of the plant. The well water is treated to remove iron, then stored in five ground level tanks for plant and firewater use, and one overhead tank for domestic use. The overhead tank is chlorinated.

One half of the cooling tower make-up water is softened using sodium zeolite ion exchange and stored in a ground level tank for use. Boiler feedwater make-up is purified using a reverse osmosis unit and stored in a ground level tank for use. The reverse osmosis unit replaced an evaporator and was placed in service on July 1, 1990.

Two cooling water systems are used. A large cooling tower services "A", "B", and boiler/auxiliary Plants. It is continuously loaded. A smaller system is loaded intermittently for "C" Plant. One boiler system, consisting of five gas-fired boilers, services all four plant sections.

Wastewater is fed to the evaporation ponds via a general waste sump and brine sump. These sumps receive the waste streams from cooling tower blowdown, boiler blowdown, filter back wash, softener regenerating streams and reverse osmosis effluent.

Six septic tanks exist on the site. Three drain to the general waste sump, one ties into the line from the general waste sump, one empties directly into the pond and one has a leach field.

There are two evaporation ponds. The east pond receives water directly from the plant. The west pond receives overflow from the east pond.

In addition to the fractionating plant, two other facilities are adjacent to the Wingate property which are owned by EPNG. They are the EPNG Gallup Pipeline District office, shops and yard and the EPNG Gallup general warehouse. They both receive domestic water from and discharge septic tank effluent to the Wingate systems and are connected to the firewater system.

5.2 Plant Process Description

A schematic diagram of the processes that handle the various liquefied petroleum gas components is shown on Drawing Number 5158.

Process feed arrives at the Wingate Plant via pipeline from EPNG's Chaco Plant, Conoco's San Juan Gas Plant in northwest New Mexico and Texaco's Aneth Plant in southeastern Utah. A maximum of 1,080,000 gallons per day of feed liquids are received and fed into six incoming feed tanks. The feed is sent to three plant sections where the liquid is fractionated into propane, mixed butane and a natural gas (light gasoline or straight run gasoline) liquid consisting of pentane, hexane and higher molecular weight components. A separate plant unit contains a distillation column used to fractionate mixed butane into normal and isobutane components.

Iron sponge units on the propane streams are used to remove sulfur that is in the form of hydrogen sulfide. Heavier organic sulfides are removed from the natural gas liquid (light gasoline) streams by perco treaters which convert sulfides to disulfides. Propane and butane streams are odorized with ethyl mercaptan as they are loaded for shipment at a concentration of 1.5 pounds per 10,000 gallons of product. Product which the customer may store underground or process is not odorized.

Product at the Wingate Plant is stored in a tank farm consisting of 49 spherical and horizontal tanks. All horizontal tanks containing propane or butane are undiked since these products are gaseous at atmospheric pressure. Spherical tanks containing the natural gas liquid (light gasoline) and normal butane have unlined spill containment dikes of earth or concrete.

Product leaves the plant via pipeline, railway tank cars and tanker trucks. Giant Refinery receives product via a 15 mile pipeline which extends east of the plant. Tank cars and tanker trucks are loaded at a facility which includes a deluge system in case of fire, an extensive lighting rod system and a vapor recovery system. The vapor recovery system condenses and recovers liquids lost in depressurizing and venting the tankers during loading operations. Condensed liquids are removed by scrubbers and returned to the plant inlet. Vapors are compressed and used as boiler fuel with excess being sent to the candlestick flare. When the vapor recovery system is overloaded, the excess is burned off in a candlestick flare. Two emergency flare pits exist to burn off gas and liquid in the event of a major upset. Complete combustion of liquid occurs in these pits so no liquid hydrocarbons reach the ground.

5.3 Water System

Water is supplied to the Wingate Plant by four groundwater wells. The water is passed through a series of pretreatment processes and into a set of raw water storage tanks prior to distribution to the plant and miscellaneous water systems.

Some of the water for plant use is softened by sodium zeolite ion exchange. The water is then used in the "A" and "B" cooling water system and the "C" cooling water system. The steam system and engine jackets use soft water which has been further purified using a reverse osmosis system.

Wastewater from the water systems is discharged to an evaporation pond via a general waste sump and a brine sump. The waste streams received by the sumps include the cooling tower blowdown, the filter backwash, the boiler blowdown, reverse osmosis effluent and the softener regeneration process. There are two evaporation ponds in series. Wastewater is discharged into the east pond and overflows into the west pond.

The general flow diagram is outlined in the Water Flow Block Diagram, Drawing 5151. The Water Equipment Diagram, Drawing 5152, shows all water systems except the cooling water and steam systems.

5.3.1 Wells and Pretreatment System

Water is supplied to the plant by four production wells in excess of 1,000 feet deep. Two of these wells are located on Conoco property and two are located approximately six miles east of the plant. The onsite wells, #3 and #4, have pump capacities of 60 gallons/minute and 75 gallons/minute, respectively. The offsite wells #6 and #7 have pump capacities of 300 gallons/minute and 200 gallons/minute, respectively. Well construction data for all four water supply wells is presented in Table 5-1. Groundwater samples from all four wells were taken by Meridian personnel on April 4, 1989 for analysis. The results of the analysis are presented in Table 5-2.

The water is transported via a pumping and underground piping system to the pretreatment processes located at the Wingate Plant. Pretreatment consists of aeration which oxidizes iron to a form which precipitates as iron (III) hydroxide. Pretreated water is then passed through filters to remove the iron. The filters are permanent and are cleaned by backwashing rather than replacement. Filter backwash is piped to the general waste sump. The water is stored in five ground level tanks for plant use and one overhead tank for domestic use. The overhead tank is chlorinated.

Table 5-1

Water Supply Wells Completion Data

	WELL #3 (onsite)	WELL #4 (onsite)	WELL #6 (offsite)	WELL #7 (offsite)
Location	T15N R17W S16 NE/NE/NE	515N R17W S16 NE/NE/NE	T15N R16W S28 SE/SE/NE	T15N R16W S20 NW/SE/NE
Completion Date	04/53	05/53	03/58	02/67
Total Depth (ft)	2,012	1,941	1,275	1,384
Casing Depth (in/ft)	16-76 12 3/4-185 8 5/8-1,614 6-2,012	12 3/4-131 8 5/8-1,610	16-264 12 3/4-1,033	16-180 12 3/4-1,296
Static Water Level 10/89 (ft)	Flowing Artesian	89	Flowing Artesian	Flowing Artesian
Pumping Water Level 10/89 (ft)	810	Not measured	290	310
Well Yield (gpm)	55	67	261	237

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

TABLE 5-2

Water Supply Well Water Analysis

	WATER WELL #3	WATER WELL #4	WATER WELL #6	WATER WELL #7
pH	7.7	7.7	7.8	7.6
Alkalinity (as CaCO3)	0	0	0	0
Total Alkalinity (as CaCO3)	202	191	164	166
Sulfate (as SO4)	478	410	614	618
Total Hardness (as CaCO3)	190	420	628	710
Calcium (as Ca)	40	107	156	154
Magnesium (as Mg)	22	37	58	79
Sodium (calculated as Na)	237	82	75	39
Silica (as SiO2)	0.39	0.24	0.23	0.23
Fluoride (as F)	5.1	6.7	5.2	5.4
Total Iron (Fe)	0.37	7.9*	0.35	0.15
Dissolved Iron (Fe)	0.15	0.13	0.12	0.1
Total Manganese (Mn)	0.17	0.22	0.17	0.17
Dissolved Manganese	0.12	0.16	0.14	.14
Total Dissolved Solids	932	944	1058	921
Biological Oxygen Demand	<1	<1	<1	<1
Chemical Oxygen Demand	<1	<1	<1	<1
Ammonia Nitrogen (as NH4)	0.35	0.25	0.29	0.13
Nitrate (as NO3)	<0.1	<0.1	<0.1	<0.1
Nitrite (as NO2)	0.03	0.06	0.02	0.03
Total Organic Carbon	0.67	0.62	1.09	0.68
Specific Conductance	1215	1171	1199	1173

Concentrations in parts-per-million (ppm), pH in standard units (s.u.), specific conductance in micromhos/centimeter (μmhos/cm).
*The iron content may be high as well #4 had recently been serviced.
Sample date: April 4, 1989
Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

5.3.2 Water Treatment Systems

Some of the raw water is treated with a sodium zeolite ion exchange softening system. This system removes calcium and magnesium ions and replaces them with sodium ions. The softened water provides half of the makeup for the "A & B" cooling tower, the "C" cooling tower and after further treatment, the steam system. The softeners are regenerated using a saturated brine (NaCl Solution) from the salt pit. The regeneration stream is discharged to the general waste sump. The soft water is stored in a ground level tank.

A portion of the soft water is treated with a reverse osmosis unit to remove dissolved ions. This water is stored in a ground level tank and is used as makeup for the steam system. The concentrated waste stream is discharged to the general waste sump.

5.3.3 "A & B" Cooling Water System

The "A & B" cooling water system is diagrammed in Drawing 5155. The water in this system is cooled through the evaporation process via spraying in a cooling tower. A portion of the cooled water is passed through a sidestream filter to control the level of suspended solids in the circulating water. A controller maintains the proper level of total dissolved solids in the cooling water by adjusting the blowdown stream. The blowdown and side stream filter backwash are discharged to the general waste sump. Cooling water pH is controlled using H_2SO_4.

The cooling water is pumped to the process condensers and heat exchangers. The condensers which utilize the cooling water include "A" Plant depropanizer, "A" Plant debutanizer, "B" Plant stabilizer and "B" Plant depropanizer overhead product condensers. The coolers which utilize the cooling water include the debutanizer natural gas liquid (light gasoline), butane, and propane coolers, the depropanizer butane and propane coolers and the propane dehydrator cooler. The piping system is designed to allow the condensers to be backwashed by reversing the flow of water in the condenser and draining the reversed stream directly to the waste line feeding the evaporation pond. A small portion of this stream is also used as bearing cooling water for the product pumps.

Cooling water is also used in the boiler plant in the closed loop cooling water system (engine jacket and oil water coolers) and in the starting and instrument air coolers, fan and feed water pump bearing coolers, and boiler blowdown sample coolers.

The "A & B" cooling water is returned to the cooling tower after passing through the coolers and condensers listed in this section.

5.3.4 "C" Cooling Water System

The "C" Plant cooling water system is diagrammed in Drawing 5156. A portion of the cooling tower water is passed through a side stream filter to control the level of suspended solids in the circulating water. The level of total dissolved solids in the water is controlled by a constant blowdown stream. The side stream filter backwash and the blowdown are discharged to the brine sump. Cooling water pH is controlled using H_2SO_4.

"C" Plant cooling water is used in the process condensers and heat exchangers, including stabilizer and depropanizer overhead product condensers and butane, propane, natural gas liquids (light gasoline), and dehydrator coolers. The water is then recycled to the cooling tower. The "C" plant condensers are backwashed using the same method as in the "A" and "B" plants. A small portion of the stream also provides bearing cooling water for the product pumps.

5.3.5 Steam System

A part of the softened water is treated with a reverse osmosis unit to remove the dissolved salts for use in the steam system. The steam system is shown in Drawing 5157. The plant capacity is 201,000 pounds of steam per hour (65,000 lb/hour at 100 psig and the remainder at 400 psig).

The water from the reverse osmosis unit is used for the boiler feed water make-up. It is conducted into a feed line that connects a set of condensate storage tanks, pumped into the deaeration heaters and transferred through a preheater to the boilers. The water is deaerated to prevent air buildup in the steam lines and to prevent oxygen corrosion in the boilers and steam systems.

Steam is distributed to electrical generators, reboilers, preheaters, and steam driven pumps throughout the "A & B" Plant, the "C" Plant and the boiler plant. The equipment that utilizes the steam for heat exchange include the stabilizer, depropanizer, debutanizer, mixed butane, and the iso-butane preheaters and reboilers. The equipment that utilizes the steam for a power source include the stabilizer, stand-by, depropanizer, and iso-butane feed pumps, reflux pumps, #4 and #5 electrical generators, the boiler feed pumps and cooling tower spray pumps in both "A & B" and "C" cooling systems.

After passing through the process equipment, the condensate is returned to the set of condensate storage tanks for reuse. Fin-fan condensers are used to condense some of the exhausted steam.

5.3.6 Domestic and Firewater System

Water for domestic use is chlorinated and fed to the plant from an elevated storage tank. EPNG's general warehouse and pipeline district office also receive domestic water and fire water from the plant.

Two firewater pumps feed fire hydrants and monitors throughout the property and a deluge system in the train and truck loading areas. A runoff pond exists to capture and evaporate water from the deluge system. The pond has received no water from the firewater system. Water will no longer be added to this pond except in an emergency when the deluge system is activated. An additional utility pump is connected to the firewater system and is used for various utility applications and to clean equipment.

6.0 MATERIALS STORED OR USED AT THE FACILITY

A number of process and non-process chemicals or additives are used at the Wingate Plant. A list of products stored is presented in Table 6-1. The majority of the chemicals are stored in small quantities and any spills or leaks would be very small in volume and easily contained in the immediate area.

Table 6-1

Chemicals Used at Wingate Plant

Chemical	Description	Use or Storage Location	Amount
ACETONE	LIQUID	LAB	1 GAL
ACETYLENE	GAS	SHOP	420 CU FT
AMBERLITE IR-120 PLUS	SOLID	CHEM STOR	1,500 LB
AMINO ACID REAGENT	SOLID	LAB	1 LB
ANSUL PURPLE K	SOLID	WAREHOUSE	2,800 LB
BALANCED POLYMER	LIQUID	BOILER HOUSE	250 GAL
BETZ DEPOSIT CONTROL 40K	LIQUID	A/B COOLING TOWER	200 GAL
BETZ INHIBITOR 26K	LIQUID	A/B COOLING TOWER	200 GAL
BUFFER SOLUTION PH 4.0	LIQUID	LAB	5 GAL
BUFFER SOLUTION PH 10.0	LIQUID	LAB	5 GAL
BUFFER SOLUTION PH 7.2	LIQUID	LAB	5 GAL
CALCIUM CHLORIDE	SOLID	CHEM STOR	2,900 LB
CAUSTIC SODA BEADS	SOLID BASE	CHEM STOR	50 LB
CHAMPION R&O HYDROCARBON RECIPROCATING	LIQUID	WAREHOUSE	5 GAL
CHLORINE	BIOCIDE	A/B/C COOLING TOWER	2,000 LBS
CONDENSATE	LIQUID	TANK FARM	10,000 BBL
CONDUCTIVITY ST., 4600 MHOS CODE 245	LIQUID	LAB	1 GAL
CORR-SHIELD 736	LIQUID	BOILER HOUSE	1 BBL
DOCTOR SOLUTION	LIQUID	LAB	0.5 GAL
DPD 2 FREE CHLORINE	SOLID	LAB	1 LB
EL MAR 2000 ENGINE OIL	LIQUID	BOILER HOUSE	110 GAL
EP CONOLITH HT GREASE NO. 2	SEMI-SOLID	WAREHOUSE	21 LBS
FERROSWEET IRON SPONGE	SOLID	CHEM STG BLDG	3,000 LBS
FLEET HEAVY DUTY ENGINE OIL	LIQUID	WAREHOUSE	10 GAL
FLOCLEAN IPA 403	LIQUID	R. O. BLDG	2 GAL
GALLIC ACID CODE 276	LIQUID	LAB	0.5 GAL
HALON 1301 FIRE EXTINGUISHANT	GAS	CONTROL ROOM	200 LBS

Table 6-1

Chemicals Used at Wingate Plant
(Continued)

Chemical	Description	Use or Storage Location	Amount
HARDNESS BUFFER	LIQUID	LAB	0.5 GAL
HARDNESS INDICATOR CODE 290	LIQUID	LAB	0.5 GAL
HARDNESS TITRATING SOLUTION	LIQUID	LAB	0.5 GAL
HELIUM	GAS	LAB	1,952 CU FT
HSW0700F (Sulfa-Scrub)	LIQUID	VRU AREA	1 BBL
HSW0710L (Sulfa-Scrub)	LIQUID	VRU AREA	1 BBL
HYPERSPERSE ANTIFOULANT	LIQUID	R.O. BLDG	0.5 BBL
METHANOL	LIQUID	C PLANT & DRUM STORAGE	750 GAL
METHYL ORANGE INDICATOR CODE 211	LIQUID	LAB	0.5 GAL
METHYL PURPLE INDICATOR - 1.0	LIQUID	LAB	0.5 GAL
MOBIL GLYGOYLE 22	LIQUID	VRU	110 GAL
MOLYBATE REAGENT FOR PO4 CODE 2044	SOLID	LAB	1 LB
MOLYVER 1, MOLYBDENUM REAGENT	SOLID	LAB	1 LB
MOLYVER 2, MOLYBDENUM REAGENT	SOLID	LAB	1 LB
MOLYVER 3, MOLYBDENUM REAGENT	SOLID	LAB	1 LB
MULTIGEAR LUBE EP SAE 85W-140	LIQUID	WAREHOUSE	5 GAL
N-BUTANE, ISO-BUTANE, "D" GRADE BUTANE	GAS	TANK FARM	20,000 BBL
NITROGEN, COMPRESSED GAS -	GAS	FIRE TRUCK BLDG, LAB & TRUCK ISLANDS	1,200 CU FT
NOSEGUARD	SOLID	CHEM STGE BLDG	60 LBS
OXYGEN	GAS	FIRE TRUCK BUILDING	484 CU FT
PBC MIX/EPBC MIX	LIQUID	PLANT INLET	150M GAL
PELADOW MINI-PELLETS 90% CALCIUM CHLORIDE	SOLID	CHEM STGE BLDG	5,000 LBS

Table 6-1

Chemicals Used at Wingate Plant (Continued)

Chemical	Description	Use or Storage Location	Amount
PHENOLPHTHALEIN INDICATOR	SOLID	LAB	1 LB
PHENOLPHTHALEIN SOLUTIONS	LIQUID	LAB	1 LB
POLYMER 1120	LIQUID	DRUM STRGE	2 BBL
POTASSIUM IODIDE-IODATE	SOLID	LAB	1 LB
POTASSIUM PERMANGANATE	SOLID	CHEM STGE BLDG	0.5 LB
PROPANE	GAS	TANK FARM	15M BBL
PURPLE X	LIQUID	BOILERHOUSE	15 GAL
SAFETY-KLEEN PREMIUM SOLVENT	LIQUID	WAREHOUSE	30 GAL
SCENTINEL A	LIQUID	TANK FARM & TRUCK ISLANDS	2,000 GAL
SODA ASH	SOLID	CHEM STGE BLDG	750 LBS
SULFITE INDICATOR PLUS	SOLID	LAB	1 LB
SULFUR	SOLID	LAB	2 LB
SULFURIC ACID	LIQUID	A/B/C COOLING TOWER & LAB	700 GAL
SULLUBE 32	LIQUID	WAREHOUSE	10 GAL
SUPER HYDRAULIC OIL 22, 32, 46, 68	LIQUID	BOILER HOUSE	30 GAL
TRIBOL 890 HEAVY SYNTHETIC COMPRESSOR OIL	LIQUID	BOILER HOUSE	60 LBS
ZEP-A-LUME	LIQUID	CHEM STGE BLDG	5 GAL

Ref.: Wingate Plant Chemical Storage Inventory 1996

7.0 SOURCES AND QUANTITIES OF EFFLUENT AND WASTE SOLIDS GENERATED AT THE FACILITY

7.1 Waste Streams

Waste streams originate from the backwashing of the iron filters in the pretreatment system, from the regeneration of the sodium zeolite ion exchanger, from the reverse osmosis waste, from the boiler and cooling tower blowdowns, from the backwashing of the condensers, from the backwashing of the side stream filters and from the septic tank systems. The only wastewater in contact with process streams (hydrocarbons) is the flow from the inlet feed tank water legs. This amounts to less than one gallon per day. Table 7-1 lists the waste streams with their flows.

The waste streams are directed to either the general waste sump, the brine sump, or are discharged directly to the evaporation pond. The wastes from the general waste and brine sumps are subsequently discharged into the evaporation ponds.

The general waste sump provides a waste collection point for the iron filter backwash, the softener regeneration water, the reverse osmosis waste, the boiler blowdown waste, the "A & B" side stream filter backwash, the "A & B" cooling tower blowdown water, the boiler house drain water, and the plant northeast, northwest and southwest septic tank water. The waste in the general waste sump may include some surface water runoff.

The brine sump provides a waste collection point for the overflow from the salt pit, the "C" cooling tower blowdown water, and the overflow from the plant northeast, northwest and southwest septic tanks. The waste in the brine sump may also include some surface water runoff.

The backwash from the condensers, the water from the inlet feed surge tanks, and the discharge from the warehouse septic tank are discharged into the waste stream between the sumps and the evaporation ponds. The water from the inlet feed surge tanks is the only contact water discharged to the evaporation pond. This water is entrained in the feed stock from the incoming pipeline. Any condensed water is removed via a manual valve in water legs on the six feed tanks. It is discharged to an open drain pipe and is pumped to the metered line to the evaporation pond. All other contact water and water which is produced in the process is sent to the candlestick flare to incinerate any hydrocarbon compounds with may be present.

Table 7-1

Wastewater Streams

STREAM	FLOW
Iron Filter Backwash	2,325 gal/day
Sodium Zeolite Regeneration	12,890 gal/day
Boiler Blowdown	28,000 gal/day
"A" & "B" Cooling Tower Blowdown	26,400 gal/day
"C" Cooling Tower Blowdown	360 gal/day
"A" & "B" Side Stream Filter Backwash	7,500 gal/day
"C" Side Stream Filter Backwash	575 gal/day
Reverse Osmosis Unit Waste Stream	14,400 gal/day
Process Feed Water Legs (Contact)	1 gal/day
Septic Tanks	
El Paso Natural Gas District Office and Warehouse	1,600 gal/day
Warehouse	1,600 gal/day
Plant (3) (to general waste sump)	5,135 gal/day
Plant (to leach field)	50 gal/day
Pond Influx	94,960 gal/day

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

Domestic discharges are made through six septic tanks. One septic tank in the southeast corner of the plant, is fed by one low use restroom. It has a leach field and does not empty into the evaporation ponds. The other three septic tanks in the processing plant area are discharged into the general waste sump. The septic tank for EPNG's general warehouse discharges into a metered line to the evaporation pond. The septic tank for EPNG's pipeline district office discharges into the pond through an unmetered line.

7.2 Stormwater

Storm water is routed to a discharge ditch by five shallow cement lined depressions. The drainage ditch runs to the west along the north edge of the plant. It empties into a large ditch about 2,300 feet west of the plant processing area. The larger ditch flows northwest for about another 2,300 feet and discharges into the Rio Puerco. In management of stormwater run off Conoco will comply with the National Pollutant Discharge Elimination System (NPDES) stormwater permit requirements.

7.3 Water Balance

A water balance was calculated from flowmeter data collected in 1990. This data was supplemented using information on water treatment regeneration and blowdown schedules. Estimates of domestic sewage were made based on number of workers in various areas. The balance is accurate for the period covered but water use can vary as a function of plant production and climate. The temperature and humidity will have a large effect on cooling water usage. During the winter a part of the cooling load is obtained from conduction of heat in the water to cold air instead of from evaporation of the cooling water. The production load of the plant affects both cooling water and boiler water usage. During the period of the balance, "C" plant was in little use which accounts for the low makeup water for the "C" plant cooling tower.

Approximately 305,000 gallons of water per day (gpd) are produced by the inlet wells. This can vary depending on which well is on. The majority of the water, approximately 60% of the total, is produced by Well #7. This load can be shifted to Well #6 or be distributed more evenly between the four wells. Approximately 200,000 gpd (65%) is utilized by the "A & B" cooling system, approximately 3,000 gpd (1%) is utilized by the "C" cooling system, and 11,300 gpd (5%) is utilized by the domestic system. Boiler feed make-up water is estimated to be 60,000 gpd (20%). The remaining 10% is used in water treatment regeneration and blowdown streams. The rate of waste from the main inlet into the evaporation pond is approximately 95,000 gpd (31% of well flow). The water balance is shown on Drawing 5151.

94,528,000 gallons of well water was used in 1989. From the water balance, the flow to the evaporation ponds would be 31 percent of this flow or 30,000,000 gallons per year. A totalizing flow meter was installed in the pipe discharging waste to the evaporation ponds. It became operational in February 1990.

The capacity of the ponds to evaporate water is determined by subtracting the annual rainfall (9.66 inches) from the annual lake evaporation rate (52.00 inches). The net evaporation rate is 42.34 inches/year. Using the surface area of 1,173,000 square feet, the annual evaporation capacity of the ponds is 31,000,000 gallons. Evaporative capacity exceeds wastewater inflow.

8.0 DESCRIPTION OF CURRENT LIQUID AND SOLID WASTE COLLECTION/STORAGE/DISPOSAL PROCEDURES

8.1 Evaporation Ponds

Plant waste streams are discharged to the evaporation ponds for final disposal by evaporation. The streams enter the east pond through a metered line containing most of the effluent and through an unmetered line from the district office containing only domestic waste. When the east pond is full the west pond receives the overflow. The east pond contains water throughout the year. The west pond only receives overflow during the winter months and sometimes dries up in the summer months. The east pond is contained in a 560 foot by 940 foot area and has a surface are of 480,000 square feet (11.0 acres). The west pond is contained in a 900 foot by 850 foot area and has a surface area of 693,000 square feet (15.9 acres). The north edges of the ponds are about 200 feet from the normally dry Rio Puerco. The east pond was placed in operation between 1968 and 1970. These ponds replaced smaller evaporation ponds which have been closed.

A series of flow meters have been installed to measure incoming water and outgoing waste streams. They measure both flow rate and total flow. They are indicated on the process flow diagrams with a circle with the letters "FIT" inside which stand for Flow Indicating Transmitter (FIT). These flowmeters will be read monthly and the total flow recorded.

Samples from the evaporation ponds will be obtained annually and analyzed in accordance with the "Guidelines for the Preparation of Discharge Plans at Natural Gas Plants, Refineries, Compressor and Crude Oil Pump Stations (Revised 12/95). These parameters are listed on Table 8-1. Sampling and analytical methods will be consistent with the references provided in WQCC 3107.B. Any records related to waste characteristics will be retained by Conoco for at least five years as required by Water Quality Control Commission (WQCC) regulations. The results of the analysis will be reported to NMOCD to comply with the WQCC regulations. Any changes, anticipated or otherwise, to the disposal system will be reported to NMOCD.

Table 8-1

Evaporation Pond Water Constituents

Constituent	
Arsenic (As)	Alkalinity
Barium (Ba)	Hardness
Bromide (Br)	Benzene
Cadmium (Cd)	Toluene
Chromium (Cr)	Ethylbenzene
Cyanide (Cn)	Xylenes (m, o & p)
Lead (Pb)	Carbon Tetrachloride
Mercury (Hg)	1,2-dichloroethane (EDC)
Selenium (Se)	1,1-dichloroethylene (1,1-DCE)
Silver (Ag)	1,1,2,2-tetrachloroethylene
Bicarbonate	1,1,2-trichloroethylene
Calcium (Ca)	Methylene chloride
Carbonate (CO_3)	1,1-dichlorethane
Chloride (Cl)	Ethylene dibromide (EDB)
Fluoride (F)	1,1,1-trichloroethane
Magnesium (Mg)	1,1,2-trichloroethane
Nitrate (NO3 as N)	1,1,2,2-tetrachloroethane
Potassium (K)	Vinyl chloride
Silica (SiO_2)	Benzo-a-pyrene
Sodium (Na)	Naphthalene
Sulfate (SO4)	
Total Dissolved Solids (TDS)	
pH	
Conductivity	

8.2 Waste Disposal

Waste oil from engines, generators, and motors is stored in drums on a concrete slab to the east of the processing area. The drums are periodically removed and recycled by Mesa Oil of Albuquerque, New Mexico.

Wastes such as waste paper, office and domestic garbage and miscellaneous wastes are removed to a landfill by the City of Gallup, New Mexico.

Other waste such as activated alumina are to be disposed at the Northwest New Mexico Regional Solid Waste facility, while mercury from mercury meters would be properly handled by Kettleman's, a Chemical Waste Management facility in California.

10.0 INSPECTION, MAINTENANCE, AND REPORTING

The Wingate Plant is operated in a manner to prevent and mitigate any unplanned releases to the environment. The plant is manned 24 hours per day and 365 days per year including holidays. Plant process and storage units are regularly observed by a number of personnel during normal operations, and any evidence or sign of spill/leaks are routinely reported to supervisory personnel so that repairs or cleanup can be promptly effected. Routine maintenance procedures conducted at the Wingate Plant also help to assure that equipment remains functional and that the possibility of spills/leaks is minimized.

Should a release of materials occur, Conoco will comply in accordance with provisions described in NMOCD Rule 116 and WQCC Section 1203. A Spill Prevention Control and Counter Measures Plan exists for the plant.

10.1 General Housekeeping Procedures

Conoco strives to reduce the potential for spills and leaks in all areas. No reportable liquid spills have occurred since Conoco began operations in April 1996. According to plant records and information from the Discharge Plan-Wingate Fractionating Plant filed by Meridian Oil Inc. (April 1992) no reportable liquid spills are documented at the Wingate Plant since the 1950s.

Non-process chemicals are used in relatively small quantities at the plant and are managed in a manner to prevent discharges to the environment. Any chemical spills which might occur would be immediately contained, controlled and any effects mitigated.

11.0 SPILL/LEAK PREVENTION AND REPORTING PROCEDURES

Cleanup procedures vary with the nature and extent of any unplanned release. Spills of acids and bases are relatively easy to control and general procedures include neutralization of the material in-place before a final evaluation is made on its ultimate disposal. Once neutralization is confirmed by sampling, it is quite probable that no further actions will be required to assure protection of human health and the environment.

If a chemical spill occurs, general cleanup procedures would involve minor earthwork to prevent migration, and recovery of as much free liquid as possible. Recovered chemical would then be transported off-site for reclamation or disposal. Any organic chemical which may have soaked in the soil will be left in place and will be disked periodically to enhance biodegradation.

Spills of organic materials which might occur at the drum storage area will be small in nature and easily contained. If a spill occurs, any free liquids will be contained by earthwork, recovered if possible and held in storage pending a decision on final disposal. Based on existing literature, analysis, and regulatory guidelines, any contaminated soil will either be left in place, transferred to other existing waste-management areas (if no incompatibilities exist), or transported off-site for proper disposal.

Potential releases could result from dike failure of the evaporation pond. Should a potential or actual release occur, some earth moving equipment is available on site or through contractors to repair damage to any dikes. Any liquids which have been released will be collected, where practical, and reintroduced into the wastewater system as is practical.

12.0 SITE CHARACTERISTICS

12.1 GEOLOGY DESCRIPTION

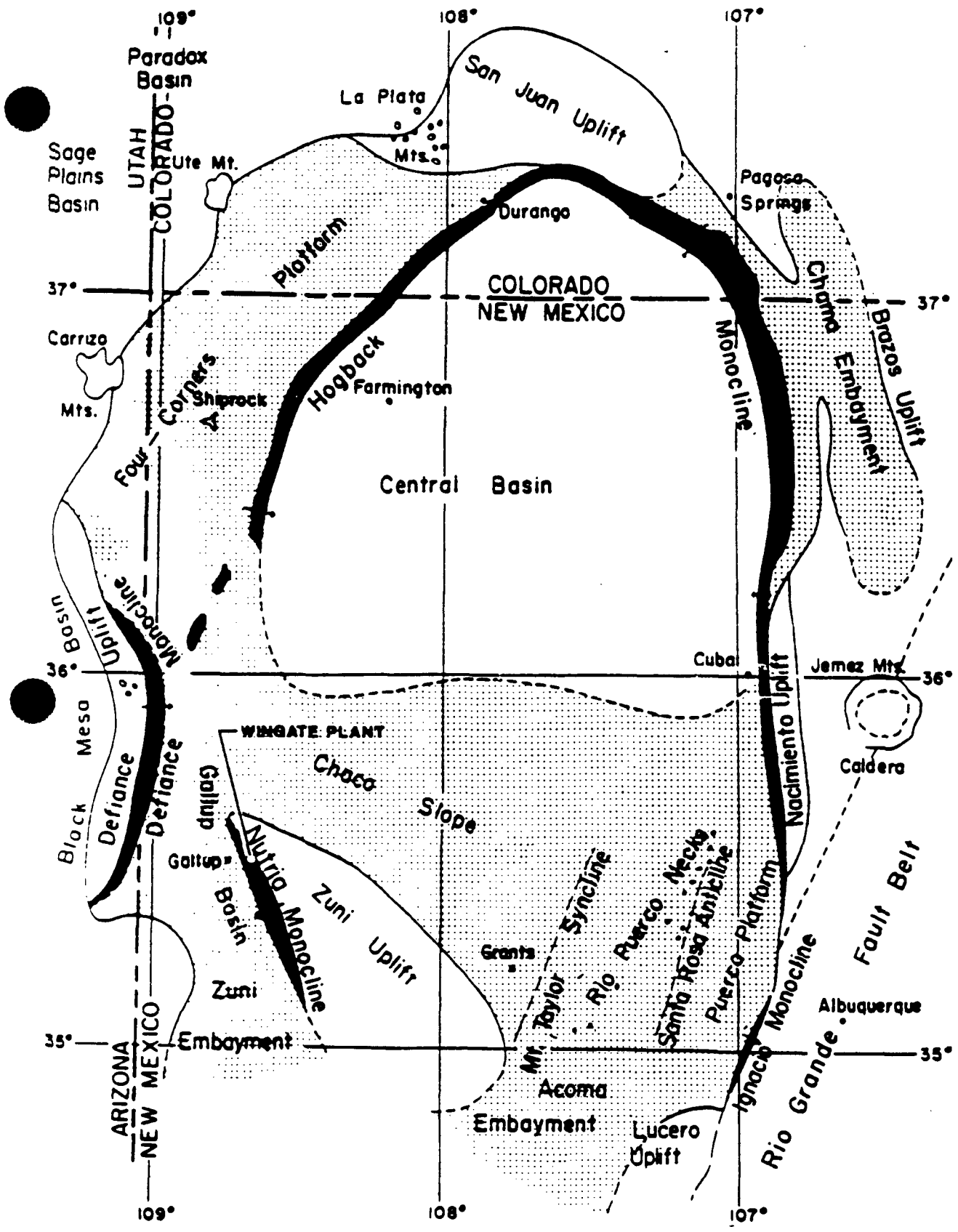
12.1.1 Regional Geology

The Wingate Plant is situated along the southwestern margin of the San Juan Basin designated the Zuni Uplift, in the Colorado Plateau physiographic Province (Figure 12-1). The Zuni Uplift is a northwest trending structural dome comprising an area approximately 55 miles in length by 20 miles in width. The site lies at the head of the western side of the uplift termed the Nutria Monocline. The San Juan Basin forms an asymmetric basin covering an area of about 25,000 square miles in northwestern New Mexico, and portions of northeastern Arizona, and southwestern Colorado. The basin is reported to contain as much as 15,000 feet of Paleozoic and Mesozoic sediments (Fassett and Hinds, 1971).

The regional geology in the area surrounding the Wingate Plant is shown in Figure 12-2. Based on available drilling log information the generalized stratigraphic column in Figure 12-3 was prepared. As shown, the surficial geology surrounding the site areas is comprised of Quaternary-aged alluvial deposits. Below the alluvium lies a thick sequence (on the order of 1,500 feet) of the Chinle Formation siltstones and mudstones. Underlying the Moenkopi Formation, also unconformably, are the Permian-age San Andres Limestone, and Glorieta Sandstone (102 and 230 feet thick, respectively), which comprise the regional aquifer in the site area. The deepest onsite well is completed into the top portion of the Yeso Formation also of Permian age, described as a fine-grained Arkosic sandstone, to a depth of approximately 2,000 feet. Below the base of the Yeso Formation in descending order are the sandstone, claystone and siltstone of the Permian-age Abo Formation, unnamed limestone and conglomerate rocks of Pennsylvania age, and Percambrian granitic and metamorphic rocks which comprise the basement rocks in the regions.

12.1.2 Local Geology

The site lies along the south side of an east-west trending alluvial drainage formed by the South Fork of the Puerco River. To the south of the site are the Zuni Mountains, reaching a maximum elevation of around 9,000 feet. North of the plant, a massive red sandstone escarpment comprised of the Triassic/Jurassic-aged sandstone and siltstone deposits of the Entreda and Wingate sandstones. It rises approximately 400 feet above the valley to an elevation of around 7,000 feet. The Wingate Plant property ranges in elevation from around 6,580 to 6,612 ft-msl.

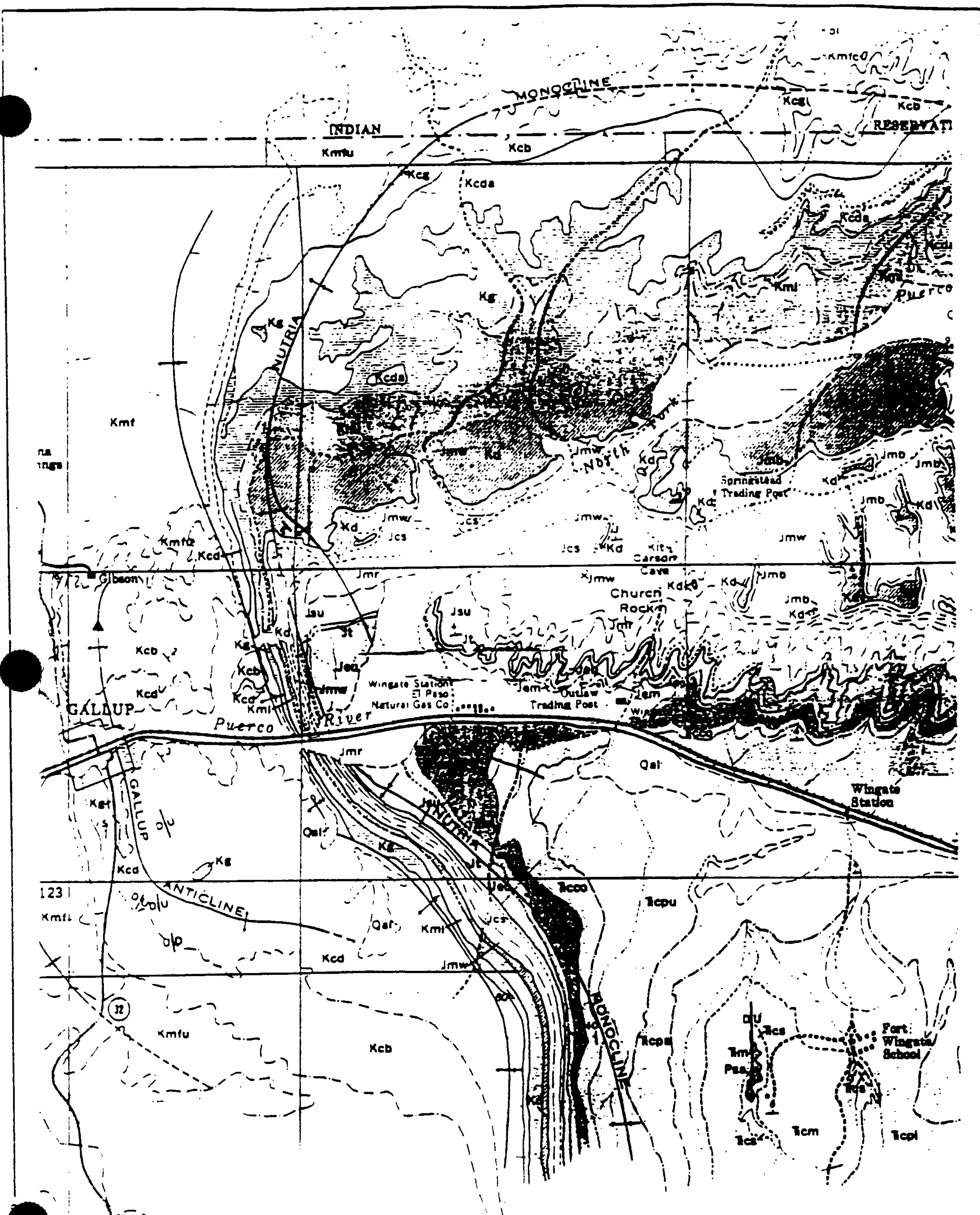


REGIONAL STRUCTURAL MAP SAN JUAN BASIN

Figure 12-1

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

DAMES & MOORE



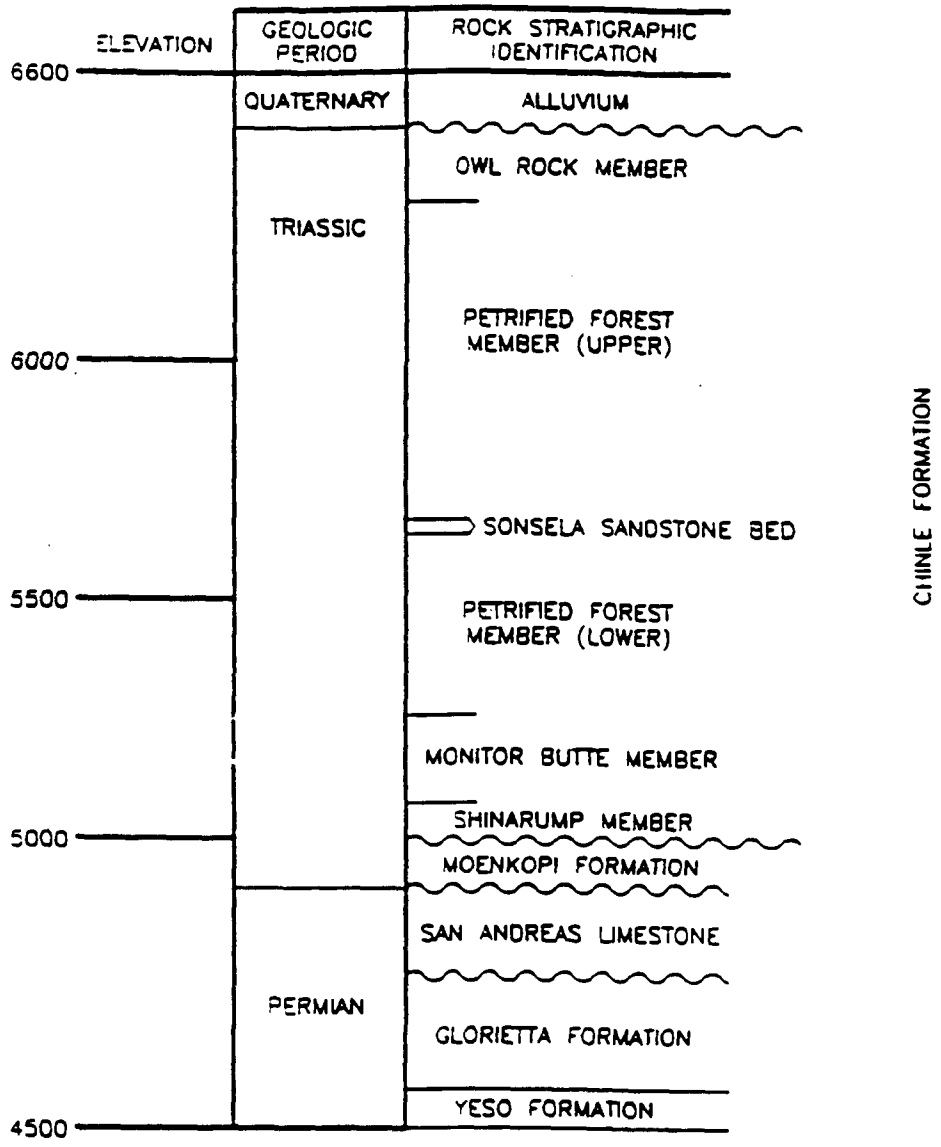
REGIONAL GEOLOGIC MAP

Figure 12-2

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

DAMES & MOORE

B00122 11



LEGEND:

——— CONTACT

~~~ UNCONFORMABLE CONTACT

VERTICAL SCALE:

1 INCH = 400 FEET

GENERALIZED STRATIGRAPHIC COLUMN

Figure 12-3

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

DAMES & MOORE
01889-115-022

A00011-06-15-90
~~~

As shown in Figure 12-2, the surficial geology in the site area, consists of Quaternary-ages alluvium. These strata dip to the northwest at approximately 2-3 degrees.

12.2 Hydrogeology

12.2.1 Regional Hydrogeology

The hydrogeology of the region is a function of geologic structure and hydraulic properties of the sedimentary formations deposited in the basin. Permeable sandstones and limestones are typically interbedded with relatively impermeable shales, siltstones and mudstones, resulting in the formation of numerous confined aquifer systems in the Permian, Triassic, Jurassic, and Cretaceous-aged deposits. The northward dip of these strata in the southwestern portion of the San Juan Basin, in conjunction with the presence of impermeable overlying formations, results in recharge being limited to the outcrop exposure of the water-bearing unit, with progressively artesian conditions occurring to the north. The major regional aquifer in the site area is San Andres Limestone/Glorieta Sandstone of Permian age. Recharge to the Sand Andres/Glorieta aquifer occurs primarily in areas of the Zuni Mountains to the south of the site area.

As stated previously, the San Andres Limestone/Glorieta Sandstone formations constitute the primary aquifer in the region. This aquifer has been designated part of the C multiple-aquifer in the region. This aquifer has been designated part of the C multiple-aquifer system (Cooley, et.al 1969). The top of the San Andres is found at a depth of approximately 1,670 feet, according to the driller's log data from on site wells. The thickness of the combined aquifer system in the site area is reported to be about 330 feet. Driller's log data from off site wells approximately six miles to the east, which service the plant via pipeline indicate the tope of the San Andres/Glorieta aquifer to be present locally at a depth of around 1,000 feet. Based on well data from the four active wells (two onsite and two offsite), the San Andres/Glorieta aquifer appears to become more productive to the east perhaps reflecting an increased degree of fracturing and/or solution cavities in that area.

Available aquifer test data for the San Andres/Glorieta report transmissivity and storage coefficient ranges of < 5 to 3,740 ft^2/day, and 7.6×10^{-5} to 1.3×10^{-4}, respectively (Shomaker, 1971).

12.2.2 Local Hydrogeology

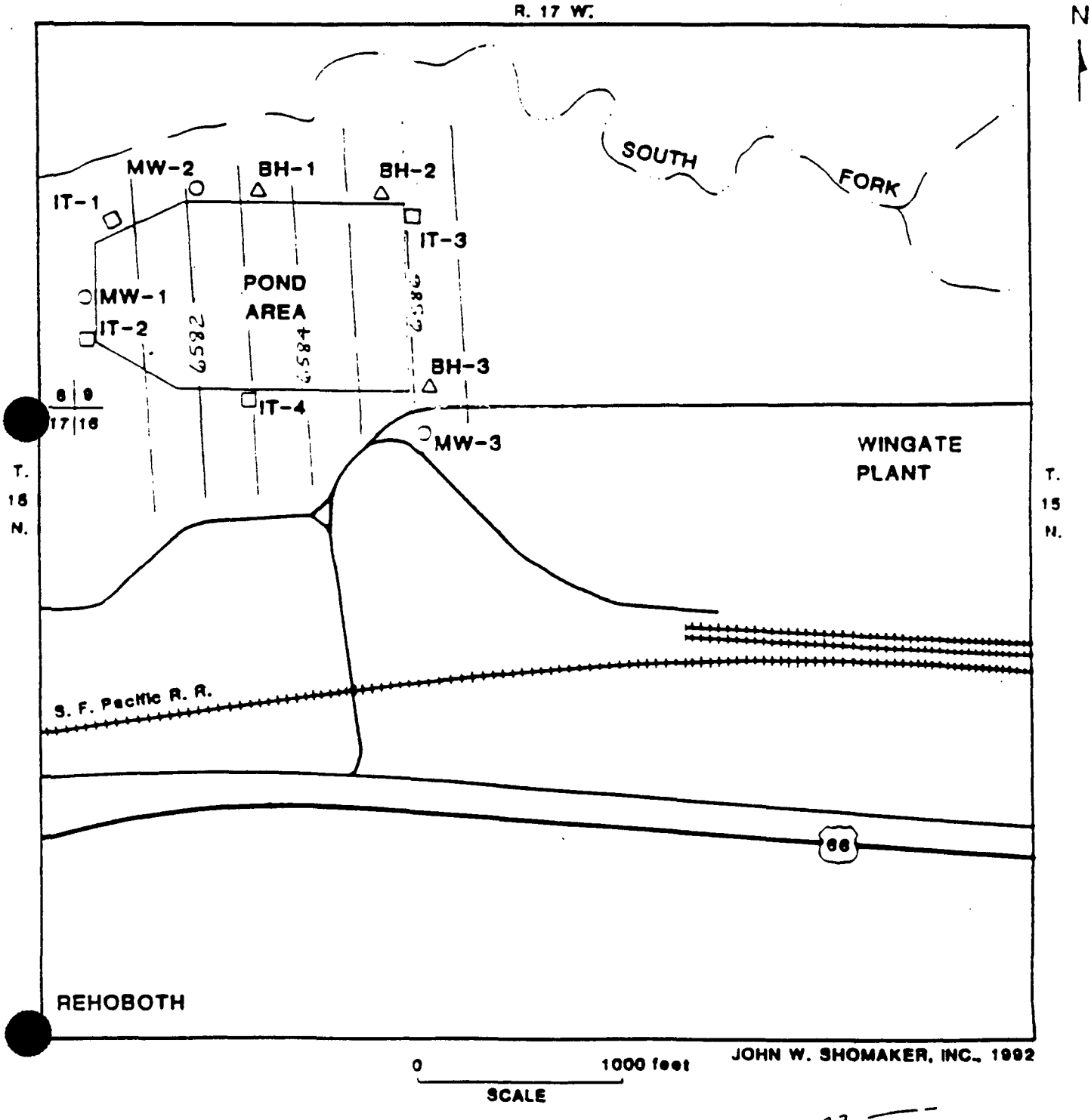
Shallow borings in the southwestern corner of the plant site associated with a geotechnical investigation for a railroad overpass (Sergent, Hauskins and Beckwith, 1987), encountered between 40 and 80 feet of unconsolidated clays, silty clays, silty sands and gravels, prior to auger refusal in weathered siltstones and sandstone. The specific capacity of offsite wells completed in alluvium reported to range from 0.19 to 1.75 gpm/ft (Shomaker, 1971). A review of driller's logs for the onsite water supply wells indicated alluvial thickness on the order of 100 feet. These logs variously report that the Chinle Formation or basal unit of the Wingate sandstone to underlie the alluvial fill deposits.

In order to better define the hydrogeology of the shallow alluvial aquifer and assess the impact of the plant's wastewater impoundments (i.e. east and west evaporation ponds) three groundwater monitoring wells were installed around the impoundments (Dames & Moore 1990) and three additional test holes were drilled and four field permeability tests were conducted (Shomaker 1992). Two of the monitoring wells were sited downgradient (MW-1 & MW-2), and one upgradient to the approximate direction of shallow groundwater flow. The location of these monitoring wells were sited downgradient (MW-1 & MW-2), and one upgradient to the approximately direction of shallow groundwater flow. The location of these monitoring wells (MW), bore holes (BH) and field tests (FT) are shown in Figure 12-4. In addition, five other wells were installed onsite as part of a property transfer environmental assessment (WMW.-1,2,3,4 and WMW-5). The location of these wells is shown in the Figure 12-5.

Three test holes were drilled around the ponds between January 6 and 8, 1992. Each hole was drilled to a depth of 26.5 feet. Split-spoon samples were collected to total depth in each hole. Core samples were collected in BH-3 from 12.5 to 14 feet (red clay), and 17.5 to 19 feet (dark red clayey silt). The core samples were submitted for laboratory analysis for column constant-head permeability tests. The laboratory was unable to saturate the samples after 21 days. The samples were sieved and found to be very fine-grained with 76 percent of the samples passing 200 mesh. The plasticity and liquid limit of both samples were 35 and 51, respectively, indicating both samples were high plasticity clays. The permeabilities were found to be less than 10^{-7} cm/sec.

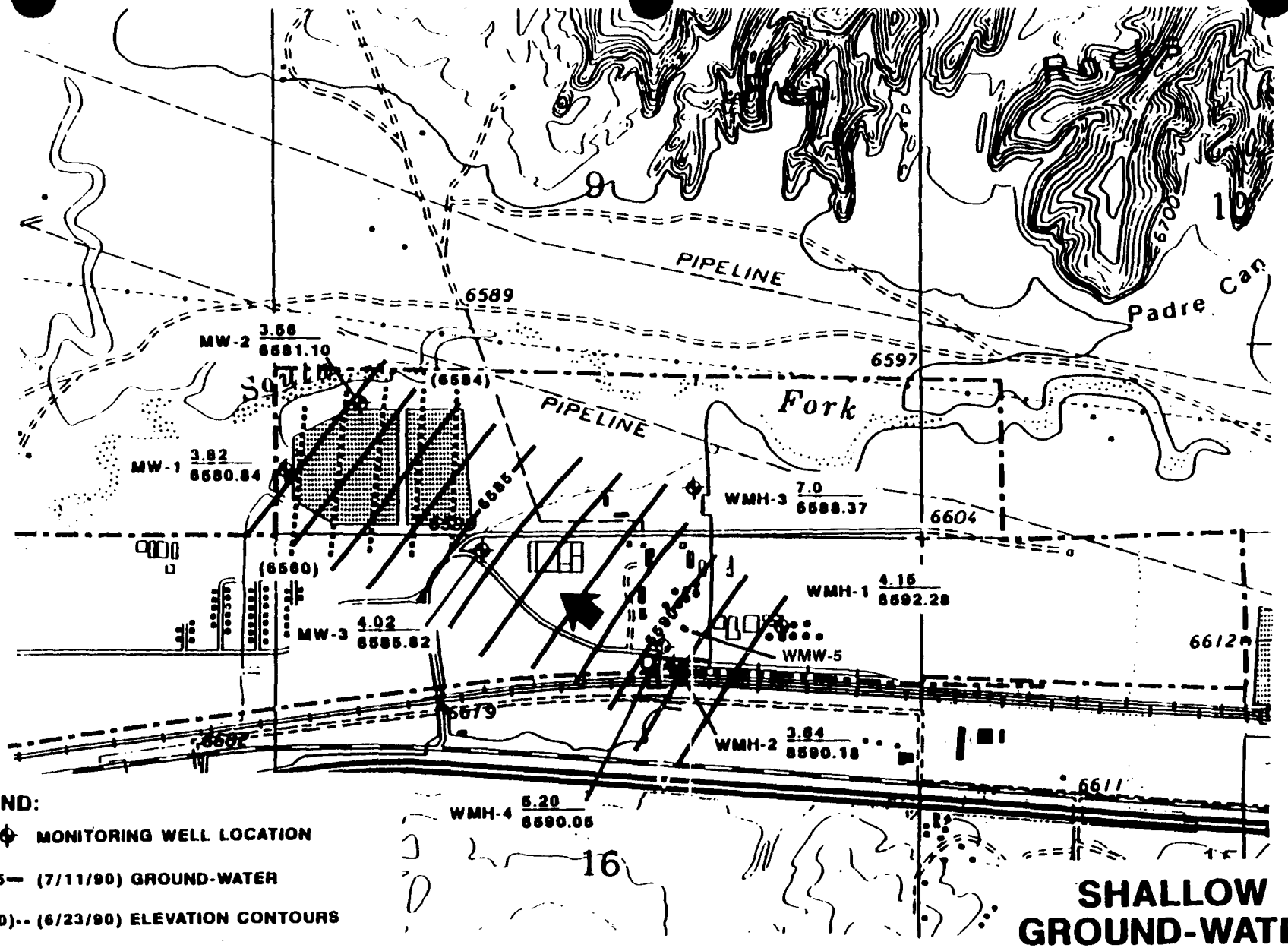
Figure 12-4

Potentiometric Surface of Alluvial Aquifer



Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

6583 — water-level contour, ft.



LEGEND:

MW-1 ⊕ MONITORING WELL LOCATION

—6585— (7/11/90) GROUND-WATER

--(6580)-- (6/23/90) ELEVATION CONTOURS

3.82 / 6580.84 DEPTH-TO-WATER / GROUND-WATER ELEVATION (FT-MSL)

DIRECTION OF SHALLOW GROUND-WATER FLOW

SHALLOW GROUND-WATER ELEVATIONS

Figure 12-5

DAMES & MOORE

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

Based upon well logs, bore holes and cores, the stratigraphy of the alluvium under the ponds consists generally of three unconsolidated units which are illustrated in Figure 12-6. These units include (from the surface downward): an upper unit consisting of sands and silty clays to depths of four or five feet; an intermediate unit consisting of clay with minor silt and sands to depths of 15 to 23 feet; and a lower unit consisting of sands, silts and interbedded clay at depths from 15 to 55 feet. As discussed above, the hydraulic conductivity of the intermediate clay unit was determined to be less than 10^{-7} cm/sec. Saturated conditions were encountered only in the lower unit.

The shallow aquifer at the plant is in the shallow alluvium. In the pond area, the aquifer occurs in sands, silty sands interbedded with clays and silty clays of the lower unit at depths between 20 to 25 feet. Logs indicated soils were unsaturated to a depth of between 21 and 25 feet around the ponds. Saturated conditions were encountered below these depths. The potentiometric surface is about three feet below the land surface. The shallow aquifer, beneath the pond area is confined by the overlying intermediate unit. This confining interval should restrict downward migration of water from the pond.

As shown by the water level contours in Figures 12-4 and 12-5, the direction of groundwater flow in the alluvial aquifer underlying the site is variable. Water levels in the evaporation pond monitoring wells, measured on June 23, 1990, indicate a westerly flow direction prevailed at the time. Water levels measured July 17, 1990 (Figure 12-5) indicated a northwesterly flow. Additional analysis on January 1, 1992 shifts the direction of flow back to a more westerly direction (Figure 12-4). This apparent shifting in flow direction suggests communication in the subsurface flow with the South Fork of the Puerco River east of the plant (Shomaker 1992, and Dames & Moore 1990).

12.3 Water Quality

12.3.1 Regional Aquifer

Water quality data for the four plant water supply wells are presented in Table 12-1. The data for the onsite wells probably represent a composite of that found in the San Andres/Glorieta aquifer and the Sonsila Sandstone bed of the Chinle Formation. Groundwater from these wells meets New Mexico State water quality standards.

Table 12-1

Regional Groundwater Quality Data

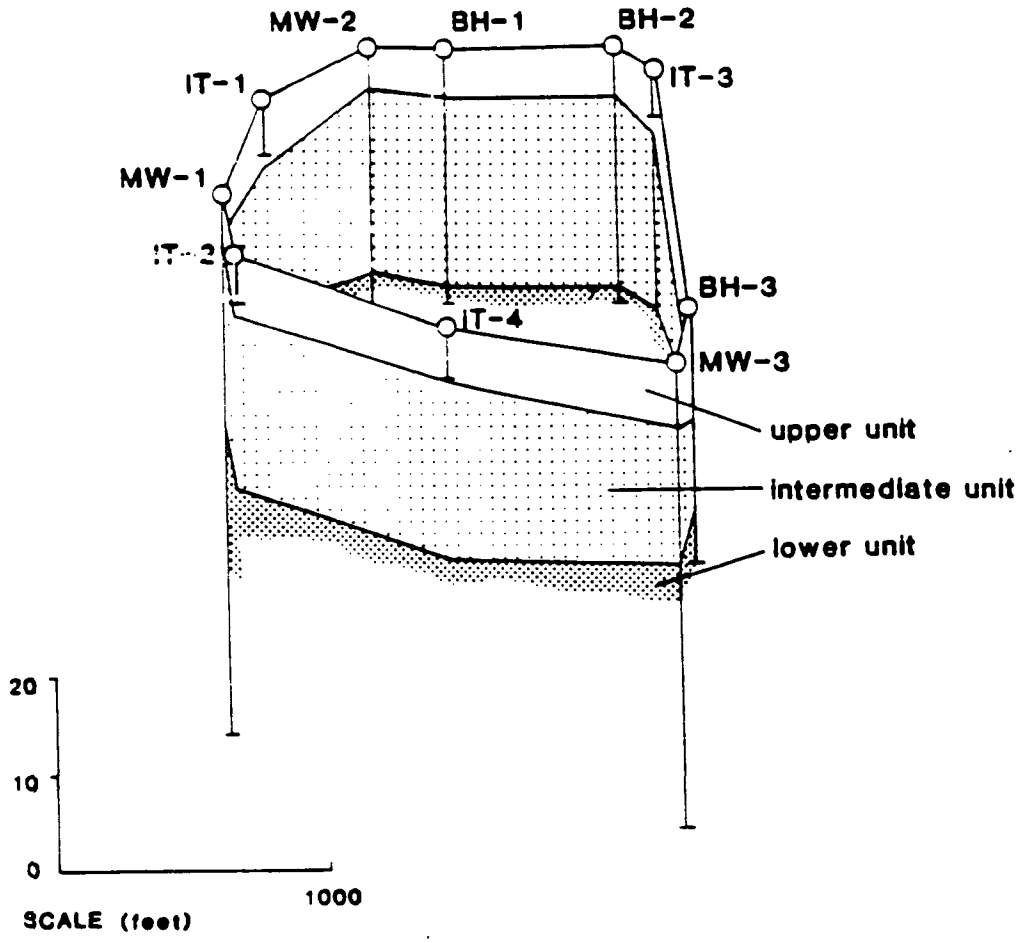
Constituent	WELL #3 (ON SITE) T15N 417W S16 NE/NE/NE 04/09/76	WELL #3 (ON SITE) T15N R 17W S16 NE/NE/NE 04/04/89	WELL #4 (ON SITE) T15N R 17W S16 NE/NE/NE 04/14/89	WELL #6 (OFF SITE) T15N R16W S20 SE/SE/NE 04/04/89	WELL #7 (OFF SITE) T15N R16W S20 NW/SE/NE 04/09/89	WELL #7 (OFF SITE) T15N R16W S20 NW/SE/NE 04/14/89
pH s.u.	8.2	7.7	7.7	7.8	7.75	7.6
Alkalinity, Total	174	202	191	164	166	166
Calcium	62	40	107	156	344	154
Chloride	64	34	16	17	14	16
Fluoride	-	0.39	0.24	0.23	-	0.23
Hardness, Total	118	190	420	628	680	710
Iron, Dissolved	-	0.15	0.13	0.12	-	0.1
Iron, Total	-	0.37	7.9*	0.35	-	0.15
Magnesium	56	22	37	58	336	79
Maganese, Dissolved	-	0.12	0.16	0.14	-	0.14
Manganese, Total	-	0.17	0.22	0.17	-	0.17
Nitrate (as (NO3)	-	<0.1	<0.1	<0.1	-	<0.1
Nitrate (as NO2)	-	0.03	0.06	0.02	-	0.03
Potassium	-	5.1	6.7	5.2	-	5.4
Silica	-	9.4	8.2	7.1	-	7.1
Sodium	-	237	82	75	-	39
Specific Conductance (μmhos)	1360	1215	1171	1199	1340	1173
Sulfate	502	478	410	614	679	618
Total Dissolved Solids	888	932	944	1058	1135	921
Turbidity	9.2	-	-	-	4.4	-
BOD	-	<1	<1	<1	-	<1
COD	-	<1	<1	<1	-	<1
Ammonia Nitrogen (as NH4)	-	0.35	0.25	0.29	-	0.13
TOC	-	0.67	0.62	1.09	-	0.68

Units expressed in mg/l unless otherwise stated.

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

Figure 12-6

Fence Diagram - Stratigraphic Relation Underlying Pond Area



JOHN W. SHOMAKER, INC., 1992

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

12.3.2 Alluvial Aquifer

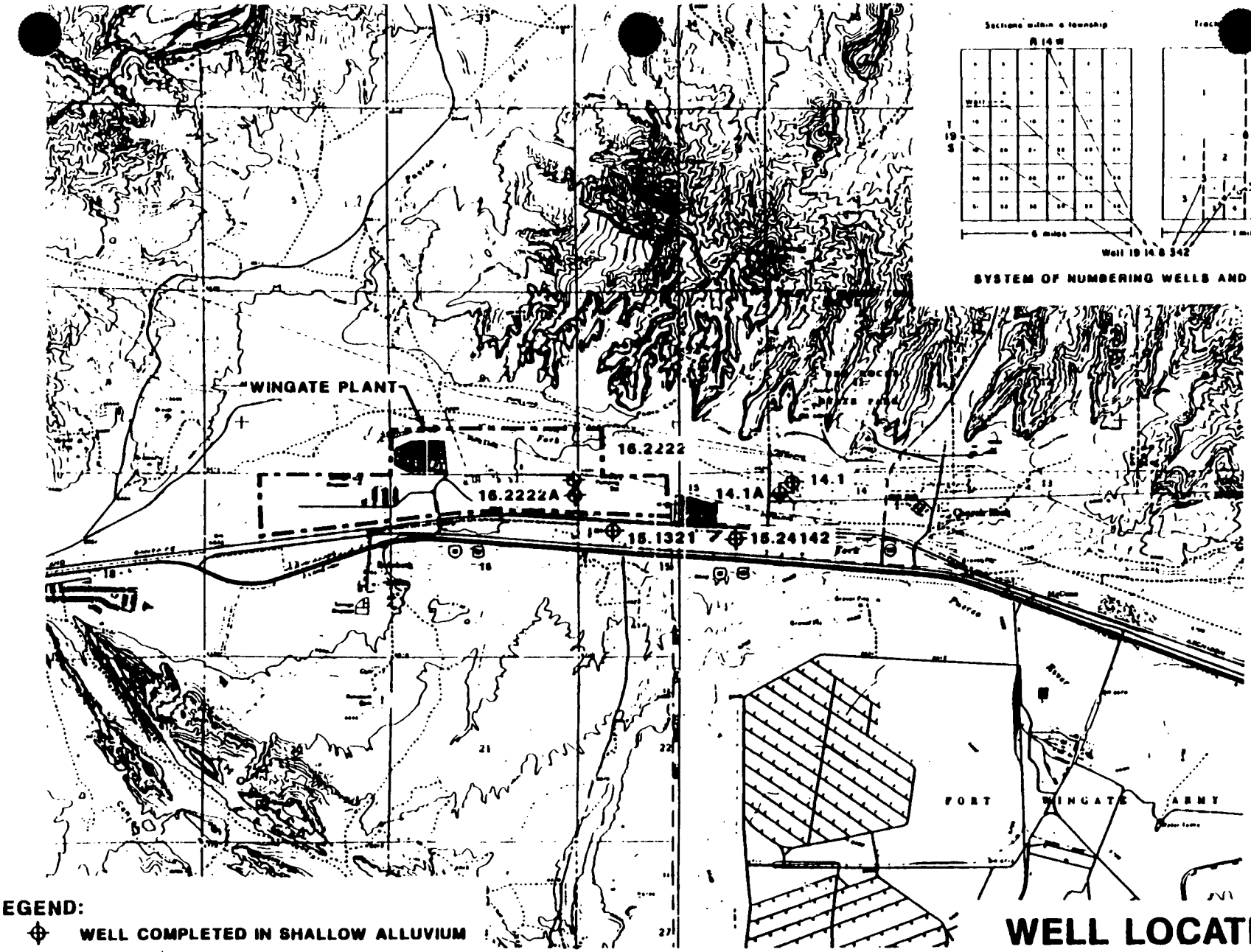
The locations of wells within one mile of Wingate Plant and the onsite water supply wells are shown in Figure 12-7 (USGS, 1990). All the offsite wells listed are shallow alluvial wells to the east and upgradient of the facility. The available water quality data for these wells are presented in Table 12-2. Additional analyses of groundwater samples from the shallow alluvial aquifer in the area of the Wingate Plant were given in Shomaker (1971). The reported analyses suggest the groundwater was generally a sodium-bicarbonate type, with total dissolved solids ranging from 692 to 954 mg/l.

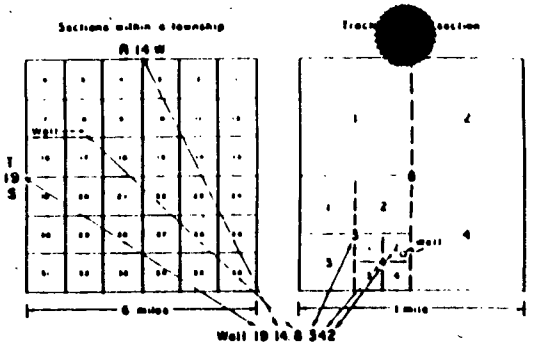
Monitoring events have been previously conducted by El Paso and Meridian. The monitoring of the wells will be continued. Analyses of water samples from the evaporation pond monitoring wells indicate the shallow groundwater is similar to analyses reported in Shomaker (1971).

The monitoring wells at the site are completed to a depth of about 58 feet and the depth of the first water-bearing zone is between 20 and 25 feet. By nature of this construction, these wells are open to more than one water-bearing interval. Therefore water produced from these wells is probably not representative of the uppermost water-bearing interval beneath the ponds. Water samples are composites of the 30+ feet of saturated interval open to the wells.

The hydraulic and stratigraphic relationships previously discussed suggest water in the evaporation ponds is not likely to leak into the aquifer beneath the evaporation ponds. This interpretation is based upon the following:

- The clayey sediments in the intermediate unit underlying the evaporation ponds has a hydraulic conductivity less than 10^{-7} cm/sec.
- The intermediate interval is from 15 to 20 feet thick beneath the ponds.
- The confined hydraulic head in the shallow aquifer indicates upward flow is limited and restricted by the clay-rich intermediate unit.





SYSTEM OF NUMBERING WELLS AND SPRINGS

LEGEND:

- WELL COMPLETED IN SHALLOW ALLUVIUM
- WELL COMPLETED IN REGIONAL AQUIFER

SOURCE: USGS ALBUQUERQUE NM
PROVISIONAL GROUND-WATER DATA 6/22/90

WELL LOCATION MAP

Figure 12-7

DAMES & MOORE
01089-115-022

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

800058-08-10-90

Table 12-2

Offsite Wells Adjacent to Wingate Plant

	Well 14.1 08/07/75	Well 14.1A 08/07/75	Well 15.1321 03/65	Well 15.2414 03/65	MCL
pH (s.u.)	8.5	8.5	7.7	7.7	6-9
Alkalinity, Total	-	-	-	-	-
(as CaCO3)	315	524	418	-	-
Carbonate (as CaCO3)	61	83	-	-	-
Bicarbonate (as CaCO3)	260	470	5120	282	-
Hydroxide	-	-	-	-	-
Chloride (Cl)	50	82	23	50	250
Fluoride (F)	1.3	1.2	0.6	0.5	1.6
Nitrate (as N)	0.14	0.14	0.05	6.6	10
Sulfate (SO4)	210	39	173	340	600
Total Dissolved Solids (TDS)	739	747	692	932	1,000
Silver (Ag)	-	-	-	-	0.05
Arsenic (As)	-	-	-	-	0.1
Barium (Ba)	-	-	-	-	1.0
Calcium (Ca)	22	22	52	98	--
Cadmium (Cd)	-	-	-	-	0.01
Chromium (Cr)	-	-	-	-	0.05
Copper (Cu)	-	-	-	-	1.0
Iron (Fe)	-	-	-	-	1.0
Hardness	75	80	372	352	-
Mercury (Hg)	-	-	-	-	0.002
Magnesium (Mg)	4.8	6.1	59	26	-
Manganese (Mn)	-	-	-	-	0.2
Sodium (Na)	260	280	120	189	-
Lead (Pb)	-	-	-	-	0.05
Selenium (Se)	-	-	-	-	0.05
Zinc (Zn)	-	-	-	-	10
Silica (SiO2)	-	-	13	11	-
Potassium (K)	0.8	1.0	-	-	-
Boron (B2)	0.26	0.54	-	-	-

Units expressed in mg/l unless otherwise stated.
MCL = Maximum Concentration Limit
Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

The concentrations of total dissolved solids, chloride, bicarbonate, and sulfate in monitor wells MW-1 and MW-2 compared with well MW-3, may be due to communication with the South Fork. Such communication is suggested by the observed changes in direction of groundwater flow in the shallow aquifer. This appears to be influenced by flow and recharge from the South Fork, east of the Plant (Shomaker 1992, and Dames & Moore 1990). The concentration of total dissolved solids and other anions in groundwater samples has been relatively consistent. This also suggests the quality of water is controlled by natural conditions and not pond leakage.

The November 1991 and January 1992 samples from MW-3 showed trace levels of BTEX. Meridian had attributed these readings to inadequate decontamination of sampling equipment or contamination from upgradient sources. The second point is discussed in the following paragraphs. MW-2 also showed a trace of BTEX in November 1991. This result was not repeated in January 1992. Meridian attributed the trace November reading to inadequate sampling equipment decontamination. In order to continue to demonstrate the absence of a significant impacts to aquifer water quality, Meridian proposed to conduct annual water quality monitoring in MW-1 through MW-3 for general water chemistry, priority pollutant metals and BTEX. These parameters are specified on Table 12-3.

Several additional sets of water quality samples have been collected from the WMH 1 through 4 monitoring wells for the parameters listed in Table 12-3. These data have been submitted to NMOCD. These wells are upgradient of the evaporation ponds. There are no plant process discharges that can impact water quality in this area.

The most significant aspect of the data is the presence of BTEX consistently detected in WMH-2. BTEX levels exceed New Mexico WQCC standards. According to Meridian, the contamination is possibly related to a historic accidental release of hydrocarbon in the train loading rack area when the facility was owned and operated by EPNG. Meridian conducted further investigation of the BTEX contamination by installing WMW-5. Meridian had also proposed that any follow-up assessment of the BTEX contamination be handled as a stand-alone investigation and not be linked to this Wingate Plant Discharge Plan. Currently, biannual monitoring is being conducted on these five wells and the three MW series wells located near the evaporation ponds. This monitoring program is to be continued on a biannual basis for the parameters listed in Table 12-3.

Table 12-3

Wingate Plant Monitoring Well Constituents

Constituents	
pH	Arsenic (As)
TDS	Barium (Ba)
Alkalinity	Beryllium (Be)
Bicarbonate	Cadmium (Cd)
Calcium (Ca)	Chromium (Cr)
Carbonate	Copper (Cu)
Chloride (Cl)	Lead (Pb)
Fluoride (F)	Mercury (Hg)
Hardness	Nickel (Ni)
Iron (Fe)	Selenium (Se)
Magnesium (Mg)	Silver (Ag)
Manganese (Mn)	Thallium (Tl)
Nitrate (as N)	Zinc (Zn)
Nitrite	TPH
Potassium	Benzene
Silicia	Ethylbenzene
Sodium (Na)	Toluene
Sulfate (SO4)	Xylenes (m, o & p)
Antimony (Sb)	

12.4 Hydrologic Features

The northern portion of the Wingate Plant property is bounded by the South Fork of the Puerco River. The Puerco River is an intermittent stream tributary to the Little Colorado River watershed. The confluence of the North and south forks occurs to the west of the plant, upstream from the City of Gallup. The Puerco River (north and south branches) comprises a drainage area of approximately 558 square miles. No other surface water sources are known to be present with in a one mile radius of the Wingate Plant.

Surface water runoff upgradient of the Plant property to the south is intercepted by the I-40 Freeway, and routed to the south around the facility. Runoff from the east of the Plant is a channeled north to the Puerco River. Onsite run-off is routed to the north and south of the developed portion of the site, where it rejoins pre-existing natural drainages to the west.

12.5 Flood Protection

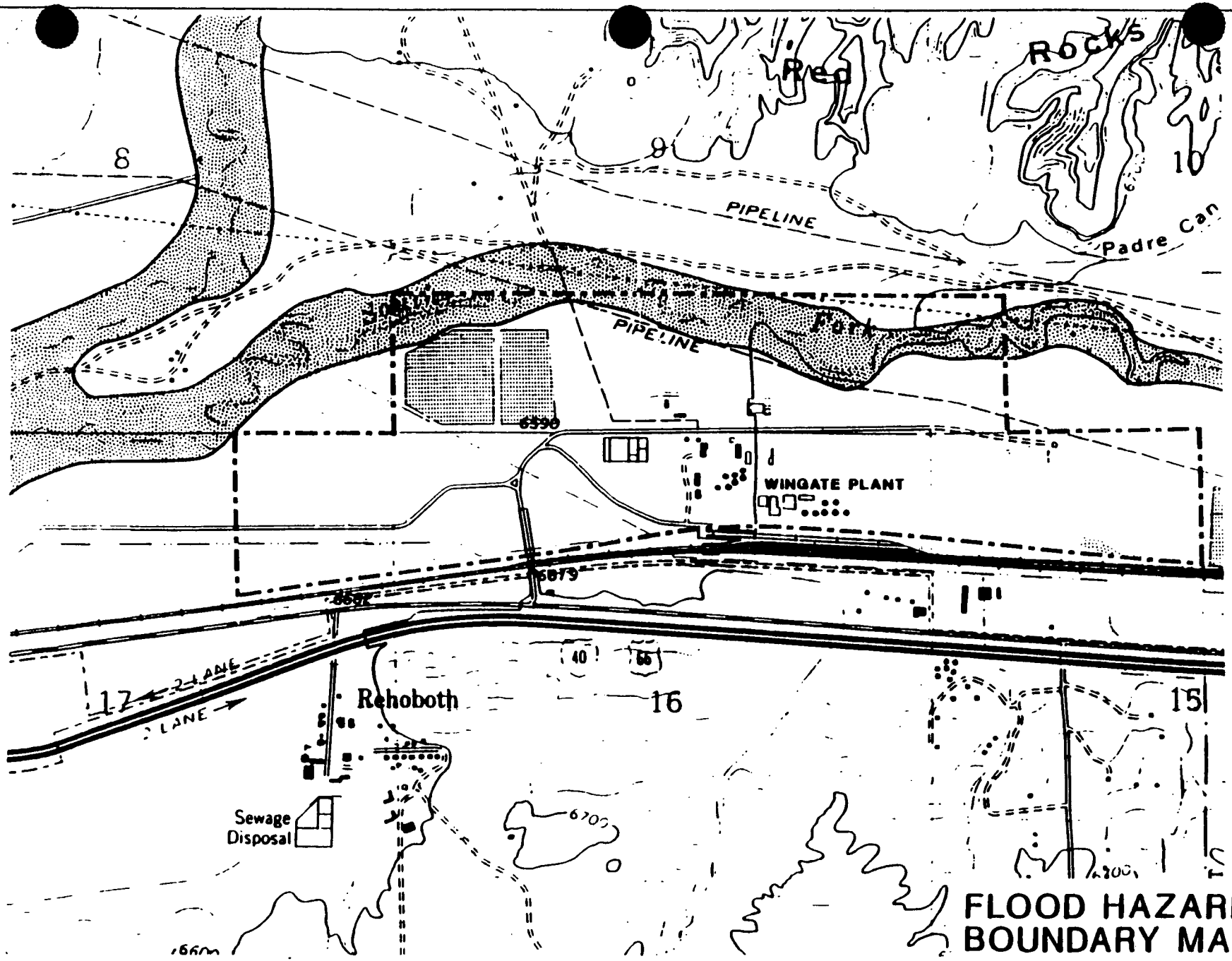
The Flood Hazard Boundary Map for this portion of McKinley County (HUD, 1978) delineates the area described as "subject to special flood hazards" shown in Figure 12-8. This area is approximately that which would be inundated as a result of a 100-year flood flow in the Puerco River. Although it appears from this information that some undeveloped areas of the Plant property, outside the stream channel, may be subject to flooding, no facilities, with the possible exception of the evaporation ponds appears to be at risk as a result of flood flows in the Puerco River.

12.6 Climate

The Conoco Wingate Plant is located in a semi-arid region. Data recorded at the Wingate weather station show an annual precipitation of 9.66 inches. The mean annual temperature is 49.2°F.

The prevailing winds are southwesterly although southeasterly and west-southwesterly winds are also common. Strong winds are predominant in the winter and spring months.

The area is prone to lightning strikes which necessitate an extensive protection system against lightning caused fires.



FLOOD HAZARD BOUNDARY MAP

Figure 12-8

DAMES & MOORE
01000-116-022

Ref.: Discharge Plan-Wingate Fractionating Plant, Meridian Oil Inc., 4/9/92

13.0 OTHER COMPLIANCE INFORMATION

13.1 Spill/Leak Reporting

Should a major discharge occur as defined in OCD Rule 116 and WQCC Section 12-3, verbal notification will be made to the following agencies:

OCD Santa Fe Office
OCD Aztec District Office
WQCC Ground Water Protection Agency - Chief

Notification to these agencies will be as soon as possible, but not more than 24-hours thereafter.

Information to be provided in the notification will include:

- Name, address and telephone number of person(s) in charge of the facility;
- Name and address of the facility;
- Date, time, location and duration of the discharge;
- Source and cause of the discharge;
- A description of the discharge and its chemical composition;
- Estimated volume of the discharge; and
- Actions taken to mitigate immediate damage from the discharge.

Within one week after the discharge, written notification will be provided by Conoco, to the WQCC. The context of the written notification will include the information above as well as additional information relative to actions taken in response to the discharge.

Subsequent written notification to the OCD will be provided in duplicate to the Aztec District Office within 10 days after discovery of the incident.

Should a "minor" discharge, as defined by OCD Rule 116, occur, subsequent notification will be provided as described above.

13.2 Closure Plan

In accordance with WQCC Section 3107.A.11, Conoco acknowledges and commits to the preparation of closure plan at the time the decision is made to close the evaporation ponds. The Closure Plan will include a description of closure measures, maintenance and monitoring plans, post-closure maintenance and monitoring plans, a financial assurance mechanism, as well as other measures deemed necessary to prevent and/or abate contamination should it be found to be present.

14.0 REFERENCES

Cooley, M.E., Harsburger, J.W., Akers, J.P., and Hardt, W.F., 1969, Regional Hydrogeology of the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah, USGS Professional Paper 521-A.

Cresswell, L.W., The Fate of Petroleum in a Soil Environment, 1977 Oil Spill Conference Proceedings, American Petroleum Institute Publication N. 4284, pp. 479-482, 1977.

Dames and Moore, Hydrogeologic Assessment Wingate Fractionating Plant for El Paso Natural Gas Company, 1990, unpublished report prepared for El Paso Natural Gas Company.

Gudin, C., and W.J. Syratt, Biological Aspects of Land Rehabilitation Following Hydrocarbon Contamination, Environmental Pollution, volume 8:107-117, 1975.

Meridian Oil Inc., Discharge Plan, Wingate Fractionating Plant, April 9. 1992.

National Oceanic and Atmospheric Administration, Climatography of the United States No. 81 (New Mexico), 1982.

National Oceanic and Atmospheric Administration, Mean Relative Humidity (%), Monthly and Annual, pp 61-62, 1970.

Oil Conservation Division, "Guidelines for the Preparation of Discharge Plans at Natural Gas Plants, Refineries, Compressor and Crude Oil Pump Stations", Revised December 1995.

Sergent, Hauskins, and Beckwith Engineers, 1987, EPNG Wingate Plant Railroad Bridge Overpass - Geotechnical Investigation Report, June 26, 1987.

Shomaker, J. W., 1971, Water Resources of Fort Wingate Army Depot and Adjacent Areas, McKinley County, New Mexico, USGS Open File Report MK-32, September 1971.

Shomaker and Associates, 1992, Hydrologic Evaluation of Evaporation Pond Area, Wingate Plant, McKinley County, New Mexico, unpublished report prepared for Conoco Oil, Inc.

U.S. Department of Agriculture, Annual Lake Evaporation map, USSCS, 1978.

U.S. Department of Housing and Urban Development, Federal Insurance Administration, 1978, Flood Hazard Boundary Map, McKinley County, New Mexico.

U.S. Geological Survey, Well Information Database, McKinley County, New Mexico, June 6, 1990, Albuquerque, New Mexico.

Pat Sanchez

From: Denny Foust
Sent: Tuesday, April 22, 1997 7:50 AM
To: Pat Sanchez
Subject: Conoco Wingate Plant

April 22, 1997

Conoco Wingate Plant Discharge plan application dated April, 1997 for GW-054. Concerns for inspection arise for the Emergency Flare pits as to construction and operation. integrity of waste water piping will be a concer since no testing is mentioned. Evaporation pond construction and water quality are of concern since we are near the Rio Puerco. Are active monitor wells really checking shallow groundwater for contamination?

Denny Foust

C-K ASSOCIATES • INC
ENVIRONMENTAL & ENGINEERING CONSULTANTS

17170 PERKINS ROAD
BATON ROUGE, LA 70810
PH (504) 755-1000
FAX (504) 751-2010

AREA OFFICES
LAKE CHARLES, LA 70601
PH (318) 479-0303
FAX (318) 479-1145
SHREVEPORT, LA 71105
PH (318) 797-8636
FAX (318) 798-0478
BEAUMONT, TX 77705
PH (409) 842-2265
FAX (409) 840-9116
AUSTIN, TX 78759
PH (512) 346-1048
FAX (512) 346-7320

SALES OFFICES
JACKSON, MS 39236
PH (601) 853-6987
FAX (601) 856-9784
PENSACOLA, FL 32574
PH (904) 934-8979
FAX (904) 934-6198

April 16,1997

New Mexico Energy Minerals and
Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
Attn: Mr. Roger C. Anderson

Ref: Final Discharge Plan Wingate Plant
C-K Associates Project No. 15-586

Dear Mr. Anderson:

Enclosed please find one original and one copy of the Final Discharge Plan for the Wingate Fractionating Plant. Also enclosed, please find a check in the amount of $50.00 to cover the filing fees. If you have any questions about the enclosed document, please feel free to call me at (504) 755-1000.

Very truly yours,
C-K Associates, Inc.

Bill Corbin

Bill Corbin
Groundwater and Remediation Services
Division Director

WLC/mgb

Attachment: As Stated

cc: Ms. Cindy Thompson
C-K Associates, Inc.

Ms. Terry L. Killian, P.E.
Conoco Inc.

Mr. Denny Foust
OCD - Aztec Office w/ 1 copy of Discharge Plan
w/o check

ASSOCIATES, INC.

▼ PLEASE DETACH AND RETAIN FOR YOUR RECORDS ▼

INVOICE NUMBER	DATE		VOUCHER NO.	AMOUNT
041697	04/16/97	NMED-WATER QUALITY MANAGEMENT Filing Fee - Project #015-586		$50.00

C-K ASSOCIATES, INC.
17170 PERKINS ROAD
BATON ROUGE, LOUISIANA 70810
PHONE (504) 755-1000

PREMIER BANK OF BATON ROUGE
BANK CODE 02
BATON ROUGE, LOUISIANA

04/16/ 1997

NO. [redacted]

PAY *****50***** DOLLARS AND**NO/100** CENTS $ 50.00

O THE
RDER
OF

NMED-WATER QUALITY MANAGEMENT
New Mexico Energy Minerals and
Natural Resources Dept.
2040 South Pacheco St.
Santa Fe, New Mexico 87505

Wm. D. Kennedy
AUTHORIZED SIGNATURE

[redacted]

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

February 17, 1997

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-258-765

Ms. Terry L. Killian, P.E.
Director - Environmental
Conoco, Inc.
P.O. Box 2197 - HU 3002
Houston, TX 77252

RE: Discharge Plan GW-054 Renewal
Wingate Gas Plant
McKinley County, New Mexico

Dear Ms. Killian:

On August 17, 1992, the groundwater discharge plan, GW-054, for the **Wingate Gas Plant** located in Sections 16 and 17, Township 15 North, Range 17 West, NMPM, McKinley County, New Mexico, was approved by the Director of the New Mexico Oil Conservation Division (OCD). This discharge plan was required and submitted pursuant to Water Quality Control Commission (WQCC) regulations and was approved for a period of five years. **The approval will expire on August 17, 1997.**

If the facility continues to have potential or actual effluent or leachate discharges and wishes to continue operation, the discharge plan must be renewed. **Pursuant to Section 3106.F., if an application for renewal is submitted at least 120 days before the discharge plan expires (on or before April 17, 1997), then the existing approved discharge plan for the same activity shall not expire until the application for renewal has been approved or disapproved.** The OCD is reviewing discharge plan submittals and renewals carefully and the review time can extend for several weeks to months. Please indicate whether Conoco, Inc. has made, or intends to make, any changes in the system, and if so, please include these modifications in the application for renewal.

The discharge plan renewal application for the **Wingate Gas Plant** is subject to WQCC Regulation 3114. Every billable facility submitting a discharge plan renewal will be assessed a fee equal to the filing fee of $50 plus a flat fee of $16675.50 for Gas Plants. The $50 filing fee is to be submitted with the discharge plan renewal application and is nonrefundable.

Please make all checks payable to: **NMED-Water Quality Management** and addressed to the OCD Santa Fe Office.

Please submit the original discharge plan renewal application and one copy to the OCD Santa Fe Office and one copy to the OCD Aztec District Office. **Note that the completed and signed application form must be submitted with your discharge plan renewal request.**(Copies of the WQCC regulations and discharge plan application form and guidelines are enclosed to aid you in preparing the renewal application. A complete copy of the regulations is also available on OCD's website at **www.emnrd.state.nm.us/ocd/**)

If Conoco, Inc. no longer has any actual or potential discharges and a discharge plan is not needed, please notify this office. If Conoco, Inc. has any questions, please do not hesitate to contact Pat Sanchez at (505) 827-7156.

Sincerely,

Roger C. Anderson
Environmental Bureau Chief

RCA/pws

enclosed: 20 NMAC 6.2 "WQCC Regulations", Discharge Plan Guidelines, Discharge Plan Application Form.

c: Mr. Denny Foust

P 288 258 765

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Conoco, Ms. Killian	
Street & Number GW-054, 6 Mon. REN. NOTICE.	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, April 1995

MERIDIAN OIL

June 3, 1996 *Certified Mail No. Z-382-118-134*

William C. Olson
Environmental Bureau
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Re: **Discharge Plan GW-54**
Wingate Plant
Ground Water Monitoring

Dear Mr. Olson:

Please find attached the ground water monitoring data and contour map for the March, 1996 sampling at the Wingate facility. This information is provided pursuant to your letter of October 1, 1993.

If you have any questions or need additional information please contact me at (505) 326-9841.

Sincerely,

Keith M. Boedecker

Keith M. Boedecker
Sr. Staff Environmental Representative

Attachment: 1996 First Semiannual Ground Water Sampling Report

cc: Kathy Kanocz - Conoco Inc.
Gerry Garibay - EPNG
Greg Kardos - MOI

file: Wingate Plant GW Contamination: Correspondence
s:\2-envmnt\grndwatr\facility\wingate\corresp\win_gw96.doc

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

Meridian Oil, Inc.
Farmington, New Mexico

TABLE 1

Wingate
Groundwater Analytical Results

ANALYTES	MW-1	MW-2	MW-3	WMH-1	WMH-2	WMH-3	WMH-4	WMW-5	MW-51	EB-1	Trip Blank
Benzene (ug/L)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	29,800	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Toluene (ug/L)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	3,100	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1.39	ND(0.5)
Ethylbenzene (ug/L)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	132	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Xylenes (ug/L)	ND *	ND *	ND *	ND *	994	ND *	ND *	ND *	ND *	ND *	ND *
TPH	ND(0.48)	ND(0.48)	ND(0.48)	ND(0.48)	9.33	ND(0.48)	ND(0.48)	ND(0.48)	ND(0.48)	ND(0.48)	-
Chloride	22.5	53.7	23.7	472	500	810	110	471	25.0	1.50	-
Flouride	1.13	1.95	1.03	0.38	2.08	0.93	1.64	0.23	1.15	0.04	-
Hardness as CaCO3	47.3	74.6	134	836	179	473	139	1,050	34.8	10.9	-
Nitrate	<0.01	0.43	<0.01	0.36	<0.01	11.7	2.81	0.62	<0.01	0.31	-
Nitrite	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01	-
Alkalinity as CaCO3	516	792	453	931	1,530	1,160	805	1,160	490	15.1	-
TDS	690	1,120	540	3,690	2,450	5,060	1,500	4,870	650	18.0	-
pH (pH units)	8.0	8.0	7.9	7.6	8.1	7.7	7.9	7.3	8.0	6.9	-
Antimony	0.014	0.019	0.012	0.084	0.021	0.18	0.039	0.19	0.017	<0.003	-
Arsenic	0.001	0.005	0.012	0.024	0.027	0.013	0.038	0.004	0.013	<0.001	-
Barium	<0.25	<0.25	<0.25	<0.25	0.43	<0.25	<0.25	<0.25	<0.25	<0.25	-
Beryllium	<0.001	0.002	<0.001	0.013	0.009	0.021	0.004	0.019	<0.001	<0.001	-
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-
Calcium	7.68	14.5	18.8	185	22.2	63.2	12.1	270	7.54	0.24	-
Chromium	0.001	0.002	<0.001	0.025	0.003	0.034	0.006	0.040	<0.001	<0.001	-

ND - Analyte not detected at the stated detection limit (in parentheses)

ND* - Detection limit for m,p-Xylenes = 1.00, o=Xylene=0.50

Results are in milligrams per Liter (mg\L) unless otherwise noted

EB - Equipment Blank

MW-51 - Duplicate of MW-1

Samples collected on March 27 and 28, 1996

PHILIP ENVIRONMENTAL

Meridian Oil, Inc.
Farmington, New Mexico

TABLE 1

Wingate
Groundwater Analytical Results

ANALYTES	MW-1	MW-2	MW-3	WMH-1	WMH-2	WMH-3	WMH-4	WMW-5	MW-51	EB-1	Trip Blank
Copper	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.16	
Iron	0.192	<0.05	<0.05	<0.05	0.073	0.051	<0.05	0.065	0.146	<0.05	
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Magnesium	3.70	7.12	12.6	46.6	16.6	36.8	10.2	86.0	3.65	<0.05	
Manganese	0.08	0.33	0.06	0.53	0.047	<0.02	<0.02	0.35	0.068	0.037	
Nickel	<0.05	<0.05	<0.05	<0.05	<0.05	0.055	<0.05	0.077	<0.05	<0.05	
Potassium	1.38	1.55	1.69	7.45	2.35	4.23	2.19	9.70	1.34	<0.05	
Selenium	0.006	0.017	0.004	0.20	0.033	0.059	0.065	0.41	0.005	<0.003	
Silica	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	
Silver	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Sodium	215	342	119	895	670	1,295	472	1,340	181	0.26	
Thallium	0.11	0.21	0.076	0.51	0.49	0.19	0.26	0.76	0.10	<0.001	
Zinc	0.018	0.020	<0.01	0.032	0.019	0.032	0.01	0.048	0.018	0.057	
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Carbonate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bicarbonate	516	792	453	931	1,530	1,160	805	1,160	490	15.1	
Sulfate	10.3	86.4	20.6	1,460	<10	1,730	302	2,120	12.3	<10	

ND - Analyte not detected at the stated detection limit (in parentheses)

ND* - Detection limit for m,p-Xylenes = 1.00, o=Xylene=0.50

Results are in milligrams per Liter (mg\L) unless otherwise noted

EB - Equipment Blank

MW-51 - Duplicate of MW-1

Samples collected on March 27 and 28, 1996

PHILIP ENVIRONMENTAL

Meridian Oil, Inc.
Farmington, New Mexico

TABLE 2

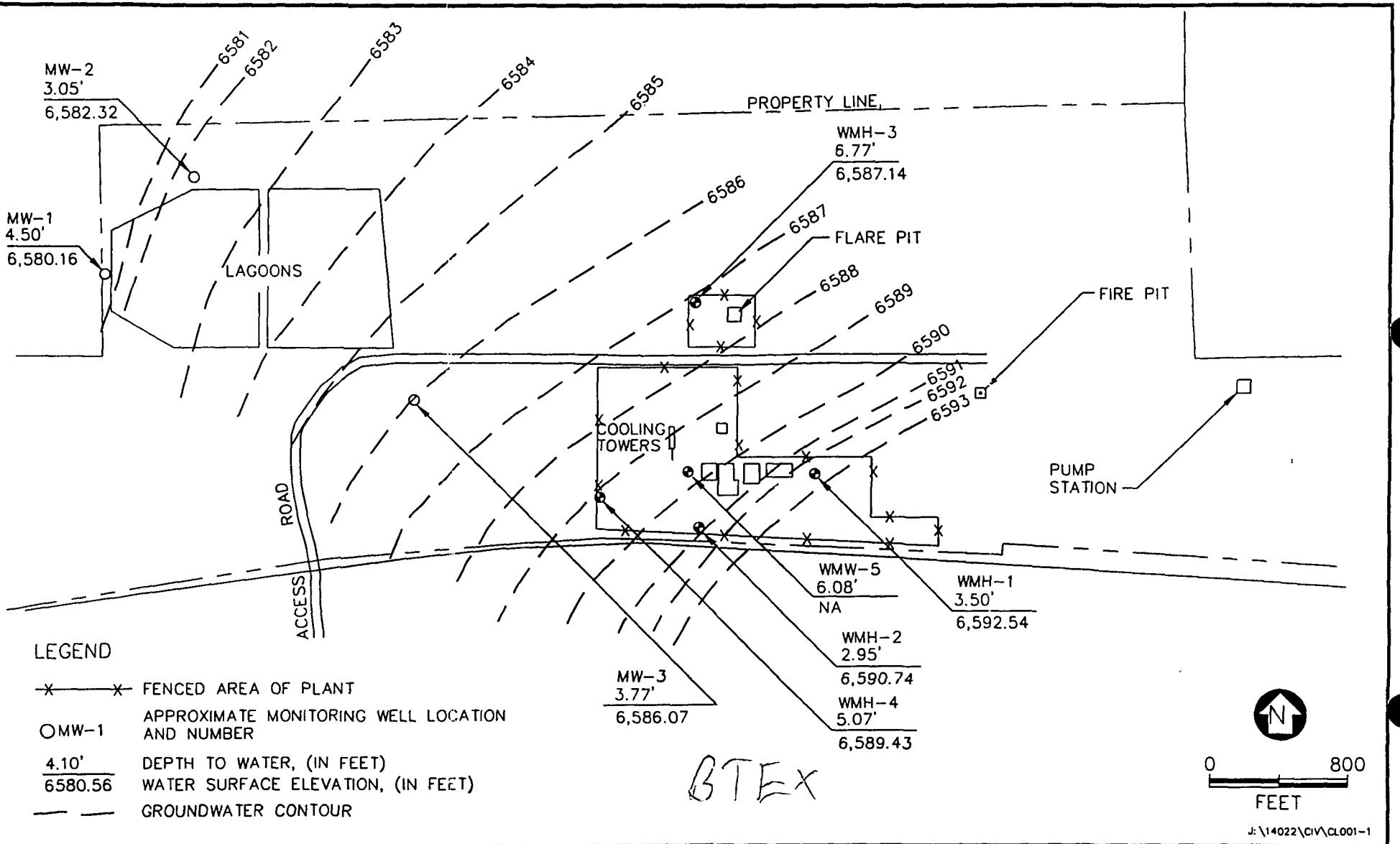
Wingate
Groundwater Elevation Data

March 1996

WELL NUMBER	TOP OF RISER ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION
MW-1	6,584.66	4.50	6,580.16
MW-2	6,585.37	3.05	6,582.32
MW-3	6,589.84	3.77	6,586.07
WMH-1	6,596.04	3.50	6,592.54
WMH-2	6,593.69	2.95	6,590.74
WMH-3	6,593.91	6.77	6,587.14
WMH-4	6,594.50	5.07	6,589.43
WMW-5	NA	6.08	NA

Elevation Data Supplied by Meridian Oil, Inc.
Data is in Feet
NA = Not Available
Depth to Water Data Collected March 27 and March 28, 1996

PHILIP ENVIRONMENTAL



PHILIP ENVIRONMENTAL

TITLE:
WINGATE GROUNDWATER
POTENTIOMETRIC SURFACE MAP
MARCH, 1996

SCALE AS NOTED	DATE	PROJECT NO: 14022	
DWN:	4/8/96	MERIDIAN-WINGATE WINGATE, NM	
DES:		Figure 1	REV: 0
CHKD:			
APPD:			

COL. J:\14022\CIV\CL001-1

Kathy A. Kanocz
Environmental Engineer
Safety & Environmental Services
Natural Gas & Gas Products

Conoco Inc.
P.O. Box 2197, HU 3086
Houston, TX 77525
(713) 293-4067
Fax: (713) 293-1214

Certified Mail - Return Receipt Requested
P 365 728 001

RECEIVED
MAY 24 1996
Environmental Bureau
Oil Conservation Division

Mr. William C. Olson
Environmental Bureau
Energy, Minerals and Natural Resource Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 78504

RE: Wingate Plant Remediation Semiannual Sampling Event

Dear Mr. Olson,

Conoco Inc. acquired the Wingate Plant from Meridian Oil on April 1, 1996. The OCD groundwater remediation approval for this site requires semi-annual sampling reports. Meridian did not conduct the required sampling or submit the April report. As per our conversation on May 9, 1996, Conoco will schedule a sampling event to meet the requirements. Burlington Environmental will conduct sampling the week of May 20th. The report will be submitted no later than June 15, 1996.

If you have any questions for Conoco about the sampling or anything else associated with the project, please let me know.

Thank you for your assistance,

Kathy A. Kanocz

cc: Alan Higginbotham, Wingate
ENV. 223-2-19

Gerry Garibay, El Paso Natural Gas
P. O. Box 1492
El Paso, TX 79978

Terry L. Killian, P.E.
Director - Environmental
Safety & Environmental Services
Natural Gas & Gas Products Department

Conoco Inc.
600 N. Dairy Ashford
P. O. Box 2197 - HU 3002
Houston, TX 77252
(713) 293-1188

Certified Mail No. P 365 856 116
Return Receipt Requested

April 1, 1996

Mr. Roger C. Anderson
Environmental Bureau Chief
Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
P. O. Box 6429
Santa Fe, NM 87505-6429

Re: Transfer of Ownership - Wingate Plant
Discharge Plan No. GW-54
Conoco Inc., Natural Gas & Gas Products Department

Dear Mr. Anderson:

Conoco Inc. hereby provides notification to the Oil Conservation Division of ownership change for the Wingate Plant, located in McKinley County. Effective today the facility, previously owned and operated by Meridian Oil, has been purchased by Conoco Inc. Natural Gas & Gas Products Department.

For future matters concerning this facility and/or Discharge Plan No. GW-54, all correspondence should be addressed to me as follows:

Terry L. Killian
Conoco Inc.
P. O. Box 2197 - HU 3002
Houston, Texas 77252

My telephone number is (713) 293-1188.

If you have any questions, please contact me at the number above. Thank you for your assistance.

Sincerely,

Terry L. Killian

MERIDIAN OIL

March 29, 1996

Certified Mail No.P 895-114-312

New Mexico Oil Conservation Division.
Attn: William LeMay (Director)
P.O. Box 2088
Santa Fe, NM 87504

Re: **Wingate Discharge Plan GW-54**
Transfer Notice

Dear Mr. LeMay:

Please accept this notice that Meridian Oil, Inc. (MOI) has sold the Wingate Plant to Conoco Inc. effective April 1, 1996. As required by New Mexico Water Quality Control Commission Regulation Part 3.111, MOI notified Conoco Inc. of the existing Wingate Discharge Plan prior to the effective date. As evidence of this notification, attached you will find a copy of the letter sent to Conoco Inc. along with a copy of the Certified Return Receipt which documents that Conoco Inc. received the notification.

If you have any questions or need additional information concerning this notification, please feel free to contact me at (505) 326-9523 or Keith Boedecker at (505) 326-9841.

Sincerely,

Matthew J. McEneny
Resource Manager

Attachments: Conoco Inc. Discharge Plan Notification Letter
Certified Return Receipt Documentation

cc: Paul J. Grimm - Conoco Inc.
Kent Beers - MOI
Wingate file

s:\grndwatr\facility\wingate\corresp\wndisch2.doc

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

MERIDIAN OIL

March 18, 1996

Certified Mail No.P 895-114-311

Conoco Inc.
Attn: Paul J. Grimm
600 North Dairy Ashford
Houston, TX 77079

Re: **Wingate Discharge Plan GW-54**
Transfer Notice

Dear Mr. Grimm:

As required by New Mexico Water Quality Control Commission Regulation Part 3.111, Meridian Oil, Inc. (MOI) hereby notifies Conoco Inc. of the New Mexico Oil Conservation Division (NMOCD) approved Wingate Discharge Plan that currently exists for the facility. Upon official date of sale, April 1, 1996, Conoco Inc. will be responsible for complying with the provisions and requirements contained in the discharge plan. The Plan was approved on August 17, 1992 and must be renewed upon its expiration date of August 17, 1997.

Also required by Part 3.111, MOI is sending a copy of this notice to the NMOCD Director as evidence that MOI has notified Conoco Inc. of the existing discharge plan.

If you have any questions or need additional information concerning this notification, please feel free to contact me at (505) 326-9523 or Keith Boedecker at (505) 326-9841.

Sincerely,

Matthew J. McEneny
Resource Manager

cc: NMOCD Director - William LeMay
Kent Beers - MOI
Wingate file

s:\grndwatr\facility\wingate\corresp\windisch.doc

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Paul J. Grimm
Conoco Inc.
600 North Dairy Ashford
Houston, TX 77079

4a. Article Number
P 895 114 311

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
MAR 21 1996

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 ★U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

UNITED STATES POSTAL SERVICE

Official Business

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S. MAIL

RECEIVED
MAR 25 1996
SAFETY/ENVIRONMENTAL

Print your name, address and ZIP Code here

MERIDIAN OIL INC.
ATTN: K. Boedecker
P.O. BOX 4289
FARMINGTON, NM 87499

MERIDIAN OIL

March 18, 1996

Certified Mail No.P 895-114-311

Conoco Inc.
Attn: Paul J. Grimm
600 North Dairy Ashford
Houston, TX 77079

Re: **Wingate Discharge Plan GW-54**
Transfer Notice

Dear Mr. Grimm:

As required by New Mexico Water Quality Control Commission Regulation Part 3.111, Meridian Oil, Inc. (MOI) hereby notifies Conoco Inc. of the New Mexico Oil Conservation Division (NMOCD) approved Wingate Discharge Plan that currently exists for the facility. Upon official date of sale, April 1, 1996, Conoco Inc. will be responsible for complying with the provisions and requirements contained in the discharge plan. The Plan was approved on August 17, 1992 and must be renewed upon its expiration date of August 17, 1997.

Also required by Part 3.111, MOI is sending a copy of this notice to the NMOCD Director as evidence that MOI has notified Conoco Inc. of the existing discharge plan.

If you have any questions or need additional information concerning this notification, please feel free to contact me at (505) 326-9523 or Keith Boedecker at (505) 326-9841.

Sincerely,

Matthew J. McEneny
Resource Manager

cc: NMOCD Director - William LeMay
Kent Beers - MOI
Wingate file

s:\grndwatr\facility\wingate\corresp\windisch.doc

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time 1600	Date 1/25/96

Originating Party	Other Parties
Bill Olson - Envir. Bureau	Craig Boyle - Meridian

Subject

Wingate Monitoring Report

Discussion

Report is missing ground water potentiometric map.

Conclusions or Agreements

He will mail ASAP

Distribution

Signed Bill Olson

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time 8:20 AM	Date 12-19-95

Originating Party	Other Parties
Pat Sanchez - OCD	Craig Bach - MOI 326-9537 / 320-2653 #

Subject: Wingate Plant - GW-54 (Fire Training Pit Closure.)

Discussion: (1) Mr. Bach called earlier at 7:45 AM with a few Questions regarding the "Fire Training Pit"
- closure - Land Farm Soils associated w/ closure.

(2) I told him I would check the File and call him back (# - he was in the field on Mobil Phone.) He said he needed the info. because MOI is going to sell wingate.

(3) I called him back and Told him there is an approval letter dated 1-14-94 from Bill Olson approving closure - they have to latter Submit soils results ON the landfarmed soils from the pit.

Conclusions or Agreements:
- Mr. Bach will follow up on the soils testing and also notify the purchaser of the Discharge Plan and send a letter to us (OCD) and them.

Distribution: File

Signed: Patricia W. Sanchez

Pat Sanchez

From: Pat Sanchez
To: Denny Foust
Subject: MOI - Wingate plant flare pit closure letter GW-54
Date: Wednesday, August 09, 1995 12:55PM
Priority: High

Denny - do you have any comments? Call Me at -7156. Thanks Pat S.

August 9, 1995

CERTIFIED MAIL
RETURN RECEIPT NO.Z-765-963-106

Mr. Kevin C. Myers
Meridian Oil, Inc.
P.O. Box 4289
Farmington, NM 87499-4289

RE: Closure Plan Approval
Flare Pit - Wingate Plant GW-54
McKinley County, New Mexico

Dear Mr. Myers:

The New Mexico Oil Conservation Division (OCD) has received the Meridian Oil, Inc. closure proposal and sample data dated July 24, 1995 signed by Mr. Kevin C. Myers. The NMOCD shall approve the closure of the Meridian Oil, Inc. Flare Pit located at the Wingate Plant in Mckinley County, New Mexico. The conditions outlined below shall serve as basis for approval of the "Flare Pit" closure at the Meridian Oil, Inc. Wingate Plant.

1. The remmediated soil may be used by Meridian Oil, Inc. to backfill the excavation of the "Flare Pit."
2. Meridian Oil, Inc. shall mound the "Flare Pit" in order to prevent the ponding of rainwater over the former "Flare Pit" site.
3. Sampling/monitoring by Meridian Oil, Inc. at all the monitor wells shall continue.

Note, that OCD approval does not relieve Meridian Oil, Inc. of liability should it later be found that contamination exists which is beyond the scope of this work plan. In addition , OCD approval does not relieve Meridian Oil, Inc. of responsibility for compliance with any other Federal, State, or other local laws and/or regulations. If you have any questions regarding this matter feel free to call me at (505)-827-7156.

Sincerely,

Patricio W. Sanchez
Petroleum Engineer, Environmental Bureau OCD

XC: Mssr. Denny Foust - Environmentalist.

Pat Sanchez

From: Denny Foust
Date sent: Wednesday, August 09, 1995 1:27PM
To: Pat Sanchez
Subject: Registered: Denny Foust

Your message
To: Denny Foust
Subject: MOI - Wingate plant flare pit closure letter GW-54
Date: Wednesday, August 09, 1995 12:55PM
was accessed on
Date: Wednesday, August 09, 1995 1:27PM

Okay for verbal
w/ Denny Foust
8-9-95 1:45 P.M.

MEMORANDUM OF MEETING OR CONVERSATION

X TELEPHONE ___ PERSONAL TIME 8:55 (AM)/PM DATE 8-9-95

ORIGINATING PARTY: Kevin Myers - MCI
OTHER PARTIES: P.W. Sanchez - NMOCD

SUBJECT: GW-54 Wingate Plant - Flare Pit closure

DISCUSSION: Just wants to put Rem. soils back in the Flare Pit - will not erase any groundwater sampling -

CONCLUSIONS/AGREEMENTS: I will draft up approval letter and put it through the mill-ie RCA, WO, DF and send to Kevin Myers

PATRICIO W. SANCHEZ: Patricio W. Sanchez

xc: FILE,

MERIDIAN OIL

July 24, 1995

Certified #895-114-170

Mr. William C. Olson
Hydrogeologist
NM Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

Re: **Meridian Oil Wingate Plant**
Flare Pit Closure

Dear Mr. Olson:

In reviewing our records, it appears that it has been some time since Meridian Oil, Inc. (MOI) has provided you with an update on remediation efforts associated with Wingate's flare pit closure project. This is intended to update you and request closure approval for both the flare pit and the flare pit landfarm soil. The following tables summarize all data collected to date:

Table 1
Flare Pit Water Quality Samples

Sample Date	Benzene µg/l	Toluene µg/l	E-Benzene µg/l	Xylenes µg/l
09/23/93	370	78	8	85
10/07/93	31	ND	ND	ND
12/30/93	1.1	ND	ND	1
08/08/94	1.5	ND	ND	ND

This data demonstrates that the water quality in the flare pit is below New Mexico Water Quality Control Commission (WQCC) ground water standards. Furthermore, it has met these standards on two consecutive sampling periods, as requested in your letter of March 11, 1994 (copy of final two consecutive sample periods is attached). Therefore, MOI requests that OCD approve cessation of further monitoring and that approval be given to close-out (backfill) the excavated pit.

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

Table 2
Flare Pit Landfarm Soils

Total Petroleum Hydrocarbon (mg/kg)

Sample Date	Sub-Sample A	Sub-Sample B	Sub-Sample C	Composite Average
09/23/93	576	336	1300	737.3
10/07/93	620	1040	1460	1040
11/03/93	339	42.6	55.2	145.6
12/30/93	406	379	51.5	278.8
08/08/94	188	34.7	35.0	85.9
10/27/94	99.4	ND	106	68.5

Note that both the August, 1994 and the October, 1994 composite average TPH results (copy attached) are below the 100 ppm guideline criteria applicable to this site. Note also that the field PID readings (substitute for BTEX) have been consistently below the 100 ppm criteria (see attached field notes provided by SUNDANCE Consultants, Inc.). Based on these results, MOI seeks approval from OCD that the landfarm is considered remediated and that this soil can be utilized as backfill material for the excavated flare pit discussed previously.

MOI is hopeful that the data provided is sufficient for OCD to approve the final closure as described. Please contact me at (505) 326-9841 with any questions.

Sincerely yours,

Kevin C. Myers

Kevin C. Myers
Environmental Specialist

cc: G. Kardos - MOI
H. Humada - MOI

file: Wingate Pit Closures: Flare Pit/Landfarm

ANALYTICAL LABORATORIES, INC. • 7300 Jefferson, N.E. • Albuquerque, New Mexico 87109

3332 Wedgewood, Suite E-5 • El Paso, Texas 79925

REPORT

Work Order # 93-12-235

Received: 12/30/93

Results by Sample

SAMPLE ID FLARE PIT FRACTION 05A TEST CODE WBTEX NAME BTEX/EPA 602

Date & Time Collected 12/30/93 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Benzene	1.1	1.0	1.0	01/05/94
Toluene	ND	1.0	1.0	01/05/94
Ethylbenzene	ND	1.0	1.0	01/05/94
P-&m-xylene	1.0	1.0	1.0	01/05/94
O-xylene	ND	1.0	1.0	01/05/94

Notes and Definitions for this Report:

EXTRACTED

ANALYST NO

FILE ID 007

UNITS ug/L

BATCH_ID WGCVOA-117

COMMENTS N/A

Received: 08/09/94 Results by Sample

SAMPLE ID FLARE PIT FRACTION 04A TEST CODE WBTEX NAME BTEX/EPA 602

Date & Time Collected 08/08/94 10:45:00 Category WATER

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Benzene	1.5	1.0	1.0	08/12/94
Toluene	ND	1.0	1.0	08/12/94
Ethylbenzene	ND	1.0	1.0	08/12/94
P-&m-xylene	ND	1.0	1.0	08/12/94
O-xylene	ND	1.0	1.0	08/12/94

Notes and Definitions for this Report:

EXTRACTED

ANALYST DH

FILE ID 4VL1625.D

UNITS ug/L

BATCH_ID WBTEXM-003

COMMENTS N/A

SAMPLE ID CELL A FRACTION 01A TEST CODE STRPH NAME TRPH/EPA 418.1
Date & Time Collected 08/08/94 10:05:00 Category SOIL

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Total Petroleum HCs	188	5.0	5.0	08/11/94

Notes and Definitions for this Report:

EXTRACTED 08/10/94
ANALYST JB
UNITS mg/Kg
BATCH_ID STRPH-192
PRCNT_MOIST

SAMPLE ID CELL B FRACTION 02A TEST CODE STRPH NAME TRPH/EPA 418.1
Date & Time Collected 08/08/94 10:15:00 Category SOIL

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Total Petroleum HCs	34.7	5.0	1.0	08/11/94

Notes and Definitions for this Report:

EXTRACTED 08/10/94
ANALYST JB
UNITS mg/Kg
BATCH_ID STRPH-192
PRCNT_MOIST

SAMPLE ID CELL C FRACTION 03A TEST CODE STRPH NAME TRPH/EPA 418.1
Date & Time Collected 08/08/94 10:30:00 Category SOIL

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Total Petroleum HCs	35.0	5.0	1.0	08/11/94

Notes and Definitions for this Report:

EXTRACTED 08/10/94
ANALYST JB
UNITS mg/Kg
BATCH_ID STRPH-192
PRCNT_MOIST

ASSAIGAI ANALYTICAL LABORATORIES
7300 Jefferson, N.E. • Albuquerque, New Mexico 87109 • (505) 345-8964 • FAX (505) 345-7259
3332 Wedgewood, E-5 • El Paso, Texas 79925 1910 N. Big Springs • Midland, Texas 79705

Report Generated:
November 4, 1994 12:25

CERTIFICATE OF ANALYSIS
RESULTS BY SAMPLE

SENT MERIDIAN OIL
TO: 3535 EAST 30TH STREET
FARMINGTON, NM 87402

ATTN: KEVIN MEYERS

WORKORDER # : 9411012
WORK ID : SOIL
CLIENT CODE : MER01
DATE RECEIVED : 11/01/94

Lab ID: 9411012-01A
Sample ID: LANDFARM A
Collected: 10/27/94
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
TRPH/EPA 418.1 Total Petroleum HCs	99.4	mg/Kg	5.0	1.0	11/03/94	STRPH-210

Lab ID: 9411012-02A
Sample ID: LANDFARM B
Collected: 10/27/94
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
TRPH/EPA 418.1 Total Petroleum HCs	ND	mg/Kg	5.0	1.0	11/03/94	STRPH-210

Lab ID: 9411012-03A
Sample ID: LANDFARM C
Collected: 10/27/94
Matrix: SOIL

TEST / METHOD	RESULT	UNITS	LIMIT	D_F	DATE ANAL	BATCH_ID
TRPH/EPA 418.1 Total Petroleum HCs	106	mg/Kg	5.0	1.0	11/03/94	STRPH-210

For James A. Seely
Operations Manager

Wingate Pit Closure Project
Field PID Results

[redacted]

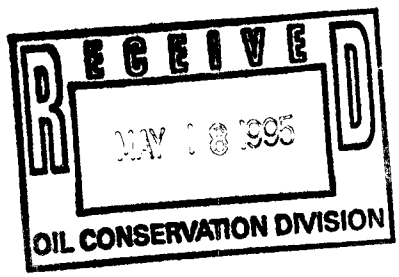
FLARE PIT LAND FARM

Date/Time	Grid #	Sample #	Depth	Peak - ppm
9-23 0945	A	Composite	3"	97.2
9-23 1245	B	Composite	3"	79.6
9-23 1305	C	Composite	3"	58.9
10-6 1040	A	Composite	3"	75.8
10-6 1030	B	Composite	3"	70.7
10-6 1020	C	Composite	3"	10.2
12-30 1100	A	Composite	0-6"	18.5
12-30 1100	B	Composite	0-6"	1.2
12-30 1100	C	Composite	0-6"	13.7

MERIDIAN OIL

May 15, 1995 *Certified Mail #P 895-114-193*

William C. Olson
Environmental Bureau
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504



Re: **Discharge Plan GW-54**
Wingate Plant
Ground Water Monitoring

Dear Mr. Olson:

Please find attached the ground water monitoring data and contour map for the March, 1995 sampling at the Wingate facility. This is provided pursuant to your letter of October 1, 1993.

Should you have any additional questions, I can be reached at (505) 326-9561.

Sincerely yours,

Doug L. Thomas
Environmental/Safety Representative

Attachments

cc: Gerry Garibay - EPNG
Greg Kardos - MOI

file: Wingate Plant GW Contamination: Correspondence
s:/dthomas/gw/wingwmor

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

WINGATE GROUNDWATER ANALYTICAL RESULTS

Analytes	MW-1	MW-2	MW-3	WMH-1	WMH-2	WMH-3	WMH-4	WMW-5	MW-53	EB-1	E. Pond	W. Pond
Benzene (ug/L)	<0.3	<0.3	<0.3	<0.3	12,300	<0.3	0.9	<0.3	<0.3	<0.3	<0.3	<0.3
Toluene (ug/L)	<0.3	<0.3	<0.3	<0.3	478	<0.3	0.8	<0.3	<0.3	0.4	<0.3	<0.3
Ethylbenzene (ug/L)	<0.3	<0.3	<0.3	<0.3	<200.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Xylenes (ug/L)	<0.6	<0.6	<0.6	<0.6	<300.0	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
TPH	<0.3	<0.3	<0.3	<0.3	34.5	<0.3	<0.3	<0.3	<0.3	<0.3	0.4	<0.3
Chloride	20.4	57.0	18.7	655.0	819.0	961.0	123.0	485.0	18.4	<0.1	12,000.0	63,500.0
Flouride	1.4	2.3	1.0	0.4	1.8	0.7	1.3	0.3	1.0	<0.1	<10	0.4
Hardness as CaCO3	39.6	62.3	132.6	857.1	251.2	580.0	142.7	1,016.0	122.0	6.0	5,000.0	21,600.0
Nitrate	<0.1	<0.1	<0.1	<0.1	<0.1	9.9	<0.1	<0.1	<0.1	0.3	<0.1	<1.0
Nitrite	<0.2	<0.2	<0.2	<0.2	<0.2	<2.0	<0.2	<0.2	<0.2	<0.2	<20	2.2
Alkalinity as CaCO3	459.0	748.0	400.0	993.0	1,760.0	1,110.0	769.0	1,080.0	404.0	1.0	206	391.0
TDS	535	1,030	481	4,350	3,200	4,970	1,470	4,250	470	15	26,900	172,000
pH (pH units)	8.31	8.08	7.80	7.36	8.11	8.01	7.95	7.30	7.98	4.68	8.08	8.42
Antimony	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	<0.001	0.006	0.004	0.001	0.006	0.004	0.010	0.001	0.004	<0.001	0.005	0.011
Barium	0.125	0.178	0.142	0.144	0.417	0.354	0.203	0.090	0.135	<0.005	0.081	0.039
Beryllium	<0.0005	<0.0005	<0.0005	0.0005	0.0008	0.0023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.008
Calcium	8.18	13.5	30.3	236.0	52.7	140.0	26.7	277.0	26.9	0.09	750.0	985.0
Chromium	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.03	0.01	<0.01	0.01	<0.01	<0.01

Results are in milligrams per Liter (mg/L) unless otherwise noted
EB - Equipment Blank
MW-53 - Duplicate of MW-3
E. Pond - East Pond
W. Pond - West Pond
Samples Collected on March 20, 21, 22, 23, and 28

WINGATE GROUNDWATER ANALYTICAL RESULTS(cont.)

Analytes	MW-1	MW-2	MW-3	WMH-1	WMH-2	WMH-3	WMH-4	WMW-5	MW-53	EB-1	E. Pond	W. Pond
Copper	<0.01	<0.01	<0.01	<0.01	0.04	0.02	<0.01	<0.01	<0.01	<0.01	0.01	0.02
Iron	0.35	0.75	0.49	9.44	26.3	34.0	9.29	6.79	0.37	0.04	0.35	0.13
Lead	0.001	<0.001	<0.001	0.002	0.015	0.012	0.005	0.001	<0.001	0.001	<0.001	0.012
Magnesium	4.65	6.91	13.7	64.4	29.0	56.2	18.4	78.1	13.2	<0.05	522.0	3,860
Manganese	0.13	0.37	0.49	3.35	0.54	0.69	0.55	1.97	0.46	<0.01	0.20	0.27
Nickel	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1	<1	1	5	4	12	2	5	<1	<1	112	544
Selenium	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sodium	206.0	385.0	151.0	1,180.0	1,160.0	1,610.0	534.0	1100.0	148.0	<0.1	7,180.0	31,400
Thallium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.004
Zinc	0.01	0.01	0.02	0.03	0.08	0.08	0.02	0.02	0.01	<0.01	<0.01	<0.01
Mercury	<0.00005	0.00007	<0.00005	0.00013	0.00009	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Carbonate	275.7	449.1	240.4	596.3	1,056.0	670.0	461.6	648.4	242.8	0.6	<0.1	208.0
Bicarbonate	556.0	905.7	484.7	1,202.0	2,130.0	1,351.0	930.8	1,307.0	489.6	1.2	250.0	419.4
Sulfate	8.7	84.5	14.0	1,730.0	<0.5	1,760.0	346.0	1,800.0	13.8	<0.5	5,700.0	14,500.0

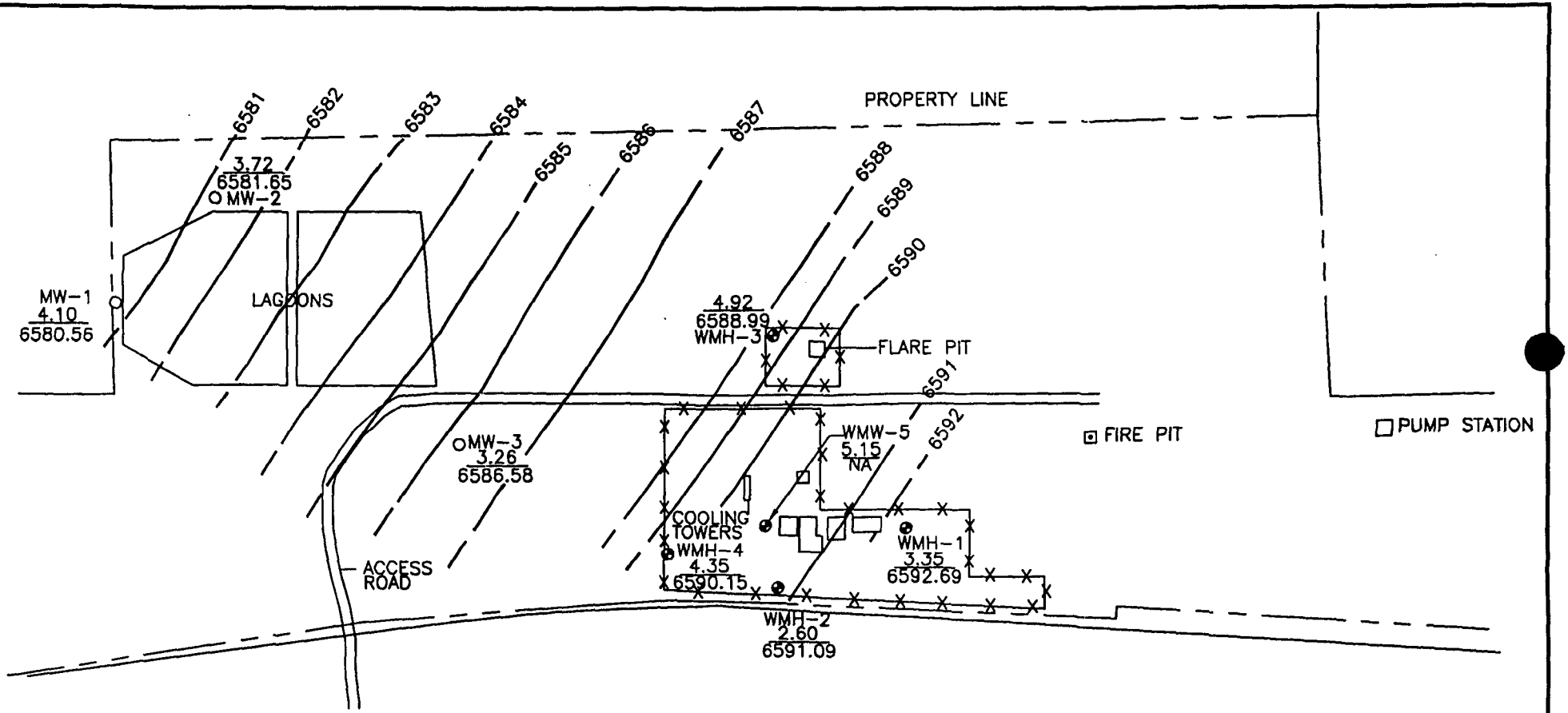
Results are in milligrams per Liter (mg/L) unless otherwise noted
EB - Equipment Blank
MW-53 - Duplicate of MW-3
E. Pond - East Pond
W. Pond - West Pond
Samples Collected on March 20, 21, 22, 23, and 28

Wingate Groundwater Elevation Data
March 1995

Well Number	Top of Riser Elevation	Depth to Water	Groundwater Elevation
MW-1	6,584.66	4.10	6,580.56
MW-2	6,585.37	3.72	6,581.65
MW-3	6,589.84	3.26	6,586.58
WMH-1	6,596.04	3.35	6,592.69
WMH-2	6,593.69	2.60	6,591.09
WMH-3	6,593.91	4.92	6588.99
WMH-4	6,594.50	4.35	6,590.15
WMW-5	NA	5.15	NA

Notes

Elevation Data Supplied by MOI
Data is in Feet
NA = Not Available
Depth to Water Data Collected March 20, 21, & 23, 1995



LEGEND

-X——X- FENCED AREA OF PLANT

O MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBERS

4.10 / 6580.56 DEPTH TO WATER / WATER SURFACE ELEVATION

0 800 FEET

N

PHILIP ENVIRONMENTAL

TITLE:

Wingate Groundwater Contours
March 1995

SCALE	1=800	DATE	
DWN:	EMS	5/27/94	PROJECT NO: 14022
DES:	JEN	4/13/95	MERIDIAN—WINGATE WINGATE, NM
CHKD:	CC	4/12/95	Figure 1 — REV: 1
APPD:	CC	4/12/95	

COL 14022A-001

MERIDIAN OIL

January 9, 1995

Certified Mail #P 895-114-382

William C. Olson
Environmental Bureau
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Re: **Discharge Plan GW-54**
Wingate Plant
Ground Water Monitoring

Dear Mr. Olson:

Please find attached the ground water monitoring data and contour map for the September, 1994 sampling at the Wingate facility. This is provided pursuant to your letter of October 1, 1993.

Should you have any additional questions, I can be reached at (505) 326-9841.

Sincerely yours,

Kevin C. Myers

Kevin C. Myers
Environmental Specialist

Attachments

cc: Gerry Garibay - EPNG
Greg Kardos - MOI

file: Wingate Plant GW Contamination: Correspondence

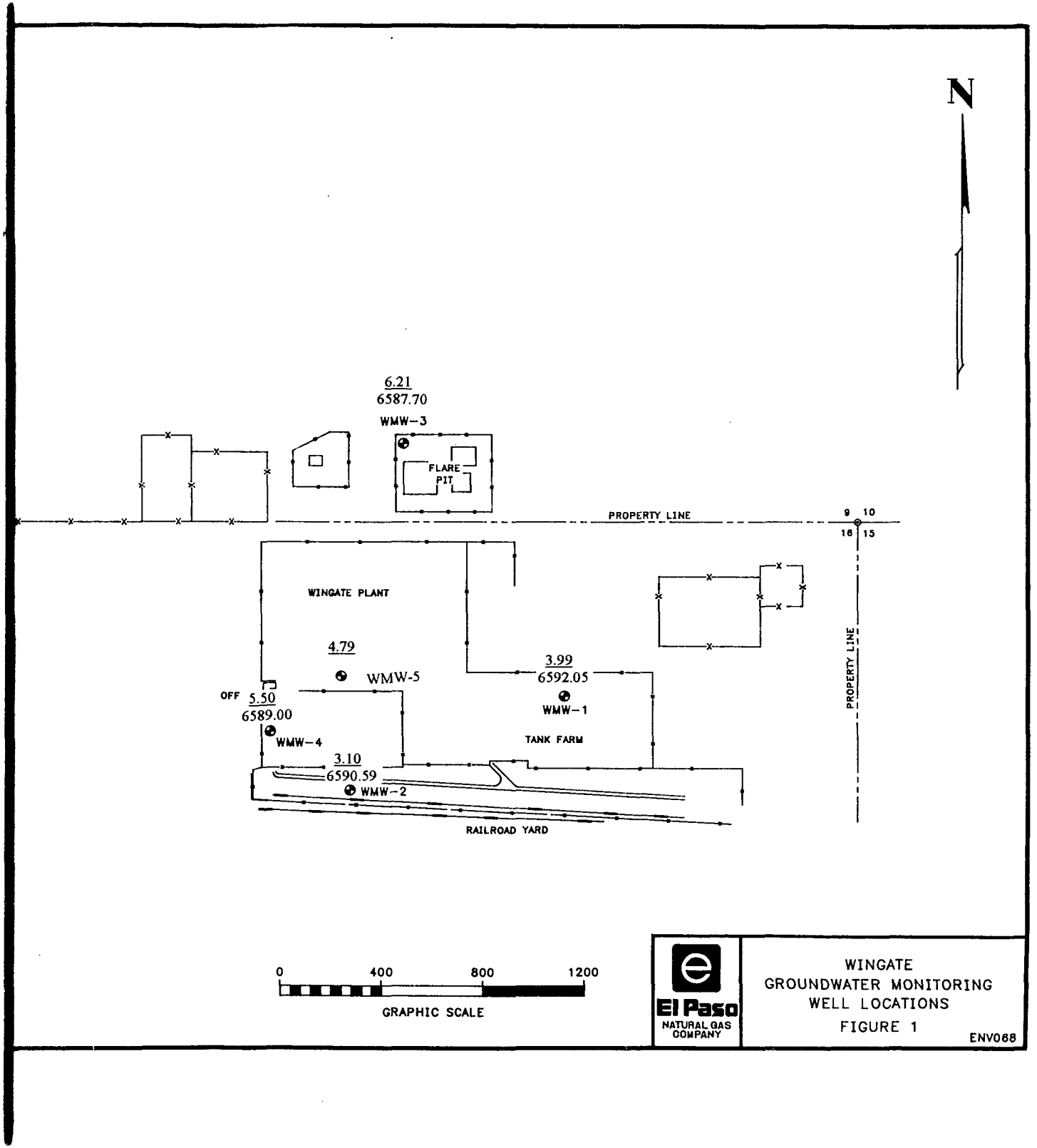
Wingate Plant
Second Semiannual Ground Water Monitoring
September, 1994
Summary of Results

Sample# Description	Benzene µg/l	Toluene µg/l	Ethyl Benzene µg/l	Total Xylenes µg/l
S94-0615 Bailer Blank	ND	ND	ND	ND
S94-0616 Equipment Blank #1	78	36	ND	25
S94-0617 WMW #3	ND	ND	ND	ND
S94-0618 WMW #4	ND	2	ND	2
S94-0619 WMW #2	35,000	5,000	46	640
S94-0620 WMW #2 Duplicate	28,000	4,100	66	900
S94-0621 WMW #5	5	0.8	ND	ND
S94-0622 MW #3	2	ND	ND	ND
S94-0622 MW #3 Duplicate	1.4	ND	ND	ND
S94-0623 WMW #1	2	1	ND	ND
S94-0624 MW #2	ND	ND	ND	ND
S94-0625 MW #1	ND	ND	ND	ND
S94-0626 MW #1 Duplicate	ND	1.4	ND	1.1

ND = Non-Detect

Wingate GW Monitoring
Ground Water Elevation Data
September, 1994

Well Number	Top of Riser Elevation	Depth to Water	Groundwater Elevation
MW-1	6,584.66	5.00	6579.66
MW-2	6,585.37	3.20	6582.35
MW-3	6,589.84	4.40	6585.44
WMH-1	6,596.04	3.99	6592.05
WMH-2	6,593.69	3.10	6590.59
WMH-3	6,593.91	6.21	6587.70
WMH-4	6,594.50	5.50	6589.00
WMH-5	Not Available	4.79	Not Available


N
6.21
6587.70
WMW-3
FLARE PIT
PROPERTY LINE
9
10
16
15
WINGATE PLANT
4.79
WMW-5
3.99
6592.05
WMW-1
OFF
5.50
6589.00
WMW-4
TANK FARM
3.10
6590.59
WMW-2
PROPERTY LINE
RAILROAD YARD
0
400
800
1200
GRAPHIC SCALE
El Paso
NATURAL GAS COMPANY
WINGATE
GROUNDWATER MONITORING
WELL LOCATIONS
FIGURE 1
ENV068

MERIDIAN OIL

OIL CONSERVATION DIVISION
RECEIVED
'94 JUN 20 AM 8 50

Certified Mail
Return Receipt No. P049501183

June 17, 1994

Mr. William C. Olson
Environmental Bureau
Energy, Minerals and Natural Resources Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Re: Discharge Plan GW-54
Wingate Train Rack
Ground Water Contamination Monitoring

Dear Mr. Olson:

Please find attached the ground water monitoring data and ground water contour map for March, 1994 at the referenced facility. This is provided pursuant to your letter of October 1, 1993.

Sincerely yours,

Kevin C. Myers

Kevin C. Myers
Environmental Specialist

cc: Richard Duarte-EPNG
Greg Kardos-MOI
Wingate Train Rack: Correspondence

BURLINGTON ENVIRONMENTAL

WINGATE GROUNDWATER ANALYTICAL RESULTS

	MW-1	MW-2	MW-3	EB-1	MW-52	TB-1
Benzene	ND	ND	ND	ND	ND	ND
Toluene	1.1	ND	1.4	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND
TPH mg/L	7.5	ND	ND	ND	ND	
Inorganic						
Chloride mg/L	29.4	49.5	18.4	3.5	49.8	
Flouride mg/L	1.3	2.5	1	ND	2.5	
Hardness						
as CaCO3 mg/L	44	56	128	ND	64	
Nitrate mg/L	ND	ND	1.8	1.7	ND	
Nitrite mg/L	ND	ND	ND	ND	ND	
Silica mg/L	6	4.4	6.5	ND	4.4	
Alkalinity						
as CaCO3 mg/L	519	705	438	1.73	871	
TDS mg/L	722	1070	560	20	1138	
pH S.U. @ 25C	8.01	7.97	7.52	8.1	7.98	
Antimony	ND	ND	ND	ND	ND	
Arsenic	ND	ND	ND	ND	ND	
Barium	205	235	184	5.9	228	
Beryllium	ND	ND	ND	ND	ND	
Cadmium	ND	ND	ND	ND	ND	
Calcium mg/L	8.58	12.1	2.92	0.606	11.9	
Chromium	ND	ND	ND	ND	ND	
Copper	10.7	10.4	ND	ND	ND	
Iron	2290	3220	3060	ND	3000	
Lead	5.9	6.1	ND	ND	3.6	
Magnesium mg/L	4.4	5.82	13.5	ND	5.84	
Manganese	169	232	723	ND	319	
Nickel	ND	ND	ND	ND	ND	
Potassium	867	1480	1160	ND	1140	
Selenium	ND	ND	ND	ND	ND	
Silver	ND	ND	ND	ND	ND	
Sodium mg/L	246	394	142	1.69	386	
Thallium	ND	ND	ND	ND	ND	
Zinc	15.8	19.4	ND	ND	18	
Mercury	ND	ND	ND	ND	ND	

***Results in ug/L unless noted**
EB- Equipment Blank, TB - Trip Blank
MW-52- Duplicate of MW-2
Samples Collected March 28 & 29, 1994

Burlington Environmental Inc.
4000 Monroe Road • Farmington, NM 87401
Phone 505/326-2262 • FAX 505/326-2388

BURLINGTON ENVIRONMENTAL

WINGATE GROUNDWATER ANALYTICAL RESULTS

	WMH-1	WMH-2	WMH-3	WMH-4	WMW-5
Benzene	ND	21400	21.9	4.9	ND
Toluene	ND	4380	5.2	ND	ND
Ethylbenzene	ND	139	2.8	ND	ND
Xylenes	ND	1080	4.2	ND	ND
TPH mg/L	ND	22	ND	ND	ND
Inorganic					
Chloride mg/L	465	321	724	121	421
Flouride mg/L	ND	6.4	ND	1.1	ND
Hardness					
as CaCO3 mg/L	950	180	520	236	1030
Nitrate mg/L	ND	ND	6.2	1.7	ND
Nitrite mg/L	ND	ND	ND	ND	ND
Silica mg/L	5.5	5.1	3.2	8.3	6.2
Alkalinity					
as CaCO3 mg/L	897	891	1148	843	1018
TDS mg/L	3820	1912	4720	1587	4332
pH S.U. @ 25C	7.06	7.64	7.53	7.64	6.94
Antimony	ND	ND	ND	ND	ND
Arsenic	ND	ND	ND	ND	ND
Barium	913	265	344	622	36.4
Beryllium	2.5	ND	2.1	1.3	ND
Cadmium	5.2	ND	ND	ND	ND
Calcium mg/L	245	31.2	100	49.5	258
Chromium	10.8	ND	9.1	5.8	ND
Copper	31.3	61.9	16	12.5	ND
Iron	14300	8170	9980	11200	890
Lead	15.3	4.2	11.9	7.6	ND
Magnesium mg/L	56.9	19.7	36.9	21.3	67.7
Manganese	3940	274	713	915	1840
Nickel	13.5	ND	ND	ND	ND
Potassium	5940	1390	5360	2620	3940
Selenium	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND
Sodium mg/L	924	620	1390	575	1040
Thallium	ND	ND	ND	ND	ND
Zinc	77.8	35.7	48.2	30.4	ND
Mercury	ND	ND	ND	ND	ND

*Results in ug/L unless noted
Samples Collected March 28 & 29, 1994

Burlington Environmental Inc.
4000 Monroe Road • Farmington, NM 87401
Phone 505/326-2262 • FAX 505/326-2388

BURLINGTON ENVIRONMENTAL

Groundwater Elevation Data

March 1994

Well Number	Top of Riser Elevation	Depth to Water	Groundwater Elevation
MW-1	6,584.66	2.24	6,582.42
MW-2	6,585.37	2.05	6,583.32
MW-3	6,589.84	2.27	6,587.57
WMH-1	6,596.04	3.25	6,592.79
WMH-2	6,593.69	2.65	6,591.04
WMH-3	6,593.91	4.68	6,589.23
WMH-4	6,594.50	4.41	6,590.09
WMW-5	NA	5.46	NA

Notes

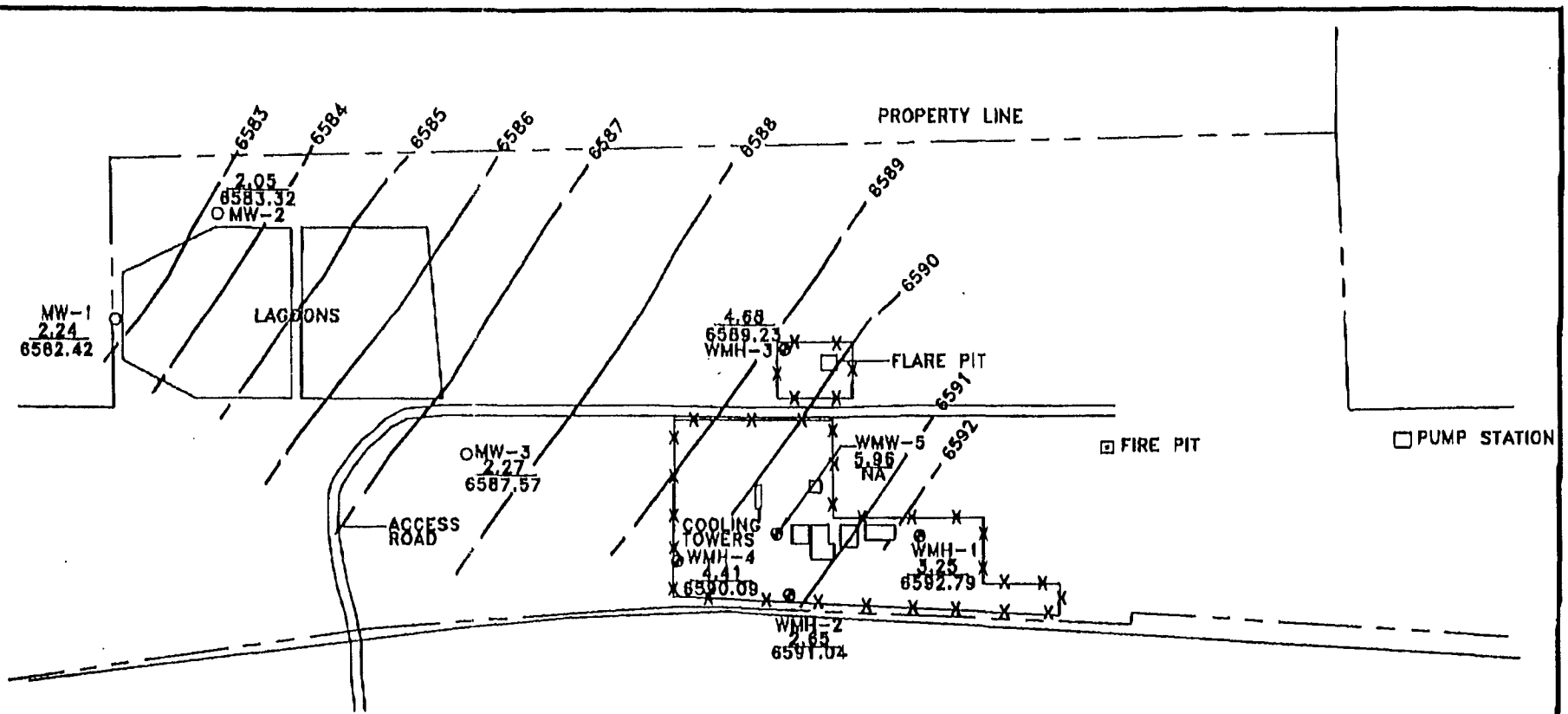
Elevation Data Supplied by MOI

Data is in Feet

NA = Not Available

Depth to Water Data Collected March 28 & 29, 1994

Burlington Environmental Inc.
4000 Monroe Road • Farmington, NM 87401
Phone 505/326-2262 • FAX 505/326-2388



LEGEND

- FENCED AREA OF REFINERY
- MW-1 — APPROXIMATE MONITORING WELL LOCATION AND NUMBERS
- 2.24 / 6582.42 — DEPTH TO WATER / WATER SURFACE ELEVATION

0 800 FEET

N

BURLINGTON ENVIRONMENTAL
– A Phillip Environmental Company –

TITLE: Wingate Groundwater Contours – March 1994

DRN:	DES.:	PROJECT NO.: 11931
ems		MERIDIAN–WINGATE WINGATE, NM
CHKD:	APPD:	
DATE: 5/27/94	REV.:	Figure 1

11931A-001

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

DRUG FREE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

March 11, 1994

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-667-241-909

Mr. Michael J. Frampton
Meridian Oil, Inc.
P.O. Box 4289
Farmington, New Mexico 87499-4289

RE: FLARE PIT CLOSURE
MERIDIAN OIL WINGATE PLANT
MCKINLEY COUNTY, NEW MEXICO

Dear Mr. Frampton:

The New Mexico Oil Conservation Division (OCD) has completed a review of the Meridian Oil, Inc. (MOI) February 22, 1994 "FLARE PIT CLOSURE, MERIDIAN OIL WINGATE PLANT, MCKINLEY COUNTY, NEW MEXICO" This report presents the results of MOI's ground water monitoring activities associated with the closure of the former unlined flare pit at the Wingate Fractionating Plant and requests discontinuation of ground water monitoring.

While the sampling results provided in the above document show ground water contaminants to be below New Mexico Water Quality Control Commission (WQCC) ground water standards, this analysis represents a one time sampling. Therefore, the OCD requires that MOI provide OCD with another quarterly ground water analysis confirming that the contaminants are below WQCC standards prior to OCD approval of cessation of this monitoring requirement.

Please be advised that OCD approval does not relieve MOI of liability should remaining contaminants pose a future threat to surface water, ground water, human health or the environment. In addition, OCD approval does not relieve MOI of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please contact me at (505) 827-5885.

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec Office

MERIDIAN OIL

February 22, 1994 Certified - P794 519 790

William C. Olsen
N.M. Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Re: Flare Pit Closure
Meridian Oil Wingate Plant
McKinley County, New Mexico

Dear Mr. Olsen,

Meridian Oil Inc. (MOI) recently conducted water quality sampling and analysis at the referenced flare pit. The results of the December 30, 1993 sampling show that BTEX levels have continued to decline. Shown below are the results of the three samples and analysis conducted to date. A copy of the most recent analysis is attached.

Date	Benzene	Toluene	Ethylbenzene	Xylenes
09/23/93	370 ug/L	78 ug/L	8 ug/L	85 ug/L
10/07/93	31 ug/L	ND	ND	ND
12/30/93	1.1 ug/L	ND	ND	1 ug/L

These data indicate that contamination levels have steadily and rapidly decreased. Remaining contaminants are below New Mexico Water Quality Commission Criteria. These results are consistent with MOI's belief that the contamination at the site was very localized in shallow groundwater in the immediate vicinity of the flare pit. Based upon the above data MOI is discontinuing water quality monitoring as part of the flare pit closure.

Contaminated soil continues to be remediated on location. Contaminant levels continue to decline. Tilling and watering will continue until acceptable clean-up levels are met. Upon completion of the landfarming MOI will submit an analysis of the final contaminant levels in the landfarmed soils to the OCD for approval. Once approved MOI intends to backfill the evacuated flare pit with the remediated soil.

If you have questions please call me at (505) 326-9841.

Sincerely,

Michael J. Frampton
Sr. Staff Environmental Representative

Attachment: Water Quality Analysis

cc: G. Kardos w/o Attachments
Wingate Plant Closures: Flare Pits

mf/sn/wgflar2

ANALYTICAL LABORATORIES, INC. • 7300 Jefferson, N.E. • Albuquerque, New Mexico 87109

3332 Wedgewood, Suite E-5 • El Paso, Texas 79925

REPORT

Work Order # 93-12-235

Received: 12/30/93

Results by Sample

SAMPLE ID **FLARE PIT** FRACTION **05A** TEST CODE **WBTEX** NAME **BTEX/EPA 602**

Date & Time Collected **12/30/93** Category **WATER**

PARAMETER	RESULT	LIMIT	D_F	DATE_ANAL
Benzene	1.1	1.0	1.0	01/05/94
Toluene	ND	1.0	1.0	01/05/94
Ethylbenzene	ND	1.0	1.0	01/05/94
P-&m-xylene	1.0	1.0	1.0	01/05/94
O-xylene	ND	1.0	1.0	01/05/94

Notes and Definitions for this Report:

EXTRACTED

ANALYST NO

FILE ID 007

UNITS ug/L

BATCH_ID WGCVOA-117

COMMENTS N/A

MERIDIAN OIL

February 2, 1994

Certified - P 794 519 779

William C. Olsen
Oil Conservation Division
Environmental Bureau
P.O. Box 2088
Santa Fe, New Mexico 87504

Re: Train Rack Ground Water Contamination
Meridian Oil Wingate Plant
McKinley County, New Mexico

Dear Mr. Olsen:

Pursuant to your request described as Conditions 3 and 4 in your October 1, 1993 letter (Certified Mail P 667 242 395) Meridian Oil Inc. is submitting the following information for your review:

1. Monitoring well (WMW-5) installation report with completion details and schematic.
2. BTEX water quality analysis from the newly completed well. Samples were collected 1/5/94. Reported values are below New Mexico Water Quality Control Commission Ground Water Standards.
3. Rico Verde fertilizer has been selected as the nutrient to be applied during bioremediation activities. Product information and an Action Plan are attached.

If you have any questions please call me at (505) 326-9841.

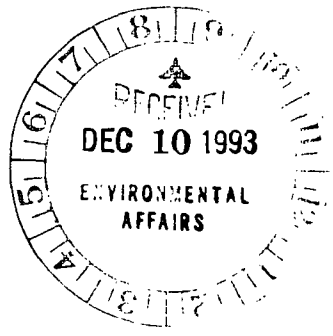
Sincerely,

Michael J. Frampton
Sr. Staff Environmental Representative

Attachments: Monitoring Well Installation Report
WMW-5 Water Quality Analysis
Rico Verde Product Information and Action Plan

cc: Richard Duarte, EPNG
Greg Kardos, MOI
Wingate Plant GW Train Rack: Correspondence

BURLINGTON
ENVIRONMENTAL



TECHNICAL MEMORANDUM

TO: El Paso Natural Gas Company

FROM: Burlington Environmental Inc.

DATE: December 9, 1993

SUBJECT: **Monitoring Well Installation at Wingate Gas Plant**

On November 17, 1993, El Paso Natural Gas Company (EPNG) installed one monitoring well , WMW-5, at Meridian Oil Company's (Meridian's) Wingate Gas Plant. EPNG contracted Burlington Environmental Inc. to oversee the installation of the well. Rodgers Drilling Company from Albuquerque, New Mexico conducted drilling and soil sampling for the monitoring well installation.

Boring for the monitoring well installation was completed using a CME-75 drill rig and 6.25-inch inside diameter (ID) hollow-stem augers. Soil samples were collected at 5-foot intervals using a 3-inch-diameter, 2-foot-long split-spoon sampler. Burlington's field geologist recorded the lithologic descriptions of the soils on Record-of-Subsurface-Exploration forms.

Each 2-foot-long, split-spoon soil sample was scanned for volatile compounds with an HNu PI 101 photoionization detector (PID) immediately after opening. The results of the PID readings in needle deflection units (NDUs) were recorded on Record-of-Subsurface-Investigation forms. One NDU is approximately equivalent to 1 part per million hydrocarbons in vapor. Drilling and sampling continued to 21 feet below ground surface as specified by EPNG.

Monitor Well WMW-5 is constructed of flush threaded, 4-inch-ID, Schedule 40 polyvinyl chloride (PVC) riser and 15 feet of 0.010-inch slotted PVC well screen. The well screen was capped on the bottom and installed through the augers to allow a competent gravel pack to be emplaced prior to removing the augers.

The gravel pack consisted of 10-20 washed silica sand which was added slowly through the auger string as it was pulled upward. Once the gravel pack had extended approximately one foot above the screen, a minimum 1-foot-thick bentonite pellet seal was installed and the pellets hydrated with 5 gallons of potable water. A locking, 8-inch diameter, steel well protector and a 3-foot by 3-foot by 3-inch-thick cement pad with 3 bumper posts were installed.

Burlington Environmental Inc.
4000 Monroe Road • Farmington, NM 87401
Phone 505/326-2262 • FAX 505/326-2388

Burlington's field representative developed the well immediately following installation. The well was surged vigorously with a 1.5-inch-diameter 3-foot-long Teflon™ bailer. Following surging , 5 casing volumes of water were removed. Development continued until pH, conductivity, temperature, and water clarity stabilized. All well-development water was contained in a DOT-certified drum and left on site for disposal by EPNG. The lithologic log, well-completion diagram and well-development data sheet are attached for your records.

Drilling equipment, sampling tools and bailers were decontaminated prior to use at the boring location. Decontamination included cleaning all equipment with high pressure steam or a soap solution followed by a potable water rinse. Decontamination fluids were contained in a bermed area designated by Meridian. The soil cuttings were shoveled into a front-end loader and placed in an area designated by Meridian.

WELL DEVELOPMENT & PURGING

GENERAL DATA

BURLINGTON ENVIRONMENTAL

SERIAL NO. WD _____
PAGE ___ OF ___

PROJECT NAME Wingate WELL NO. WMW5
PROJECT NO. 11180 MAJOR TASK 0077 SUB TASK 00
DATE 11/17/93 FORM COMPLETED BY Cory Chance

WELL CONSTRUCTION

TOTAL DEPTH (FT) 20.2 BOREHOLE DIAMETER (IN) 10
GRAVEL PACK INTERVAL (FT) 19-20 WELL DIAMETER INSIDE (IN) 4
WELL PROTECTOR: ✓ YES ___ NO PADLOCK NO. 2532
QUANTITY OF FLUID INJECTED DURING DRILLING (GALLONS) N/A

WATER VOLUME CALCULATION

DATE OF MEASUREMENT 11/17/93
MEASURING POINT TOR ELEV. 2.2
WATER LEVEL INSTRUMENT USED EWLI
INITIAL WATER LEVEL (FT) 7.05
LINEAR FEET OF WATER 13.15
LINEAR FEET SATURATED GRAVEL PACK 13.15

ITEM	WATER VOLUME	
	FT^3	GAL
WELL CASING		8.58
GRAVEL PACK		
DRILLING FLUIDS		
TOTAL		8.58

NOTE: QUANTITIES ARE TO BE CALCULATED PRIOR TO DEVELOPMENT.

DEVELOPMENT CRITERIA

METHOD OF DEVELOPMENT Teflon Bailer
WATER QUALITY MEASUREMENTS ✓ YES ___ NO
WELL VOLUME (ANNULUS) (GAL) _____ WELL CASING VOLUME (PIPE) (GAL) 8.58
WATER VOLUME TO BE REMOVED (GAL) MINIMUM 42.9 MAXIMUM _____

NOTE: DEVELOPMENT IS TO BE PERFORMED IN ACCORDANCE WITH PROJECT-SPECIFIC WELL DEVELOPMENT PLAN.

WATER QUALITY INSTRUMENTS

DATE	INSTRUMENT	SERIAL NO.	CALIBRATION PERFORMED (/)	TECH	COMMENTS
11/17/93	PH/Cond.	9206	✓	CMC	Problems Calibrating due to cold Weather

COMMENTS _____

DATE 11/17/93 WELL NO. WMW5

DEVELOPMENT TECHNIQUES

DATE	DEVELOPMENT METHOD	MATERIAL OR SERIAL NO.	DEVELOPMENT TECHNICIAN	VOLUMES REMOVED/TYPE
11/17/93	Bailer	Teflon	Scottpac/C. Chance	5/CSG

WATER QUALITY/WATER REMOVAL

WATER QUALITY READINGS | WATER REMOVAL DATA

	DATE	TIME	TOTAL INCREMENT GALLONS REMOVED	TOTAL WELL INCREMENT VOLUMES REMOVED	TEMP (°F)	pH	CONDUCTIVITY (umhos/cm) X1	APPEARANCE/ COMMENTS	DEVELOPMENT START TIME	DEVELOPMENT STOP TIME	REMOVAL RATE (GPM)	PUMP INTAKE LEVEL	WATER LEVEL BEFORE DEVELOPMENT	WATER LEVEL AFTER DEVELOPMENT
	11/17/93	1120	5		62.7	7.2	7.17 X1000	Reddish Brown-Silty	1128				7.05	
		1147	5		60.3	7.22	7.6 X1000	Reddish Brown-Silty						
		1154	5		60.1	7.26	7.21 X1000	A/A						
		1159	5		58.5	7.35	6.94 X1000	A/A						
*		1213	5		63.4	7.61	7.1 X1000	A/A w/Less Sand		1218				
		1226	5		67.5	7.59	8.23 X1000	Becoming Clearer	1220	1240				
		1300	4		56.7	8.02	7.53 X1000	Becoming Clear	1253	1302				
		1326	1 gal.		61.3	7.96	8.13 X1000	Becoming Clear	1326					
		1329	2.5		58.6	7.95	8.37 X1000	A/A						
		1335	2.5		57.6	7.98	7.81 X1000	A/A Mostly Clear		1338				

COMMENTS * Bailed dry after 2.5 gal. Water becoming clearer after resuming bailing (on initial bail.) Let well recharge 2nd time. Initial bailing is very clear. Let recharge 3rd time. (last bailer very clear)

NOTES:

1. COMMENTS SHOULD DELINEATE FINAL SAMPLE AND REPLICATE MEASUREMENTS.
2. ANY INSTRUMENTATION CALIBRATION OR USE ANOMALIES SHOULD BE NOTED.
3. APPEARANCE SHOULD BE NOTED BEFORE, DURING, AND AFTER DEVELOPMENT.

DATE 11/17/92 WELL NO. WMW5

DEVELOPMENT TECHNIQUES

DATE	DEVELOPMENT METHOD	MATERIAL OR SERIAL NO.	DEVELOPMENT TECHNICIAN	VOLUMES REMOVED/TYPE
11/17/92	Bailer	Teflon	Scottpre/C. Chance	5/CSG

WATER QUALITY/WATER REMOVAL

WATER QUALITY READINGS | WATER REMOVAL DATA

	DATE	TIME	TOTAL INCREMENT GALLONS REMOVED	TOTAL WELL INCREMENT VOLUMES REMOVED	TEMP (°F)	pH	CONDUCTIVITY (umhos/cm) X1	APPEARANCE/ COMMENTS	DEVELOPMENT START TIME	DEVELOPMENT STOP TIME	REMOVAL RATE (GPM)	PUMP INTAKE LEVEL	WATER LEVEL BEFORE DEVELOPMENT	WATER LEVEL AFTER DEVELOPMENT
	11/17/92	1128	5		62.2	7.2	7.17 X1000	Reddish Brown-Silty	1128				7.05	
		1147	5		60.3	7.22	7.6 X1000	Reddish Brown-Silty						
		1154	5		60.1	7.26	7.21 X1000	A/A						
		1159	5		58.5	7.35	6.94 X1000	A/A						
*		1213	5		63.1	7.61	7.1 X1000	A/A w/Less Sand		1218				
		1236	5		67.5	7.59	8.23 X1000	Becoming Clearer	1220	1240				
		1300	4		56.7	8.02	7.53 X1000	Becoming Clear	1253	1302				
		1326	1qt.		61.3	7.96	8.13 X1000	Becoming Clear	1326					
		1329	2.5		58.6	7.95	8.37 X1000	A/A						
	↓	1335	2.5		52.6	7.98	7.81 X1000	~~A/A~~ Mostly Clear		1338				

COMMENTS * Bailed dry after 25 gal. Water becoming clearer after resuming bailing (on initial bail.) Let well recharge 2nd time. Initial bailing is very clear. Let recharge 3rd time (1st bailee very clear)

NOTES:

1. COMMENTS SHOULD DELINEATE FINAL SAMPLE AND REPLICATE MEASUREMENTS.
2. ANY INSTRUMENTATION CALIBRATION OR USE ANOMALIES SHOULD BE NOTED.
3. APPEARANCE SHOULD BE NOTED BEFORE, DURING, AND AFTER DEVELOPMENT.

RECORD OF SUBSURFACE EXPLORATION

Borehole # WMW - 5
Well # WMW - 5
Page 1 of 1

Burlington Environmental Inc.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name Wingate Plant
Project Number 11180 Phase 77
Project Location Gallup, NM

Elevation
Borehole Location WMW - 5
GWL Depth 8.1'
Logged By C. Chance
Drilled By Rodgers Inc.
Date/Time Started 11-17-93 / 0745
Date/Time Completed 11-17-93 / 0945

Personnel On-Site Scott Pope
Contractors On-Site Rodgers Inc.
Client Personnel On-Site Gerry Garibay

Drilling Method HSA 6 1/4" ID, CME 75
Air Monitoring Method HNU, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0		4		Reddish Brown CLAY, trace Silt, low-medium plasticity, trace evaporite Fillins, soft, slightly moist.			0	0	0	- Very easy drilling.
5	1	6	24							
		9		Reddish-Brown CLAY, trace Silt, trace fine SAND, moist, SL-med plastic (~2- 3" Sandy Clay with high moisture @ ~9'),	CL		0	0	0	- Very wet cuttings @ ~9-11'.
10	2	11	22							
		14		Reddish-Brown CLAY with fine Sand, trace Silt, SL moist, SL plastic, soft, very moist @ 14'.			0	0	0	- Very soft drilling. - 2' water noted in BH.
15	3	16	24							
		19		Reddish-Brown Sandy CLAY, fine-medium Sand, SL-med plastic, soft, moist-very moist.			0	0	0	- Cuttings wet @ ~18'. Let well set to allow water to recharge 0900 water @ 8.1' after 15 min.
20	4	21	24							
				TOB 21'						
25										
30										
35										
40										

Comments: 3.6' heave in BH. Will redrill to remove heave and set CSG @ 18'. Removed heave CSG went to bottom of hole.

Geologist Signature Cory C Chance

MONITORING WELL INSTALLATION RECORD

Burlington Environmental Inc.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # WMW5
Well # WMW5
Page 1 of 1

Project Name WINGATE
Project Number 11180 Phase 0077
Project Location GALLUP, NM

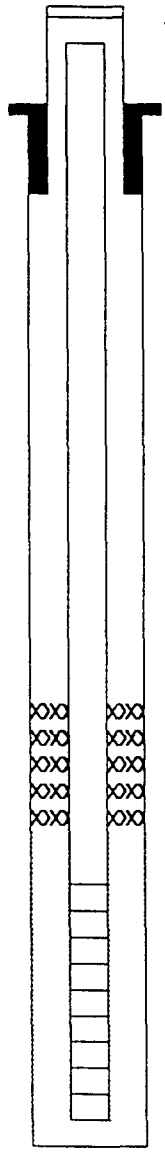
Elevation
Well Location WMW5
GWL Depth 8.1
Installed By RODGERS, INC.

Date/Time Started 11/17/93 0945
Date/Time Completed 11/17/93 1100

On-Site Geologist C.M. CHANCE
Personnel On-Site S. POPE
Contractors On-Site RODGERS, INC.
Client Personnel On-Site GERRY GARIBAY

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing	8" STEEL	+2.5
Bottom of Protective Casing		-1.5
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete	PRE-MIX	+.3
Bottom of Concrete		0.0
Top of Grout		N/A
Bottom of Grout		N/A
Top of Well Riser	4" SCH 40 PVC	+2.2
Bottom of Well Riser		-2.8
Top of Well Screen	4" SCH 40 PVC	-2.8
Bottom of Well Screen	.010 SLOT	-17.9
Top of Peltonite Seal		0.0
Bottom of Peltonite Seal	1/8 BENTONITE CHIPS	-2.0
Top of Gravel Pack	10-20 SILICA	-2.0
Bottom of Gravel Pack		-19.0
Top of Natural Cave-In		-19.0
Bottom of Natural Cave-In		-21.0
Top of Groundwater		-8.1
Total Depth of Borehole		-21.0



Top of Protective Casing +2.5
Top of Riser +2.2
Ground Surface 0.0
Top of Seal 0.0
Top of Gravel Pack -2.0
Top of Screen -2.8
Bottom of Screen -17.9
Bottom of Borehole -21.0

Comments: POURED APPROXIMATELY 1 FOOT SAND IN BOREHOLE TO SET CASING AT 18 FEET. SEVEN (100 LBS.) BAGS 10-20 SILICA SAND, 1 (50 LB.) BAG BENTONITE CHIPS HYDRATED WITH 5 GALLONS WATER.

Geologist Signature Cory Chance

JAL_MW2.WK1

BURLINGTON ENVIRONMENTAL INC.

CORPORATE LABORATORY

MODIFIED 8015 METHOD FOR BTEX ANALYSIS

Client:	**El Paso Natural Gas Company**		
Date of Receipt	**01/07/94**	**Date of Report:**	**01/14/94**
Analyst:	**Sheng Pan**	**QC by:**	

Project	**Wingate**
Sample Identification	**#94-0005**
Lab Number	**51324-5**
Sample Type:	water

Date of Extraction: **Date of Analysis:** **01/14/94**

BTEX

Benzene:	**3.7 ug/l**
Toluene:	**2.4 ug/l**
Ethyl Benzene:	**1.3 ug/l**
Total Xylenes:	**4.4 ug/l**

Surrogate:	**% Recovery**
Trifluorotoluene	**98.9**

MERIDIAN OIL -Wingate Plant, Gallup, NM.

ACTION PLAN
for
APPLICATION OF FERTILIZER TO ENHANCE PASSIVE BIOREMEDIATION

I. Introduction: Pursuant a Discharge Plan condition, NMOCD required a preliminary groundwater investigation by Meridian Oil. A geoprobe survey was conducted on April 6 and 7, 1993. In general, data collected indicated hydrocarbon contamination still confined to the area around the train loading rack. The hydraulic head in the shallow aquifer indicates that the upward flow is limited and restricted by the clayey-rich intermediate unit previously identified in the 1992 Discharge Plan.

As a result of the preliminary groundwater investigation, several recommendation were proposed and accepted by NMOCD. Based on the observations, the following was agreed to by Meridian and NMOCD: 1) a continuation of the groundwater monitoring program with a change in the sampling frequency to semi-annually beginning in 1994; 2) install an additional monitoring well; and, 3) initiate passive bioremediation. The latter point is the focus of this action plan.

MOI will initiate an in situ passive bioremediation within the area of concern. Since the groundwater is relatively shallow and hydrocarbon concentrations are relatively low, the addition of nutrients should initiate or enhance passive remediation of the hydrocarbon contaminants in the soil above the saturated zone. Nutrients will be applied on an annual basis to stimulate and augment natural bioremediation. The program will continue until the groundwater contaminants are below the applicable WQCC criteria.

II. Schedule of Application: Contact for this application procedure is Richard Duarte, El Paso Natural Gas Co., 831-7763.

The dates shown below are subject to change pending weather or product delivery to Gallup, NM. Application shall be in and around non paved areas within the train rack, excluding the immediate area within the train rails.

Day 1: Approval is received from NMOCD to apply RICO VERDE. RICO VERDE will be applied per product instructions.

Day 2: Submit the request to purchase RICO VERDE. Delivery is estimated to be 10-days.

Day 7: Notify Wingate Plant Supervisor and Meridian Environmental Engineer of pending delivery and proposed application.

Day 12: Delivery of RICO VERDE.

Day 13 -15: Contractor will mechanically apply the RICO VERDE per instructions for the product.

Day 15: Notify Meridian of completion.

Soil Conditioning Fertilizer

RICO VERDE®

(Rich Green)

5-3-3-3$_S$-2$_{FE}$

For Southwestern Lawns and Gardens
A fertilizer blended with minor nutrients
in an organic base.
Odorless and Weed Free
Guaranteed Analysis:
Total Nitrogen (N) 5% - Urea
Available Phosphoric Acid (P_2O_5) 3% -Superphosphate
Soluble Potash (K_2O) 3% - Sulfate of Potash
Sulphur..... 3%
Iron 2%
Zinc.....1%
Manganese...2%
Copper 1%
Ph 4.0
Organic Matter...30% by weight
For Complete Instructions, See Reverse

AGRONICS INCORPORATED
701 Madison Street N.E.
Albuquerque, N.M. 87110
Phone (505) 298-1748

50 Lbs. Net Wt.

gronics Incorporated

701 Madison St N.E. Albuquerque, New Mexico 87110
(505) 268-1749 DBA Farm Guard Products

AGRONICS, Inc. is pleased to announce.....

RICO VERDE

(Rich Green)

A premium lawn and garden soil conditioning fertilizer.

RICO VERDE represents the most complete lawn and garden fertilizer available with a total supplement of major nutrients (Nitrogen 3%, Phosphate 3%, and Potash 3%) with a full complement of micronutrients (Iron 2%, Sulfur 3%, Zinc .4%, Manganese .3%, and Copper.1%) in a concentrated, weed-free, odorless, humus base with 30% organic matter.

RICO VERDE is complete. It will soften soil, improve water penetration, balance soil nutrients, provide an organic matter, which is stable and does not oxidize as peat moss or composts which are very short-lived in the soil. **RICO VERDE** will save the cost of peat moss or organics as the **RICO VERDE**'s organic components are very concentrated and highly active.

RICO VERDE's complete plant food mix reduces any possibility of minor nutrient deficiency. In Southwestern alkali soils, the organic base provides a chelating effect which releases the minor nutrients to the plant for maximum availability.

RICO VERDE represents the premium high quality lawn and garden fertilizer to supplement your product line. **RICO VERDE** can be placed on truckload orders with Clod Buster or micronutrients for your complete full season sales activity.

RICO VERDE can be sold to lawn and garden stores, nurseries, or you can sell it direct through your outlet. It is an excellent product and the repeat business you receive will be very profitable.

We welcome **RICO VERDE**.

AGRONICS, Inc.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

January 27, 1994

Mr. Michael J. Frampton
Meridian Oil, Inc.
P.O. Box 4289
Farmington, NM 87499-4289

RE: Wingate Fractionating Plant
RCRA E&P Exemption Clarification
McKinley County, New Mexico

Dear Mr. Frampton,

The New Mexico Oil Conservation Division (OCD) has received your January 24, 1994 request to clarify the Resource Conservation and Recovery Act (RCRA) Exploration and Production Hazardous Waste Exemption status of the Wingate Fractionating Plant in McKinley County, New Mexico.

The OCD has reviewed this letter and agrees with your general listing of exempt and non-exempt wastes, as well as with your justification of the Wingate Plant's E&P exempt status as determined in the Federal Register as you referenced. It appears that Meridian's management strategy is consistent with waste management standards under the OCD's jurisdiction.

Please be advised that compliance with these standards does not relieve Meridian Oil, Inc. of liability should their operation result in actual pollution of surface or ground waters or the environment actionable under other laws and/or regulations.

If you have any questions, please call me at (505)827-4080.

Sincerely,

Robert L. Myers II
Petroleum Engineer Specialist

RLM/rlm
xc: Denny Foust, OCD Aztec Office

MERIDIAN OIL

January 24, 1994

Certified - P794 519 768

Roger Anderson
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Re: Wingate Fractionating Plant (Wingate)
Resource Conservation and Recovery Act (RCRA)
Exploration and Production Hazardous Waste Exemption (E & P Exemption)
Clarification

Dear Mr. Anderson:

Meridian Oil Inc. (MOI) recently reviewed waste management practices at Wingate. (Wingate facility operations are thoroughly described in New Mexico Oil Conservation Division (OCD) approved Discharge Plan GW-54.) During this review a question arose concerning which wastes generated at the facility are included under the E & P exemption. With this letter MOI wants to share with OCD MOI's interpretation of E & P exemption applicability at Wingate. MOI requests your written concurrence with our management approach.

Listed below is a table that describes the major waste producing activities at Wingate and MOI's E & P exemption applicability determination.

Non-Exempt	***Exempt***
Machinery maintenance	Process spill residue
Construction and painting	Process vessel wastes
Fuel storage spills	Process waste waters
Cooling tower cleaning waste	Process cooling tower blowdown
Fire training wastes	Process dehydration wastes
Used equipment lubrication oil	Process sweetening wastes
Used hydraulic fluids	Process filter media wastes
Odorants wastes (addition of)	
Drums, insulation and miscellaneous solids	
Waste mercury from meters and gauges	
Purchased product storage wastes	

This table is not intended to cover all wastes generated at Wingate. Rather it is provided as an example of how MOI implements the E & P exemption to Wingate gas plant wastes.

Meridian Oil Inc., 3535 East 30th St., P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-327-0251

MOI believes that this implementation is consistent with E & P exemption regulatory determinations described in the Federal Register (Vol. 53, No. 129 July 6, 1988 and Vol. 58 No. 53 March 22, 1993). MOI's position is supported by the following:

1. Wingate is an operating gas plant with processes designed to fractionate various natural gas fractions into marketable products.

2. After processing at Wingate the processed products are ready for marketing and transportation to consumption markets.

3. Wingate processing removes natural impurities from natural gas fractions.

4. Wingate processing does not crack or reform the molecular structure of the various gas fractions.

5. Wingate is an essential gas plant extension of the upstream gas plants located in the San Juan Basin.

Roger, please review the points raised in this letter. MOI seeks your concurrence that our management strategy is consistent with waste management standards under your department's jurisdiction. If you have any questions or would like clarification on any of the above stated, please call me at 326-9841.

Sincerely,

Michael J. Frampton
Sr. Staff Environmental Representative

cc: Denny Foust, OCD - Aztec
Greg Kardos, MOI
Wingate Plant Waste Disposal Issues: Correspondence

mjf/sn/c:\wingclar

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

January 14, 1994

CERTIFIED MAIL
RETURN RECEIPT NO. P-667-241-893

Mr. Michael J. Frampton
Meridian Oil, Inc.
P.O. Box 4289
Farmington, New Mexico 87499-4289

RE: FIRE TRAINING PIT CLOSURE
MERIDIAN OIL WINGATE PLANT
MCKINLEY COUNTY, NEW MEXICO

Dear Mr. Frampton:

The New Mexico Oil Conservation Division (OCD) has completed a review of the Meridian Oil, Inc. (MOI) November 19, 1993 "FIRE TRAINING PIT CLOSURE PROJECT, WINGATE FRACTIONATING PLANT, MCKINLEY COUNTY, NEW MEXICO" and MOI's December 20, 1993 "FIRE TRAINING PIT CLOSURE, DISCHARGE PLAN GW-54, CLOSURE REPORT - ADDENDUM #1". These reports present the results of MOI's remedial activities associated with the closure of the former unlined fire training pit at the Wingate Fractionating Plant.

The remedial actions performed at the above referenced site have been completed in accordance with the standards in effect at the time of closure and are approved with the following condition:

1. Upon completion of landfarming activities, MOI will submit the final analyses of the landfarmed soils to OCD for final approval.

Please be advised that OCD approval does not relieve MOI of liability should remaining contaminants pose a future threat to surface water, ground water, human health or the environment. In addition, OCD approval does not relieve MOI of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions please contact me at (505) 827-5885.

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec Office