

GW - 49

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

---

**2004 - 2001**



Enterprise Products Operating, LP  
614 Reilly Avenue  
Farmington, NM 87401

RECEIVED

DEC 15 2004

OIL CONSERVATION  
DIVISION

Mr. Roger Anderson  
New Mexico Oil Conservation Division  
1220 S. St. Francis  
Santa Fe, NM 87505

RE: Change of Ownership

Dear Roger:

This is to notify you of the change of ownership for the El Paso Field Services Co. facilities in the San Juan Basin area, in and near Farmington, NM. A list of the effected facilities, along with the Discharge Permit numbers, is attached. These plants and compressor stations are now owned by GulfTerra Energy Partners, L.P. ("GulfTerra"). GulfTerra is no longer affiliated with El Paso Corp.. It is now a subsidiary of Enterprise Products Partners, L.P. ("Enterprise"). All the GulfTerra facilities are operated by Enterprise Products Operating, L.P.

All local contact information as listed in the Discharge Plans is still current. However, Mr. E. Randal West is no longer the Responsible Party for the facilities. The new Legally Responsible Party for all the GulfTerra/Enterprise locations is:

Mr. Terry Hurlburt  
Vice President  
Enterprise Products Operating, L.P.  
2727 North Loop West  
Houston, TX 77008.

If you need any additional information regarding the change of ownership, please call me at (505) 599-2256.

Sincerely yours,

David Bays, REM  
Principal Environmental Scientist

Cc: Mr. Denny Foust – NMOCD – Aztec, NM

## **New Mexico Discharge Permit Numbers**

<b>Permit Number</b>	<b>Facility Name</b>
GW-189	Angel Peak Plant
GW-212	Ballard Plant
GW-049	Blanco Plant
GW-71	Chaco Plant
GW-186	Kutz Plant
GW-049-1	Kutz Separator
GW-188-1	Hart Canyon #1 Station
GW0188-2	Hart Canyon #2 Station
GW-188-3	Hart Canyon #3 Station
GW-211	Largo Plant
GW-209	Lindrith Plant
GW-301	Manzanares Station
GW-298	Martinez Canyon Station
GW-303	Navajo City Station
GW-302	Potter Canyon Station
Gw-317	Rattlesnake Plant
GW-304	Turley Station
GW-153	2B-3A Station
GW-154	2B-3B Station
GW-188	3B-1 Station

THE SANTA FE  
NEW MEXICAN

Founded 1849

RECEIVED

OCT 12 2004

OIL CONSERVATION  
DIVISION

NM OIL CONSERVATION DIV.  
1220 ST. FRANCIS DR  
Attn: Ed Martin  
SANTA FE NM 87505

ALTERNATE ACCOUNT: 56689  
AD NUMBER: 00089513 ACCOUNT: 00002212  
LEGAL NO: 75034 P.O. #: 05-199-050185  
461 LINES 1 TIME(S) 315.04  
AFFIDAVIT: 5.50  
TAX: 21.44  
TOTAL: 341.98

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO  
COUNTY OF SANTA FE

I, B. Perner, being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper 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 # 75034 a copy of which is hereto attached was published in said newspaper 1 day(s) between 10/06/2004 and 10/06/2004 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 6th day of October, 2004 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

*B Perner*

/S/

LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 6th day of October, 2004

Notary *Laura & Harding*

Commission Expires: *11/23/07*



dental discharge is at a depth of approximately 75 feet with a total dissolved solids concentration ranging from 48 mg/L to 52 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-049-2) - El Paso Field Services, David Bays, 614 Reilly Ave., Farmington, NM 87401, has submitted a discharge permit application for the Blanco C and D Compressor Station, located in the N/2 N/2 of Section 14, Township 29 North, Range 11 West, NMPM, San Juan County, New Mexico. Approximately 9,500 barrels per month of crude oil and natural gas condensate are collected in closed-top steel tanks until sale to the Giant Refinery near Bloomfield, NM. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 15 to 40 feet. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-182) - Williams Field Services, Michael K. Lane, (505) 632-4625, 188 CR 4900, Bloomfield, New Mexico 87413, has submitted a discharge plan renewal application for the Navajo CDP Compressor Station located in the NE/4 NW/4 of Section 2, Township 30 North, Range 8 West, NMPM, San Juan County, New Mexico. After oil/water separation, approximately 42 gallons per day of process waste water with a total dissolved solids concentration in excess of 2000 mg/l is stored in an above ground, closed-top steel tank prior to transport to an OCD approved off-site disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of 20 feet with a total dissolved solids concentration of approximately 2000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-047) - Williams Field Services, Mark K. Lane, (505) 632-4625, 188 CR 4900, Bloomfield, New Mexico 87413, has submitted a discharge plan renewal application for the Lybrook Natural Gas Processing Plant located in the N/2 NW/4 of Section 14, Township 23 North, Range 7 West, NMPM, Rio Arriba County, New Mexico. After oil/water separation, approximately 3000 gallons per day of process wastewater with a total dissolved solids concentration of approximately 7500 mg/l is disposed of in clay lined evaporation ponds. Groundwater most likely to be affected in the event of an accidental discharge is at a depth ranging from 180 to 200 feet with a total dissolved solids concentration of approximately 700 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-161) - Williams Production Company, LLC (formerly J. M. Huber Corporation), 999 Goddard Avenue, Ignacio, Colorado 81137 has submitted a renewal application for their ROSA COMPRESSOR STATION located in the SW/4

SE/4 of Section 26, Township 31 North, Range 4 West, Rio Arriba County, New Mexico. Approximately 9 gallons per day of wastewater with a dissolved solids concentration of 1,500 mg/l is collected in a 400 barrel closed fiberglass tank prior to transport off-site to an OCD approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge at the surface is at a depth greater than 20 feet with a total dissolved solids concentration ranging from 2000 mg/l to 10000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-008) - El Paso Natural Gas, Robert H. St. John, 3300 North "A" Building Two, Suite 200, Midland, TX 79705, has submitted a discharge permit renewal application for the Monument Compressor Station, located in the NW/4 of Section 1, Township 20 South, Range 36 East, NMPM, Lea County, New Mexico. Approximately 9,600 gallons per day of processed wastewater with total dissolved solids concentration of 3,500 mg/L is stored in steel tanks prior to transport for disposal in an OCD-approved Class II injection well. Groundwater most likely to be affected in the event of an accidental discharge at the surface is at a depth of approximately 35 feet with a total dissolved solids concentration of approximately 500 mg/L. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-144) - Duke Energy Field Services, LP, Mr. Greg Kardos, (505) 628-0282, 3300 N. A Street, Building 7, Midland, Texas 79705, has submitted a discharge renewal application for the West (a.k.a. Westall) Compressor Station located in the SW/4 NW/4 of Section 35, Township 22 South, Range 28 East, NMPM, Eddy County, New Mexico. Duke Energy Field Services, LP certifies that no liquid or solid wastes generated on site are discharged so that they may move directly or indirectly into fresh waters. Any liquid wastes are collected and stored in containers prior to transport offsite to an OCD approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 16 feet with a total dissolved solids concentration of approximately 7.843 mg/l. The discharge permit addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-048) - Davis Gas Processing Company, Donald K. Judd, Agent, (432) 682-6311, 211 North Colorado Street, Midland, Texas 79701-4696, has submitted a discharge renewal application for the Denton Gas Plant located in the SE/4 of Section 2, Township 15 South, Range 37 East, NMPM, Lea County, New Mexico. Approximately 750 gallons per day of process waste water with a total dissolved solids concentration of approximately 2000 mg/l will be collected and stored on site in closed storage tanks prior to disposal in an OCD approved con-

tract injection Class II well. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 40 feet with a total dissolved solids concentration ranging from 610 to 1600 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 application may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday thru 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 public hearing may be requested by any interested person. Request for public hearing shall set forth the reasons why a hearing shall be held. A hearing will be held if the director determines that there is significant public interest.

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

GIVEN under the Seal of New Mexico Conservation Commission at Santa Fe, New Mexico, on this 30th day of September 2004.

STATE OF  
NEW MEXICO  
OIL CONSERVATION  
DIVISION

SEAL

JOANNA PRUKOP,  
Acting Director  
Legal #75034  
Pub. October 6, 2004

NOTICE OF  
PUBLICATION

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

Notice is hereby given that pursuant to the New Mexico Water Quality Control Commission Regulations, the following discharge plan application has been submitted to the Director of the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-049) - El Paso Natural Gas Co., Mr. Richard Duarte, 3801 Atrisco Blvd. NW, Albuquerque, NM 87120, has submitted a renewal application for their "A" Blanco Plant facility located in the NE/4 NE/4 of Section 23, Township 27 West, Range 13 North, NMPM, San Juan County, New Mexico. A small amount of engine wash-down water and storm water runoff is discharged to the City of Bloomfield publicly owned treatment works. Groundwater most likely to be affected by a spill, leak, or accidental discharge to the surface varies in depth from 14 to 39 feet. The discharge plan addresses how spill, leaks, and other accidental discharges to the surface will be managed.

(GW-317) - El Paso Field Services, David Bays, 614 Reilly Ave., Farmington, NM 87401, has submitted a renewal application for the Rattlesnake Canyon Gas Plant, located in the NE/4 of Section 16, Township 32 North, Range 9 West, NMPM, San Juan County, New Mexico. Approximately 375 barrels per month of produced water with a dissolved solids concentration ranging from 10,000 to 15,000 mg/L is collected in closed steel tanks prior to transport to an OCD-approved disposal facility. Approximately 10 barrels per year of wastewater from equipment washdown are collected in a double-walled underground sump prior to transport to an OCD-approved disposal facility. Groundwater most likely to be affected in the event of an acci-

AFFIDAVIT OF PUBLICATION

Ad No. 50560

STATE OF NEW MEXICO  
County of San Juan:

CONNIE PRUITT, being duly sworn says  
That she is the CLASSIFIED MANAGER of  
THE DAILY TIMES, a daily newspaper of  
general circulation published in English at  
Farmington, said county and state, and that  
the hereto attached Legal Notice was  
published in a regular and entire issue of the  
said DAILY TIMES, a daily newspaper duly  
qualified for the purpose within the meaning of  
Chapter 167 of the 1937 Session Laws of the  
State of New Mexico for publication and  
appeared in the Internet at The Daily Times  
web site on the following day(s):

Wednesday, October 6, 2004

And the cost of the publication is \$143.61.

Connie Pruitt

ON 10-7-04 CONNIE PRUITT  
appeared before me, whom I know personally  
to be the person who signed the above  
document.

Sunny Beck  
My Commission Expires April 2, 2008.

COPY OF PUBLICATION

NOTICE OF PUBLICATION

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

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NMPM, San Juan County, New Mexico. A small amount of engine  
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GIVEN under the Seal of New Mexico Conservation Commission at Santa Fe, New Mexico, on this 30th day of September 2004.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

SEAL

JOANNA PRUKOP, Acting Director

Legal No. 50560 published in The Daily Times, Farmington, New Mexico on Wednesday, October 6, 2004.

**NOTICE OF PUBLICATION**

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ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

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GIVEN under the Seal of New Mexico Conservation Commission at Santa Fe, New Mexico, on this 30th day of September 2004.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

SEAL

JOANNA PRUKOP, Acting Director



August 17, 2004

Roger Anderson, Bureau Chief  
NMOCD – Environmental Bureau  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Overnight Mail  
UPS Air Bill No. 1Z 93V 676 01 9314 0783

**Re: Discharge Plan GW-049 Renewal; El Paso Natural Gas Company's "A" Blanco Plant, near Bloomfield, San Juan County, NM**

Dear Mr. Anderson:

Enclosed please find the documents related to the renewal of the Station's Discharge Plan. As you may already know, last year EPNG sold Blanco's "C" and "D" plant to El Paso Field Services ("EPFS"); and, EPFS recently submitted an application for its own Discharge Plan. The break up of Blanco Plant has eliminated a majority of the discharges under EPNG's responsibility. Except for "wash-down" water from engines and storm-water runoff from "A" plant, EPNG's Blanco Plant is almost a zero discharge facility.

Please contact me at (505) 831-7763 if you have any questions regarding this renewal application or if you wish to schedule a site inspection.

Sincerely,

A handwritten signature in cursive script, appearing to read "Richard Duarte".

Richard Duarte  
Environmental Representative  
Compliance Services Department

Enclosure (application – 1 original & 1 copy)

**Copy (with enclosure): UPS Air Bill No. 1Z 93V 676 01 9359 2796**  
Denny G. Foust  
NMOCD – Environmental Bureau  
1000 Rio Brazos Street  
Aztec, NM 87410

Mr. R. Anderson, NMOCD Environmental Bureau  
Blanco Plant – Discharge Plan Renewal  
August 17, 2004  
Page 2

**Blind Copy (w/ Discharge Plan Renewal documents):**

Russell S. Pyeatt  
Sandra D. Miller

File: Blanco Plant – Wastewater  
R. Duarte's Chron. (w/out enclosures)

District I - (505) 393-6161

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 Departments

Oil Conservation Division

2040 South Pacheco Street

Santa Fe, New Mexico 87505

(505) 827-7131

Revised 12/1/95

Submit Original

Plus 1 Copy

to Santa Fe

1 Copy to appropriate

District Office

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

New

Renewed

Modification

1. Type: Natural Gas Plant Compressor for transmission

2. Operator: El Paso Natural Gas Company

Address: 2 North Nevada, Colorado Springs, Colorado 80903

Contact Person: Richard Duarte, Environmental Representative

3. Location: NE ¼ NE ¼ Section 23 Township 27-West Range 13-North

- 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 locaiton 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 soilds. Average daily quality and daily volume of waste water must be included.
- 8. Attach a description of current liquid waste and solid waste collection/treatment/disposal systems.
- 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 rules, regulations, and/or orders.

14. CERTIFICATION

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

NAME: Richard Duarte Title: Environmental Engr.

Signature: *Richard Duarte* Date: 8/17/04

**Item 1**

*Indicate the major operational purpose of the facility. If the facility is a compressor station include the total combined site rated horsepower.*

The El Paso Natural Gas Company – Blanco A Compressor Station (herein referenced as Blanco “A” or “A” plant) is engaged in the compression of natural gas for transmission. Blanco Plant can receive about 550 MMCF/day of dry “sweet” natural gas for compression from EPFS’ Ignacio plant (~50 MMCF) and Duke’s Val Verde Plant (~500 MMCF) for transmission to the natural gas markets.

To accomplish this natural gas compression, Blanco Plant utilizes the following:

**“A” Plant:**

Fourteen Cooper-Bessemer GMV-10TF Engines each rated at 913 site-hp.

**Item 2**

*Name of operator or legally responsible party and local representative.*

**Legally Responsible Party**                      Thomas P. Morgan, Vice President  
El Paso Natural Gas Company  
2 N. Nevada Street  
Colorado Springs, Colorado 80903

**Local Representative**                              Richard Duarte (505) 831-7763  
El Paso Natural Gas Company  
3801 Atrisco Blvd. NW  
Albuquerque, NM 87120

**Operator**    El Paso Natural Gas Company  
Physical Address                                      #81 County Road 4900  
Bloomfield, NM 87413

Mailing Address                                      El Paso Natural Gas Company  
P. O. 127  
Bloomfield, NM 87413  
(505) 632-6001, Russell S. Pyeatt, San Juan Area Manager  
1-800-334-8047 (24 hour emergency notification)

**Item 3**

*Give a legal description of the location and county. Attach a large-scale topographic map.*

San Juan County, New Mexico  
Township 29 North, Range 11 West, N/2 of the N/2, Section 14; and, also W/2 SE/4 NE/4, Section 14  
and Portion SW/4 NE/4, Section 14.

Lat.: 36 Degrees 43 Minutes and 43 Seconds  
Long.: 107 Degrees 57 Minutes and 21 Seconds

The topographic map, figure 1, is attached in Appendix A.

**Item 4**

*Attach the name, telephone number and address of the landowner of the facility site.*

El Paso Natural Gas Company  
2 N. Nevada St.  
Colorado Springs, Colorado  
Site Contact (505) 632-6001 Russ S. Pyeatt, Manager  
Environmental Representative Contact (505) 831-7763 Richard Duarte

**Item 5**

*Attach a description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.*

**Gas Compressors.** All natural gas that is compressed by Blanco "A" are reciprocating and do not produce wastewater. Any the cooling liquids used within these systems are "closed" and disposed as necessary. A simplified process flow diagram (figure 2, in Appendix A) is included.

**Natural gas scrubbers/separator units.** All inlet gas is passed through one or more scrubber/separator units to remove any used oil or other particulates entrained in the already treated natural gas stream from Val Verde and Ignacio sources.

**Domestic sewage.** Domestic Sewage is generated by a plant work force of about 2 people. Sewage is treated in four septic tanks and any effluent from these is routed into the sewer discharging to the City of Bloomfield WWTP.

**Storm water.** Located in an alluvial region, the Blanco Plant has good natural drainage. Storm water from the process area is collected concrete-lined and gravel-lined ditched that drain into the SPCC pond. This pond is used to capture and monitor the quality of storm water leaving the compressor plant. The pond is earthen diked on two sides and has two discharge sluice valves. The dike lengths are about 120 feet by 210 feet and are capable of capturing 2 feet of water at the deep end. Any storm water normally evaporates or is the storm event is significant the water is discharged to natural drainage channels. See attached policy on storm water management.

**Wash-down water.** As necessary, Blanco Plant utilizes high pressure water-jet or high pressure steam to remove solid particulate matter (dust, dirt, weeds, etc.) from fin-fans, reciprocating engines, process vessels or piping (not contained within a building). The wash-water is not contained.

**Item 6**

Attach a description of all materials stored or used at the facility.

Container	ID	Material	Form	Volume	Location	Containment
Closed steel AGT	Diesel Tank	Diesel fuel	Liquid	500 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	Gasoline Tank	Gasoline Fuel	Liquid	500 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	Safety Solvent	Solvent	Liquid	500 gallons	South of shop	Concrete curb
Closed steel AGT	797 Turbine Oil	Turbine lube oil	Liquid	8,714 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	Kerosene tank	Kerosene fuel	Liquid	4,200	Near "A" Plant	Concrete containment
Closed steel AGT	490 Lube oil	Engine lube oil	Liquid	12,600 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	490 Lube oil	Engine lube oil	Liquid	12,600 gallons	Near "A" Plant	Concrete containment

AGT-above ground tank (non-pressurized)

The used oil is transported via truck transport to the Mesa Oil for recycling.

MSD sheets for materials at the site are maintained in Blanco Plant office and are available upon request.

**Item 7**

Attach a description of present sources of effluent and waste solid. Average quality and daily volume of waste water must be included.

Source	Type of Waste	Volume	Quality
Compressor sumps and engine drains	Spills, leaks and used engine oil, wash down water, and some rain water collected.	10 bbl/year	Used lube oil and water with detergents

**Item 8**

*Attach a description of current liquid and solid waste collection/treatment/disposal procedures.*

<b>Type of Waste</b>	<b>Collection</b>	<b>Storage</b>	<b>Hauler</b>	<b>Disposal</b>
Used oil.	Drained to an underground storage sump	AGT steel (pyramid tank)	Removed as generated by Mesa Environmental	Mesa Oil Recycling/Recovery Facility (Belen, NM)

**OCD Transporters/Disposal Facilities**

**Waste Management of Four Corners**, 101 Spruce St., Farmington, NM (505) 327-6284

**Mesa Oil Inc.**, 7239 Bradburn Blvd, Westminster, CO 80030 (303) 426-4777.

**Non-Exempt, Non-Hazardous Waste**

Any previously unclassified waste, will be collected as generated from the compressor unit and disposed according to its characteristics.

New lube oil is brought to the site by vendors as needed and stored in the on-line reservoir.

Any, wash down water from the compressor engines will be collected as generated within the "A", sump and discharged into the surge basin, treated by oil skimmer and then on to the City of Bloomfield WWTP

**Hazardous Waste**

Other than fluorescent light bulbs, Lead-acid or Ni-Cad batteries, no RCRA-listed hazardous wastes are expected to be generated at the facility. All batteries are recycled by Safety-Kleen of Farmington, NM.

**Other Solid Waste**

There will be no solid waste or miscellaneous trash disposal at the facility. All solid waste will be managed by disposal into the Waste Management dumpsters. One Dumpster handles only drained oil filters. The other Dumpster handles all other miscellaneous solid waste.

**Item 9**

*Attach a description of proposed modifications to existing collection/treatment/disposal system.*

No modifications to the facility are necessary to meet NMOCD requirements.

**Item 10**

*Attach a routine inspection and maintenance plan to ensure permit compliance.*

The "A" Plant is manned and will be inspected daily by an operator. Operation and maintenance will be performed and records will be kept according to EPNG procedures. The integrity of any buried

pipng installed at the facility was last tested in July 27, 2001 and scheduled to be re-tested again during the year 2005 plant shutdown (usually mid-summer).

#### **Item 11**

*Attach a contingency plan for reporting and clean-up of spills or releases.*

EPNG will handle all spills and leaks immediately as required by company procedures and will report all spills and leaks according to the requirements of the State of New Mexico as found in NMOCD Rule 116 and WQCC Section 1203.

Any waste generated will be characterized and profiled in accordance with NMOCD-Approved landfill requirements or solid-waste facility requirements (like Waste Management disposal facility).

#### **Item 12**

*Attach geological/hydrological information for the facility, Depth to and quality of groundwater must be included.*

The "A" plant is located within the west-central part of the San Juan Basin, a large, asymmetric structural depression that contains up to 15,000 feet of Paleozoic and Mesozoic sediments (Fassett and Hinds, 1971). Maximum topographic relief within 1 mile of the is about 480 feet with elevations ranging from 5460 to 5937 feet above sea level. The area is characterized by bedrock hillsides and mesas and Plio-Pleistocene gravel terraces of the San Juan and Animas Rivers. Average annual precipitation in the area is 8.5 inches per year.

**Site Geology.** The "A" plant site is located on an alluvial valley fill sloping gently to the south. There are no major drainages crossing the site. Three major soil associations are identified on the plant site; Stumble-Fruitland, Gypsiorthids-Badland-Stumble, and Fruitland sandy loam (C. W. Keetch, 1980). Most of the plant facilities are located on the Stumble-Fruitland association, which developed in alluvium, derived dominantly from sandstone and shale. Permeability is moderate (2.0-6.0 in/hr) in Fruitland soils to very rapid (6.0-20.0 in/hr) in Stumble soils (C. W. Keetch, 1980). For this association runoff is very slow to slow and water erosion potential is low (C. W. Keetch, 1980).

No plant facilities are constructed on the Fruitland sandy loam. It can be found on the southeast part of the plant site. Permeability is moderate (2.0-6.0 in/hr). Runoff is slow, and water erosion potential is low to moderate (C. W. Keetch, 1980).

The "A" plant site is located on alluvium, which fills a canyon cut into the Nacimiento Formation. The alluvium consists of fine to course sands, clays and varying combinations of the two. These were deposited by stream and wind action. The soils tend to be weak, compressible and moderately permeable. At the plant site the thickness of the alluvium ranges from less than 3 to 75 feet. The alluvium is deposited on the Nacimiento Formation.

**Regional Ground Water Hydrology.** Three ground-water systems are present in the Tertiary and younger sedimentary deposits in this areas of the San Juan Basin.

- Confined aquifers in Tertiary sandstone units.
  - Unconfined (water table) aquifer in Tertiary sandstone units near the outcrop areas.
  - Unconfined (water table) aquifers in the Quaternary alluvium in river valleys and tributaries.
- Each is described below in more detail.

*Tertiary Sandstone aquifers.* The Tertiary sandstone aquifers of the basin were deposited in fluvial or alluvial environments. Recharge to ground water is by infiltration of precipitation through formation exposures along the flanks of the Nacimiento Uplift and on the broad plateaus that occur in the central part of the basin. Ground water in these aquifers flows from upland recharge areas to discharge areas along canyon floors. Springs and seeps result due to regional topographic and geomorphic controls. The hydraulic gradient is controlled by topography but the structural attitude of the formation can alter the flow direction or gradient. Erosion has removed these units from much of the basin flanks.

Tertiary-sandstone aquifers commonly provide major sources of water for domestic and agricultural usage. The complex intertonguing of sandstone and shale units is primary influence on specific conductance which can be as high as 10,500 umho/cm.

The two Tertiary aquifers occurring beneath the site are the Nacimiento Formation and the Ojo Alamo sandstone. Neither are used as a direct source of water near the plant site. Seepage from the Nacimiento is probably a small source of recharge for the overlying alluvium aquifer.

Transmissivities for the Nacimiento Formation are estimated to be as high as 100 ft<sup>2</sup>/day for coarser and more continuous sandstones. Transmissivities for the Ojo Alamo sandstone range from 0.5 ft<sup>2</sup>/day to 250 ft<sup>2</sup>/day (Stone and others, 1983).

Specific conductance for the sandstones of the Nacimiento Formation ranges from less than 1,500 umhos to greater than 2,000 umhos in the finer grained portions of the unit (Stone and others, 1983). Specific conductance for the Ojo Alamo Sandstones ranges from less than 1,000 umhos to greater than 9,000 umhos (Stone and others, 1983).

*Quaternary-sediment aquifers.* Quaternary-sediment aquifers occur primarily as valley fill in the major river valleys and consist of gravel, sand, silt and clay. Ground-water recharge results from drainage from the irrigated lands, infiltration of the surface runoff and leakage from bedrock aquifers. Flow directions are concurrent with topographic slope and river-flow directions, and hydraulic conductivity can be extremely high. Transmissivities range from less than 1,000 ft<sup>2</sup>/day to more than 40,000 ft<sup>2</sup>/day (Stone and others, 1983).

Quaternary River Valley alluvium is highly variable and specific conductance may range from less than 1,500 to 6,000 umhos (Stone and others, 1983). Water from this source is used for stock, irrigation and domestic purposes. In arroyos and tributaries of the major rivers the ground water quality is also highly variable and specific conductance can be significantly higher than 6,000 umhos.

*Local Ground water hydrology.* Two ground water regimes exist at the Blanco "A" Plant site:

1. Unconfined sandstone aquifer in the Nacimiento Formation;
2. Unconfined aquifer in the canyon-filling alluvium beneath the plant site.

No wells are completed in the Nacimiento Formation near the plant site. Discussion for this aquifer is limited to that presented in the sections above.

The "A" Blanco Plant is constructed on the alluvium filling the canyon beneath the plant site. This alluvium is an unconfined aquifer limited laterally by edges of the canyon it fills. Based on the topography, ground water should flow from the north-northeast to south-southwest beneath the plant site following the general trend of the canyon. The main source of recharge is by rainfall. The recharge area is limited north of the plant site topography and the edges of the buried canyon. A small amount of recharge may occur from water seeping from the sandstone beds of the Nacimiento Formation. South of the plant site recharge is supplemented by irrigation. Depth to water near the south border of the plant site is between 10 and 15 feet below ground surface. Under the plant facilities, water depths have been reported over the last 25 years to range between 14.4 feet and 39 feet. Average transmissivity for the alluvium is estimated to be less than 1,000 ft<sup>2</sup>/day.

*Surface Water Hydrology.* Blanco "A" is situated at the mouth of an unnamed canyon located between Bloomfield and Hare Canyons, northeast of the town of Bloomfield, at an altitude of about 5,600 feet. The major hydrologic feature in this area is the San Juan River which drains in an east-west direction, some 1.5 miles due south of the plant. Flooding from the San Juan River would not affect the plant because the plant is located some 160 feet above the river and is outside the 100-year flood plain.

The local drainage that could have a potential flooding impact on the plant is the unnamed canyon. Storm runoff from this canyon drains in a northeast to southwest direction, through the plant site area, and continues to the Citizen Ditch which diverts the flows to the Bloomfield and Hare Canyons' watershed.

At the "A" plant site area, this unnamed canyon drains an area of about 0.9 square miles. It is ephemeral with little vegetation cover. The length of this canyon is about 1.5 miles with an average slope of 3%. The time concentration for this canyon was estimated to be 0.6 hours. The soils in the canyon according to the soil survey published by the US Soil Conservation Service (C. W. Keetch, 1980) is silty sand and belongs to the Hydrologic Soil Group B.

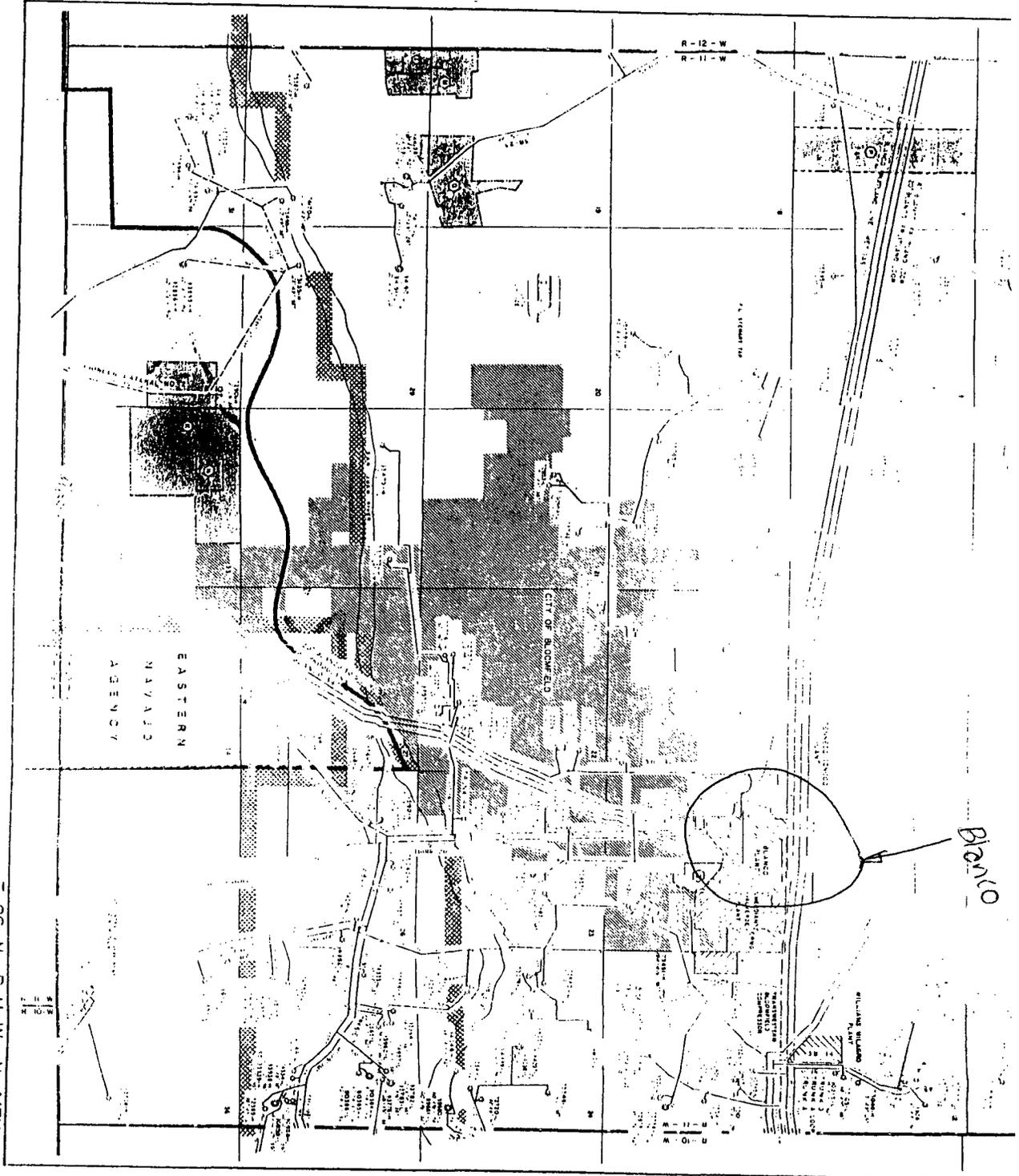
The rainfall frequency data were obtained from NOAA Atlas 2 Precipitation – Frequency Atlas of the Western United States Volume IV, New Mexico. The 10-year, 25-year, 50-year and 100-year, 24-hour rainfall amounts were estimated to be 1.7, 2.0, 2.4 and 2.6 inches, respectively.

At present, storm runoff from this canyon is intercepted just to the north of the plant and is channeled into two drainage ditches in the east and west side of the plant site, respectively, with the east ditch carrying the majority of the storm runoff. Both of these drainage ditches have very limited capacities and would not be able to accommodate runoff from a severe storm event. Some local flooding in the vicinity of the ditches would be expected.

**Item 13**

*Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.*

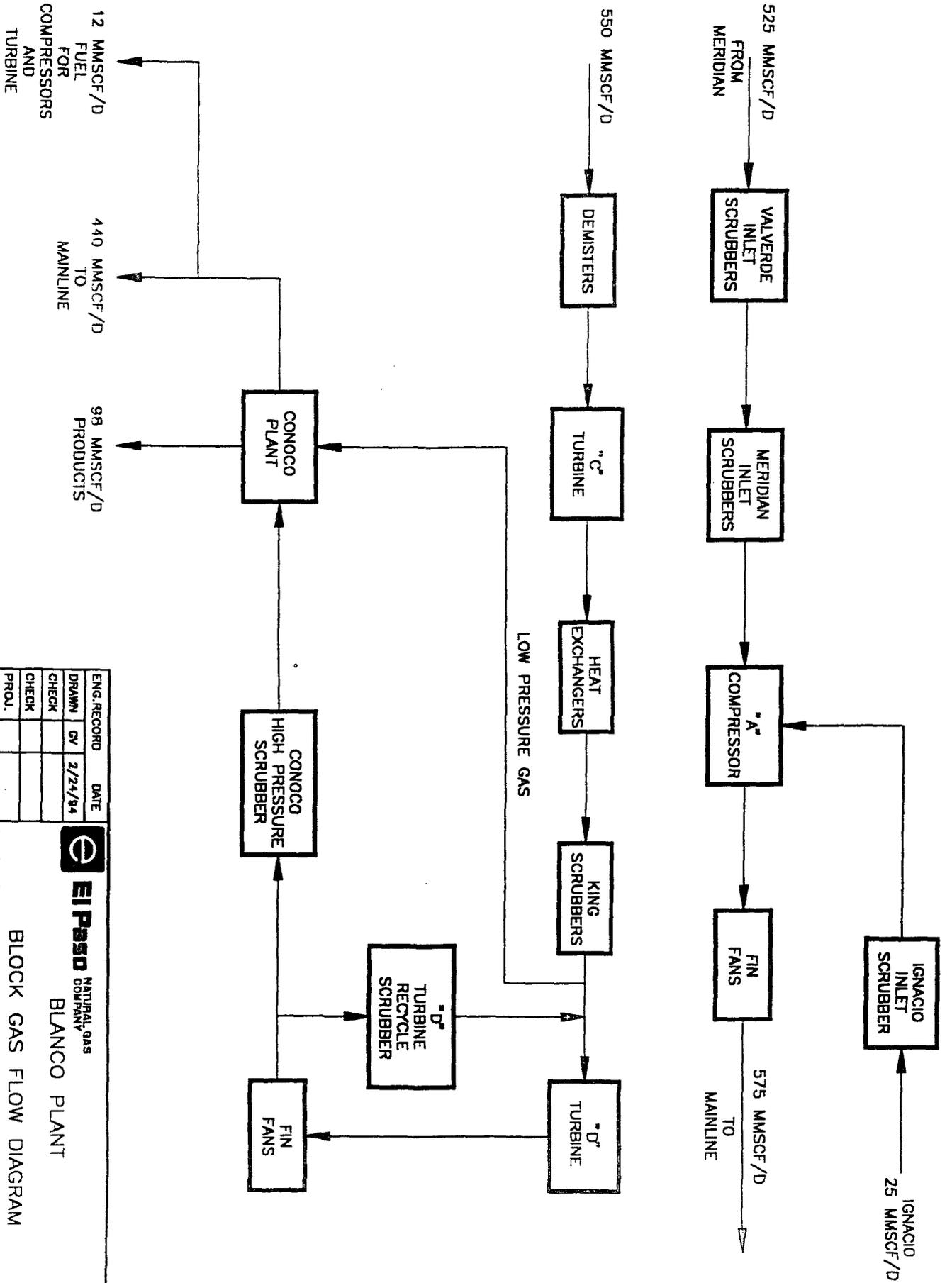
All reasonable and necessary measures will be taken to prevent the exceedance of 20 NMAC 6.2.3103 water quality standards should EPNG choose to permanently close the facility. Closure measures will include removal or closure in place of all underground piping and equipment. All tanks will be emptied. No potentially toxic materials or effluents will remain on site. All potential sources of toxic pollutants will be inspected. Should contaminated soil be discovered, any necessary reporting under NMOCD Rule 116 and 20 NMAC 6.2.1203 will be made, and clean-up activities will commence. Post closure maintenance and monitoring plans would not be necessary unless contamination is encountered.



7-29-N, R-11-W N. MEX.

Blanco

Fig. 2, App. A



ENG. RECORD	DATE
DRAWN	CV 2/24/84
CHECK	
CHECK	
PROJ.	
DESIGN	
CAD NO.	SP3187



**EIPASO**  
NATURAL GAS  
COMPANY

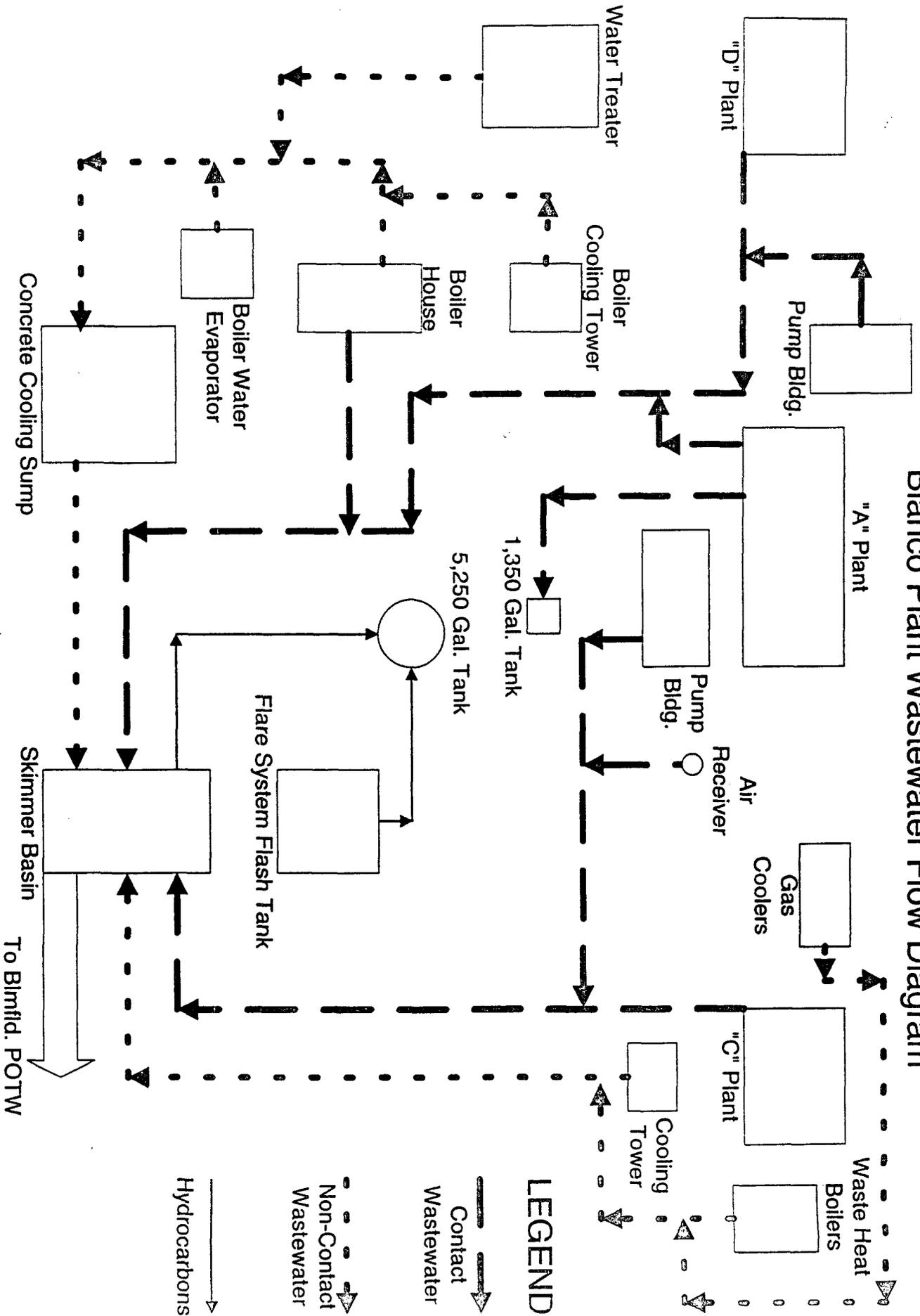
BLANCO PLANT

BLOCK GAS FLOW DIAGRAM

SCALE	NONE	DWG. NO.
W.O.		

REV.	NO.
1	1

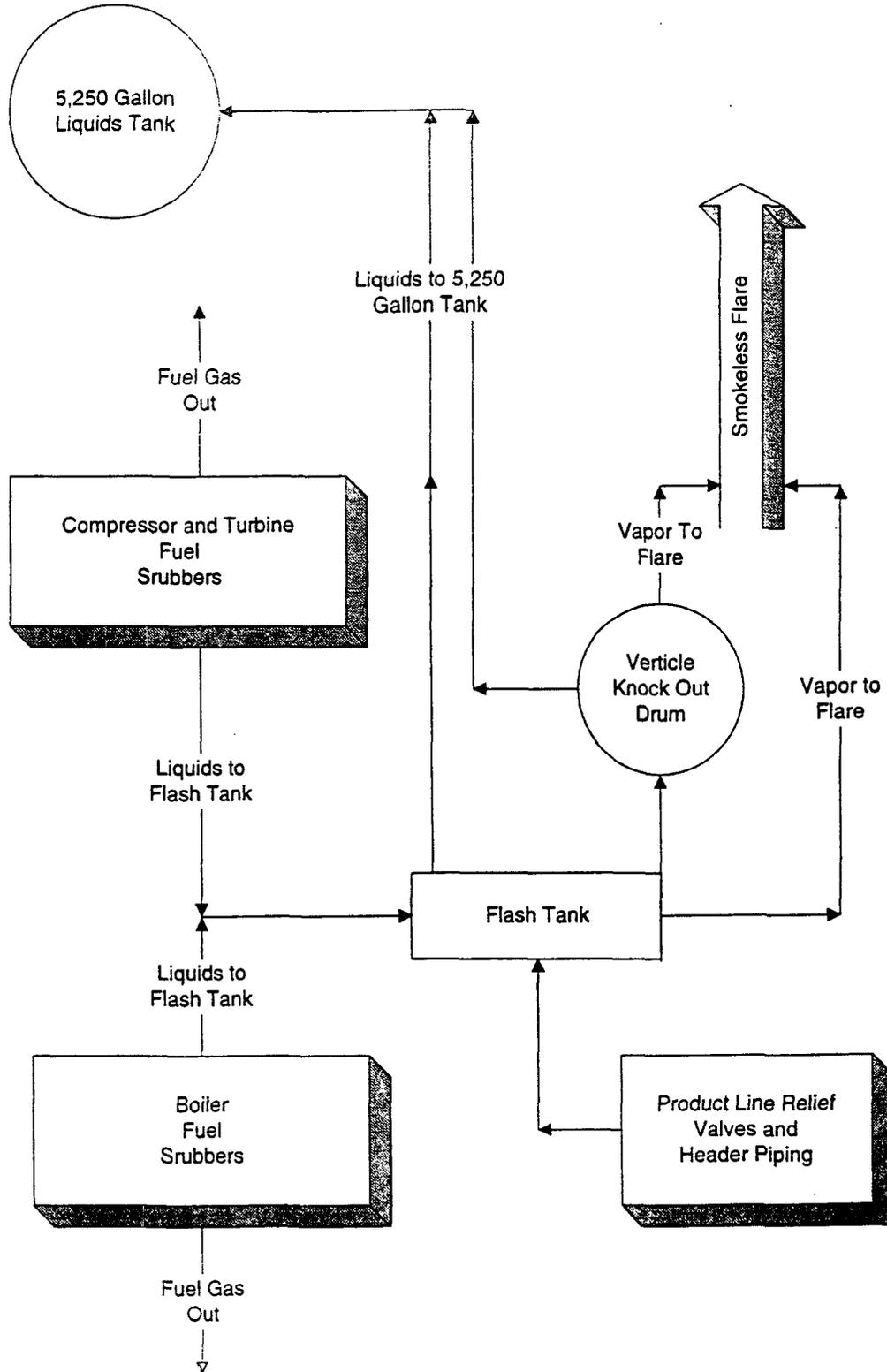
# El Paso Natural Gas Co. Blanco Plant Wastewater Flow Diagram



## LEGEND

- Waste Heat
- Contact Wastewater
- Non-Contact Wastewater
- Hydrocarbons

# El Paso Natural Gas Co. Blanco Plant Flare System





VIA FEDERAL EXPRESS

July 23, 2004

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

RECEIVED

JUL 26 2004

Oil Conservation Division  
Environmental Bureau  
Blanco Plant South Flare Pit

RE: 2004 Annual Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas

Dear Mr. Olson;

El Paso Natural Gas Company (EPNG) hereby submits the enclosed annual report "2004 Groundwater Report for the Blanco South Flare Pit and D Plant Areas". The enclosed report details groundwater sampling in the South Flare Pit and D Plant areas for the 2004 annual sampling event.

If you have any questions concerning the enclosed report or require additional information, please call me at (719) 520-4433.

Sincerely,

Scott T. Pope, P.G.  
Senior Environmental Scientist

Enclosures: as stated

cc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; via Federal Express

bc: Scott Pope Blanco South Flare Pit General File w /o enclosures  
Pam Anderson / Dave Ellerbroek – MWH Steamboat Springs w/o enclosures  
24321 – NMOCD Regulatory w / o enclosures  
Blanco South Flare Pit Reports File – with report

GW-49



Certified Mail: #7002 0510 0000 0307 2393

January 14, 2004

RECEIVED

JAN 20 2004

Oil Conservation Division  
Environmental Bureau

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

**RE: Well Abandonment at Closed Sites**

Dear Mr. Olson:

El Paso Field Services (EPFS) hereby submits for your records abandonment forms for sites that have been approved for closure. As stipulated as a condition of final closure the monitoring wells at the sites listed below have been plugged and abandoned in accordance with EPFS' approved monitoring well abandonment plan. The forms documenting the plugging and abandoning of monitoring wells listed below are attached to this letter. In addition three monitoring wells were abandoned as approved at the Blanco Plant.

Charley Pah #4	TMW-1	Navajo
Rementa et al #1	MW-1, 2 and 3	Navajo
D-Loop Line Drip	MW-1, 2 and 3	Federal
Ohio C Government #3	MW-1	Federal
WD Heath B #5	MW-1	Federal
Lat 3B-39 Line Drip	MW-1, 2 and 3	Non-Federal
Blanco Plant	MW-10, 17 and 18	Non-Federal

If you have any questions concerning the attached well abandonment forms or require additional information please call me at (505) 599-2124.

Sincerely,

Scott T. Pope P.G.  
Senior Environmental Scientist

Attachments: as stated

- xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; 1<sup>st</sup> Class Mail
- Mr. Bill Liesse, BLM - w / enclosures (federal sites only), 1<sup>st</sup> Class Mail
- Mr. Bill Freeman, Navajo EPA - w/ enclosures (Navajo Sites Only), 1<sup>st</sup> Class Mail
- Mr. James Walker, USEPA - w / enclosures (Navajo Sites Only), 1<sup>st</sup> Class Mail

## Monitor Well Abandonment Record

### 1. Owner:

Name: EPFS City: Farmington State: NM  
Address: 614 Reilly Ave. Zip: 87401 Phone: (505) 599-2124

### 2. Monitor Well Location:

Location Name: El Paso South Place Pit Monitor Well I.D.: MW-10  
\_\_\_\_ 1/4 of, \_\_\_\_ 1/4 of, Section \_\_\_\_ Township \_\_\_\_ Range \_\_\_\_  
County: \_\_\_\_\_

### 3. Description:

Well depth: 16.30 ft. Casing material (circle one): Steel Plastic Concrete  
Depth to water: Dry ft. Installation type (circle one): Drilled Driven Augered  
Casing diameter: 4 in.  
Depth of casing: 16.30 ft. GROUND LEVEL

### 4. Abandonment Method:

Well Casing: \_\_\_\_\_ Removed \_\_\_\_\_ Abandoned in place (Out <sup>2.5</sup> below surface)  
Plugging Method: \_\_\_\_\_ Pressure grouting \_\_\_\_\_ Bentonite pellets  
No. of Bags of Cement: 2  
No. of Bags of Bentonite Powder: 1/4  
No. of Bags of Bentonite Pellets: \_\_\_\_\_

Signature: Leonardo Tena Date Plugged: 12-3-03  
Printed Name: Leonardo Tena Title: Driller

Monitor Well Abandonment Record

1. Owner:

Name: EPFS City: Farmington State: NM
Address: 614 Reilly Ave. Zip: 87401 Phone: (505) 599-2124

2. Monitor Well Location:

Location Name: EIPASO BLANCO SOUTH PLAZA Monitor Well I.D.: MW-17
1/4 of, 1/4 of, Section Township Range
County:

3. Description:

Well depth: 14.36 ft. Casing material (circle one): Steel Plastic Concrete
Depth to water: Dry ft. Installation type (circle one): Drilled Driven Augered
Casing diameter: 2 in.
Depth of casing: 12.30 ft. GROUND LEVEL

4. Abandonment Method:

Well Casing: Removed Abandoned in place (Cut 2 below surface)
Plugging Method: Pressure grouting Bentonite pellets
No. of Bags of Cement: 1
No. of Bags of Bentonite Powder: 1/4
No. of Bags of Bentonite Pellets:

Signature: Leonardo Tenu Date Plugged: 12-3-03
Printed Name: Leonardo Tenu Title: Driller

Monitor Well Abandonment Record

1. Owner:

Name: EPFS City: Farmington State: NM
Address: 6014 Reilly Ave Zip: 87401 Phone: (505) 599-2124

2. Monitor Well Location:

Location Name: EL PASO BLANCO SOUTH FLARE PIT Monitor Well I.D.: MW # 18
1/4 of, 1/4 of, Section Township Range
County:

3. Description:

Well depth: 12.0' ft. Casing material (circle one): Steel Plastic Concrete
Depth to water: 9.74 ft. Installation type (circle one): Drilled Driven Augered
Casing diameter: 2 in.
Depth of casing: 11.80 GROUND SURFACE

4. Abandonment Method:

Well Casing: Abandoned in place (Cut 3' below surface)
Plugging Method: Bentonite pellets
No. of Bags of Cement: 0.5
No. of Bags of Bentonite Powder: 1/16
No. of Bags of Bentonite Pellets:

Subsurface completion vault cemented in as per Scott Pope

Signature: Leonardo Tena Date Plugged: 12-3-03
Printed Name: Leonardo Tena Title: Driller

GW-49



**Certified Mail: #7002 0510 0000 0307 2447**

October 10, 2003

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

**RE: Blanco North Flare Pilot Air Sparging System Report**

Dear Mr. Olson:

El Paso Field Services (EPFS) hereby submits the enclosed "2003 Blanco Flare Pit Pilot Air Sparging System Report". The enclosed report details the sparging system 8 week pilot test and contains analytical data to show the effectiveness of the system to date.

If you have any questions concerning the enclosed report, please call me at (505) 599-2124.  
Sincerely,

A handwritten signature in black ink, appearing to read "Scott T. Pope".

Scott T. Pope P.G.  
Senior Environmental Scientist

Enclosures

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7002 0510 0000 0307 2430**



GW-49

**Certified Mail: #7002 0510 0000 0308 2477**

July 31, 2003

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

**RE: Annual Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas**

Dear Mr. Olson;

El Paso Natural Gas Company (EPNG) hereby submits the enclosed annual report "2003 Groundwater Report for the Blanco South Flare Pit and D Plant Areas". The enclosed report details groundwater sampling in the South Flare Pit and D Plant areas for the years 2002 and 2003.

If you have any questions concerning the enclosed report or require additional information, please call me at (505) 599-2124.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott T. Pope". The signature is fluid and cursive, with a long horizontal stroke at the end.

Scott T. Pope, P.G.  
Senior Environmental Scientist

Enclosures: as stated

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7002 0510 0000 0308 2484**

**Certified Mail: #7001 1940 0002 1371 7836**

June 6, 2003

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

**RECEIVED**

**JUN 09 2003**

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

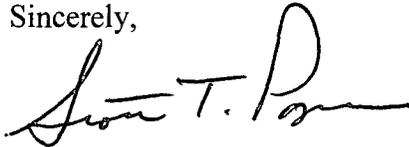
**RE: Blanco North Flare Pit Work Plan Update**

Dear Mr. Olson:

El Paso Field Services (EPFS) hereby submits the enclosed Technical Memorandum "Blanco North Flare Pit Work Plan Update". The enclosed document details changes to the original work plan as a result of Non Aqueous Phase Liquids discovered during the installation of a sparge well at the site.

If you have any questions concerning the enclosed document, please call me at (505) 599-2124.

Sincerely,



Scott T. Pope P.G.  
Senior Environmental Scientist

Enclosures

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7001 1940 0002 1371 7843**

**Olson, William**

---

**From:** Pope, Scott T [Scott.Pope@ElPaso.com]  
**Sent:** Tuesday, June 03, 2003 9:35 AM  
**To:** Bill Olson  
**Cc:** Denny Foust  
**Subject:** Blanco North Flare Tech Memo

Bill, attached please find the Tech Memo that explains the changes to the sparge pilot test since NAPL was discovered in MW-26. The only real change involves removal of the NAPL with a recently installed skimming system in combination with sparge technology to enhance product recovery. Once sufficient NAPL removal has occurred the pilot test will proceed as planned. NAPL skimming has been ongoing since April 2003 and approximately 2 gallons of NAPL have been recovered since April. The sparge system is scheduled to begin operation Thursday, May 5, 2003. If you have any questions, please call. STP

<<NFlare Sparge Loc Jun2.pdf>> <<ASTechMemoTables Jun2.xls>> <<NFP AS System Tech Memo Jun2.doc>>

Scott T. Pope P.G.  
Senior Environmental Scientist  
Environmental Remediation Department  
(505) 599-2124  
(505) 599-2119 Fax

\*\*\*\*\*  
This email and any files transmitted with it from the ElPaso Corporation are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the sender.  
\*\*\*\*\*

*Prepared for:*

**El Paso Field Services**  
614 Reilly Avenue  
Farmington, New Mexico 87401

**BLANCO NORTH FLARE PIT WORK PLAN UPDATE  
TECHNICAL MEMORANDUM  
SAN JUAN COUNTY, NEW MEXICO**

*June 2003*

*Prepared by:*

**MWH**  
1475 Pine Grove Road, Suite 109  
P.O. Box 774018  
Steamboat Springs, Colorado 80477  
(970) 879-6260

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2.1	Groundwater Monitoring
3.1	2003 AS System and Free Product Removal

### LIST OF FIGURES

<u>Figure No.</u>	<u>Description</u>
2.1	New Air Sparging Well Location

### LIST OF ATTACHMENTS

<u>Attachment No.</u>	<u>Description</u>
A	AESE Field Reports, February 2003

## LIST OF ACRONYMS

AS	Air Sparging
AFCEE	Air Force Center for Environmental Excellence
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene and total xylenes
cfm	cubic feet per minute
EPFS	El Paso Field Services
NMOCD	New Mexico Oil Conservation Division
NMWQCC	New Mexico Water Quality Control Commission
psi	pounds per square inch

## 1.0 INTRODUCTION

This *Blanco North Flare Pit Work Plan Update* has been prepared for El Paso Field Services (EPFS) as a technical memorandum to update the *Work Plan for the Blanco North Flare Pit, July 2002* (MWH, 2002) (Work Plan). This update has been developed due to the recent unexpected detection of free-product in one of the wells in the North Flare Pit area. As a result, this update details modifications to the scope and schedule of the Work Plan to address this development in site conditions, including operation and monitoring of the recently installed free-product removal and air sparging (AS) systems in the North Flare Pit area.

The purpose of these systems is groundwater remediation downgradient of the North Flare Pit. Constituents of potential concern at the site include free-phase hydrocarbons (i.e., free-product), benzene, ethylbenzene, toluene and total xylenes (BTEX). Regulatory drivers for groundwater remediation at this site include New Mexico Oil Conservation Division's (NMOCD) guidelines and the New Mexico Water Quality Control Commission's (NMWQCC) regulations. This update describes a phased approach to groundwater remediation at the site. Phase I will consist of AS enhanced free-product removal. Following adequate removal of free-product, Phase II will be initiated which will consist of AS for groundwater remediation of dissolved-phase hydrocarbon contamination.

The Work Plan summarizes the available information related to the North Flare Pit, including a summary of previous site activities and investigations, a description of the geology/hydrogeology of the area and historic groundwater quality data. Therefore these discussions will not be reiterated in this update.

## 2.0 REMEDIAL ACTIVITIES

### 2.1 RECENT REMEDIAL ACTIVITIES

As described in the Work Plan (MWH, 2002), EPFS proposed AS in the vicinity of the impacted groundwater to remediate dissolved-phase hydrocarbon contamination and reduce BTEX concentrations to below NMWQCC standards. On December 16, 2002 a new AS well, SW-1, was installed approximately 25 feet upgradient (north) of monitoring well MW-26 as shown on Figure 2.1, *New Air Sparging Well Location*. The AS well was drilled through unconsolidated sediments to a depth of approximately 66 feet below ground surface (bgs) and into sandstone bedrock to a total boring depth of 75.5 feet bgs. The well was constructed of two-inch diameter PVC casing with a five-foot long, 0.01-inch slotted well screen. The well screen was installed at the base of the well from 70.2 to 75.2 feet bgs. The water level in MW-26 is typically between 62 and 64 feet below top of casing, which is indicative of the final water level in the new AS well.

During drilling and installation of the AS well, free-product was discovered in well MW-26. The nearby monitoring wells were checked for the presence of free-product; however, none was encountered in any of the existing wells or the new AS well. On December 17<sup>th</sup>, approximately 1.4 feet of free-product was measured and removed from MW-26 (approximately 2 gallons of water/product). On February 3, 2003, approximately 1.53 feet of free-product was measured in the well, and on April 22, 2003, approximately 2 feet of free-product was measured. In mid-April 2003 a skimmer pump was installed in MW-26 and free-product removal was initiated on April 23, 2003. On May 2, 2003, it was reported that a total of 1.63 gallons of free-product had been removed from the well. Operation and maintenance of the skimmer pump is ongoing.

On February 3, 2002, a one-day pressure test was conducted on the AS system to investigate communication between the AS well and the surrounding monitoring wells MW-26, MW-27 and MW-19. The field reports are included in Attachment A, *AESE Field Reports, February 2003*. It was concluded that there is good communication between the AS well, SW-1, and wells MW-26 and MW-19.

Currently, the AS system is instrumented and prepared for operation. The AS system operation has not yet been initiated, pending baseline groundwater sampling scheduled for May 2003, as described in the Work Plan and summarized in Section 2.3.2. Start-up of the AS system is tentatively scheduled for June 5, 2003.

### 2.2 PHASE I: AIR SPARGING-ENHANCED FREE-PRODUCT REMOVAL

Phase I of groundwater remediation at the site will consist of AS enhanced free-product removal. The skimmer will continue to be operated in MW-26 to remove free-product. Air sparging will be initiated to potentially enhance free-product removal. Enhancement of free-product removal by air sparging has been demonstrated at other sites (Payne et al., 1997; Payne et al., 1998). AS system start-up is tentatively scheduled for June 5, 2003.

Air will be introduced into the AS well, SW-1, to volatilize free-product and to enhance biodegradation of the dissolved phase hydrocarbons. The injection will be conducted on a

12-hour off/on cycle to help reduce the potential for channeling. Volatilized hydrocarbons will be biodegraded in the vadose zone. Extensive testing conducted by the United States Air Force Center for Environmental Excellence (AFCEE) and EPFS's experience in the local area, has shown that AS systems are more effective when the air injected into a formation is pulsed. The pulsing helps to prevent and close preferential pathways that may be generated by over-pressuring the formation. These pathways essentially short circuit the treatment process and reduce the effectiveness of the AS system. EPFS anticipates injecting 5 to 10 cubic feet per minute (cfm) of air into the well at 50 to 100 pounds per square inch (psi). The air flow and injection pressures of the system will be monitored and adjusted to optimize air flow through the affected area.

During the initial phase of operation, weekly maintenance checks on the skimmer and AS systems will be conducted. Air pressure measurements will be measured at each well head using magnehelic gages, and field parameters, including pH, temperature, specific conductance and dissolved oxygen, will be monitored (preferably downhole measurements). Once the systems are generally stabilized, maintenance visits may be reduced to bi-weekly or monthly. Visits may be more or less frequent depending on operational conditions and constraints. Following each visit, a field report will be prepared that will include the following information:

#### General

- date/time of the visit
- overall status of the systems
- any maintenance that was performed
- any relevant information related to the system operations

#### Free-product Removal/Skimmer System

- volume of product recovered
- volume of product disposed (if any)
- pressures on the skimmer pump and tank
- skimmer pump timer settings

#### AS System Monitoring

- injection pressure
- flow measurements
- imposed air pressure at monitoring wells
- water levels in monitoring wells
- groundwater field parameters in monitoring wells

### **2.3 PHASE II: GROUNDWATER REMEDIATION BY AIR SPARGING**

Following adequate removal of free-product from MW-26 (and any additional wells where free-product may have developed), Phase II of groundwater remediation will be initiated. This phase of remediation will consist of removal of dissolved-phase hydrocarbon contamination using the AS system. An eight-week pilot test will be conducted to evaluate the effectiveness of the system in remediating groundwater. Based

on the results of the pilot test, recommendations will be made for continued operation of the AS system. This pilot test is described in the Work Plan and is summarized below.

### 2.3.1 AS System Operation

The AS system will continue to be operated under the conditions and on the schedule determined to be optimal during Phase I of operations.

### 2.3.2 AS System and Groundwater Monitoring

Prior to system start-up, groundwater monitoring will be conducted at each of the six monitoring wells in the North Flare Pit area (wells containing free-product will not be sampled). These wells and monitoring parameters are listed in Table 2.1, *Groundwater Monitoring*. Groundwater levels and field parameters (pH, temperature, specific conductance and dissolved oxygen) will be measured at each monitoring well (preferably downhole measurements), and samples will be analyzed for BTEX. Groundwater samples will be collected again from all of the monitoring wells after four weeks, and again after eight weeks of Phase II system operations. (Forty-eight hours prior to sample collection the AS system will be shut-down to ensure natural groundwater conditions are being evaluated.)

During this period, maintenance visits for the AS system will be conducted bi-weekly. Air pressures at well heads, water levels and field parameters will also be monitored during these visits. Following each visit, a field report will be prepared that will include the following:

#### General

- date/time of the visit
- overall status of the AS system
- any maintenance that was performed
- any relevant information related to the system operations

#### AS System/Groundwater Monitoring (bi-weekly)

- air injection pressure
- air flow measurement
- imposed air pressure at monitoring wells
- water levels in monitoring wells
- groundwater field parameters in monitoring wells

#### Groundwater Monitoring (Baseline, 4 weeks and 8 weeks)

- water levels
- groundwater field parameters
- date/time of sample collection
- types of samples collected (numbers, amounts, preservatives)
- condition of samples (color, odor)
- Chain of Custody form

At the end of the pilot test, EPFS will continue to operate the AS system and groundwater sampling will continue on a quarterly basis until four, consecutive rounds of groundwater samples indicate BTEX concentrations below NMWQCC standards or until levels reach steady-state values.

### 3.0 SCHEDULE AND REPORTING

The free-product removal and AS system operation and monitoring schedule for 2003 is presented in Table 3.1, *2003 AS System and Free-Product Removal Operation and Monitoring Schedule*.

At the end of the eight-week evaluation period, the results of the AS pilot-study will be evaluated and reported to NMOCD with recommendations. A report documenting performance of the pilot AS system and status of the free-product removal activities will be prepared. This report will include a summary of free-product removal, location and construction details of the AS well, as-built details of the AS system and groundwater analytical results collected over this period. An evaluation of the AS system and recommendations for modifications and future activities will also be included in this report. This report will be submitted to NMOCD within 30 days of receipt of the final groundwater sampling data report.

In addition, results of the quarterly groundwater sampling events will be submitted to NMOCD in annual reports.

## 4.0 REFERENCES

- Burlington Environmental, Inc, 1992. *Monitoring Well Installation and Testing at the North Flare Pit Area of Blanco Plant*. Prepared for El Paso Natural Gas Company. December 1992.
- EPNG, 1989. *Groundwater Investigation Report, El Paso Natural Gas Company's Blanco Plant, San Juan County, New Mexico*. January 1989.
- EPNG, 1995. Letter from El Paso Natural Gas Company (David Bays) to New Mexico Oil Conservation Division (William C. Olson); Re: Blanco Plant Sampling Plan. September 7, 1995.
- K.W. Brown and Associates, Inc, 1990. *Site Investigation of the Blanco Plant, San Juan County, New Mexico*. Prepared for El Paso Natural Gas Company. February 1990.
- Payne, R.E., M.N. Gallagher, S.J. Pinizzotto and E.M. Nobles-Harris. 1997. *Air Sparging Below Hydrocarbon Free Product Without Vapor Control*. Battelle Conference.
- Payne, R.E., M.N. Gallagher, et al. 1998. *Using Air Sparging To Enhance Free Product Recovery Without Vapor Control*, API/NGWA Hydrocarbon Conference.
- MWH, 2002. *Work Plan for the Blanco North Flare Pit*. Prepared for El Paso Natural Gas Company. July 2002.

**TABLES**

---

**TABLE 2.1  
GROUNDWATER MONITORING  
BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO  
EL PASO FIELD SERVICES**

Monitoring Well	Analyses
<b>North Flare Pit Area</b>	
MW-2	Field Parameters, BTEX
MW-19	Field Parameters, BTEX
MW-23	Field Parameters, BTEX
MW-24	Field Parameters, BTEX
MW-26	Field Parameters, BTEX
MW-27	Field Parameters, BTEX

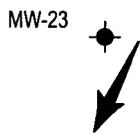
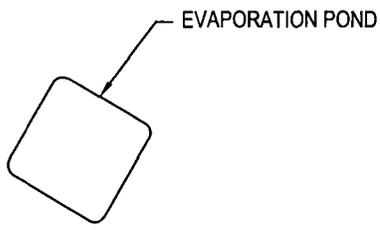
**Notes:**

- 1. Field Parameters include temperature, pH, dissolved oxygen, specific conductance and air pressure measurement and will be conducted bi-weekly during the 8-week pilot test.**
- 2. Monitoring well MW-20 was damaged and will be abandoned in 2003.**
- 3. Monitoring wells containing free product will not be sampled.**

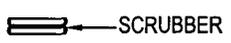
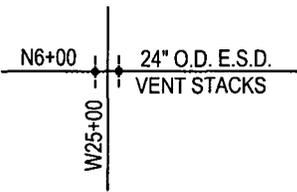
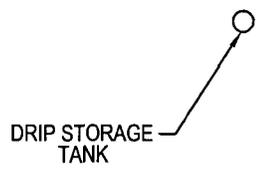
**BTEX: Benzene, Toluene, Ethylbenzene and Total Xylenes.**

**FIGURE**

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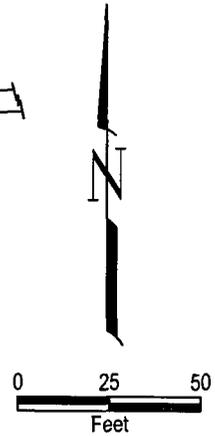


NEW AIR SPARGING WELL LOCATION



### LEGEND

- MW-24 + GROUNDWATER MONITORING WELL (GW ELEV. IN FT. NGVD)
- SOIL BOREHOLE
- ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION
- SW-1 NEW AIR SPARGING WELL LOCATION



0	Issued for Review	5/03	P.Anderson	K.Conrath	P.Anderson
REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
PROJECT No: 2450152.			AutoCAD FILE: NFlare Sparge Loc		
SCALE: As Shown			FIGURE No: 2.1		

**elpaso** NORTH FLARE PIT

## NEW AIR SPARGING WELL LOCATION



**ATTACHMENT A**

***AESE Field Reports, February 2003***

---

# AESE

906 San Juan Blvd., Suite D,  
Farmington, NM 87401  
(505) 566-9116

## Memo

**To:** Marc Greeley, Lynn Benally  
**From:** Martin Nee  
**CC:** File  
**Date:** 2/3/03  
**Re:** Blanco North

---

1/22/03, AESE visited Blanco North to prepare a one-day pilot test to investigate communication between the newly installed sparge well and surrounding monitoring wells MW-26, 27, and 19. Well casing sizes were verified and the distance from the compressor house to the wells was measured. We looked at the existing compressor as a source of sparge air. The existing compressor is not an oil-less model and it has been drained of oil and tagged out-of-service.

A 30A 240V receptacle will need to be installed to run the oil-less compressor. Static water in the sparge well was 68.465 feet beneath top of casing and total depth 80.18. No product was present.

1/24/03 AESE contacted David Nichols and delivered a key to the compressor shed to him at Blanco so he could wire the compressor for a pilot test at the new sparge well. AESE also placed the sparge compressor in the shed.

1/31/03 Traveled to Jaquez to pick up magnehelic gauges for pilot test at Blanco. Dropped off magnehelic gauges and checked to make sure compressor was operational. Also purchased hardware for pilot test.

2/3/03 1130 hrs, arrived at site to conduct limited pilot test. Objective is to determine if communication can be established between SW-1( sparge well 1) and nearby monitoring wells MW- 19, 27, and 26. Compressor was plumbed to SW-1 and preparations made for pilot test.

---

1257 hrs, water levels were measured as follows

MW-19	63.64 feet beneath top of well casing (fbtoc)
MW-26	64.55 water, 63.02 product fbto
MW-27	64.05 fbto
SW-1	68.396 fbto.

Water was bailed from SW-1 so the compressor would not have to push the water in the well into the formation. Approximately 3.0 gallons of water were removed. Final water level measurement indicated a depth of water at 76.80 fbto, td is 80.18 fbto.

The compressor was started at 1345 hrs and a flow rate of 12 scfm was measured while vented to the atmosphere. Flow was directed to SW-1 and the flow rate dropped to 5 scfm and remained constant throughout the test.

Pressure readings from monitoring wells were recorded as follows:

1350 hrs	MW-19	0.75 inches H <sub>2</sub> O
1354 hrs	MW-26	1.25 inches H <sub>2</sub> O
1358 hrs	MW-27	0.01 inches H <sub>2</sub> O
1442 hrs	MW-27	0.02 inches H <sub>2</sub> O
1444 hrs	MW-26	5.5 inches H <sub>2</sub> O strong hydrocarbon vapors from well
1446 hrs	MW-19	3.8 inches H <sub>2</sub> O
1500 hrs	Ended test	

### **Conclusion**

Good communication between SW-1, MW-26 and MW-19.

---

# AESE

906 San Juan Blvd., Suite D,  
Farmington, NM 87401  
(505) 566-9116

# Memo

**To:** Marc Greeley, Lynn Benally  
**From:** Martin Nee  
**CC:** File  
**Date:** 2/7/03  
**Re:** Blanco North 2/6/03 pilot

---

1145 hrs, water levels were measured as follows

MW-19	63.61 feet beneath top of well casing (fbtoc)
MW-26	64.31 water, 62.98 product fbtoc
MW-27	64.06 fbtoc
SW-1	75.725 fbtoc.

1208 hrs

The compressor was started and a flow rate of 11 scfm was measured while vented to the atmosphere. Flow was directed to SW-1 and the flow rate dropped to 5 scfm and remained constant throughout the test.

1238 hrs

MW-19	62.56 fbtoc	
MW-26	64.23 fbtoc water	62.65 fbtoc product
MW-27	64.055 fbtoc	

1248 hrs turned off sparge and checked water levels

MW-19	62.55 fbtoc	
MW-26	64.17 fbtoc water	62.56 fbtoc product
MW-27	64.09 fbtoc	
SW-1	76.87 fbtoc	

---



Certified Mail: #7001 1940 0002 1371 7799

April 16, 2003

RECEIVED

APR 21 2003

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

**RE: Groundwater Nitrate Report for the Blanco Plant Bloomfield, New Mexico**

Dear Mr. Olson:

El Paso Natural Gas Company (EPNG) hereby submits the enclosed report "Groundwater Nitrate Report for the Blanco South Flare Pit and D Plant Areas". The enclosed report details investigations into the potential sources for the elevated Nitrates in groundwater at the Blanco Plant.

If you have any questions concerning the enclosed report or require additional information, please call me at (505) 599-2124.

Sincerely,

Scott T. Pope P.G.  
Senior Environmental Scientist

Enclosures: as stated

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; Certified Mail # 7001 1940 0002 1371 7782



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

February 21, 2003

Mr. Scott T. Pope  
El Paso Field Services  
614 Reilly Ave.  
Farmington, New Mexico 87401

**RE: GROUND WATER REMEDIATION  
EPNG BLANCO PLANT (GW-49)  
BLOOMFIELD, NEW MEXICO**

Dear Mr. Pope:

The New Mexico Oil Conservation Division (OCD) has reviewed the following El Paso Natural Gas' (EPNG) July 29, 2002 correspondence titled "REQUESTED INFORMATION ITEMS 1-4 IN NMOCD MAY 3, 2002 LETTER "REMEDICATION ACTIVITIES BLANCO PLANT (DP-49)."

This document contains information related to several remediation projects at EPNG's Blanco Plant in Bloomfield, New Mexico. The documents also contain EPNG's proposed work plans for additional ground water remediation activities related to the former north flare pit area and nitrate contamination at the facility.

The work plans, as contained in the above-referenced documents, are approved with the following conditions:

1. EPNG shall sample all ground water monitoring wells in the north flare pit area and on the Blanco Plant on an annual basis for nitrates.
2. EPNG shall include the results of the nitrate sampling events in subsequent annual ground water monitoring reports for the facility
3. EPNG shall notify the OCD at least 48 hours in advance of all scheduled sampling activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not relieve EPNG of responsibility if the plan fails to adequately monitor contamination related to EPNG's activities. In addition, OCD approval does not relieve EPNG of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call me at (505) 476-3491.

Sincerely,

A handwritten signature in black ink, appearing to read "W. C. Olson". The signature is fluid and cursive, with the first name "William" and last name "Olson" clearly distinguishable.

William C. Olson  
Hydrologist  
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office



**EARTHJUSTICE**  
LEGAL DEFENSE FUND

**Earthjustice Environmental Law Clinic**  
at the University of Denver

EPN6 { ALTON JAMES  
RICKY CROSBY  
SANDORA MILLER

January 6, 2003

**RECEIVED**

JAN 10 2003

SURFACE WATER  
QUALITY BUREAU

Gregg A. Cooke, Administrator  
Environmental Protection Agency, Region VI  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202

By Fax: (214) 665-6648

Re: Citizen's Petition for Preliminary Site Assessment under Section 9605(d) of the Comprehensive Environmental, Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §9601 et seq.

Dear Mr. Cooke:

On behalf of Ms. Tweeti Blancett, pursuant to 42 U.S.C. §9605(d) and 40 C.F.R. §300.420(b)(5) we hereby request that the Environmental Protection Agency (EPA) conduct preliminary assessments of four (4) locations in northern New Mexico to determine the hazards to public health and the environment associated with a threatened release of hazardous substances, pollutants, and contaminants.

Ms. Blancett's ranch is located near Aztec, New Mexico, and her family has lived in northern New Mexico for five generations. Recently, Ms. Blancett was presented with information about various locations in the area where hazardous substances and other contaminants were buried by former owners and operators of oil and gas production and refining facilities. Each of these locations is in the direct path of surface or groundwater drainage into the San Juan River basin. The threatened release of hazardous substances and other contaminants poses an imminent and substantial danger to human health and the environment. Because Ms. Blancett and her family are part of this community, their health and well being is also at risk.

LAW FIRM FOR THE ENVIRONMENT  
FORBES HOUSE 1714 POPLAR STREET DENVER, CO 80220  
T: 303 871-6039 F: 303 871-6991 W: www.earthjustice.org

The specific locations, the nature of activities which reportedly occurred at the sites, and the probable effects of a release are described below.

**I. Sunland Yard, Hampton Arroyo, Aztec, New Mexico**

Contact information:

Sean Renfro  
Rocky Mountain Division Manager  
Sunland Construction, Inc.  
816 NE Aztec Boulevard  
Aztec, NM 87410  
(505) 334 4350

-Photograph attached as Exhibit A-

This site is located next to the Hampton Arroyo, which drains into the Animas River. It is near the McCoy Elementary School. The site was formerly owned by El Paso Natural Gas and was recently sold to Sunland Construction.

When El Paso was the owner and operator of the site, it was used as a shop for oil field service trucks. At that time, mercury was used in well meters. Field workers periodically recalibrated these meters by adding new mercury. Any mercury that was spilled in the field trucks during the recalibration process was rinsed out at the shop into a sump pit that drained directly into the Hampton Arroyo. This was done for many years. The sump pit was later cemented over without any reclamation.

The Hampton Arroyo flows year round and because this specific stretch of the Arroyo is close to the McCoy Elementary School, it is a favorite place for children to play in the water. Because mercury was routinely washed into the Arroyo here where children play, and because there is an old mercury-containing pit in the direct path of drainage into the Arroyo, this site clearly poses a potential health hazard to the local population.

**II. Farmington Yard, Farmington, New Mexico**

Contact information:

Richard Farley  
Burlington Resources, Inc.  
3401 E 30<sup>th</sup> Street  
Farmington, NM 87402  
(505) 326-9700

-Photograph attached as Exhibit B-

This is another yard which was formerly owned by El Paso Natural Gas. The site has since been sold to Burlington Resources. It is located on the Animas River which contributes to Farmington's water supply.

When El Paso owned the yard, oil distillants, lead paint, mercury, and asbestos were dumped there and remain to this day. The potential migration of these hazardous substances and other pollutants threatens to contaminate the water supply of Farmington, thus posing an imminent danger to its citizens.

**III. Old Blanco Refinery, Bloomfield, New Mexico  
East US 64, 1 mile from US 64 and NM 44**

-Photograph attached as Exhibit C-

The Blanco Refinery was formerly owned by El Paso Natural Gas. It is very close to the Bloomfield Irrigation Ditch – Bloomfield's water source. The Blanco Refinery was torn down by El Paso and the land was sold to Burlington Resources and was recently resold to Duke Energy.

While El Paso was operating the refinery, they took contaminants from the plant, put them in 55 gallon drums, dug a trench, put the barrels in the trench, poked holes in the barrels, and covered up the mess with soil.

The punctured barrels, located so near the irrigation ditch, pose an obvious threat to Bloomfield's water supply.

This site was added to the CERCLIS database on October 1, 1986, and was archived on December 1, 1988, with a status of no further remedial action planned (NFRAP). However, Ms. Blancett believes that the dumping occurred after the EPA's 1988 site inspection and the site should be reinvestigated.

**IV. Ballard Plant, Kutz Wash, just off the San Juan River, on Highway 550 45 miles South of Bloomfield, NM**

-Photograph attached as Exhibit D-

This plant was owned and operated by El Paso Natural Gas. While it is no longer operating, during its operating years, El Paso buried mercury-filled meters and barrels of oil field waste near the Kutz Wash which is part of the San Juan River watershed.

The existence of this buried waste threatens the water supply of the surrounding area.

**Notification of State and local authorities**

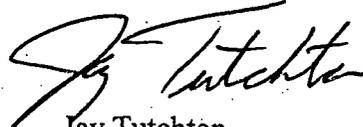
Ms. Blancett has discussed the existence of these sites with a number of elected representatives and government personnel in the State of New Mexico. She has also discussed the sites with Joel Dougherty an enforcement officer in the Hazardous Waste Division at the EPA, Region VI. A copy of this letter is being sent to Mr. Dougherty. This letter is also being copied to the appropriate individuals at the New Mexico

Environment Department as well as to the potentially responsible parties to the disposal. The company representatives were previously notified by Ms. Blancett, but she received no reply from them.

Because Ms. Blancett's family has been a part of the northern New Mexico community for many generations, she is deeply concerned about the environment and the health and safety of the people there.

Please do not hesitate to request any necessary follow-up information and please provide a written response to this Petition. In the event that a preliminary assessment is deemed inappropriate, under 42 U.S.C. §9605(d), 40 C.F.R. 300.420(b)(5)(iii), and the Administrative Procedures Act (APA) 5 U.S.C. §555(e), please notify me and provide the reason for such determination. Thank you for your time and attention to this matter.

Sincerely,



Jay Tutchton  
Earthjustice

Attachments: Exhibits A - D

cc: Myron O. Knudson, P.E.  
Division Director, Superfund Division  
EPA, Region VI

Joel Dougherty  
Compliance Assurance and Enforcement  
Hazardous Waste Division  
EPA, Region VI

Marcy Leavitt, Bureau Chief  
Ground Water Quality Bureau  
New Mexico Environment Department  
Harold Runnels Building, Room N2250  
1190 St. Francis Drive, P.O. Box 26110  
Santa Fe, NM 87502

James P. Bearzi, General Manager  
Hazardous Waste Bureau  
New Mexico Environment Department  
Harold Runnels Building  
1190 St. Francis Drive, P.O. Box 26110  
Santa Fe, NM 87502

James H. Davis, Ph.D., Bureau Chief  
Surface Water Quality Bureau  
New Mexico Environment Department  
Harold Runnels Building, Room N2050  
1190 St. Francis Drive, P.O. Box 26110  
Santa Fe, NM 87502

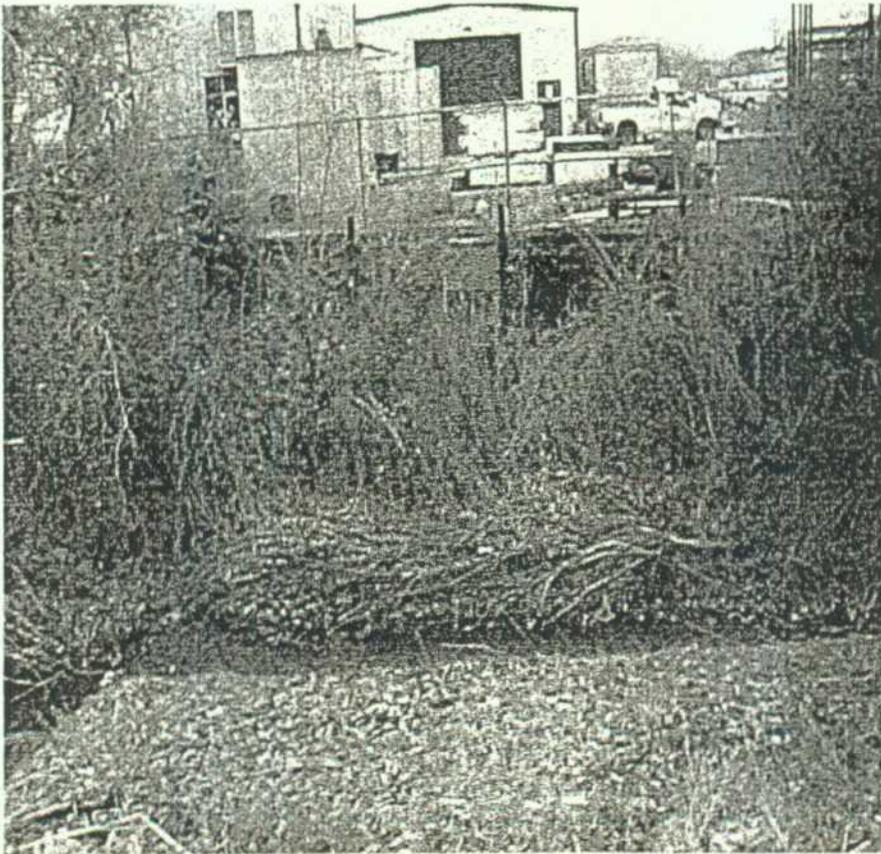
Sean Renfro  
Rocky Mountain Division Manager  
Sunland Construction, Inc.  
816 NE Aztec Boulevard  
Aztec, NM 87410

Richard Farley  
Burlington Resources  
Box 4289  
3401 E. 30<sup>th</sup> Street  
Farmington, NM 87402

Bruce Myerson  
El Paso Natural Gas Co.  
614 Reilly  
Farmington, NM 87410

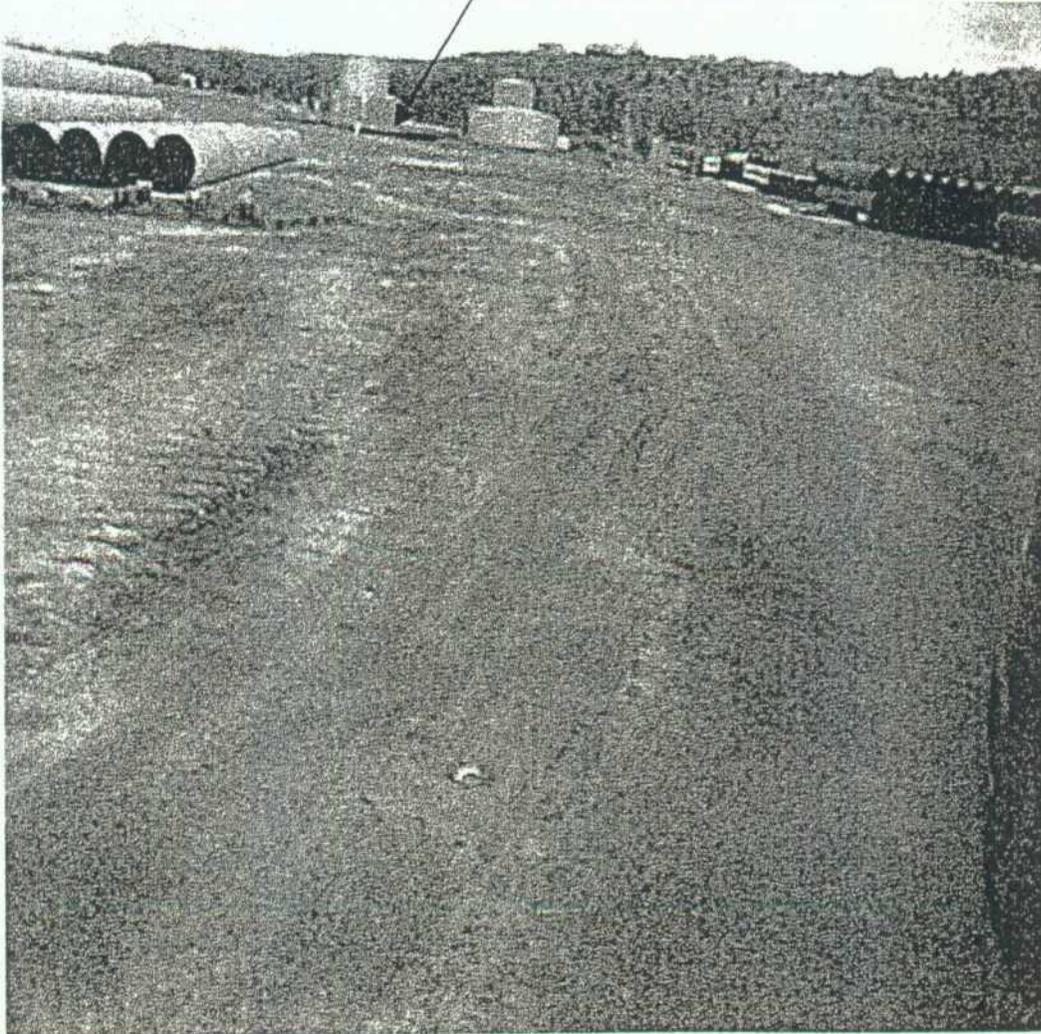
Ms. Tweeti Blancett  
103 West Aztec Boulevard  
Aztec, NM 87410

Exhibit A



# Exhibit B

Look under the tanks



# Exhibit C

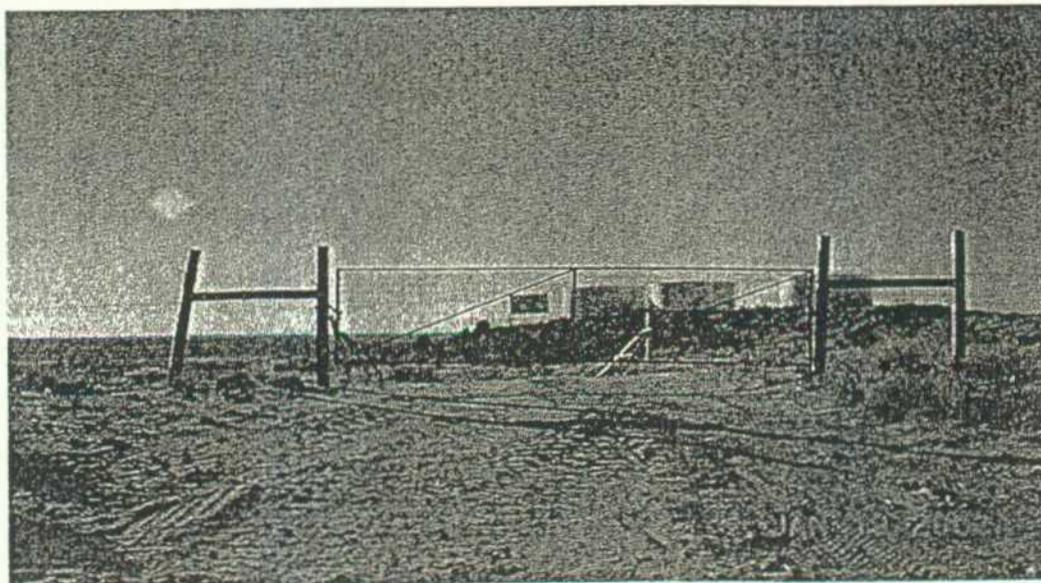
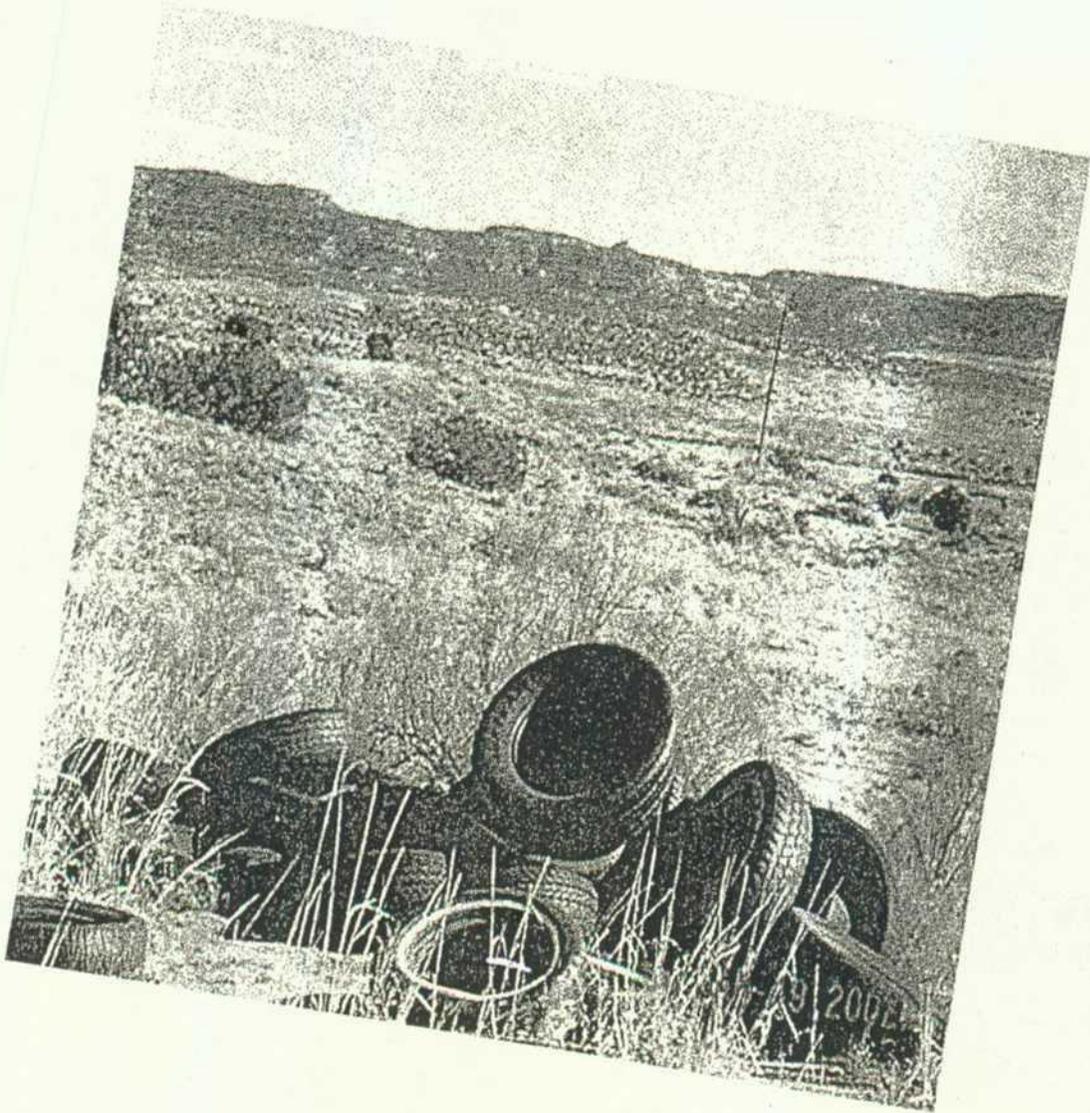


Exhibit D



## Price, Wayne

---

**From:** Price, Wayne  
**Sent:** Tuesday, April 30, 2002 1:54 PM  
**To:** Olson, William  
**Cc:** Martin, Ed; Anderson, Roger  
**Subject:** El Paso Blanco Plant- GW-049

Ed and I inspected this facility on March 09, 2000 and during the inspection we found a small yellow stained area in which we requested El Paso to collect a sample and depending upon the results to submit an action plan. El Paso gave us a response to our inspection on April 10, 2000 and included a commitment for site's future action to be completed by May 19. As of this date ED or I have not receive this action plan. We approved the new discharge plan on April 14, 2000 and included this commitment as a condition of approval.

I understand that you are reviewing the site's vadose zone and groundwater plans, please note the small area sampled had 1600 ppm total chrome and 86 ppm TCLP. It was located near the existing flare pit. It appears that El Paso owes OCD an action plan.

Please let us know if you are going to include this issue in your review of the site, if not then let ED know since he is handling El Paso now.

**Olson, William**

---

**From:** Olson, William  
**Sent:** Friday, December 06, 2002 11:12 AM  
**To:** 'Pope, Scott'  
**Subject:** RE: Notification of Sparge Well Installation

Scott,

The below sparge well installation work plan is approved. I expect to get to the remainder of the items in EPFS's response by the end of the month.

If you have any questions please contact me.

Sincerely,

William C. Olson  
Hydrologist  
New Mexico Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
(505) 476-3491

=====  
-----Original Message-----

**From:** Pope, Scott [mailto:Scott.Pope@ElPaso.com]  
**Sent:** Thursday, December 05, 2002 11:50 AM  
**To:** 'Bill Olson'  
**Cc:** 'David Ellerbroek'; 'Marc Greeley'; Benally, Lynn; Towe, Roger; 'Denny Foust'  
**Subject:** Notification of Sparge Well Installation

Bill, as we discussed on the telephone this morning, we would like to proceed with the sparge well installation for the pilot study at the Blanco North Flare Pit site north of Bloomfield, New Mexico on Tuesday, December 10, 2002. The details of the proposed pilot test are detailed in the July 29, 2002 letter from El Paso, "Requested Information Items 1 - 4 in NMOCD May 3, 2002 Letter Remediation Activities Blanco Plant (DP-49) - Attachment 2 Work Plan for the Blanco North Flare Pit San Juan County, New Mexico". I have attached a copy of the well installation diagram for you convenience. We anticipate the system installation to occur during week following sparge well installation and the pilot test to begin the first week in January. If you need any additional information regarding the installation of the sparge well please let me know. STP

<<sparge well.doc>>

Scott T. Pope P.G.  
Senior Environmental Scientist  
Environmental Remediation Department  
(505) 599-2124  
(505) 599-2119 Fax

12/6/2002

**Olson, William**

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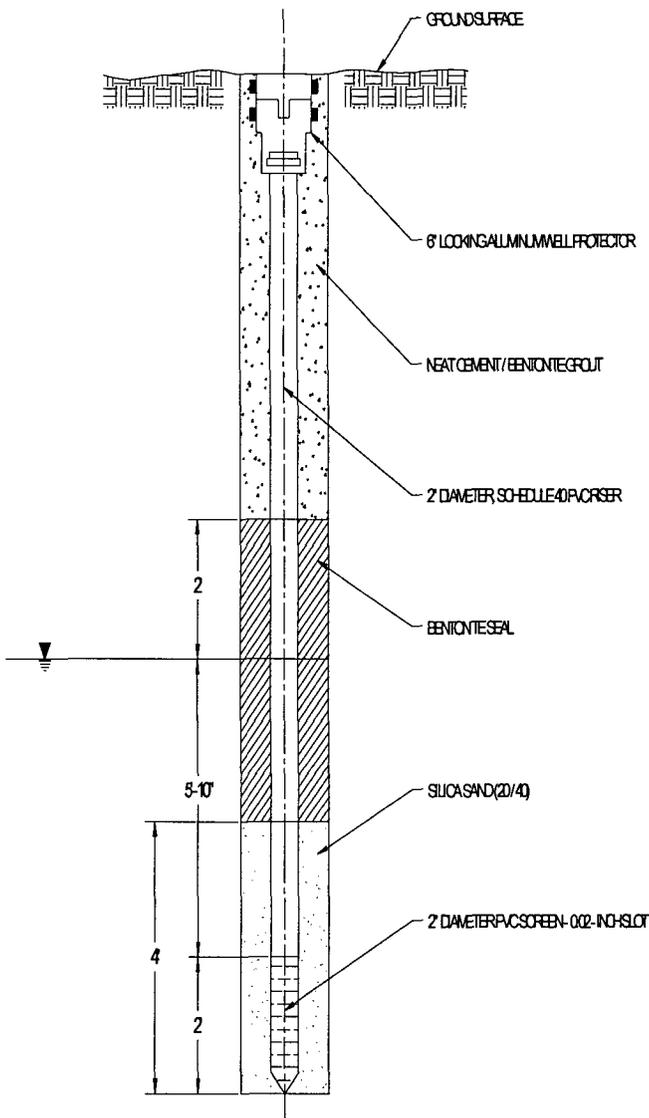
**From:** Pope, Scott [Scott.Pope@ElPaso.com]  
**Sent:** Thursday, December 05, 2002 11:50 AM  
**To:** 'Bill Olson'  
**Cc:** 'David Ellerbroek'; 'Marc Greeley'; Benally, Lynn; Towe, Roger; 'Denny Foust'  
**Subject:** Notification of Sparge Well Installation

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<<sparge well.doc>>

Scott T. Pope P.G.  
Senior Environmental Scientist  
Environmental Remediation Department  
(505) 599-2124  
(505) 599-2119 Fax

\*\*\*\*\*  
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\*\*\*\*\*



NOT TO SCALE

										 NORTH FLARE PIT WORK PLAN	
0	Issued for	7/02	P. Anderson	J. Galan	D. Elorbrock						
REV. NO.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	CHECKED AND SIGNED BY						
 <b>MWH</b> MONTGOMERY WATSON HARZA		PROJECT No.: 500027421004 AutoCAD FILE: air sparge well schem SCALE: Not to Scale		FIGURE No.: 4.1		AIR SPARGE WELL SCHEMATIC					



Certified Mail: #7001 1940 0003 1553 8773

July 29, 2002

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

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AUG 02 2002

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

**RE: Requested Information Items 1 – 4 in NMOCD May 3, 2002 Letter “Remediation Activities Blanco Plant (DP-49)”**

Dear Mr. Olson:

El Paso Natural Gas Company (EPNG) and El Paso Field Services (EPFS) hereby submits the information requested in your letter dated May 3, 2002 “Remediation Activities Blanco Plant (DP-49)”. Item 1 from the above mentioned letter relates to nitrate levels in ground water above New Mexico Water Quality Commission (WQCC) standards. EPNG has provided a work plan addressing this issue and is presented as Attachment 1 to this letter.

Item 2 requested information regarding the remediation and monitoring of ground water down gradient of the former North Flare Pit. Historical remediation and monitoring data as well as a work plan for a pilot test for remediation of hydrocarbons in ground water is provided as Attachment 2.

Item 3 regarding the soils excavated near the skimmer basin and the drain system near the “C” compressor building is addressed by Mr. David Bays of EPFS and is provided as Attachment 3. Mr. Bays is the project manager for this work and can answer specific questions regarding this project if required.

Item 4 requested information regarding a discharge plan permit condition requiring a work plan to investigate chromium contamination near the flare stack. Mr. Richard Duarte of EPNG is the project manager for this work and has provided the requested information as Attachment 4.

If you have any questions concerning the enclosed information for items 1 and 2 call me at (505) 599-2124. If you have questions concerning items 3 and 4 please contact David Bays at (505) 2256 or Richard Duarte at (505) 831-7763.

Sincerely,

Scott T. Pope P.G.  
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; Certified Mail # 7001 1940 0003 1553 8766

**RECEIVED**

**AUG 02 2002**

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

---

**Attachment 1**

---

*Prepared for:*

**El Paso Natural Gas Company  
614 Reilly Avenue  
Farmington, New Mexico 87401**

**Groundwater Nitrate Work Plan for  
Blanco South Flare Pit and D Plant Areas  
San Juan County, New Mexico**

*July 2002*

**RECEIVED**

**AUG 02 2002**

**ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION**

*Prepared by:*

**MWH  
P.O. Box 774018  
Steamboat Springs, Colorado 80477  
(970) 879-6260**

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<u>Figure No.</u>	<u>Description</u>
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3.1	<i>Groundwater Nitrate Concentrations and Potentiometric Surface</i>

## 1.0 INTRODUCTION

### 1.1 INTRODUCTION

This Work Plan addressing nitrate in groundwater at the Blanco South Flare Pit and "D" Plant areas (Work Plan) has been prepared on behalf of El Paso Natural Gas Company (EPNG) pursuant to New Mexico Oil Conservation Division's (NMOCD) letter dated May 3, 2002 regarding remediation activities at EPNG's Blanco Plant. The purpose of this Work Plan is to describe the proposed work to be conducted to investigate the source and extent of elevated nitrate concentrations in groundwater in these areas. The Blanco Plant is located in San Juan County, New Mexico, approximately 1.5 miles northeast of the town of Bloomfield, New Mexico on San Juan County Road 4900. Figure 1.1, *Blanco Plant Site Layout*, presents the Blanco Plant site layout and location of the "D" Plant and South Flare Pit.

This Work Plan describes historic and current information regarding nitrate concentrations in groundwater at the site, and proposes tasks for further investigation. These tasks include: (1) a literature review of background groundwater nitrate data in the region; (2) a review of EPNG site information to investigate potential on-site nitrate source(s); and (3) groundwater sampling of existing wells. Regulatory drivers for groundwater remediation at this site include the New Mexico Water Quality Control Commission's (NMWQCC) nitrate standard.

Sections 2.0 and 3.0 of this Work Plan summarize the available information relating to the South Flare Pit and "D" Plant areas including a description of previous investigations, a description of the geology/hydrogeology of the area, and groundwater quality data. Details of the work to be conducted under this Work Plan are described in Section 4.0.

## 2.0 SITE BACKGROUND

### 2.1 SITE BACKGROUND – GROUNDWATER NITRATE CONCENTRATIONS

An initial assessment of site hydrogeology and groundwater resources of the Blanco Plant area was conducted by Bechtel Environmental in 1989 (Bechtel, 1989). Six monitoring wells were installed and sampled during this investigation. High nitrate concentrations were identified in wells MW-2 (290 ppm) and MW-6 (51 ppm) at that time. It was concluded in this study that, “the high concentration of nitrate in the upgradient well (W2) could not have been due to plant operations”.

As part of a groundwater study by K.W. Brown & Associates, Inc (K.W. Brown, 1990) to investigate the extent of contamination resulting from a leaking underground storage tank in the D Plant Area, the source of elevated nitrate in groundwater was further investigated. Monitoring well, MW-19, was installed upgradient of MW-2. Sampling results from this investigation indicated high nitrate concentrations in MW-2 (200ppm), MW-19 (90 ppm), MW-14 (210 ppm) and MW-15 (89 ppm). Inspection of the plant area at that time did not find a source for potential nitrate contamination. Suggested potential sources included the presence of naturally-occurring sodium nitrate salts (nitratine,  $\text{NaNO}_3$ ), amines from sour gas treatment, and by-products from pigging pipelines (K.W. Brown, 1990).

### 3.0 SITE DESCRIPTION

#### 3.1 SITE GEOLOGY/HYDROGEOLOGY

The geologic framework of the site has been summarized by Bechtel Environmental (Bechtel, 1989) and K.W. Brown and Associates (K.W. Brown, 1990). Based on these assessments, the plant area is located on Quaternary alluvium, consisting of sand, silt, clay and gravel. At the plant site, the thickness of the alluvium varies from less than 3 feet to more than 75 feet (Bechtel, 1989). Underlying the alluvium is the Tertiary Nacimiento Formation, consisting of interbedded coarse- to medium-grained arkosic sandstone, siltstone, and shale which were deposited as both channel fill and floodplain deposits (Bechtel, 1989). Orientation of the channel-fill sandstone deposits may locally control groundwater flow due to higher hydraulic conductivities through these features.

An assessment of site hydrogeology and groundwater resources of the Blanco Plant area was conducted by Bechtel Environmental in 1989 (Bechtel, 1989). Based on the information collected during this study, it was concluded that the direction of groundwater flow through the plant area is to the south-southwest and then trends southward through the southern portion of the site. The average hydraulic conductivity was estimated to be  $2.1 \times 10^{-4}$  centimeters per second. Depth to groundwater ranged from 50 feet (at MW-2) to 9 feet below ground surface (5564 to 5552 feet above sea level) (EPNG, 1989). These results were generally consistent with the findings of K.W. Brown (1990).

A potentiometric surface map for the site has been prepared based on water level measurements collected on May 30, 2002, and is presented in Figure 3.1, *Groundwater Nitrate Concentrations and Potentiometric Surface*. Based on these data, groundwater is flowing to the south-southeast with a hydraulic gradient of 0.034 ft/ft. At the southern boundary of the site the groundwater gradient reverses and is towards the north, likely resulting from groundwater mounding in that area due to increased recharge from Citizens Ditch.

#### 3.2 GROUNDWATER NITRATE DATA

Groundwater nitrate data from several rounds of groundwater sampling (1991 – 2002) at the site are presented in Table 3.1, *Groundwater Nitrate Analytical Data*. These data indicate that nitrate concentrations have consistently exceeded NMWQCC standards in monitoring wells, MW-2, MW-6, MW-14, MW-15, MW-28, MW-29 and MW-30. Monitoring well MW-2 has not been sampled since 1994 because the well has been dry. The most recent nitrate concentration from each of the wells is presented on Figure 3.1. The 10 mg/L iso-concentration contour, based on May 2002 nitrate data, is also presented on this figure to indicate areas in exceedance of the NMWQCC standard. As shown in this figure, there is no obvious source or apparent trend in the nitrate data. Instead, there appears to be confined areas or “hot spots” of high nitrate concentrations adjacent to wells with nitrate concentrations consistently below NMWQCC standards. In addition, there is no indication that high nitrate groundwater is migrating off the site.

## 4.0 PROPOSED REMEDIAL ACTION

### 4.1 PROPOSED WORK PLAN TASKS

The objective of this Work Plan is to propose tasks for further investigation of the potential sources and extent of nitrate concentrations in groundwater at the site. The proposed Work Plan tasks include:

- Review available data for background groundwater nitrate data in the region;
- Review EPNG site information to investigate potential, on-site nitrate source(s); and
- Sample existing monitoring wells.

A review of available literature and databases will be conducted to attempt to determine potential background nitrate concentrations in alluvial aquifers in the area. Databases maintained by USGS, and other sources will be reviewed.

In addition, Blanco Plant files will be reviewed and appropriate personnel will be interviewed to investigate the presence of nitrogen-containing compounds on-site that may constitute a potential source. Site files will also be reviewed for any other historic information relating to nitrate concentrations in soil, surface water or groundwater.

Groundwater samples will be collected from wells MW-5, MW-6, MW-7, MW-10, MW-17 and MW-18 using standard purging and sampling techniques, and analyzed for nitrite and nitrate concentrations. These wells are selected because they have not been recently sampled (2002) and will provide additional information on the extent of nitrate in the groundwater.

## 5.0 REPORTING

The findings of the interviews, literature reviews and groundwater monitoring data will be presented in a report to NMOCD within 60 days following approval of this Work Plan. Recommendations for further remedial actions will be presented at this time.

## 6.0 REFERENCES

Bechtel Environmental, 1989. *Groundwater Investigation Report, El Paso Natural Gas Company's Blanco Plant, San Juan County, New Mexico*. January 1989.

K.W. Brown and Associates, Inc, 1990. *Site Investigation of the Blanco Plant, San Juan County, New Mexico*. Prepared for El Paso Natural Gas Company. February 1990.

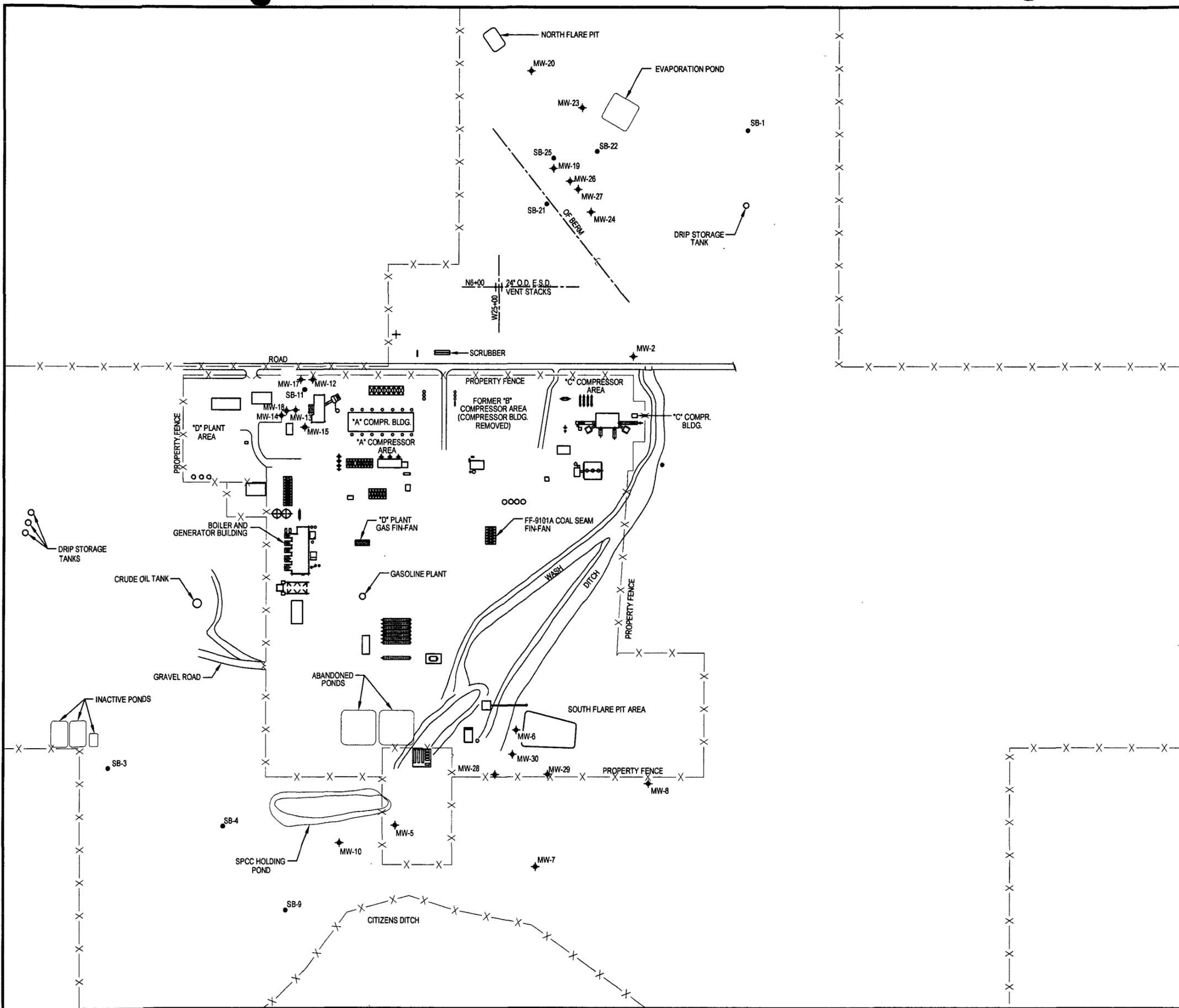
**TABLE 3.1**  
**GROUNDWATER NITRATE ANALYTICAL DATA (1991 - 2002)**  
**BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO**

		Nitrite (mg/l)	Nitrate (mg/l)
NMOCD Standard		NA	10
Monitoring Well	Sample Date		
MW-2	18-Jun-91	NA	160
	23-Feb-93	NA	256
	08-Jun-93	NA	228
	29-Sep-93	NA	233
	10-Feb-94	NA	249
MW-5	18-Jun-91	NA	0.08
	19-Feb-93	NA	<1.0
	07-Jun-93	NA	<1.0
	27-Jan-94	NA	<1.0
	08-Aug-00	NA	4.6
	08-Aug-00	NA	4.6
MW-6	10-Nov-00	<0.1	4.0
	19-Jun-91	NA	110
	19-Feb-93	NA	63.5
	07-Jun-93	NA	76.4
	28-Sep-93	NA	85.9
	07-Oct-93	NA	94.5
	26-Jan-94	NA	95.8
	20-Aug-94	NA	1.68
	20-Dec-94	NA	94
16-Feb-95	NA	90.6	
10-Nov-00	<0.1	59	
MW-7	18-Jun-91	NA	0.28
	07-Jun-93	NA	3
	27-Sep-93	NA	<2.8
MW-8	18-Jun-91	NA	<0.06
	19-Feb-93	NA	1.95
	07-Jun-93	NA	<1.0
	27-Sep-93	NA	<1.0
	27-Jan-94	NA	<1.0
	10-Nov-00	NA	<0.1
	10-Nov-00	<0.1	<0.1
	23-Mar-01	<0.1	0.21
	23-Mar-01	<0.1	0.21
	28-Aug-01	<0.10	0.33
28-May-02	NA	0.26	
MW-10	18-Jun-91	NA	0.74
	19-Feb-93	NA	1.19
	07-Jun-93	NA	2.16
	27-Sep-93	NA	2.1
	27-Jan-94	NA	1.95
MW-12	19-Jun-91	NA	7.8
	25-Feb-93	NA	7.82
	07-Jun-93	NA	8.45
	28-Sep-93	NA	9.1
	27-Jan-94	NA	7.32
	08-Aug-00	NA	<10
	09-Nov-00	<0.1	5.7
	22-Mar-01	<0.10	8.4
	28-Aug-01	<0.10	8.0
	28-May-02	NA	2.0
MW-13	19-Jun-91	NA	6.3
	24-Feb-93	NA	10.9
	08-Jun-93	NA	8.09
	28-Sep-93	NA	4.1
	27-Jan-94	NA	5.37
	08-Aug-00	NA	<12.5
	09-Nov-00	0.19	9.8
	22-Mar-01	0.12	13
	28-Aug-01	0.13	7.9
	28-May-02	NA	6.0

		Nitrite (mg/l)	Nitrate (mg/l)
NMOCD Standard		NA	10
Monitoring Well	Sample Date		
MW-14	25-Feb-93	NA	19.2
	08-Jun-93	NA	17.5
	28-Sep-93	NA	11.8
	27-Jan-94	NA	15.4
	08-Aug-00	NA	19
	13-Nov-00	<0.1	0.24
	22-Mar-01	0.19	15
	28-Aug-01	0.37	20
MW-15	28-May-02	NA	15
	19-Jun-91	NA	50
	24-Feb-93	NA	5
	08-Jun-93	NA	48.1
	28-Sep-93	NA	43
	27-Jan-94	NA	43.7
	08-Aug-00	NA	35
	09-Nov-00	<0.1	38
	22-Mar-01	<0.10	25
MW-16	28-Aug-01	<0.10	30
	28-May-02	NA	24
	19-Jun-91	NA	0.07
MW-17	25-Feb-93	NA	3.68
	08-Jun-93	NA	<1.0
MW-18	25-Feb-93	NA	15.3
	25-Feb-93	NA	8.19
	08-Jun-93	NA	<1.0
MW-28	28-Sep-93	NA	<1.0
	07-Oct-93	NA	2.1
	02-Feb-94	NA	2.83
	20-Aug-94	NA	2.72
	20-Dec-94	NA	0.33
	16-Feb-95	NA	1.56
	10-Aug-00	NA	25
	10-Nov-00	0.20	53
	23-Mar-01	1.0	34
	28-Aug-01	<0.10	63
MW-29	28-May-02	NA	83
	07-Oct-93	NA	8.3
	02-Feb-94	NA	19.6
	20-Aug-94	NA	28.84
	20-Dec-94	NA	41
	16-Feb-95	NA	28.1
	10-Aug-00	NA	50
	10-Nov-00	0.54	66
MW-30	26-Mar-01	<0.1	70
	28-Aug-01	0.26	58
	28-May-02	NA	70
	07-Oct-93	NA	28.1
	02-Feb-94	NA	57.1
	20-Aug-94	NA	67.63
	16-Feb-95	NA	81.3
10-Aug-00	NA	84	
MW-30	10-Nov-00	<0.1	70
	26-Mar-01	<0.1	72
	28-Aug-01	<0.10	76
	28-May-02	NA	68

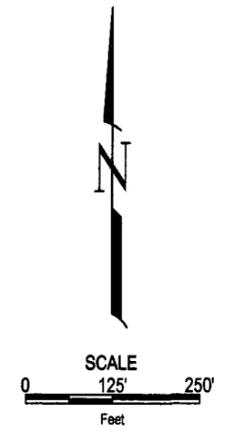
NA: Not Applicable/Not Analyzed

PROJECT NUMBER: 5020024.071824  
AutoCAD FILE: GW-Location\_Maps



### LEGEND

- ◆ MONITORING WELL
- SOIL BOREHOLE



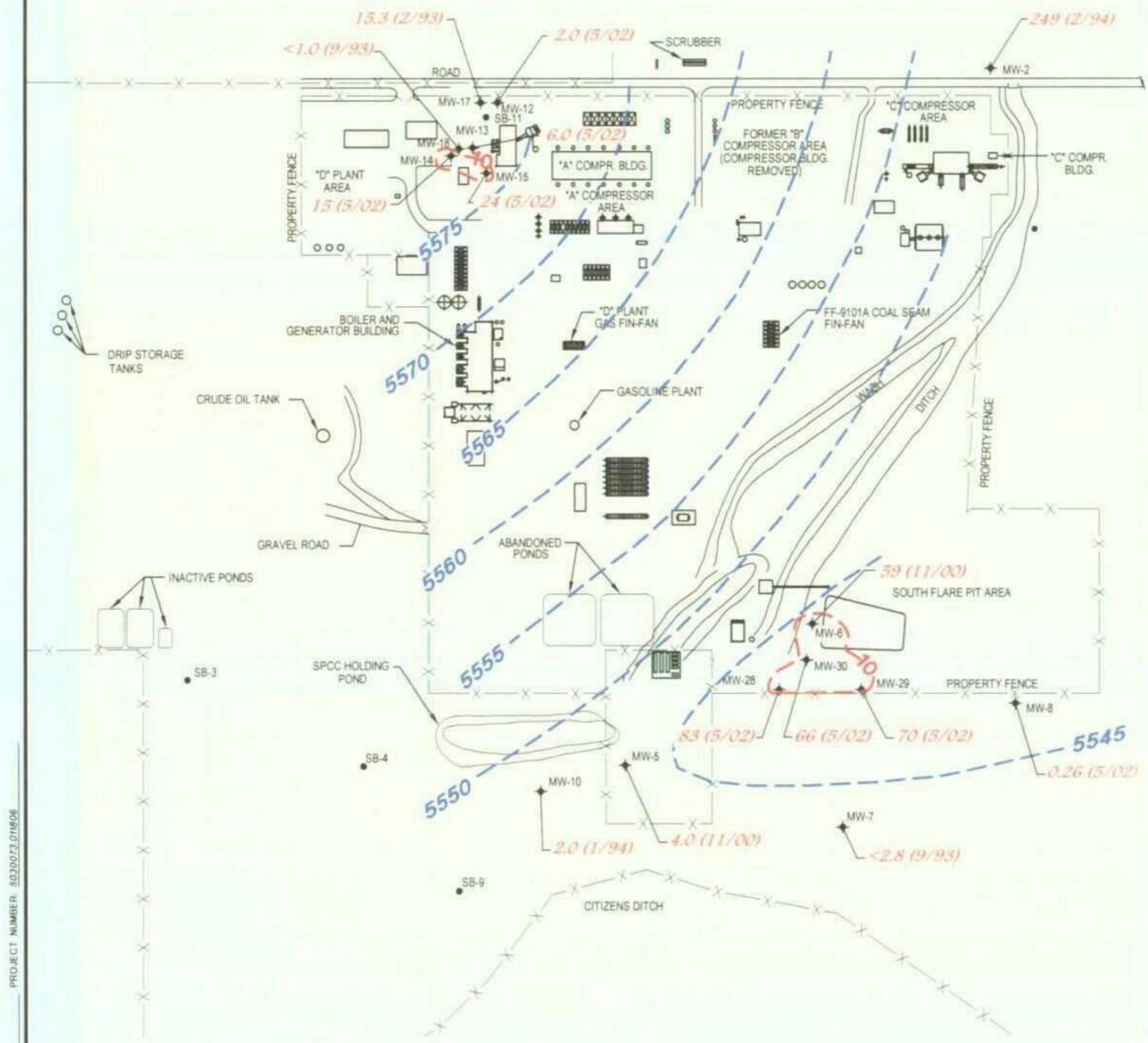
0	Issued for	7/02	P. Anderson	J. Gates	D. Elbertson
REV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
					
PROJECT: <b>GROUNDWATER NITRATE WORK PLAN</b>					
DRAWING TITLE: <b>BLANCO PLANT SITE LAYOUT</b>					
 <b>MWH</b> MONTGOMERY WATSON HARZA			Sheet <u>1</u> of <u>1</u> Sheets SCALE: <u>As shown</u> FIGURE No. <b>1.1</b>		

# LEGEND

- 5545 — — — APPROXIMATE POTENTIOMETRIC SURFACE CONTOUR (Groundwater Elevation in feet)
- 10 — — — GROUNDWATER NITRATE ISOCONCENTRATION CONTOUR, MAY 2002 DATA (10 mg/L)
- SOIL BOREHOLE
- MW-2 + MONITORING WELL

## KEY

MW-2 + Most Recent Groundwater NO<sub>3</sub> Concentration (mg/L) (Date Sampled)  
 59 (11/00)



AutoCAD FILE: GW\_Nitrate\_Conc2 PROJECT NUMBER: 3020072.D18/06

REV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
0	Issued for Review	7/02	P. Anderson	N. Gonzalez	G. Edwards



PROJECT: **GROUNDWATER NITRATE WORK PLAN**  
 DRAWING TITLE: **GROUNDWATER NITRATE CONCENTRATIONS AND POTENTIOMETRIC SURFACE**

<b>MWH</b> MONTGOMERY WATSON HARZA	Sheet <b>1</b> Of <b>1</b> Sheets
	SCALE: <b>As shown</b> FIGURE No. <b>3.1</b>

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**AUG 02 2002**

**ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION**

---

**Attachment 2**

---

*Prepared for:*

**El Paso Field Services  
614 Reilly Avenue  
Farmington, New Mexico 87401**

**Work Plan for the Blanco North Flare Pit  
San Juan County, New Mexico**

*July 2002*

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**AUG 02 2002**  
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**OIL CONSERVATION DIVISION**

*Prepared by:*

**MWH**  
**P.O. Box 774018**  
**Steamboat Springs, Colorado 80477**  
**(970) 879-6260**

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4.1	<i>Air Sparge Well Schematic</i>

## 1.0 INTRODUCTION

### 1.1 INTRODUCTION

This Work Plan for the Blanco North Flare Pit (Work Plan) has been prepared on behalf of El Paso Field Services (EPFS) to describe the proposed air sparging system to be designed and operated for the purpose of groundwater remediation downgradient of the North Flare Pit. The Blanco Plant is located in San Juan County, New Mexico, approximately 1.5 miles northeast of the town of Bloomfield, New Mexico on San Juan County Road 4900. The North Flare Pit area is located north of the Blanco Plant, and covers approximately 18 acres. Figure 1.1, *Blanco Plant Site Layout*, presents the Blanco Plant site layout and location of the North Flare Pit.

The objective of this Work Plan is to describe the proposed development and operation of a pilot air sparging system to evaluate its effectiveness in reducing levels of hydrocarbons in groundwater to acceptable levels. Regulatory drivers for groundwater remediation at this site include New Mexico Oil Conservation Division's (NMOCD) guidelines and the New Mexico Water Quality Control Commission's (NMWQCC) regulations. Constituents of potential concern at the site included benzene, ethylbenzene, toluene and xylene (BTEX) parameters.

Sections 2.0 and 3.0 of this Work Plan summarize the available information relating to the North Flare Pit including a description of previous site activities and investigations, a description of the geology/hydrogeology of the area, historic groundwater quality data, and on-going monitoring activities. A conceptual design for the proposed remedial system and air sparging system monitoring is described in Section 4.0.

## 2.0 SITE BACKGROUND AND PREVIOUS ACTIVITIES

### 2.1 SITE BACKGROUND

The first indication of groundwater contamination associated with the North Flare Pit occurred in 1990. As part of a groundwater study by K.W. Brown & Associates, Inc (K.W. Brown, 1990) to investigate the extent of contamination resulting from a leaking underground storage tank in the D Plant Area, monitoring well MW-19 was installed approximately 500 feet southeast of the North Flare Pit. During installation, high photoionization detector (PID) readings, strong hydrocarbon odors, and an oily sheen on the water level probe were reported from MW-19. A groundwater sample was collected and elevated levels of benzene, ethylbenzene and total xylenes (above NMWQCC standards) were detected. Releases from the North Flare Pit were suspected to be the source of these constituents. A lined evaporation pond that was previously an unlined pit may also have been a source of hydrocarbon contamination in the area. These features are shown on Figure 1.1. Monitoring well, MW-2, was also installed at this time further downgradient of the area. A groundwater sample collected from this well indicated BTEX and total petroleum hydrocarbon (TPH) concentrations below detection limits.

In 1992, Burlington Environmental, Inc (Burlington, 1992) conducted an investigation (initiated by El Paso Natural Gas Company (EPNG)) of the extent of subsurface hydrocarbon contamination downgradient of the North Flare Pit. Five additional groundwater monitoring wells (MW-20, MW-23, MW-24, MW-26 and MW-27) were installed in the area to the south of the North Flare Pit, soil and groundwater samples were collected and analyzed, and groundwater/hydrocarbon pump tests were performed. Several soil borings were also drilled in the area, but significant groundwater was not encountered and therefore wells were not installed. Locations of these monitoring wells and soil borings are shown on Figure 1.1. Floating hydrocarbon product, as much as 3.6 feet thick, was measured in monitoring wells MW-19, MW-26 and MW-27. Concentrations of BTEX in groundwater samples collected from MW-23 and MW-24 were above NMWQCC water quality standards. Groundwater data from MW-20 indicate BTEX concentrations below the detection limit. (Burlington, 1992).

### 2.2 PREVIOUS REMEDIAL ACTIVITIES

Removal of light non-aqueous phase liquid (LNAPL) hydrocarbon product was initiated by EPNG in 1993 through total fluids pumping from monitoring wells MW-19 and MW-26. Recovered water and hydrocarbons were transported to the Kutz Separator adjacent to the site. At that time, groundwater data from MW-23, MW-24 and MW-27 continued to indicate hydrocarbon concentrations above NMWQCC standards (EPNG, 1995). Pumping was discontinued in July 1995 to monitor the effectiveness of the pumping system in remediating groundwater. In August 1995, LNAPL was not detected in any well. However, LNAPL was detected in MW-26 (0.02 feet) in November, 2000. In March, 2002, LNAPL was not detected in any well.

Groundwater samples have periodically been collected from these wells and analyzed for BTEX and various other analyte concentrations. All groundwater monitoring data are

presented in Table 2.1, *Historic Groundwater Monitoring Analytical Data – North Flare Pit*. Groundwater remediation pumping data are presented in Table 2.2, *North Flare Pit Pumping Data*.

### 3.0 SITE DESCRIPTION

#### 3.1 SITE GEOLOGY/HYDROGEOLOGY

The geologic framework of the site has been summarized by EPNG (EPNG, 1989), K.W. Brown and Associates (K.W. Brown, 1990), and Burlington Environmental (Burlington, 1992). Based on these assessments, the plant area is located on Quaternary alluvium, consisting of sand, silt, clay and gravel. At the plant site, the thickness of the alluvium varies from less than 3 feet to more than 75 feet (EPNG, 1989). Underlying the alluvium is the Tertiary Nacimiento Formation, consisting of interbedded coarse- to medium-grained arkosic sandstone, siltstone, and shale which were deposited as both channel fill and floodplain deposits (EPNG, 1989). Locally, orientation of the channel-fill sandstone deposits may locally control groundwater flow due to higher hydraulic conductivities through these features.

An initial assessment of site hydrogeology and groundwater resources of the Blanco Plant area was conducted by EPNG in 1989 (EPNG, 1989). Based on the information collected during this study, it was concluded that the direction of groundwater flow through the plant area is to the south-southwest and then trends southward through the southern portion of the site. The average hydraulic conductivity was estimated to be  $2.1 \times 10^{-4}$  centimeters per second. Depth to groundwater ranged from 50 feet (at MW-2) to 9 feet below ground surface (5564 to 5552 feet above sea level) (EPNG, 1989). These results were generally consistent with the findings of K.W. Brown.

Burlington Environmental conducted a hydrogeologic investigation in 1992, specific to the North Flare Pit area (Burlington, 1992). Eight borings were drilled in the area to the south of the North Flare Pit (Figure 1.1). Three of the borings did not encounter significant groundwater, and the other five were completed as monitoring wells. In general, these borings were advanced through approximately 19 feet of silty/clayey sand, underlain by silty/sandy clay with interlaminated siltstone and mudstone. In MW-24, MW-26 and MW-27 borings, a sand layer with gravel and clay was encountered just above bedrock, possibly indicating a relict channel feature. Similarly, a thick sandy unit was encountered in the MW-19 boring (K.W. Brown, 1990). Bedrock (likely the Nacimiento Formation), consisting of gypsum-cemented sandstone, was encountered approximately 58 to 60 feet below ground surface. Groundwater was encountered within this sandstone. The direction of groundwater flow was determined to be to the south-southeast with a hydraulic gradient of 0.006 ft/ft.

#### 3.2 GROUNDWATER MONITORING AND ANALYTICAL DATA

Groundwater analytical data and water level measurements from several rounds of groundwater sampling (1991 – 2002) at the North Flare Pit area are presented in Table 2.1. A potentiometric surface map has been prepared based on the water level measurements collected on May 30, 2002, and is presented in Figure 3.1, *Groundwater Potentiometric Surface Map*. Groundwater is flowing to the south-southwest with a hydraulic gradient of 0.080 ft/ft.

Groundwater analytical data indicate that BTEX concentrations consistently exceed NMWQCC standards in monitoring wells, MW-19, MW-23, MW-24, MW-26 and MW-27. There is some indication that groundwater quality is improving at MW-26 and MW-27. Monitoring wells MW-2 and MW-20 have not recently been sampled because either the well had gone dry (MW-2) or was damaged such that a sample could not be collected (MW-20). However, historic data from these wells indicate that elevated BTEX concentrations have not been detected at either location.

## 4.0 PROPOSED REMEDIAL ACTION

### 4.1 PROPOSED TECHNOLOGY – AIR SPARGING

Based on past success at sites with similar conditions, EPFS believes that air sparging (AS) in the vicinity of the impacted groundwater will remediate hydrocarbon contamination and reduce BTEX concentrations to below NMWQCC standards. EPFS proposes a AS pilot test be conducted by injecting a low flow of air beneath impacted groundwater to encourage biodegradation by increasing dissolved oxygen concentrations in the water, while enhancing hydrocarbon volatilization through increased air flow. A low flow of air will be introduced into a newly constructed AS well on a 12-hour off/on cycle to help reduce the potential for channeling. One advantage of using low flow AS is that volatile organic hydrocarbons are not directly discharged to the atmosphere. Low flow air injection systems produce no condensate, no liquid wastes, and no contaminated air stream. Because there is no direct discharge to the atmosphere, this system would not require air permitting.

### 4.2 PILOT AIR SPARGE SYSTEM CONCEPTUAL DESIGN

For the pilot-scale study, one new AS well will be installed approximately 10 feet upgradient (north) of monitoring wells MW-19 and MW-26. The AS well will be drilled through the unconsolidated sediments and into the fractured bedrock. The well will be constructed of two-inch diameter PVC casing with a two-foot long, 0.02-inch slotted well screens, as shown in Figure 4.1, *Air Sparge Well Schematic*. The well screen will be installed at the base of the well, and submerged five to ten feet below the water table. The water level in the new boring will be confirmed by checking the water levels in nearby monitoring wells. A 20/40 silica sand filter pack will be placed in the annular space from the bottom of the boring to approximately two feet above the well screen. A bentonite seal will be placed above the filter pack to two feet above the water table. The first (bottom) two feet of the bentonite seal will be constructed using coated bentonite pellets, in order to ensure that the bentonite settles to the base of the boring before hydrating. The remainder of the annular space will be grouted with a neat cement/bentonite slurry seal to the surface.

A low flow of air will be introduced into the AS well on a 12-hour off/on cycle. Extensive testing conducted by the United States Air Force Center for Environmental Excellence (AFCEE) and EPFS's experience in the local area, has shown that AS systems are more effective when the air injected into a formation is pulsed. The pulsing helps to prevent and close preferential pathways that may be generated by over-pressuring the formation. These pathways essentially short circuit the treatment process and reduce the effectiveness of the AS system. EPFS anticipates injecting 10 cubic feet per minute (cfm) of air into the well at 50 pounds per square inch (psi).

Based on the results of the pilot study, a full-scale AS system will be designed and operated until it is determined that groundwater hydrocarbon concentrations have either decreased to below NMWQCC standards or have reached steady-state conditions.

### 4.3 AS SYSTEM MONITORING

Groundwater samples will be collected from each of the existing monitoring wells in the North Flare Pit area prior to system start-up. Groundwater field parameters (including pH, temperature, specific conductance and dissolved oxygen) will be collected (preferably downhole measurements), and samples will be analyzed for BTEX. Following AS system start-up, field parameters will be collected from the monitoring wells (during operation) on a weekly basis. Groundwater samples will be collected again from all of the monitoring wells after four weeks, and again after eight weeks of system operation. Forty-eight hours prior to sample collection the AS system will be shut-down to ensure natural groundwater conditions are being evaluated. At the end of the two-month evaluation period, the results of the AS pilot-study will be evaluated and reported to NMOCD with recommendations for design and operation of a full-scale system. EPFS will continue to operate the pilot AS system, and groundwater sampling will continue on a quarterly basis until four, consecutive rounds of groundwater samples indicate BTEX concentrations below NMWQCC standards or until levels reach steady-state values.

## 5.0 REPORTING

Following the evaluation period of two months, a report documenting performance of the pilot AS system will be prepared. This report will include location of the AS well, as-built details of the AS system, and groundwater analytical results collected over this period. An evaluation of the AS system and recommendations for modifications and future activities will also be included in this report. This report will be submitted to NMOCD within eight weeks of the end of the evaluation period.

In addition, results of the quarterly groundwater sampling events will be submitted to NMOCD in an annual report.

## 6.0 REFERENCES

Burlington Environmental, Inc, 1992. *Monitoring Well Installation and Testing at the North Flare Pit Area of Blanco Plant*. Prepared for El Paso Natural Gas Company. December 1992.

EPNG, 1989. *Groundwater Investigation Report, El Paso Natural Gas Company's Blanco Plant, San Juan County, New Mexico*. January 1989.

EPNG, 1995. Letter from El Paso Natural Gas Company (David Bays) to New Mexico Oil Conservation Division (William C. Olson); Re: Blanco Plant Sampling Plan. September 7, 1995.

K.W. Brown and Associates, Inc, 1990. *Site Investigation of the Blanco Plant, San Juan County, New Mexico*. Prepared for El Paso Natural Gas Company. February 1990.

TABLE 2.1  
GROUNDWATER MONITORING ANALYTICAL DATA - NORTH FLARE PIT  
BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO

Monitoring Well	Sample Date	Static Water Level (ft BTOC)	Analytical Parameters					
			Benzene (ug/l)	Ethylbenzene (ug/l)	Toluene (ug/l)	Total Xylenes (ug/l)	Nitrite (mg/l)	Nitrate (mg/l)
			NMWOCC Standard	10	750	750	620	NA
MW-2	6/18/91		<0.5	0.7	<0.5	0.9	NA	180
	2/23/93		<0.5	<0.5	<0.5	<0.5	NA	255
	6/8/93		<2.0	<2.0	<2.0	<2.0	NA	228
	9/29/93		6.2	<2.0	<2.0	<2.0	NA	233
	2/10/94		<2.0	<2.0	<2.0	<2.0	NA	249
	5/13/94		<2.0	<2.0	<2.0	<2.0	NA	NA
	8/22/94		<2.0	<2.0	<2.0	<2.0	NA	NA
	11/9/00	dry	Well Dry - No Sample Collected					
3/25/01	dry	Well Dry - No Sample Collected						
MW-19	6/19/91		8600	<25.0	210	4200	NA	70
	2/25/93		14000	3900	450	5100	NA	10.6
	6/10/93		9580	928	159	1087	NA	NA
	11/13/00	63.45	7200	3500	<25	88	NA	<0.1
	3/26/01	63.37	12000	4500	<50	110	<0.1	0.19
	5/30/02	63.54	12000	4300	<50	140	<0.1	0.13
MW-20	9/26/92		<1.0	<1.0	<1.0	<1.0	NA	NA
	2/24/93		<0.5	<0.5	<0.5	<0.5	NA	<1.0
	6/10/93		<2.0	<2.0	<2.0	<2.0	NA	<1.0
	9/29/93		<2.0	<2.0	<2.0	<2.0	NA	<1.0
	1/27/94		<2.0	<2.0	<2.0	<2.0	NA	<1.0
	5/13/94		<2.0	<2.0	<2.0	<2.0	NA	NA
	8/22/94		<2.0	<2.0	<2.0	<2.0	NA	NA
	11/13/00	41.00	Well Damaged - No Sample Collected.					
MW-23	9/26/92		2770	7690	221	6090	NA	0.62
	2/1/93		2900	190	3500	4100	NA	NA
	2/25/93		2900	3500	190	4100	NA	0.56
	6/8/93		1680	1850	30.1	2906	NA	<1.0
	9/29/93		2133	1807	216	3823	NA	<1.0
	2/10/94		2090	1150	151	2660	NA	<1.0
	5/13/94		3530	852	255	2190	NA	NA
	8/22/94		3270	353	212	1176	NA	NA
	11/13/00	57.02	3700	840	<25	1400	<0.1	0.12
	3/26/01	57.07	7200	520	<25	1300	<0.1	0.18
	5/30/02	57.08	9300	360	<50	1500	<0.1	0.23
MW-24	9/26/92		2650	<50	94.8	1340	NA	1.42
	2/23/93		1300	<12.5	71	600	NA	<1.0
	6/10/93		59.2	7.03	15	94.7	NA	<1.0
	9/29/93		1040	8	62.7	918	NA	<1.0
	2/10/94		490	<2.0	43.8	395	NA	<1.0
	5/13/94		1390	<2.0	69	858	NA	NA
	8/22/94		836	<2.5	60.2	154	NA	NA
	11/13/00	65.06	200	4.6	<1	22	NA	0.1
	3/26/01	65.00	1500	18	<5.0	35	<0.1	0.18
	5/30/02	65.65	2100	29	13	<25	<0.1	0.15
MW-26	2/25/93		11000	9900	660	10000	NA	23
	6/10/93		12180	7504	470	4993	NA	8.23
	3/26/01	62.36	6400	280	100	1900	<0.1	0.24
	5/30/02	63.68	6200	270	50	1300	<0.1	0.26
MW-27	2/26/93		9100	5700	470	4900	NA	<1.0
	6/10/93		8970	137	376	5406	NA	<1.0
	9/30/93		13200	420	402	3100	NA	<1.0
	2/2/94		9740	209	212	1750	NA	<1.0
	5/14/94		10100	180	358	4500	NA	NA
	11/13/00	63.67	4400	12000	4700	60000	<0.1	0.28
	3/26/01	63.38	420	260	27	1600	<0.1	0.61
5/30/02	63.54	420	170	13	1100	<0.1	0.21	

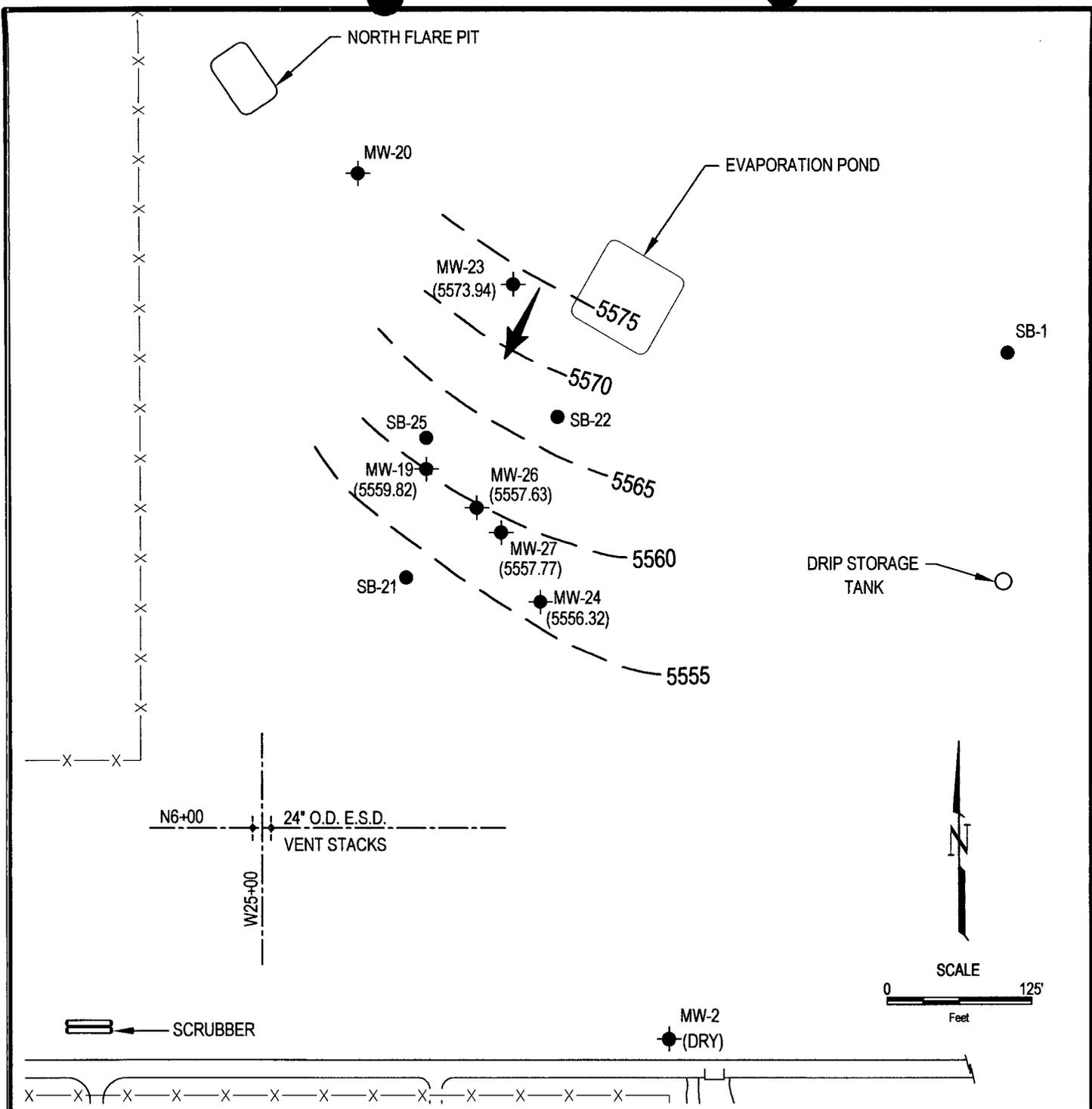
Notes:

1. Shaded data indicate exceedance of New Mexico Water Quality Control Commission's (NMWOCC) standards.
  2. All detected concentrations are shown in bold type.
- BTOC Below Top of Casing  
 NA Not Applicable  
 < Analyte detected below the method detection limit (MDL). Value shown is the MDL.

**TABLE 2.2**  
**NORTH FLARE PIT PUMPING DATA**  
**BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO**

MONTH	YEAR	WATER REMOVED (gallons)	HYDROCARBONS (HC) REMOVED (gallons)	PERCENTAGE HC REMOVED (%)
August	1993	2450	196	7.4
September	1993	2156	49	2.2
October	1993	2425	73	2.9
November	1993	3395	24	0.7
December	1993	1176	49	4.0
January	1994	1176	49	4.0
February	1994	98	0	0.0
March	1994	0	0	0.0
April	1994	735	49	6.3
May	1994	246	42	14.6
June	1994	1323	49	3.6
July	1994	1372	49	3.4
August	1994	1176	0	0.0
September	1994	1715	0	0.0
October	1994	539	0	0.0
November	1994	1617	0	0.0
December	1994	1078	49	4.3
January	1995	882	0	0.0
February	1995	882	0	0.0
March	1995	1079	49	4.3
April	1995	588	0	0.0
May	1995	588	0	0.0
June	1995	490	0	0.0
July	1995	0	0	0.0

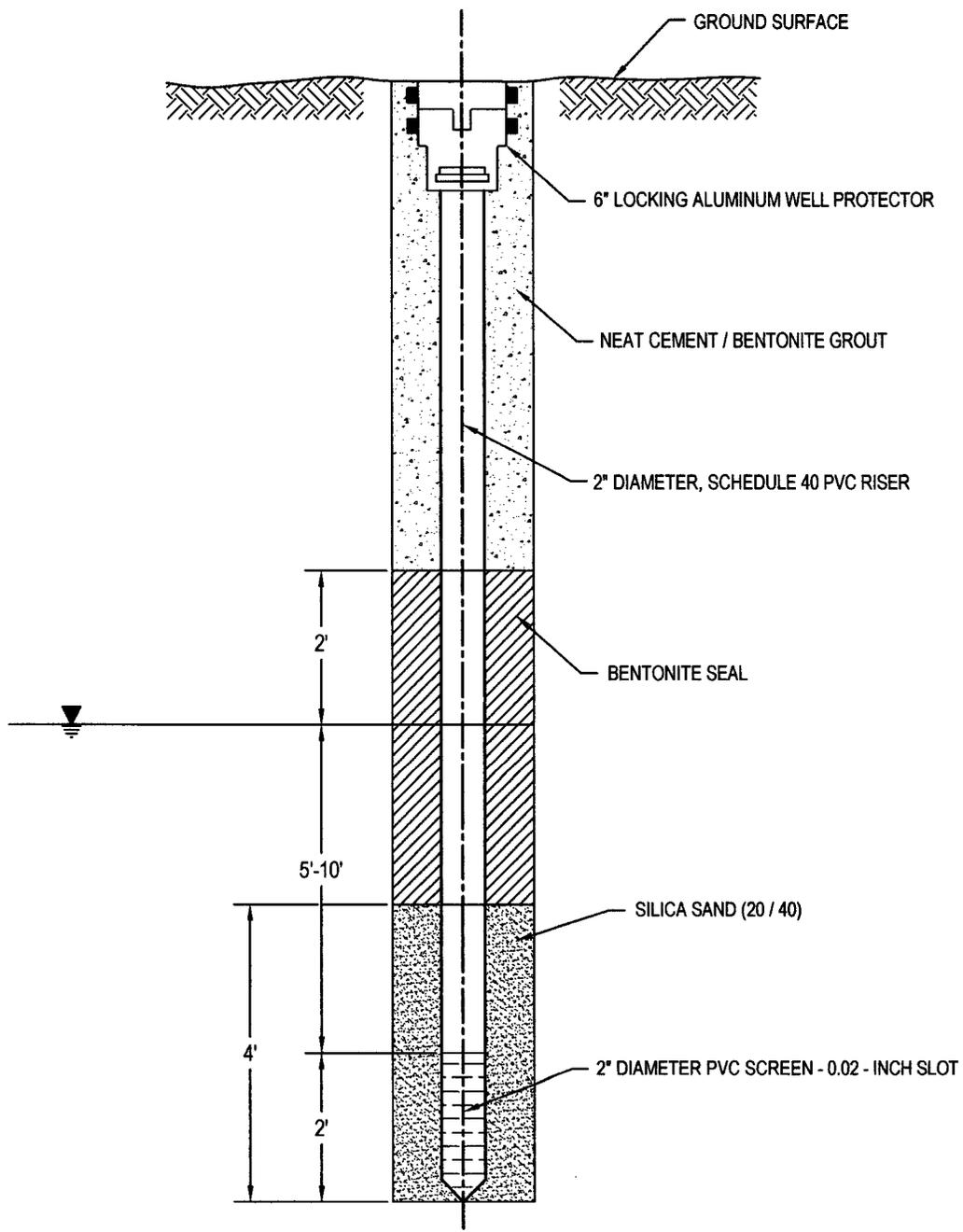




### LEGEND

- MW-24 (5556.32) + GROUNDWATER MONITORING WELL (GW ELEV. IN FT. NGVD)
- SOIL BOREHOLE
- ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION
- 5555 — — APPROXIMATE POTENTIOMETRIC SURFACE CONTOUR (5 FT. INTERVAL) (ELEVATION IN FT. NGVD)

<b>NORTH FLARE PIT WORK PLAN</b>				
Issued for Review	07/02	P.Anderson	J.Gates	D.Ellerbrook
REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY
				REVIEWED AND SKIPPED BY
<b>MWH</b> MONTGOMERY WATSON HARZA		PROJECT No.: 5030074.018004 AutoCAD FILE: GW-Pot.dwg SCALE: As Shown      FIGURE No. <b>3.1</b>		
<h2>GROUNDWATER POTENTIOMETRIC SURFACE MAP (MAY 2002)</h2>				



NOT TO SCALE

						 <b>NORTH FLARE PIT WORK PLAN</b>	
0	Issued for Report	7/02	P. Anderson	J. Gates	D. Ellerbroek		
REV. No.	REVISIONS	REV DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY		
						PROJECT No. 5030074.01804 AutoCAD FILE: air sparge well schem	
 <b>MWH</b> MONTGOMERY WATSON HARZA		SCALE: Not to Scale		FIGURE No. 4.1		<b>AIR SPARGE WELL SCHEMATIC</b>	

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**Attachment 3**

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July 23, 2002

Mr. William C. Olson  
New Mexico Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

**RE: Remediation Activities – Blanco Plant (DP-049)**

Dear Bill:

In your May 3, 2002 letter to Mr. Scott Pope you requested additional information about several projects at the Blanco Plant. Paragraph 3 (copied below) of your letter dealt with remediation of sumps at the Blanco "C" Plant and the oil skimmer pond. Since I was originally involved with those two sump removals, Mr. Pope asked me to respond to that portion of your request.

**Question:**

3. EPC's January 29, 1997 correspondence provided a report on the excavation of contaminated soils from a sump located adjacent to the skimmer basin near the south edge of the plant property and a French drain system west of the waste heat boiler near the "C" Plant compressor building. The correspondence summarized that high levels of total petroleum hydrocarbon (TPH) contamination existed in the floor and side walls of each excavation and stated that EPC was contracting to install soil borings and ground water monitoring wells to determine the extent of contamination. The OCD has no record of receiving this information or a detailed report on the excavations. Please provide this information.

**Response:**

The correspondence referenced indicated that El Paso Field Services Co. (EPFS) was contracting to install groundwater monitoring wells if groundwater was encountered during the excavation. Contaminated soil was removed from both locations. The extent of excavation was limited at both locations by the presence of natural gas piping and the maximum extent of the back hoe reach. At that point further soil removal was not possible without damage to piping, and groundwater was not encountered.

Soil samples were collected from the side walls and bottom of the excavation. Results were received in April 1997 and copies furnished to the OCD. Sample results from the "C" Plant sump indicated a residual of heavy hydrocarbons. Gasoline range hydrocarbons and BTEX were below detection limits. Samples from the skimmer basin area indicated a total BTEX residual of slightly over 6 ppm along with a high level of heavy hydrocarbons. The bottoms of the excavations were covered with organic fertilizer then backfilled.

June 24, 2002

Mr. William C. Olson

Page 2

Since the levels of mobile hydrocarbons were very low and further excavation in both locations requires removal of piping and foundations, EPFS believes that further excavation would have created a greater risk than continued passive attenuation.

If you have any questions or need additional information please contact me at 599-2256.

Sincerely yours,

A handwritten signature in cursive script that reads "David Bays". The signature is written in black ink and is positioned below the "Sincerely yours," text.

David Bays, REM

**RECEIVED**

**AUG 02 2002**

**ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION**

---

**Attachment 4**

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RECEIVED

July 30, 2002

AUG 02 2002

Mr. William C. Olson  
 New Mexico Oil Conservation Division  
 1220 S. St. Francis Drive  
 Santa Fe, NM 87505

ENVIRONMENTAL BUREAU  
 OIL CONSERVATION DIVISION

**RE: Remediation Activities – Blanco Plant (DP-049)**

Dear Mr. Olson:

In your May 3, 2002 letter to Mr. Scott Pope you requested additional information about several projects at the Blanco Plant. Paragraph 4 (copied below) of your letter dealt with the yellow-stained area. Since I was directly involved with the study and remediation of this area, Mr. Pope asked me to respond to that portion of your request.

4. The OCD's April 14, 2000 "DISCHARGE PLAN APPROVAL CONDITIONS" required that EPC submit an investigation plan to determine the extent of chromium contamination found during the OCD's March 9, 2000 inspection of the area approximately 75 feet east of the flare stack.

**EPNG's Plan:**

This site was characterized as area with varying shades of yellow on the ground that was approximately 3 feet in length by 2 feet discovered during the NMOCD site inspection on March 9, 2000. Before proceeding with an investigational plan, on March 9, 2000 EPNG covered the affected area with a plastic tarp to prevent potential disturbance from business activity or wind and storm water events. The 20'X 20' tarp was bermed with local soil and flagged to outline and protect the affected area.

Reconnaissance Sampling Events: On March 13, 2000, EPNG collected a composite sample of the affected area. The total chromium result was 1600 mg/kg. In order to further understand the subsurface EPNG conducted a subsurface probe down to 85 feet immediately adjacent (1.5 feet from center of spot) to the yellow spot on April 7, 2000. The results of that event are listed below.

Depth below surface (ft)	Total Chromium	Units
At the surface of bore-hole	3.1	mg / kg
5	3.4	mg / kg
10	49	mg / kg
15	13	mg / kg
20	20	mg / kg
30	11	mg / kg
40	9.4	mg / kg
50	4.1	mg / kg
60	3.4	mg / kg
70	1.7	mg / kg
80	9.5	mg / kg
85	6.5	mg / kg

Refined sampling: On May 18, 2000, EPNG conducted more subsurface sampling at four points surrounding the affected area. The results are listed below.

Location	Total Cr	Location	Total Cr	Location	Total Cr	Location	Total Cr
SW pt. Surface	3.5	SE pt. Surface	4.4	NE pt. Surface	6.5	E pt. Surface	6.1
SW pt. 5'	3.3	SE pt. 5'	4.9	NE pt. 5'	9.6	E pt. 5'	4.8
SW pt. 10'	47	SE pt. 10'	24	NE pt. 10'	3000	E pt. 5' Dup.	4.8
SW pt. 10'-Dup.	81					E pt. 10'	16
SW pt. 15'	19	SE pt. 15'	17	NE pt. 15'	120	E pt. 15'	120

TCLP readings:

Location	TCLP Cr	Location	TCLP Cr	Location	TCLP Cr	Location	TCLP Cr
SW pt. Surface	0.0	SE pt. Surface	0.0	NE pt. Surface	0.0	E pt. Surface	0.0
SW pt. 5'	0.0	SE pt. 5'	0.31	NE pt. 5'	0.0	E pt. 5'	0.0
SW pt. 10'	0.011	SE pt. 10'	0.011	NE pt. 10'	0.75	E pt. 5' Dup.	0.0
SW pt. 10'-Dup.	0.036					E pt. 10'	0.0
SW pt. 15'	0	SE pt. 15'	0.0	NE pt. 15'	0.021	E pt. 15'	0.86

Remediation of Area: On October 30, 2000, EPNG remediated the affected area 4'X 4' to a depth of 3 feet. The total chromium from a five point composite resulted was 63 mg/kg and hexavalent chromium 26 mg/kg. The TCLP chromium was at 2 mg/L. A total of 8-drums were disposed from the affected area.

Future action. Based on the findings that the chromium was isolated to the surface, EPNG is recommending not conducting any further remedial action or investigation related to this site.

If you have any questions on this information, please call me at (505) 831-7763.

Sincerely,

*Richard Duarte / STP*

Richard Duarte  
 Principal Environmental Engineer  
 El Paso Corporation  
 Pipelines West - Environment Department



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**BETTY RIVERA**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
Oil Conservation Division

May 3, 2002

**CERTIFIED MAIL**

**RETURN RECEIPT NO. 7001-1940-004-3929-7242**

Mr. Scott T. Pope  
El Paso Field Services  
614 Reilly Ave.  
Farmington, New Mexico 87401

**RE: REMEDIATION ACTIVITIES  
BLANCO PLANT (DP-49)**

Dear Mr. Pope:

The New Mexico Oil Conservation Division (OCD) has reviewed El Paso Corporation's (EPC) December 19, 2001 "REQUEST FOR CLOSURE OF THE BLANCO SOUTH FLARE PIT SITE AND PLUGGING AND ABANDONMENT OF ASSOCIATED MONITORING WELLS". This document contains a tabulation of EPC's 2000 and 2001 sampling of monitor wells around the South Flare Pit and "D" Plant Area at EPC's Blanco Plant in Bloomfield, New Mexico. The documents also requests permission to plug and abandon a number of the associated ground water monitoring wells based upon 4 consecutive clean sampling events for hydrocarbons for some wells or the fact that some wells are dry or damaged.

The OCD approves of EPC's proposal to plug and abandon monitor wells MW-7, MW-10, MW-16, MW-17 and MW-18 because the wells are dry or damaged and not usable. The OCD requires that these wells be plugged by cutting the casing below the ground surface and grouting the annulus to the surface with a cement grout containing 3-5% bentonite.

EPC's request to plug and abandon other wells is denied. The OCD has conducted a review of the case file on this facility and the tabulated analytical data provided by EPC. A review of this information shows that there are still some outstanding investigation and remediation issues related to these wells and other areas of the facility. Below is a discussion of these items and OCD's requirements to begin to resolve these issues:

1. Analytical data shows that there is nitrate contamination of ground water well in excess of New Mexico Water Quality Control Commission (WQCC) standards downgradient of the former underground storage tank at the "D" Plant Area and the South Flare Pit Area. The extent of this contamination has not been defined. The OCD requires that EPC submit a plan to determine the source and extent of nitrate contamination related to EPC's facility.

Mr. Scott T. Pope  
May 3, 2002  
Page 2

2. Previous investigations showed that ground water downgradient of the North Flare Pit and Evaporation Pond was contaminated with free phase hydrocarbons and dissolved phase hydrocarbons in excess of WQCC standards. In 1993 EPC was recovering free phase hydrocarbons and monitoring ground water quality in this area. The OCD has no reports of EPC's ground water remediation and monitoring actions since EPC's January 28, 1994 correspondence titled "BLANCO NORTH RECOVERY WELL". Please provide the OCD with all ground water remediation and monitoring data related to the North Flare Pit and Evaporation Pond from 1994 to the present.
3. EPC's January 29, 1997 correspondence provided a report on the excavation of contaminated soils from a sump located adjacent to the skimmer basin near the south edge of the plant property and a french drain system west of the waste heat boiler near the "C" Plant compressor building. The correspondence summarized that high levels of total petroleum hydrocarbon (TPH) contamination existed in the floor and side walls of each excavation and stated that EPC was contracting to install soil borings and ground water monitoring wells to determine the extent of contamination. The OCD has no record of receiving this information or a detailed report on the excavations. Please provide this information.
4. The OCD's April 14, 2000 "DISCHARGE PLAN APPROVAL CONDITIONS" required that EPC submit an investigation plan to determine the extent of chromium contamination found during the OCD's March 9, 2000 inspection of the area approximately 75 feet east of the flare stack. The OCD has no record of receiving such a plan. Please provide this work plan.

The OCD requires that EPC submit the above information to the OCD Santa Fe Office by July 31, 2002 with a copy provided to the OCD Aztec District Office.

If you have any questions, please call me at (505) 476-3491.

Sincerely,



William C. Olson  
Hydrologist  
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office

## Olson, William

---

**From:** Price, Wayne  
**Sent:** Tuesday, April 30, 2002 1:54 PM  
**To:** Olson, William  
**Cc:** Martin, Ed; Anderson, Roger  
**Subject:** El Paso Blanco Plant- GW-049

Ed and I inspected this facility on March 09, 2000 and during the inspection we found a small yellow stained area in which we requested El Paso to collect a sample and depending upon the results to submit an action plan. El Paso gave us a response to our inspection on April 10, 2000 and included a commitment for site's future action to be completed by May 19. As of this date ED or I have not receive this action plan. We approved the new discharge plan on April 14, 2000 and included this commitment as a condition of approval.

I understand that you are reviewing the site's vadose zone and groundwater plans, please note the small area sampled had 1600 ppm total chrome and 86 ppm TCLP. It was located near the existing flare pit. It appears that El Paso owes OCD an action plan.

Please let us know if you are going to include this issue in your review of the site, if not then let ED know since he is handling El Paso now.



614 Reilly Avenue  
Farmington, New Mexico 87401

Certified Mail # 7000 1670 0012 7260 9082

December 19, 2001

Mr. William Olson  
Hydrogeologist  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

RECEIVED

DEC 27 2001

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

**Subject: Request for Closure of the Blanco South Flare Pit Site and Plugging and Abandonment of Associated Monitoring Wells**

Dear Mr. Olson:

El Paso Corporation (EPC) is hereby requesting written approval from the New Mexico Oil Conservation Division (OCD) for closure of the South Flare Pit site, based on remediation of the South Flare Pit and favorable results of groundwater monitoring. In addition, EPC is requesting approval to plug and abandon the eight monitoring wells, located at the Blanco Plant – South Flare Pit site. Finally, EPC is requesting closure of three monitor wells and a change in the monitoring program for the D Plant monitoring wells.

In 1985, the OCD issued a directive for oil and gas producers to cease discharging production fluids to unlined surface impoundments (pits) located in the vulnerable groundwater areas of the San Juan Basin and major river drainages to the San Juan, Animas, and La Plata Rivers (R-7940). Once discharge had ceased, producers were required to investigate and remediate soil and groundwater contamination caused by these pits.

EPC installed 30 soil borings at the Blanco Plant between 1988 and 1993 to investigate subsurface contamination at several sites including the South Flare Pit, North Flare Pit, and the D Plant underground storage tank (UST) and sump. Twenty-two soil borings were converted into monitoring wells. The remaining soil borings were dry and were plugged and abandoned at the time of drilling. A list of soil borings and monitoring wells at the Blanco Plant is provided as Table 1. A map of the Blanco Plant is shown on Figure 1.

12/19/01

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Mr. William Olson

OCD- Santa Fe

Groundwater monitoring at the South Flare Pit site has been conducted in accordance with an OCD letter to EPC dated March 31, 1993 in which closure of the South Flare Pit site was approved contingent upon the installation and sampling of groundwater monitoring wells. EPC had petitioned for closure by submitting the *Blanco South Flare Pit Closure Report*, dated February 26, 1993.

All monitoring wells at the South Flare Pit site have demonstrated at least four successive clean sampling events for hydrocarbons. The monitoring wells recommended for plugging and abandonment at the South Flare Pit site are as follows:

Active monitoring wells: MW-5, -6, -8, -28, -29, and -30  
Dry or damaged monitoring wells: MW-7 and -10

Analytical data for the South Flare Pit monitoring wells are summarized in Table 2. As shown in Table 2, petroleum hydrocarbon concentrations in each of the active South Flare Pit monitoring wells (MW-5, -6, -8, -28, -29, and -30) have been below New Mexico Water Quality Control Commission (NMWQCC) standards for at least 4 consecutive quarters. EPC would like to abandon the six monitoring wells and the two dry and damaged monitoring wells as soon as possible. The South Flare Pit monitoring wells are shown on Figure 2.

EPC is requesting closure for MW-17 and MW-18, because they have been dry for several years or have not produced enough water following purging to sample. EPC is also, requesting closure of MW-16, because in 1993 the MW-16 was destroyed during plant construction. EPC is not requesting closure of the D Plant monitoring wells MW-12, -13, -14, and -15 at this time. EPC is requesting a change in the monitoring program at the D Plant. As shown in Table 3, no petroleum hydrocarbons have been detected above NMWQCC standards in the D Plant monitoring wells since June 1993. However, the concentration of 1,1-dichloroethane exceeds its NMWQCC standard in MW-13. In addition, trichloroethene concentrations in monitoring wells MW-12 and MW-13 are below NMWQCC standards but greater than U.S. Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs). The D Plant monitoring wells are being sampled quarterly and analyzed for volatile organic compounds (EPA SW-846 Method 8260) and nitrate/nitrite (EPA SW-846 Method 353.2/354.1/4500). We propose to lengthen the monitoring program to annual sampling starting in June 2002, because natural attenuation rates for chlorinated solvents in groundwater are slow. We also request that the list of analytes be limited currently to the chlorinated solvents detected at the D Plant.

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Page 3  
Mr. William Olson  
OCD- Santa Fe

Please contact me as soon as possible, after you have considered these requests. EPC would like to complete the plugging and abandonment project as soon as possible. If you have any questions or need additional information please contact me at (505) 599-2124.

Sincerely,

El Paso Corporation



Scott T. Pope, P.G.  
Senior Environmental Scientist  
Environmental Remediation

Enclosures:

- Table 1. Blanco Plant Soil Borings/Monitoring Wells
- Table 2. Summary of Analytical Data: South Flare Pit Site Monitoring Wells
- Table 3. Summary of Analytical Data: D Plant Monitoring Wells

- Figure 1. Blanco Plant Location Map
- Figure 2. Blanco Plant- August 27-28, 2001 South Flare Pit Groundwater Elevation Isocontours

cc: Denny Foust, NMOCD Aztec; Certified Mail # 7000 1670 0012 7260 9075  
V. Terauds, MWH-Albuquerque  
L. Benally, c/o EPC-Farmington  
D. Bays, EPFS, w / o attachments  
NMOCD File  
Project File

Table 1. Blanco Plant Soil Borings/Monitoring Wells

Monitoring Well	Date Drilled	Location	Status	Proposed Action
SB-1	9/20/1988	NFP	no well installed	-
MW-2	9/20/1988	NFP	dry	-
SB-3	9/23/1988	SFP	no well installed	-
SB-4	9/23/1988	SFP	no well installed	-
<b>MW-5</b>	<b>9/23/1988</b>	<b>SFP</b>	<b>damaged casing</b>	<b>abandon now</b>
<b>MW-6*</b>	<b>9/21/1988</b>	<b>SFP</b>	<b>active</b>	<b>abandon now</b>
<b>MW-7</b>	<b>9/23/1988</b>	<b>SFP</b>	<b>dry</b>	<b>abandon now</b>
<b>MW-8</b>	<b>9/23/1988</b>	<b>SFP</b>	<b>active</b>	<b>abandon now</b>
SB-9	9/24/1988	SFP	no well installed	-
<b>MW-10</b>	<b>9/24/1988</b>	<b>SFP</b>	<b>dry</b>	<b>abandon now</b>
SB-11	1/7/1990	D Plant	no well installed	-
MW-12	1/8/1990	D Plant	active	monitor, abandon
MW-13	1/9/1990	D Plant	active	monitor, abandon
MW-14	1/10/1990	D Plant	active	monitor, abandon
MW-15	1/10/1990	D Plant	active	monitor, abandon
<b>MW-16</b>	<b>1/10/1990</b>	<b>D Plant</b>	<b>damaged</b>	<b>abandon now</b>
<b>MW-17</b>	<b>1/11/1990</b>	<b>D Plant</b>	<b>dry</b>	<b>abandon now</b>
<b>MW-18*</b>	<b>1/11/1990</b>	<b>D Plant</b>	<b>active</b>	<b>abandon now</b>
MW-19	1/11/1990	NFP	active	-
MW-20	9/17/1992	NFP	damaged	-
SB-21	9/15/1992	NFP	no well installed	-
SB-22	9/18/1992	NFP	no well installed	-
MW-23	9/21/1992	NFP	active	-
MW-24	9/22/1992	NFP	active	-
SB-25	9/28/1992	NFP	no well installed	-
MW-26	9/29/1992	NFP	active	-
MW-27	10/1/1992	NFP	active	-
<b>MW-28</b>	<b>9/27/1993</b>	<b>SFP</b>	<b>active</b>	<b>abandon now</b>
<b>MW-29</b>	<b>9/27/1993</b>	<b>SFP</b>	<b>active</b>	<b>abandon now</b>
<b>MW-30</b>	<b>9/28/1993</b>	<b>SFP</b>	<b>active</b>	<b>abandon now</b>

Notes:

LNAPL = light non-aqueous phase liquids

NFP = North Flare Pit

SFP = South Flare Pit

\*Not enough water in well to sample



Table 2. Summary of Analytical Data  
South Flare Pit Site Monitoring Wells

Monitoring Well	Acetone (ug/l)	Freon 11 (ug/l)	1,1-DCA (ug/l)	1,1-DCE (ug/l)	1,2-DCB (ug/l)	cis-1,2-DCE (ug/l)	trans-1,2-DCE (ug/l)	TCE (ug/l)	PCE (ug/l)	Benzene (ug/l)	Ethylbenzene (ug/l)	Toluene (ug/l)	Total Xylenes (ug/l)	Chromium (mg/l)	Nitrite (mg/l)	Nitrate (mg/l)
<b>NMWWQCC Standard</b>																
<b>U.S. EPA MCL</b>																
<b>Sample Date</b>																
10-Aug-00	<25	N/A	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.01	NA	25
10-Nov-00	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.005	0.20	53
23-Mar-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	0.0050	1.0	34
28-Aug-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	NA	<0.10	63
07-Oct-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<5.0	<5.0	NA	NA	8.3
02-Feb-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA	19.6
14-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA	NA
20-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.5	<2.5	<2.5	<7.5	NA	NA	28.84
20-Dec-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<5.0	<15.0	NA	NA	28.1
16-Feb-95	NA	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	0.54	66
10-Aug-00	<25	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.005	NA	<0.1
10-Nov-00	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.005	0.26	58
26-Mar-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.005	NA	NA
28-Aug-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<5.0	<5.0	NA	NA	28.1
07-Oct-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA	57.1
02-Feb-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA	NA
14-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA	67.93
20-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA	NA
20-Dec-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.5	<2.5	<2.5	<7.5	NA	NA	91.3
16-Feb-95	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<5.0	<15.0	NA	NA	84
10-Aug-00	<25	N/A	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<0.005	<0.1	70
10-Nov-00	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.005	<0.1	72
26-Mar-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.005	<0.1	76
28-Aug-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	NA	<0.10	76

Notes:  
 Bolded values are detections  
 Shaded concentrations are equal to or above NMWWQCC standards or MCLs  
 NE = Not Established  
 NA = Not Analyzed  
 ug/L = micrograms per liter  
 mg/l = milligrams per liter  
 DCA = Dichloroethane  
 DCE = Dichloroethene  
 TCE = Trichloroethene  
 PCE = Perchloroethene  
 NMWWQCC = New Mexico Water Quality Control Commission  
 MCL = U.S. Environmental Protection Agency Maximum Contaminant Level

Table 3. Summary of Analytical Data  
D Plant Monitoring Wells

Monitoring Well	Sample Date	Acetone (ug/l)	Freon 11 (ug/l)	1,1-DCA (ug/l)	1,1-DCE (ug/l)	1,2-DCB (ug/l)	cis-1,2-DCE (ug/l)	trans-1,2-DCE (ug/l)	TCE (ug/l)	PCE (ug/l)	Benzene (ug/l)	Ethylbenzene (ug/l)	Toluene (ug/l)	Total Xylenes (ug/l)	Nitrite (mg/l)	Nitrate (mg/l)
NMWQCC Standard		NE	NE	25	5	NE	NE	NE	100	20	10	750	750	620	NE	10.0
	U.S. EPA MCL	NE	NE	NE	7.0	NE	70	100	5	5	5	700	1000	NE	1.0	10.0
MW-12	19-Jun-91	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	NA	7.8
	25-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	<0.5	<0.5	<0.5	NA	7.82
	07-Jun-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	8.45
	28-Sep-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	9.1
	27-Jan-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	7.32
	13-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA
	22-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA
	08-Aug-00	<25	N/A	18	<5	6.0	14	<5	7.4	<5	<5	<5	<5	<10	NA	<10
	09-Nov-00	15	<5.0	21	<1.0	5.3	16	1.7	8.1	3.3	NA	NA	NA	NA	<0.1	5.7
	22-Mar-01	<10	7.9	8.6	<1.0	4.2	9.9	<1.0	4.2	1.9	NA	NA	NA	NA	<0.10	8.4
MW-13	28-Aug-01	<10	<10	10	<1.0	5.4	11	<1.0	6.1	3.0	NA	NA	NA	NA	<0.10	8.0
	19-Jun-91	NA	NA	NA	NA	NA	NA	NA	NA	NA	19	<0.5	<0.5	<0.5	NA	6.3
	24-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	13	<0.5	<0.5	<0.5	NA	10.9
	08-Jun-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.6	<2.0	<2.0	<2.0	NA	8.09
	28-Sep-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.8	<2.0	<2.0	<2.0	NA	4.1
	27-Jan-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.1	<2.0	<2.0	<2.0	NA	5.37
	13-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	<2.0	<2.0	<2.0	NA	NA
	20-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	<2.0	<2.0	<2.0	NA	NA
	08-Aug-00	<25	N/A	54	<5	61	36	8.2	41	<5	<5	<5	<5	<10	NA	<12.5
	09-Nov-00	<10	<5.0	58	1.5	59	33	9.0	41	2.0	NA	NA	NA	NA	0.19	9.8
MW-14	22-Mar-01	<10	<5.0	37	<1.0	36	21	4.7	26	2.3	NA	NA	NA	NA	0.12	13
	28-Aug-01	<10	<10	56	1.3	44	32	6.1	33	1.4	NA	NA	NA	NA	0.13	7.9
	25-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.7	<0.5	<0.5	<0.5	NA	19.2
	08-Jun-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.7	<2.0	<2.0	<2.0	NA	17.5
	28-Sep-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.3	<2.0	<2.0	<2.0	NA	11.8
	27-Jan-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.7	<2.0	<2.0	<2.0	NA	15.4
	13-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA
	20-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA
	08-Aug-00	<25	NA	5.9	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	NA	19
	13-Nov-00	<10	NA	6.8	<1	1.9	2	NA	2.7	NA	1.4	NA	NA	NA	<0.1	0.24
22-Mar-01	<10	<5.0	8.6	<1.0	2.1	2.6	<1.0	2.7	<1.0	NA	NA	NA	NA	0.19	13	
28-Aug-01	<10	<10	7.1	<1.0	1.7	2.1	<1.0	2.3	<1.0	NA	NA	NA	NA	0.37	20	

Table 3. Summary of Analytical Data  
D Plant Monitoring Wells

	NMWWQC Standard	Acetone (ug/l)	Freon 11 (ug/l)	1,1-DCA (ug/l)	1,1-DCE (ug/l)	1,2-DCB (ug/l)	cis-1,2-DCE (ug/l)	trans-1,2-DCE (ug/l)	TCE (ug/l)	PCE (ug/l)	Benzene (ug/l)	Ethylbenzene (ug/l)	Toluene (ug/l)	Total Xylenes (ug/l)	Nitrite (mg/l)	Nitrate (mg/l)
	<b>U.S. EPA MCL</b>															
	19-Jun-91	NE	NE	NE	7.0	NE	70	100	5	5	5	700	1000	NE	1.0	10.0
	24-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	NA	<b>50</b>
	08-Jun-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.1	<0.5	<0.5	<0.5	NA	<b>5</b>
	28-Sep-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	<b>48.1</b>
	27-Jan-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<b>3.4</b>	<2.0	<2.0	<2.0	NA	<b>43</b>
	13-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<b>3.6</b>	<2.0	<2.0	<2.0	NA	<b>43.7</b>
	22-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA
	08-Aug-00	<25	N/A	<b>5.8</b>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	NA	<b>35</b>
	09-Nov-00	<10	<5.0	<b>6.3</b>	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	<0.1	<b>38</b>
	22-Mar-01	<10	<5.0	<b>5.4</b>	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	<0.10	<b>25</b>
	28-Aug-01	<50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	NA	NA	NA	<0.10	<b>30</b>
	19-Jun-91	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	NA	<b>0.07</b>
	25-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	NA	<b>3.68</b>
	08-Jun-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	<1.0
	25-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	<0.5	<0.5	<0.5	NA	<b>15.3</b>
	19-Jun-91	NA	NA	NA	NA	NA	NA	NA	NA	NA	<25.0	<25.0	<25.0	<25.0	NA	NR
	25-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.0	<5.0	<5.0	<5.0	NA	<b>8.19</b>
	08-Jun-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	<1.0
	28-Sep-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	<1.0
	13-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA
	30-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA
	20-Dec-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.0	<2.0	<2.0	<2.0	NA	NA

Notes:  
 Bolded values are detections  
 Shaded concentrations are equal to or above NMWWQC standards or MCLs  
 D Plant UST wells have not been analyzed for chromium  
 NE = Not Established  
 NA = Not Analyzed  
 NR = value reported in error in a previous report; actual datum unavailable  
 ug/L = micrograms per liter  
 mg/l = milligrams per liter  
 DCA = Dichloroethane  
 DCE = Dichloroethene  
 TCE = Trichloroethene  
 PCE = Perchloroethene  
 NMWWQC = New Mexico Water Quality Control Commission  
 MCL= U.S. Environmental Protection Agency Maximum Contaminant Level

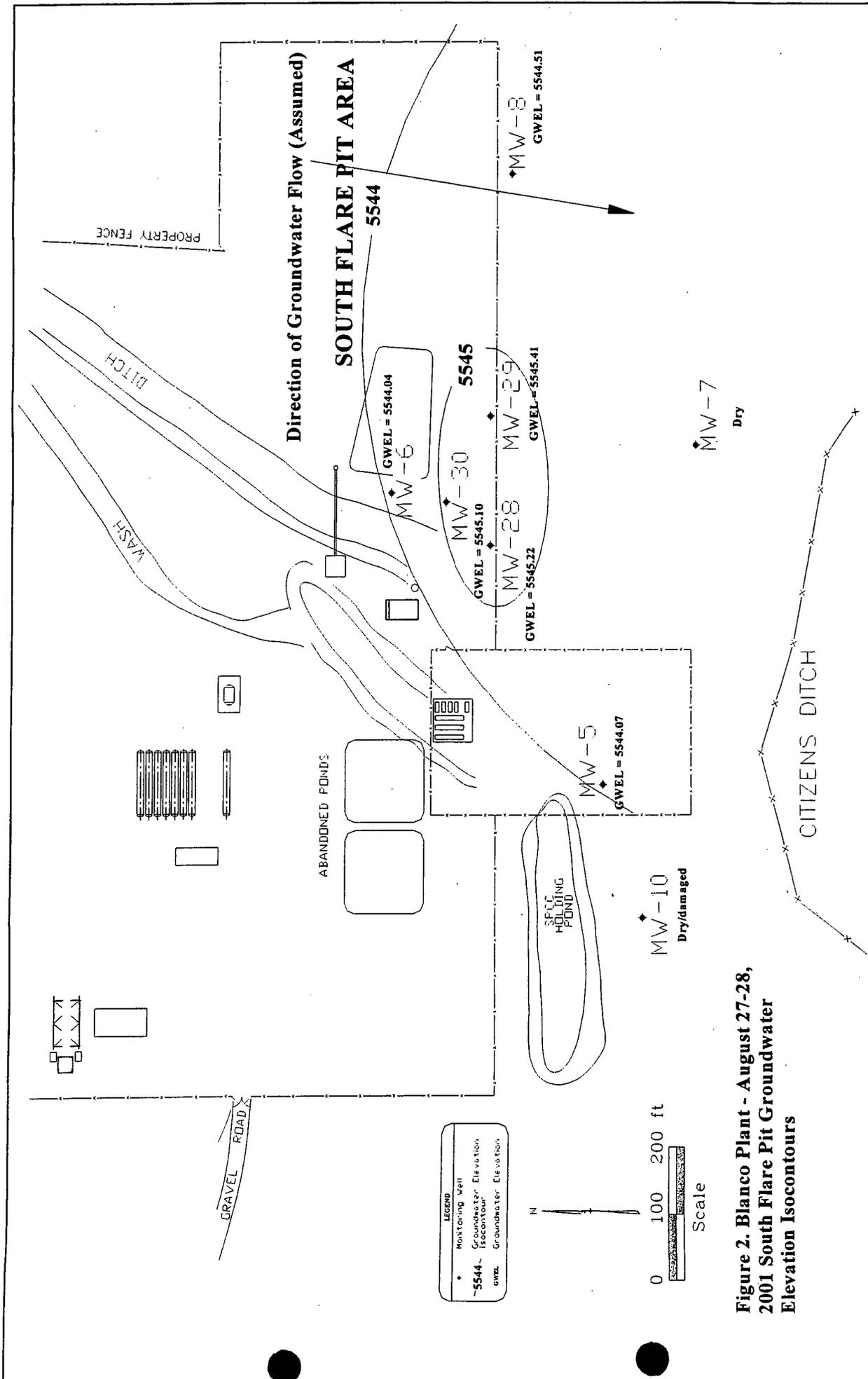


Figure 2. Blanco Plant - August 27-28, 2001 South Flare Pit Groundwater Elevation Isocontours

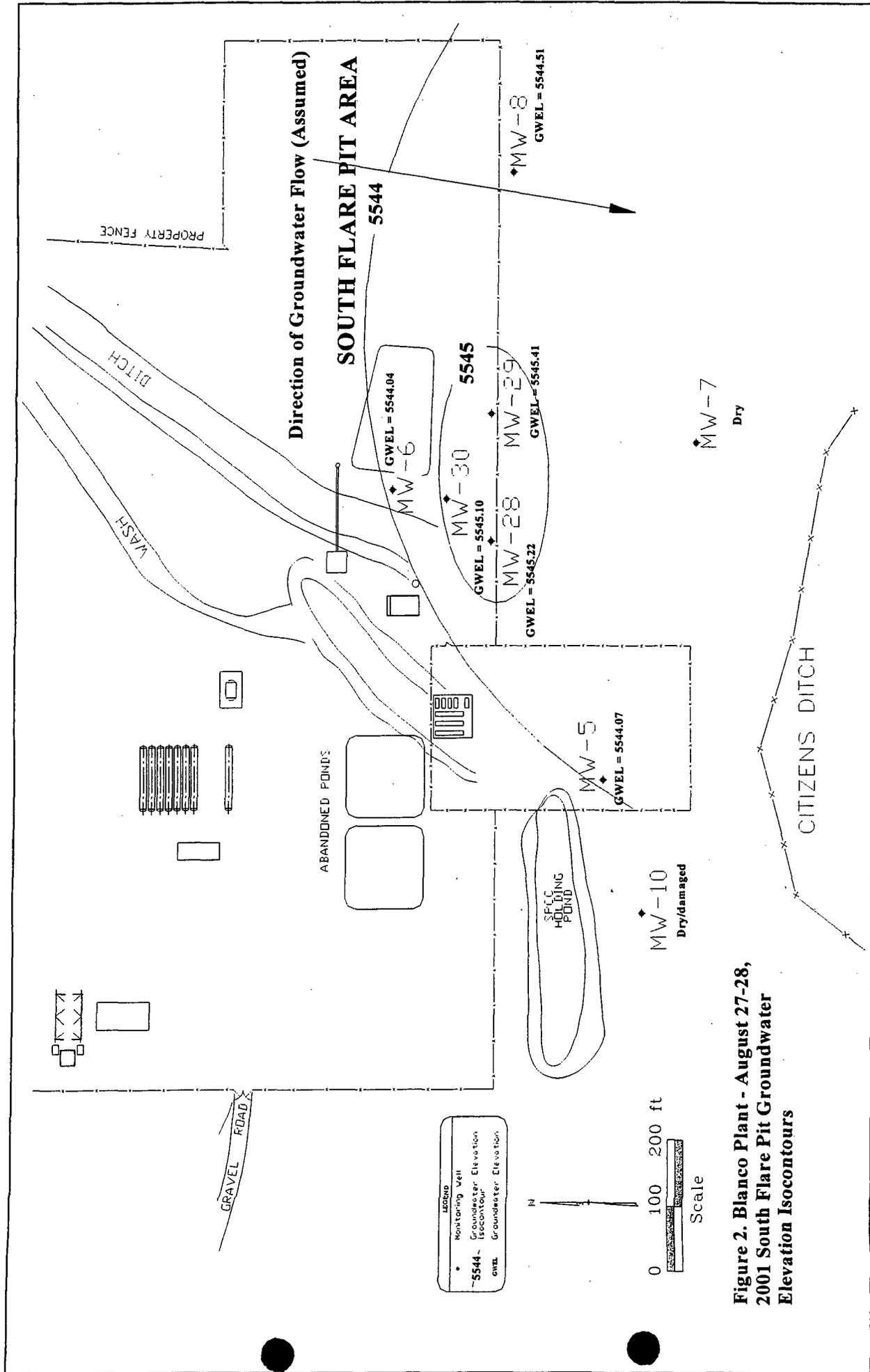


Figure 2. Blanco Plant - August 27-28, 2001 South Flare Pit Groundwater Elevation Isocontours

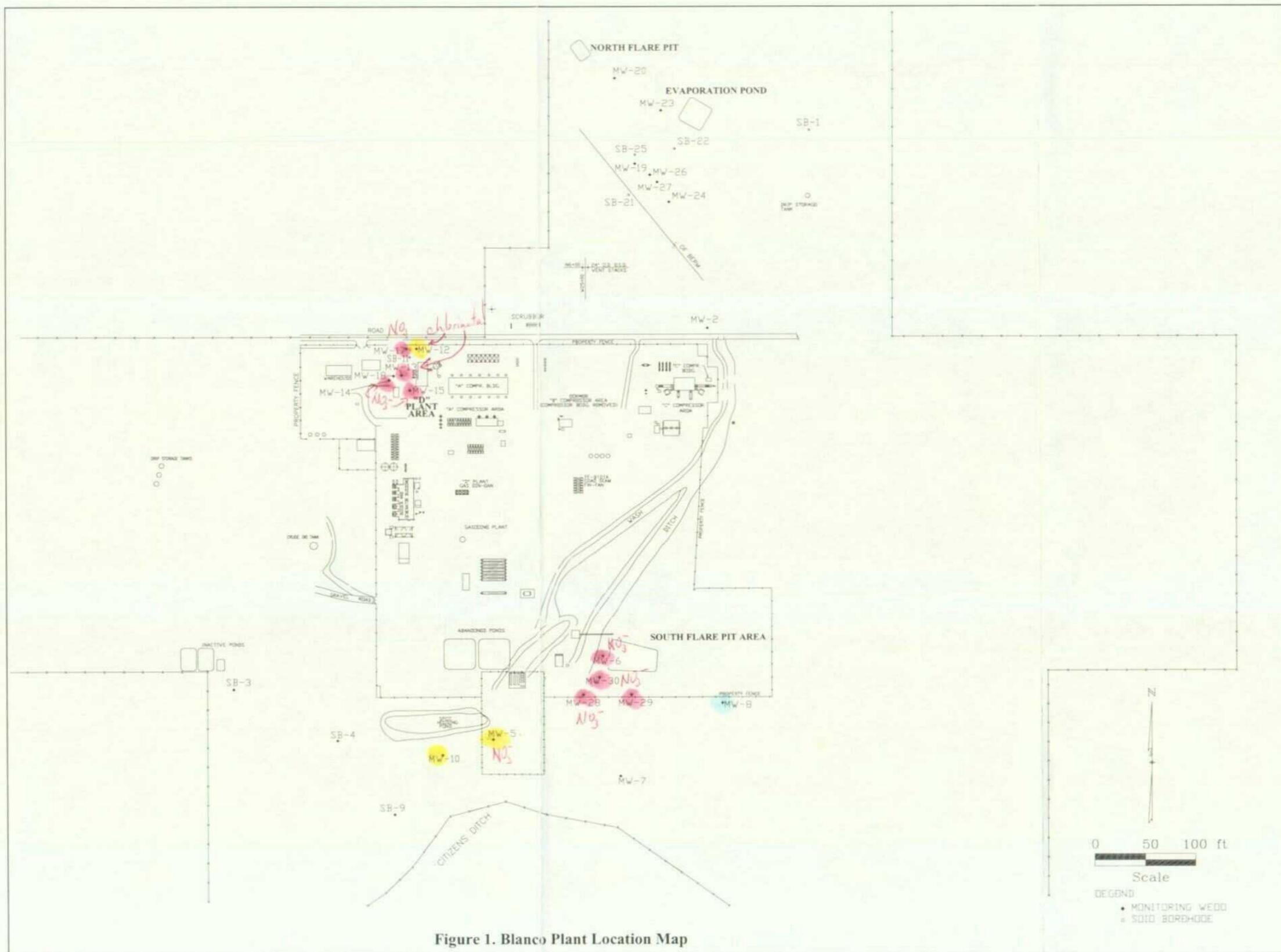


Figure 1. Blanco Plant Location Map

May 8, 2000

Wayne Price  
NM - Oil Conservation Division  
Environmental Bureau  
2040 So. Pacheco Street  
Santa Fe, New Mexico 87505

RECEIVED  
MAY 12 2000  
Environmental Bureau  
Oil Conservation Division

Subject: Attachment to the Discharge Pain GW-049 Approval  
El Paso Natual Gas Blanco Plant Compressor Facility

Please see enclosure from Richard Duarte.

RECEIVED

APR 12 2000

Environmental Bureau  
Oil Conservation Division

April 10, 2000

Wayne Price, Engineer  
NMOCD – Environmental Bureau  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Overnight Mail  
FedEx Air Bill No. 7908 3024 1096

**Re: Discharge Plan GW-049 Inspection at Blanco Plant**

Dear Mr. Price:

The purpose of this letter is to transmit requested documents and update the Bureau on certain items found during the NMOCD inspection on March 9, 2000.

The items below follow the same enumeration and order on the NMOCD Inspection Sheet completed on the day of the inspection.

**1. Drum Storage:** EPNG stored the empty drums on their sides. The replacement-bungs are on order and will be installed upon arrival.

**3. Above Ground Tanks:** (1) EPNG will repair the hole in concrete pad (storing plant vehicle fuel containers) by May 26. EPNG is currently evaluating different applications suitable for permanently sealing the hole and seams. (2) EPNG had Waste Management Inc. replace the existing container with a sealed-bottom container. (3) The end cap was installed and the concrete seals will be done during warmer weather, but no later than May 26.

**5. Labeling:** (1) New labels were painted onto the Filter Drain Drums noting them as such. (2) The vendor replaced the Unichem 1705 label on holding tank (not a drum) at the "C" cooling tower/pumphouse. (3) The labels on the A & D Plant lube oil tanks were enlarged on March 17.

**6. Below Grade Tanks/Sumps:** (1) The secondary containment on evaporator blow-down pit was checked and EPNG does not believe the concrete pit is leaking. (2) No follow-up action was required on this comment.

**12. Does the facility have any other potential environmental concerns/issues:** (1) My reference to the former chromate pit monitoring well/area was in error during the inspection. This area is the former South-Flare Pit remediated for hydrocarbon-contamination and capped. The small yellow stained area near this site was sampled on March 13 and confirmed to contain chromate. The analytical results are enclosed. Regarding items (2), (3) and (4) the areas were remediated in the past and no monitoring is required.

Mr. W. Price, NMOCD Environmental Bureau  
Blanco Plant – Discharge Plan Renewal  
April 10, 2000  
Page 2

**Miscellaneous Comments:** (1) EPNG is currently developing a plan to make steps towards the site's future action. An outline plan will be completed by May 19 and submitted to the NMOCD staff. (2) A copy of the latest manifest for the liquid waste going to Giant is enclosed.

Lastly, for your general information, enclosed please find a map identifying the Plant's monitoring wells.

Please contact me at (505) 831-7763, if you have any questions regarding the enclosed information.

Sincerely,



Richard Duarte  
Principal Environmental Engineer  
Pipelines West – Environment Department

Enclosures

**Copy (with enclosures):**

Denny G. Foust  
NMOCD – Environmental Bureau  
1000 Rio Brazos Street  
Aztec, NM 87410

RECEIVED  
APR 17 2000  
Environmental Bureau  
Oil Conservation Division

IN CASE OF  
EMERGENCY  
CALL: CHEMTREC  
1-800-424-9300

**GIANT**

CRUDE OIL  
GATHERING

558  
TICKET NUMBER

MO. DAY YEAR  
2 29 00

256207

DESCRIPTION	BARRELS
PETROLEUM CRUDE OIL, 3, UN1267, PG III	203
OPERATOR OR LOCATION <i>EL Paso Natural Gas</i>	
LEASE OR COMPANY NAME <i>Blanco Plant</i>	DELIVERY RECEIPT <input type="checkbox"/> <input checked="" type="checkbox"/>
WELL NUMBER <i>T/B</i>	CRUDE GRADE OR PRODUCT <i>Crude</i>
CREDIT	

FOR ACCOUNT OF

LEASE OR TANK LOCATION

UNIT - SEC *14* TWP *29* RGE *11*

COUNTY *San Juan* STATE *NM*

FEDERAL OR STATE LEASE NO. *N/A* GIANT LEASE NO./CODE

TANK SIZE *300* TANK HEIGHT *15-0 1/4* TRUCK NO. *558*

CHECK IF LINE SAMPLED  TANK OR METER NUMBER *GI-7370*

HGT. OF CONNECTION				OIL LEVEL				TEMP
GAGE	FT.	IN.	1/4"	GAGE	FT.	IN.	1/4"	
<input checked="" type="checkbox"/>	3	10	0	1st	14	3	1	40°
BOTTOM BS&W LEVEL				2nd	4	1	3	41°
GAGE	FT.	IN.	1/4"	OBS GVT	TEMP	GROSS		
1st	0	0	0	56.6	50°			
2nd	0	0	0	0.43	TRUE GVT.	EST. GROSS BARRELS		
						203		

METER

TEMPERATURE COMPENSATED? YES  NO

AVERAGE LINE TEMPERATURE

CTL FACTOR

AVERAGE METER PRESSURE METERED

METER FACTOR NET

ON	GAUGER <i>MP Maurer</i>	TIME <i>1:00 P.M.</i>	DATE <i>2-29</i>
	OPERATOR'S WITNESS <i>Manis Yyari</i>	SEAL OFF <i>none</i>	
OFF	GAUGER <i>MP Maurer</i>	TIME <i>1:40 P.M.</i>	DATE <i>2-29</i>
	OPERATOR'S WITNESS <i>Manis Yyari</i>	SEAL ON <i>none</i>	

RECEIVING POINT *Giant Ref. Blvd.* TANK NO.

REMARKS

RECEIVED  
APR 1 2 2000  
Environmental Bureau  
Oil Conservation Division

**SAMPLE KEY**

SAMPLE NUMBER: F00-0020 LOCATION: BLANCO PLANT

MATRIX: SOIL

SAMPLE DESCRIPTION: COMPOSITE OF YELLOW SOIL SPOT EAST OF THE FLARE

S D CONTINUED:

S D CONTINUED:

SAMPLE TIME: 14:00 SAMPLE DATE: 03/13/2000

RECEIVED  
APR 17 2000  
Environmental Bureau  
Oil Conservation Division

**ORIGINAL**

# NEL LABORATORIES

Reno • Las Vegas • Boise  
Phoenix • So. California

Reno Division  
4750 Longley Lane, Suite 106 • Reno, Nevada 89502  
775-348-2522 • Fax: 775-348-2548  
1-800-368-5221

RECEIVED

APR 12 2000  
Environmental Bureau  
Oil Conservation Division

CLIENT: El Paso Natural Gas Co.  
8645 Railroad Dr.  
El Paso, TX 79904  
ATTN: Darrell Campbell

PROJECT NAME: Blanco Plant  
PROJECT #: NA

NEL ORDER ID: P0003044

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 3/14/00.

Samples were analyzed as received.

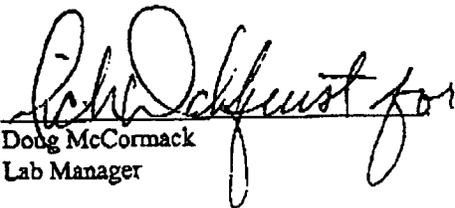
Where applicable we have included the following quality control data:

- Method blank - used to demonstrate absence of contamination or interferences in the analytical process.
- Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.
- Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

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

Some QA results have been flagged as follows:

- C - Sample concentration is at least 5 times greater than spike contribution. Spike recovery criteria do not apply.

  
Doug McCormack  
Lab Manager

3/20/00  
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0605
California	1707	2002	2264
US Army Corps of Engineers	Certified	Certified	

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
L.A.C.S.D.			10228

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.  
PROJECT ID: Blanco Plant  
PROJECT #: NA

CLIENT ID: F00-0020  
DATE SAMPLED: 3/13/00  
NEL SAMPLE ID: P0003044-01

TEST: Metals  
MATRIX: Solid

ANALYST: JY

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/kg</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Chromium	1600	2.5 mg/kg	250	EPA 6010	3/14/00	3/14/00

D.F. - Dilution Factor

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.  
PROJECT ID: Blanco Plant  
PROJECT #: NA  
TEST: Metals

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: P03044-Cr-BLK

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/kg</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Chromium	ND	0.5 mg/kg	50	EPA 6010	3/14/00	3/14/00

D.F. - Dilution Factor

ND - Not Detected

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3

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APR 12 2000  
Environmental Bureau  
Oil Conservation Division

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.  
PROJECT ID: Blanco Plant  
PROJECT #: NA

CLIENT ID: F00-0020  
DATE SAMPLED: 3/13/00  
NEL SAMPLE ID: P0003044-01

TEST: TCLP Metals  
MATRIX: Solid

<u>PARAMETER</u>	<u>RESULT</u> mg/L	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>TCLP/STLC</u> <u>EXTRACTION</u>		
					<u>DATE</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Chromium	86	0.05 mg/L	5	EPA 6010	3/16/00	3/17/00	3/20/00

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Environmental Bureau  
Oil Conservation Division

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.  
PROJECT ID: Blanco Plant  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: P03044I-BLK

TEST: TCLP Metals  
MATRIX: TCLP Extract

PARAMETER	RESULT	REPORTING LIMIT	D. F.	TCLP/STLC EXTRACTION			
				METHOD	DATE	DIGESTED	ANALYZED
Chromium	ND	0.01 mg/L	1	EPA 6010	3/16/00	3/17/00	3/20/00

RECEIVED  
APR 17 2000  
Environmental Bureau  
Oil Conservation Division

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.  
PROJECT ID: Blanco Plant  
PROJECT #: NA  
TEST: Metals  
MATRIX: Solid

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Chromium	P03044-Cr-LCS	41.3	43.8	106	85 - 115	
Chromium	P0003044-01-MS	125	1720	96	75 - 125	
Chromium	P0003044-01-MSD	125	1720	96	75 - 125	0.

RECEIVED  
APR 12 2000  
Environmental Bureau  
Oil Conservation Division

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Co.  
PROJECT ID: Blanco Plant  
PROJECT #: NA  
TEST: TCLP/STLC Metals  
MATRIX: Solid

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Chromium	P03044I-LCS	0.5	0.5	100	85 - 115	
Chromium	P0003044-01-MS	2.5	90.6	184 C	75 - 125	
Chromium	P0003044-01-MSD	2.5	90.7	188 C	75 - 125	2.2

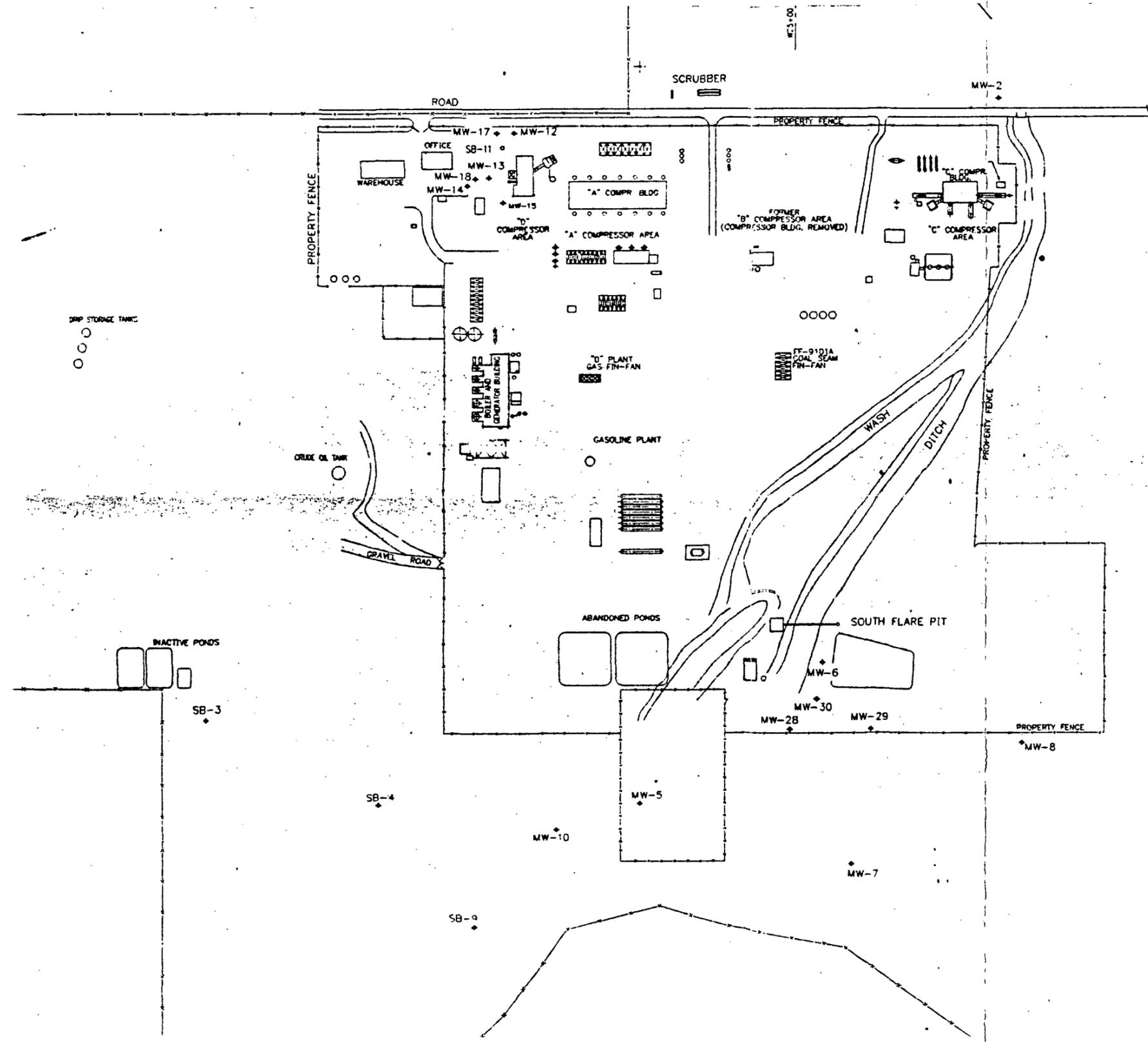
RECEIVED  
APR 17 2000  
Environmental Bureau  
Oil Conservation Division

ND - Not Detected

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RECEIVED  
APR 19 2000  
Environmental Bureau  
Oil Conservation Division



# EL PASO NATURAL GAS COMPANY PSE/LS

01/10/2000

BLANCO PLANT

SKIMMER POND (WEST LDW)

## LEAK DETECTION WELL INSPECTION

**RECEIVED**  
**MAR 09 2000**  
Environmental Bureau  
Oil Conservation Division

TOTAL WELL DEPTH (FEET) =		4.05					
DATE	DEPTH TO OIL (FEET)	DEPTH TO WATER (FEET)	FEET OF OIL	FEET OF WATER	HAS WELL BEEN PUMPED SINCE LAST INSPECTION?	INSPECTED BY	
11/16/1998	0.0	0.00	NONE	NONE	No	C.P.	
02/09/1999	0.00	0.00	NONE	NONE	No	C.P.	
07/07/1999	0.00	0.00	NONE	NONE	No	C.P.	

# EL PASO NATURAL GAS COMPANY PSE/LS

01/10/2000

BLANCO PLANT

SKIMMER POND (EAST LDW)

LEAK DETECTION WELL INSPECTION

RECEIVED  
**MAR 09 2000**  
Environmental Bureau  
Oil Conservation Division

TOTAL WELL DEPTH (FEET) =		4.05				
DATE	DEPTH TO OIL (FEET)	DEPTH TO WATER (FEET)	FEET OF OIL	FEET OF WATER	HAS WELL BEEN PUMPED SINCE LAST INSPECTION?	INSPECTED BY
11/16/1998	0.00	0.00	NONE	NONE	No	C.P.
02/09/1999	0.00	0.00	NONE	NONE	No	C.P.
07/07/1999	0.00	0.00	NONE	NONE	No	C.P.







**EL PASO FIELD SERVICES CO.  
Below Grade Tank & Pond Leak Detection Monitoring Record**

RECEIVED

MAR 09 2000

TECHNICIAN: Dennis Bird

PHONE: 599-2249

Environmental Bureau  
Oil Conservation Division

LAST P.I.D. CALIBRATION: 9/24/97

DATE: 9/24/97

LOCATION	SITE DESCRIPTION	LOCATION	TIME (24 HR.)	FEET OF WATER	P.I.D. (PPM)	OTHER
Blanco Plant	Cooling Pond Leak Det. Well	Blanco Plant	0846	0.40'		DPB Checked
Blanco Plant	Skimmer Pond-East LDW	Blanco Plant	0852	Dry		DPB Checked
Blanco Plant	Skimmer Pond-West LDW	Blanco Plant	0854	Dry		DPB Checked
Blanco Plant	Used Oil Tank	Blanco Plant	0905	Oil		DPB Checked
COMMENTS: Blanco Plant Used Oil Tank Leak Detection System Had 0.10' Of Oil.						

APPROVED BY: John Lambdin

DATE: 03-Oct-97

ORIGINAL



July 19, 1999

RECEIVED

JUL 20 1999

Roger Anderson  
NMOCD – Environmental Bureau  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Overnight Mail  
FedEx Air Bill No. 7907 6401 559  
Environmental Bureau  
Oil Conservation Division

**Re: Discharge Plan GW-049 Renewal; El Paso Natural Gas Company's Blanco Plant,  
near Bloomfield, San Juan County, NM**

Dear Mr. Anderson:

Enclosed please the subject documents. Also enclosed is EPNG Check No. 07423846, in the amount of \$740 to cover the filing fee (\$50) and renewal fee (\$690). Except for the "wash-down" water and stormwater runoff, Blanco Plant is a almost a zero discharge facility, with the majority of all wastewater (99%) discharging into the City of Bloomfield WWTP.

Please contact me at (505) 831-7763 if you have any questions regarding this renewal application or if you wish to schedule a site inspection.

Sincerely,

Richard Duarte  
Principal Compliance Engineer  
Compliance Services Department

Enclosure (application – 1 original & 1 copy)

**Copy (with enclosure): FedEx Air Bill No. 7907 6401 7827**  
Denny G. Foust  
NMOCD – Environmental Bureau  
1000 Rio Brazos Street  
Aztec, NM 87410

Check Date: 07/08/1999

**EL PASO NATURAL GAS COMPANY**  
Refer Payment Inquires to (915) 496-5354

Check No. 07423846

Invoice Number	Invoice Date	Voucher ID	Gross Amount	Discount Available	Paid Amount
CKREQ970799	07/07/1999	00065691	740.00	0.00	740.00

GW-049

Vendor Number	Vendor Name		Total Discounts		
8000001207	NMED WATER QUALITY MANAGEMENT		\$0.00		
Check Number	Date		Total Amount	Discounts Taken	Total Paid Amount
07423846	07/08/1999		\$ 740.00	0.00	\$740.00

ACKNOWLEDGEMENT OF RECEIPT  
OF CHECK/CASH

I hereby acknowledge receipt of check No. 07423846 dated 7/08/99,  
or cash received on \_\_\_\_\_ in the amount of \$ 740<sup>00</sup>  
from EL PASO NATURAL GAS  
for BLANCO PLANT GW-049  
Submitted by: WAYNE PRICE (Facility Name) Date: 8/3/99 (DP No.)  
Submitted to ASD by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received in ASD by: \_\_\_\_\_ Date: \_\_\_\_\_

Filing Fee  New Facility \_\_\_\_\_ Renewal   
Modification \_\_\_\_\_ Other \_\_\_\_\_  
(optional)

Organization Code 521.07 Applicable FY 992000

To be deposited in the Water Quality Management Fund.

Full Payment  or Annual Increment \_\_\_\_\_

THIS MULTITONE AREA OF THE DOCUMENT CHANGES COLOR GRADUALLY AND EVENLY FROM DARK TO LIGHT WITH DARKER AREAS BOTH TOP AND BOTTOM.

EL PASO NATURAL GAS COMPANY P.O. Box 1492 El Paso, TX 79978	CITIBANK DELAWARE A Subsidiary of Citicorp One Penn's Way New Castle, DE 19720 62-20/311	07423846
---	--	----------

Date 07/08/1999 Pay Amount \$740.00\*\*\*  
Void After One Year

Pay \*\*\*\*\*SEVEN HUNDRED FORTY AND XX / 100 US DOLLAR\*\*\*\*\*

To The Order Of NMED WATER QUALITY MANAGEMENT  
2040 S Pacheco  
Santa Fe, NM 87505

GW-049 H. Brent Austin  
Authorized Signature

COPYRIGHT ANTI-FRAUD PROTECTION - PATENTS 4,210,348; 4,227,720; 4,310,180; 5,197,785

District I - (505) 393-6161

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 Departments

Oil Conservation Division

2040 South Pacheco Street

Santa Fe, New Mexico 87505

(505) 827-7131

Revised 12/1/95

Submit Original

Plus 1 Copy

to Santa Fe

1 Copy to appropriate

District Office

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

New

Renewed

Modification

1. Type: Natural Gas Plant Compressor  
2. Operator: El Paso Natural Gas Company  
Address: P. O. Box 1492, El Paso, Texas 79978  
Contact Person: Richard Duarte, Principal Engineer, Compliance Services or Donald R. Payne, Manager, Compliances Services

3. Location: NE ¼ NE ¼ Section 23 Township 27-West Range 13-North

- 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 locaiton 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 soilds. Average daily quality and daily volume of waste water must be included.
- 8. Attach a description of current liquid waste and solid waste collection/treatment/disposal systems.
- 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 rules, regulations, and/or orders.

14. CERTIFICATION

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

NAME: Richard Duarte Title: Principal Compliance Engineer

Signature: Richard Duarte Date: 7/19/99

**Item 1**

*Indicate the major operational purpose of the facility. If the facility is a compressor station include the total combined site rated horsepower.*

The El Paso Natural Gas Company – Blanco Plant (“Blanco Plant”) is engaged in the compression of natural gas. Blanco Plant receives 50 MMCF/day dry gas for compression from Northwest Pipeline Company’s Ignacio Plant and the Gas Company of New Mexico. Then, 550 MMCF/day field gas is scrubbed and compressed for Conoco’s San Juan Plant. This natural gas is obtained from three formation fields: Dakota, Mesa Verde and Picture Cliff. Following compression by Blanco Plant and processing by Conoco, the gas then enters EPNG’s pipelines for transmission to the natural gas markets.

To accomplish this natural gas compression, Blanco Plant utilizes the following:

**“A” Plant:**

Fourteen Cooper-Bessemer GMV-10TF Engines each rated at 913 site-hp.

**“C” Plant:**

Two GE Frame-3 Units each rated at 16,202 site-hp.

**“D” Plant:**

One GE Frame-5B Unit rated at 22,884 site-hp.

The site rated compressor horsepower is 51,868 (at altitude).

Blanco also generates its own electricity and transports any excess to El Paso Field Services’ (EPFS). This is accomplished by capturing exhaust heat (waste heat) from the “C” Plant turbines and one Vogt Class VS bent-tube water steam boiler. Electric power is generated by one of two Elliot SBUG-5 multistage condensing steam turbines.

**Item 2**

*Name of operator or legally responsible party and local representative.*

**Legally Responsible Party**                      Thomas P. Morgan, Vice President  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, TX 79978

**Local Representative**                              Richard Duarte (505) 831-7763  
El Paso Natural Gas Company  
3801 Atrisco Blvd. NW  
Albuquerque, NM 87120

Or

**Local Representative (alternate)**              Donald R. Payne  
El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, TX 79978  
(915) 759-2270

**Operator** El Paso Natural Gas Company  
**Physical Address** #81 County Road 4900  
Bloomfield, NM 87413

**Mailing Address** El Paso Natural Gas Company  
P. O. 127  
Bloomfield, NM 87413  
(505) 632-6001, Russell S. Pyeatt, Manager  
1-800-334-8047  
(24 hour emergency notification)

**Item 3**

*Give a legal description of the location and county. Attach a large-scale topographic map.*

San Juan County, New Mexico  
Township 29 North, Range 11 West, N/2 of the N/2, Section 14; and, also W/2 SE/4 NE/4,  
Section 14 and Portion SW/4 NE/4, Section 14.

Lat.: 36 Degrees 43 Minutes and 43 Seconds  
Long.: 107 Degrees 57 Minutes and 21 Seconds

The topographic map, figure 1, is attached in Appendix A.

**Item 4**

*Attach the name, telephone number and address of the landowner of the facility site.*

El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, TX 79978  
(505) 831-7763 R. Duarte or alternate contact (915) 759-2270 D. R. Payne

**Item 5**

*Attach a description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.*

The Blanco Plant receives raw natural gas from the Picture Cliff Formation, Dakota Formation and Mesa Verde Formation Fields. Gas inlet streams are compressed into the nearby Conoco San Juan Plant for processing and liquids removal.

In the following description, unit processes are classified according to their wastewater production. Processes that produce no wastewater are considered "dry". Those processes that produce wastewater due to contact with hydrocarbons are considered "contact". Lastly, those processes, which produce wastewater that does not contact hydrocarbons, are "non-contact" processes.

**Gas Compressors.** All natural gas that is compressed by reciprocating and centrifugal compressors do not produce wastewater. Any the cooling liquids used within these systems are “closed” and disposed as necessary. A simplified process flow diagram (figure 2, in Appendix A) is included.

**Natural gas scrubbers/separator units.** All inlet gas is passed through one or more scrubber/separator units to remove any water produced with the gas. This wastewater may contain some free and dissolved hydrocarbons. This wastewater is temporarily stored at Blanco’s and then transported to EPFS’ Kutz Separator (GW Discharge Plan 49-01) for further processing.

**Water Treatment.** Makeup water from the San Juan River by way of the Citizens Irrigation Ditch is treated by sand filtration (clarifier) to produce boiler feedwater and cooling tower makeup. Clarifier backwash and cooling tower blowdown produce wastewater. Both waste streams discharge into a concrete surge tank or basin and then directly into the City of Bloomfield wastewater treatment plant (WWTP). Reference figures 3 & 4 in Appendix A.

**Boilers.** The boilers (2-waste heat boilers on turbines and one fired-boiler) produce an average 64,000 lbs./hr of steam. In order to maintain proper boiler operation, a certain quantity of boiler water is “blown down” and replaced with purified makeup water. This prevents an increase in the total dissolved solids (TDS) of the boiler water, which could lead to scale formation and/or corrosion. Approximately 9,648 gallons per day of this type blowdown is discharged into the City of Bloomfield WWTP. Boiler makeup is 25,200 gallons per day: subtracting the blowdown leaves 15,552 gpd that are lost through deaeration or stripping process. It is estimated that 86% of the steam is recycled as condensate. The boiler blowdown is discharged directly into the surge tank and then into the City of Bloomfield’s WWTP.

**Cooling Tower.** One evaporative cooling tower is used to cool compressed gases and for other general cooling process units. The cooling tower recycles much of its water, but some is “blown down” and replaced to prevent a TDS buildup. The cooling tower blowdown is discharge in the surge basin and then on to the City of Bloomfield WWTP. Pursuant to the contract with the City of Bloomfield WWTP, EPNG can not discharge any effluent that is greater than a level of 600 TDS (see contract with Appendix B).

**Domestic sewage.** Domestic Sewage is generated by a plant work force of about 12 people (on shift work). Sewage is treated in four septic tanks and any effluent from these is routed into the sewer discharging to the City of Bloomfield WWTP.

**Storm water.** Located in an alluvial region, the Blanco Plant has good natural drainage. Storm water from the process area is collected concrete-lined and gravel-lined ditched that drain into the SPCC pond. This pond is used to capture and monitor the quality of storm water leaving the compressor plant. The pond is earthen diked on two sides and has two discharge sluice valves. The dike lengths are about 120 feet by 210 feet and are capable of capturing 2 feet of water at the deep end. Any storm water normally evaporates or is the storm event is significant the water is discharged to natural drainage channels.

**Wash-down water.** As necessary, Blanco Plant utilizes high pressure water-jet or high pressure steam to remove solid particulate matter (dust, dirt, weeds, etc.) from fin-fans, process vessels or piping (not contained within a building). The wash-water is not contained.

**Item 6**

*Attach a description of all materials stored or used at the facility.*

Container	ID	Material	Form	Volume	Location	Containment
Closed steel AGT	Flare Liquid	Pipeline liquids	Liquid	6,800 gallons	Near smokeless flare	Impermeable barrier surrounded by graveled dirt berm
Closed steel AGT	Diesel Tank	Diesel fuel	Liquid	500 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	Gasoline Tank	Gasoline Fuel	Liquid	500 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	Safety Solvent	Solvent	Liquid	500 gallons	South of shop	Concrete curb
Closed steel AGT	797 Turbine Oil	Turbine lube oil	Liquid	8,714 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	Kerosene tank	Kerosene fuel	Liquid	4,200	Near "A" Plant	Concrete containment
Closed steel AGT	490 Lube oil	Engine lube oil	Liquid	12,600 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	490 Lube oil	Engine lube oil	Liquid	12,600 gallons	Near "A" Plant	Concrete containment
Closed steel AGT	797 Lube oil	Turbine lube oil	Liquid	12,600 gallons	Near "C" Plant	Concrete containment
Closed Steel AGT	Drip storage tank	Drip liquids	Liquid	12,600 gallons	Southern portion of plant facilities	Impermeable tin and liner barrier overlaid with gravel.

AGT-above ground tank (non-pressurized)

The condensate is transferred via truck transport to the Giant refinery.

MSD sheets for materials at the site are maintained in Blanco Plant office and are available upon request.

**Item 7**

*Attach a description of present sources of effluent and waste solid. Average quality and daily volume of waste water must be included.*

Source	Type of Waste	Volume	Quality
--------	---------------	--------	---------

Compressor sumps and engine drains	Spills, leaks and used engine oil, wash down water, and some rain water collected.	10 bbl/year	Used lube oil and water with detergents
Process wastewater	Cooling tower blowdown, boiler blowdown, produced water and wash down water collected in sumps.	Estimated 119,000 gallons per day discharged to the City of Bloomfield WWTP.	See attached data report. Appendix C.

**Item 8**

*Attach a description of current liquid and solid waste collection/treatment/disposal procedures.*

Type of Waste	Collection	Storage	Hauler	Disposal
Used oil.	Drained to an underground storage sump	ABT steel	Removed as generated by Dawn Trucking	EPFS, Kutz Hydrocarbon Recovery Facility
Condensate, field liquids and produced water	Underground steel pipes	Steel tanks	Water and Hydrocarbons Dawn Trucking	Water-Basin Disposal; Hydrocarbons-Giant Industries

**OCD Transporters/Disposal Facilities**

**Waste Management of Four Corners**, 101 Spruce St., Farmington, NM (505) 327-6284

**Dawn Trucking Company**, 16 County Road 5860, Farmington, NM (505) 327-6314

**Basin Disposal, Inc.**, 6 County Road 5046, Bloomfield, NM (505) 632-8936

**Giant Industries**, 111 County Road 4990, Bloomfield, NM (505) 632-8024

**EPFS, Kutz Hydrocarbon Recovery Facility**, East County Road 4900, Bloomfield, NM (505)632-2803

**Exempt Waste**

Only exempt wastes, such as water from condensate and field liquids, and produced water will be disposed in Class II injection wells (Basin Disposal).

**Non-Exempt, Non-Hazardous Waste**

Waste oil will be collected as generated from the compressor unit and removed from the site by Dawn Trucking. New lube oil will be brought to the site by vendors as needed and stored in the on-line reservoir. Waste oil from the compressor will be taken to EPFS Kutz Hydrocarbon Recovery Facility for storage pending recycling. Engine coolant, for turbines, will be replaced as necessary and removed from the site by the current supply contractor, Dow Chemical, for recycling.

Any, wash down water from the compressor engine will be collected as generated within the "A", "C" and "D" sumps and discharged into the surge basin, treated by oil skimmer and then on to the City of Bloomfield WWTP.

**Hazardous Waste**

Other than fluorescent light bulbs, Lead-acid or Ni-Cad batteries, no RCRA-listed hazardous wastes is expect to be generated at the facility. All batteries are recycled by Safety-Kleen of Farmington, NM.

**Other Solid Waste**

There will be no solid waste or miscellaneous trash disposal at the facility. All solid waste will managed by disposal into the Waste Management dumpsters. One Dumpster handles only drained oil filters. The other Dumpster handles all other miscellaneous solid waste.

**Item 9**

*Attach a description of proposed modifications to existing collection/treatment/disposal system.*

No modifications to the facility are necessary to meet NMOCD requirements.

**Item 10**

*Attach a routine inspection and maintenance plan to ensure permit compliance.*

The facility is manned and will be inspected daily by an operator. Operation and maintenance will be performed and records will be kept according to EPNG procedures. The integrity of any buried piping installed at the facility was last tested in 1996 will be tested again during the year 2001 plant shutdown (usually mid-summer) and then re-tested once every five years. All leak detection wells are observed once every year.

**Item 11**

*Attach a contingency plan for reporting and clean-up of spills or releases.*

EPNG will handle all spills and leaks immediately as required by company procedures and will report all spills and leaks according to the requirements of the State of New Mexico as found in NMOCD Rule 116 and WQCC Section 1203.

Any waste generated will be characterized and profiled in accordance with NMOCD-Approved landfill requirements or solid-waste facility requirements (like Waste Management disposal facility).

**Item 12**

*Attach geological/hydrological information for the facility, Depth to and quality of groundwater must be included.*

The plant is located within the west-central part of the San Juan Basin, a large, asymmetric structural depression that contains up to 15,000 feet of Paleozoic and Mesozoic sediments (Fassett and Hinds, 1971). Maximum topographic relief within 1 mile of the is about 480 feet

with elevations ranging from 5460 to 5937 feet above sea level. The area is characterized by bedrock hillsides and mesas and Plio-Pleistocene gravel terraces of the San Juan and Animas Rivers. Average annual precipitation in the area is 8.5 inches per year.

**Site Geology.** The plant site is located on an alluvial valley fill sloping gently to the south. There are no major drainages crossing the site. Three major soil associations are identified on the plant site; Stumble-Fruitland, Gypsiorthids-Badland-Stumble, and Fruitland sandy loam (C. W. Keetch, 1980). Most of the plant facilities are located on the Stumble-Fruitland association, which developed in alluvium, derived dominantly from sandstone and shale. Permeability is moderate (2.0-6.0 in/hr) in Fruitland soils to very rapid (6.0-20.0 in/hr) in Stumble soils (C. W. Keetch, 1980). For this association runoff is very slow to slow and water erosion potential is low (C. W. Keetch, 1980).

No plant facilities are constructed on the Fruitland sandy loam. It can be found on the southeast part of the plant site. Permeability is moderate (2.0-6.0 in/hr). Runoff is slow, and water erosion potential is low to moderate (C. W. Keetch, 1980).

The plant site is located on alluvium, which fills a canyon cut into the Nacimiento Formation. The alluvium consists of fine to coarse sands, clays and varying combinations of the two. These were deposited by stream and wind action. The soils tend to be weak, compressible and moderately permeable. At the plant site the thickness of the alluvium ranges from less than 3 to 75 feet. The alluvium is deposited on the Nacimiento Formation.

**Regional Ground Water Hydrology.** Three ground-water systems are present in the Tertiary and younger sedimentary deposits in this areas of the San Juan Basin.

- Confined aquifers in Tertiary sandstone units.
  - Unconfined (water table) aquifer in Tertiary sandstone units near the outcrop areas.
  - Unconfined (water table) aquifers in the Quaternary alluvium in river valleys and tributaries.
- Each is described below in more detail.

*Tertiary Sandstone aquifers.* The Tertiary sandstone aquifers of the basin were deposited in fluvial or alluvial environments. Recharge to ground water is by infiltration of precipitation through formation exposures along the flanks of the Nacimiento Uplift and on the broad plateaus that occur in the central part of the basin. Ground water in these aquifers flows from upland recharge areas to discharge areas along canyon floors. Springs and seeps result due to regional topographic and geomorphic controls. The hydraulic gradient is controlled by topography but the structural attitude of the formation can alter the flow direction or gradient. Erosion has removed these units from much of the basin flanks.

Tertiary-sandstone aquifers commonly provide major sources of water for domestic and agricultural usage. The complex intertonguing of sandstone and shale units is primary influence on specific conductance which can be as high as 10,500 umho/cm.

The two Tertiary aquifers occurring beneath the site are the Nacimiento Formation and the Ojo Alamo sandstone. Neither are used as a direct source of water near the plant site. Seepage from the Nacimiento is probably a small source of recharge for the overlying alluvium aquifer.

Transmissivities for the Nacimiento Formation are estimated to be as high as 100 ft<sup>2</sup>/day for coarser and more continuous sandstones. Transmissivities for the Ojo Alamo sandstone range from 0.5 ft<sup>2</sup>/day to 250 ft<sup>2</sup>/day (Stone and others, 1983).

Specific conductance for the sandstones of the Nacimiento Formation ranges from less than 1,500 umhos to greater than 2,000 umhos in the finer grained portions of the unit (Stone and others, 1983). Specific conductance for the Ojo Alamo Sandstones ranges from less than 1,000 umhos to greater than 9,000 umhos (Stone and others, 1983).

*Quaternary-sediment aquifers.* Quaternary-sediment aquifers occur primarily as valley fill in the major river valleys and consist of gravel, sand, silt and clay. Ground-water recharge results from drainage from the irrigated lands, infiltration of the surface runoff and leakage from bedrock aquifers. Flow directions are concurrent with topographic slope and river-flow directions, and hydraulic conductivity can be extremely high. Transmissivities range from less than 1,000 ft<sup>2</sup>/day to more than 40,000 ft<sup>2</sup>/day (Stone and others, 1983).

Quaternary River Valley alluvium is highly variable and specific conductance may range from less than 1,500 to 6,000 umhos (Stone and others, 1983). Water from this source is used for stock, irrigation and domestic purposes. In arroyos and tributaries of the major rivers the ground water quality is also highly variable and specific conductance can be significantly higher than 6,000 umhos.

*Local Ground water hydrology.* Two ground water regimes exist at the Blanco Plant site:

1. Unconfined sandstone aquifer in the Nacimiento Formation;
2. Unconfined aquifer in the canyon-filling alluvium beneath the plant site.

No wells are completed in the Nacimiento Formation near the plant site. Discussion for this aquifer is limited to that presented in the sections above.

The Blanco Plant is constructed on the alluvium filling the canyon beneath the plant site. This alluvium is an unconfined aquifer limited laterally by edges of the canyon it fills. Based on the topography, ground water should flow from the north-northeast to south-southwest beneath the plant site following the general trend of the canyon. The main source of recharge is by rainfall. The recharge area is limited north of the plant site topography and the edges of the buried canyon. A small amount of recharge may occur from water seeping from the sandstone beds of the Nacimiento Formation. South of the plant site recharge is supplemented by irrigation. Depth to water near the south border of the plant site is between 10 and 15 feet below ground surface. Under the plant facilities, water depths have been reported over the last 25 years to range between 14.4 feet and 39 feet. Average transmissivity for the alluvium is estimated to be less than 1,000 ft<sup>2</sup>/day.

*Surface Water Hydrology.* The Blanco Plant is situated at the mouth of an unnamed canyon located between Bloomfield and Hare Canyons, northeast of the town of Bloomfield, at an altitude of about 5,600 feet. The major hydrologic feature in this area is the San Juan River which drains in an east-west direction, some 1.5 miles due south of the plant. Flooding from the San Juan River would not affect the plant because the plant is located some 160 feet above the river and is outside the 100-year flood plain.

The local drainage that could have a potential flooding impact on the plant is the unnamed canyon. Storm runoff from this canyon drains in a northeast to southwest direction, through the plant site area, and continues to the Citizen Ditch which diverts the flows to the Bloomfield and Hare Canyons' watershed.

At the plant site area, this unnamed canyon drains an area of about 0.9 square miles. It is ephemeral with little vegetation cover. The length of this canyon is about 1.5 miles with an average slope of 3%. The time concentration for this canyon was estimated to be 0.6 hours. The soils in the canyon according to the soil survey published by the US Soil Conservation Service (C. W. Keetch, 1980) is silty sand and belongs to the Hydrologic Soil Group B.

The rainfall frequency data were obtained from NOAA Atlas 2 Precipitation – Frequency Atlas of the Western United States Volume IV, New Mexico. The 10-year, 25-year, 50-year and 100-year, 24-hour rainfall amounts were estimated to be 1.7, 2.0, 2.4 and 2.6 inches, respectively.

At present, storm runoff from this canyon is intercepted just to the north of the plant and is channeled into two drainage ditches in the east and west side of the plant site, respectively, with the east ditch carrying the majority of the storm runoff. Both of these drainage ditches have very limited capacities and would not be able to accommodate runoff from a severe storm event. Some local flooding in the vicinity of the ditches would be expected.

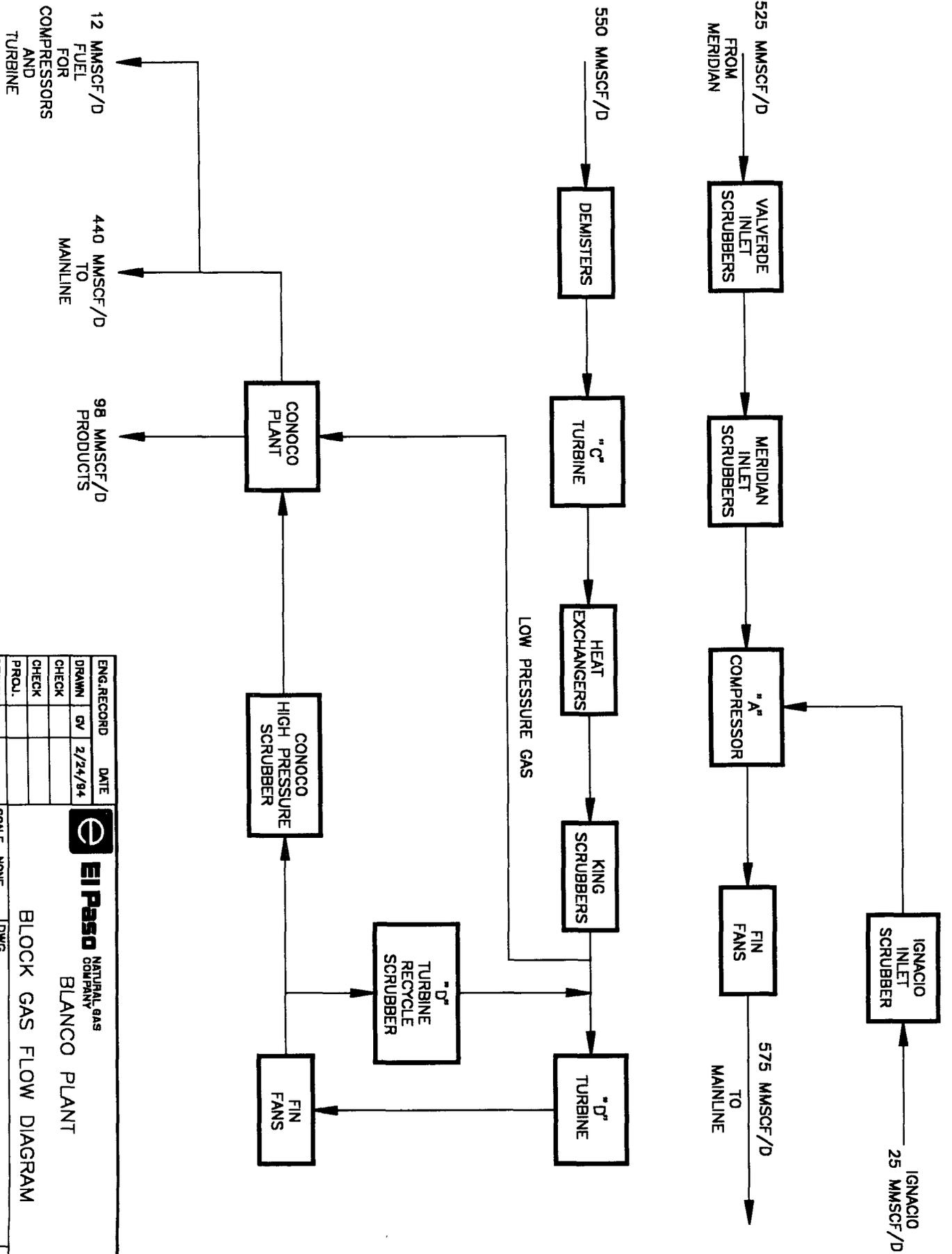
### **Item 13**

*Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.*

All reasonable and necessary measures will be taken to prevent the exceedance of 20 NMAC 6.2.3103 water quality standards should EPNG choose to permanently close the facility. Closure measures will include removal or closure in place of all underground piping and equipment. All tanks will be emptied. No potentially toxic materials or effluents will remain on site. All potential sources of toxic pollutants will be inspected. Should contaminated soil be discovered, any necessary reporting under NMOCD Rule 116 and 20 NMAC 6.2.1203 will be made, and clean-up activities will commence. Post closure maintenance and monitoring plans would not be necessary unless contamination is encountered.



Fig. 2, App. A



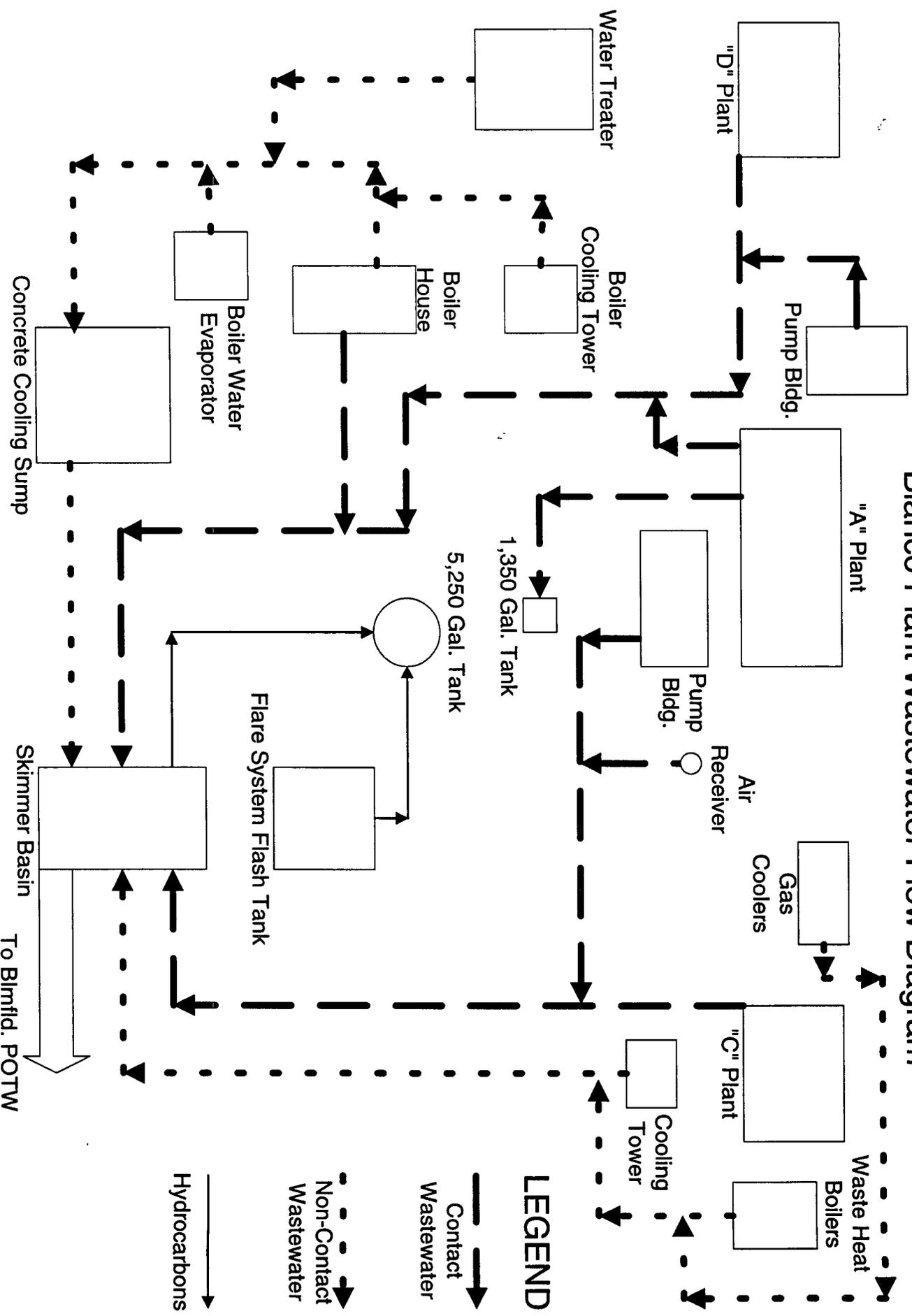
ENG. RECORD	DATE	 <b>El Paso</b> NATURAL GAS COMPANY BLANCO PLANT
DRAWN	CV 2/24/94	
CHECK		
CHECK		
PROJ.		
DESIGN		SCALE NONE
CAD NO.	SP3187	W.O. NO.

BLOCK GAS FLOW DIAGRAM

REV.	1
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El Paso Natural Gas Co.

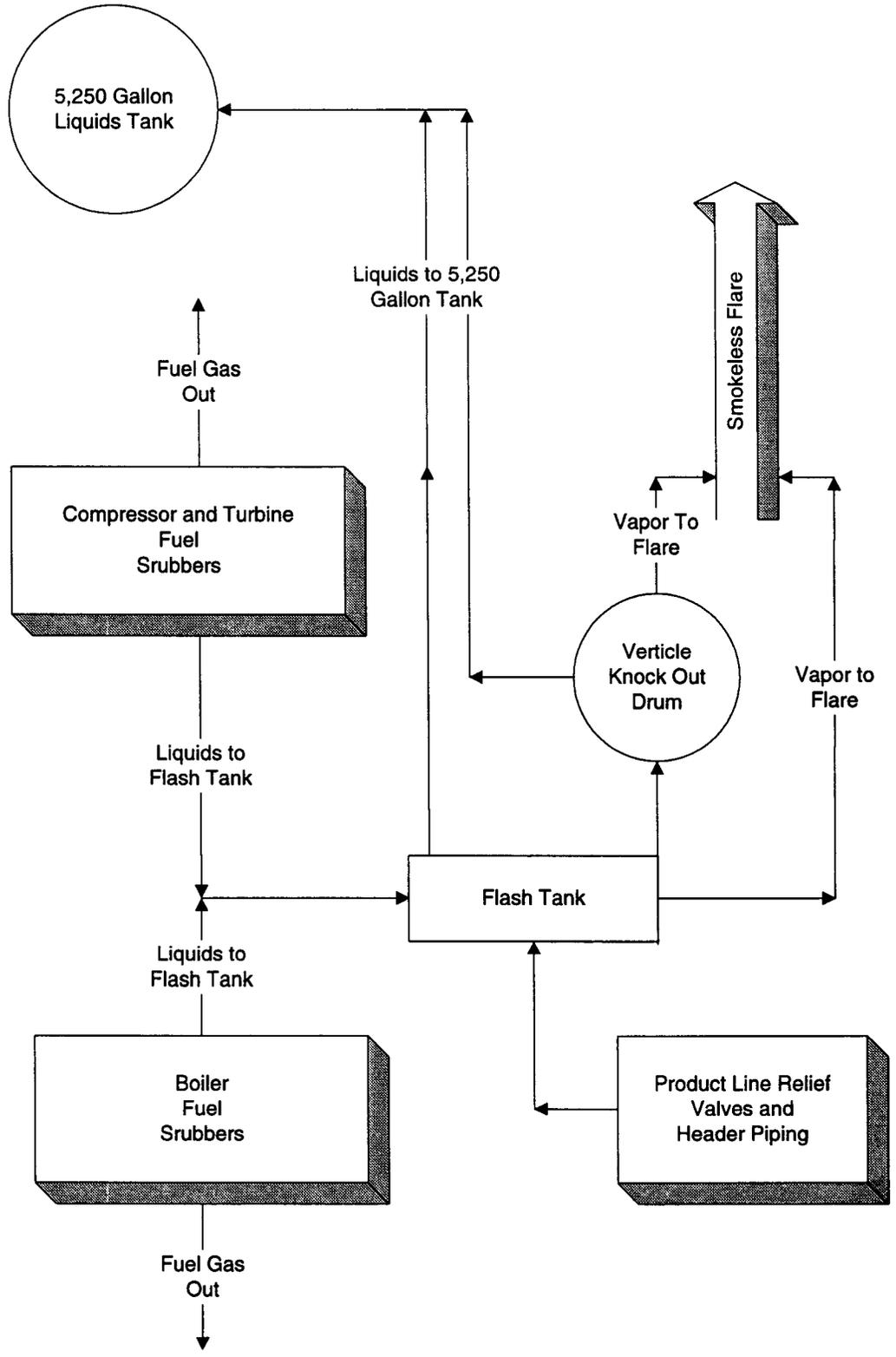
Blanco Plant Wastewater Flow Diagram



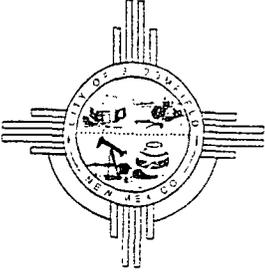
LEGEND

- > Waste Heat
- > Contact Wastewater
- - -> Non-Contact Wastewater
- - - -> Hydrocarbons

# El Paso Natural Gas Co. Blanco Plant Flare System



File: Blanco WW  
Extra-copy



# City of Bloomfield

"Gas Plant Capital - USA"

SIDNEY L. MAESTAS  
Mayor

Council:  
EDWARD WOOD  
LYNNE RANER  
SCOTT TERRY  
KEITH JOHNSON

July 1, 1999

Mr. Richard Duarte, EPNG  
3801 Artisco Blvd. NE  
Albuquerque, NM 87120

Don R. Payne -  
Cris Castillo - Original copy  
C. Padilla -  
Russ Pyeatt -  
Sandra Miller -  
This agreement lasts through 7/30/2002.  
Received by R. Duarte  
on July 6, 1999. Duarte  
831-7763

RE: Wastewater Treatment Agreement

Dear Mr. Duarte:

Enclosed please find one signed copy of the Blanco Station's Wastewater Treatment Agreement with the City of Bloomfield.

Thank you for your cooperation in this matter.

Sincerely,

Carol Miller  
City Clerk

## WASTEWATER TREATMENT AGREEMENT

This Wastewater Treatment Agreement is made and entered into as of this 14th day of June 1999, between the El Paso Natural Gas Company, Blanco Plant, (El Paso), and the City of Bloomfield, New Mexico (the City").

### ARTICLE I

#### EFFECTIVE DATES

This agreement shall be effective as of this 1st day of July 1999, and except as provided herein, shall remain effective for a period of three (3) years ending therefore on the 30th day of July 2002.

### ARTICLE II

#### DEFINITIONS

As used in this Agreement, the following terms shall have the following meanings (such meaning to be equally applicable to both the singular and plural forms of the terms defined):

SECTION 2.1 "Agreement" means this Wastewater Treatment Agreement between El Paso and the City, dated the date written above and all Exhibits attached hereto.

SECTION 2.2 "Cooling Tower Blowdown" means the stream of purged wastewater from the operation of the circulating cooling water system at the Blanco Plant.

SECTION 2.3 "Boiler Blowdown" means the stream of wastewater from the operation of the boilers at the Blanco

Plant.

SECTION 2.4 "Domestic Wastewater" means sanitary sewage wastes collected from the restrooms, kitchen, and office areas of the Blanco Plant.

SECTION 2.5 "Parties" means both El Paso and the City.

SECTION 2.6 "Party" means either El Paso or the City, depending upon the context in which term is used.

SECTION 2.7 "Stormwater" means the water resulting from rainfall runoff from the processing and storage areas of the Blanco Plant.

SECTION 2.8 "Washwater" means water collected from the processing and storage areas of the Blanco Plant resulting from maintenance and cleaning activities.

SECTION 2.9 "Wastewater" means the combined streams of all Wastewater discharged from the Blanco Plant to the City of Bloomfield, New Mexico, Wastewater Treatment System. The streams to be combined include Cooling Tower Blowdown, Boiler Blowdown, Domestic Wastewater, Stormwater and Washwater.

SECTION 2.10 "Wastewater Treatment" means the receipt, treatment and proper discharge of treated wastewater by the City of Bloomfield, New Mexico, Wastewater Treatment System, in accordance with all applicable regulations and permits.

SECTION 2.11 "Wastewater Treatment System" means the piping and treatment equipment operated by the City of Bloomfield, New Mexico, for the receipt, treatment, and discharge of municipal and industrial wastewater.

ARTICLE III

PERFORMANCE

SECTION 3.1 The City will provide Wastewater Treatment for Wastewater from El Paso.

SECTION 3.2 El Paso will discharge Wastewater to the City in accordance with the quality limitations listed in Exhibit A except as provided herein. El Paso will meet the Total Dissolved Solids ("TDS") limit of 600 mg/l so long as such limit does not cause the City to exceed limits set by the Environment Works ("EPA") for Publicly Owned Treatment Works ("POTW") or cause the City not to comply with the Colorado River Basin Salinity Control Act (Public Law 93-32, June 24, 1974). In the event that the City no longer complies with POTW limits or the Colorado River Basin Salinity Control Act and El Paso's TDS discharge is 600 mg/l, the City will immediately notify El Paso of its reasonable requirements to appropriately adjust El Paso's TDS limits for that period of time necessary to bring the City into compliance with all relevant laws.

SECTION 3.3 El Paso will provide analytical testing of Wastewater discharged to the City by El Paso, according to the list of tests, at such frequency as shown in Exhibit A and bear all costs related to such analyses.

SECTION 3.4 The City, at the City of Bloomfield Wastewater Treatment System Superintendent's discretion, will collect 24-hours time Proportional Sample of water discharged from El Paso to the Wastewater Treatment System and will analyze the water and bear all costs related to such analyses.

SECTION 3.5 El Paso will maintain in good working order that effluent flow meter installed by El Paso for use by the City in determining the quantity of Wastewater discharged to the Wastewater Treatment System.

ARTICLE IV  
REPORTING

SECTION 4.1 El Paso will provide the results of analyses performed under Section 3.3 herein to the City within 10 days of their receipt by El Paso. El Paso will report all test results to the City at the intervals described in Exhibit A.

SECTION 4.2 El Paso will, as soon as possible after recognition, report any upset, abnormal operation, emergency, or other condition that could reasonably be expected to result in adverse impact upon the operation of the Wastewater Treatment System. El Paso will report such incidents and conditions to the City of Bloomfield Engineer/Planner, as required in Section 18-70, City Code of the City of Bloomfield (as amended). See Exhibit B for text of Section 18-70.

ARTICLE V  
COST REIMBURSEMENT

SECTION 5.1 El Paso will pay industrial user rates for treatment of Wastewater. The industrial user rates mandated at Section 18-54 (4) of the City Code of the City of Bloomfield (as amended) require that El Paso pay FIFTY-ONE DOLLARS (\$51.00) each month for the first 50,000 gallons of Wastewater discharged into the Wastewater Treatment System and ONE DOLLAR and SIXTY CENTS (\$1.60) each month for each additional 1, 000 gallons of Wastewater discharged into the Wastewater Treatment System. Quantities of Wastewater shall be measured by a flow meter installed according to Section 3.5 above. See Exhibit B for text of Section 18-54(4).

SECTION 5.2 El Paso and the City shall review the monthly rate being charged on an annual basis. At such time, upon review, the parties may change the rate through written mutual agreement. If, upon review, the parties cannot agree upon the monthly rate to be charged, either party may terminate this Agreement to be effective in thirty (30) days upon written notice to the other party.

ARTICLE VI  
DAMAGES

In the event El Paso discharges or causes to discharge any substance or material which results in an adverse impact upon the operation of the Wastewater Treatment System, El Paso shall promptly pay the city all actual damages as a result of said discharge, pursuant to Section 18-71 City Code of the City of Bloomfield (as amended).

See Exhibit B for full text of Section 18-71.

#### ARTICLE VII

##### INSPECTIONS, MONITORING AND ENTRY BY THE CITY

El Paso shall comply with the city Code of the City of Bloomfield, Section 18-72, in allowing the City to inspect and monitor El Paso's Wastewater discharge provided all entries by the City on El Paso property are limited to inspection and monitoring of El Paso's Wastewater equipment. Due to the nature of the gas transmission business and the desire to reduce unnecessary risk to any of the City's authorized representatives, all on-site inspectors shall adhere to El Paso's safety procedures. Except in the event of an emergency, all on-site inspectors must be accompanied by an El Paso representative. See Exhibit B for full text of Section 18-72.

#### ARTICLE VIII

##### ATTORNEY'S FEES

In the event the City incurs attorney's fees or costs to enforce the terms of this Agreement or attorney's fees, costs, fines or penalties as a result of a third party action due to El Paso's non-compliance of the terms of this Agreement, the city shall be paid any such attorney's fees, costs, fines and penalties by El Paso. Section 18-72 City Code of the City of.

Bloomfield (as amended). See Exhibit B for full text of Section 18-72.

ARTICLE IX  
ASSIGNMENT

Neither Party may assign its rights under this Agreement without prior written consent of the other Party. Neither Party shall unreasonably withhold its consent to the assignment of rights under this Agreement.

ARTICLE X  
GOVERNING LAW

All provisions of this Agreement shall be governed by and construed in accordance with applicable Federal Regulations and the laws of the State of New Mexico, excluding any conflict of law, rule or principle that might apply the laws of another jurisdiction. Each Party is responsible for abiding by all such laws and regulations in its operations.

ARTICLE XI  
MISCELLANEOUS PROVISIONS

SECTION 11.1 The Section headings contained in this Agreement are for the convenience of the Parties only and shall not be interpreted as part of this Agreement.

SECTION 11.2 This Agreement shall not be modified except by written instrument mutually executed by duly authorized representatives of the respective Parties.

SECTION 11.3 Waiver by one Party of the other's breach of any provision of this Agreement shall not be deemed a waiver of any subsequent or continuing breach of such provision or of the breach of any other provision or

provisions of this Agreement.

SECTION 11.4 This Agreement may be renewed or extended upon the mutual agreement and written verification of both Parties.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed in two (2) counterparts by their duly authorized representatives as of the day and year first above written.

CITY OF BLOOMFIELD

ATTEST:

BY: Carol Miller  
Carol Miller  
City Clerk

BY: Sidney L. Maestas  
Sidney Maestas  
Mayor

EL PASO NATURAL GAS COMPANY <sup>ESL</sup>

ATTEST:

BY: G. J. Castillo

BY: Thomas P. Morgan  
Thomas P. Morgan  
~~Larry R. Tarver~~

TITLE: Attorney at Law

Vice President

EXHIBIT A

ANALYTICAL TESTS  
TO BE PERFORMED BY EL PASO  
ON WASTEWATER DISCHARGED  
TO THE CITY OF BLOOMFIELD

		PARAMETERS	
I. Analyses to be performed			
Monthly:	* TOTAL DISSOLVED SOLIDS	600.00	mg/l
II. Analyses to be performed			
Semi-Annually:	OIL and GREASE (Freon Ext.)	50.00	mg/l
	ETHYBENZENE	0.75	mg/l
	TOTAL XYLENES	0.62	mg/l
	CHLOROFORM	0.10	mg/l
	BIOCHEMICAL OXYGEN DEMAND (5 DAY)	200.00	mg/l
	CHEMICAL OXYGEN DEMAND	500.00	mg/l
	TOTAL SUSPENDED SOLIDS	200.00	mg/l
III. Analyses to be performed			
Annually:	ARSENIC (As)	0.10	mg/l
	BARIUM (Ba)	1.00	mg/l
	CADMIUM (Cd)	0.01	mg/l
	CHROMIUM (Cr)	0.05	mg/l
	CYANIDE (CN)	0.20	mg/l
	FLOURIDE (F)	1.60	mg/l
	LEAD (ph)	0.05	mg/l
	TOTAL MERCURY (Hg)	0.002	mg/l
	NITRATE (NO <sub>3</sub> as N)	10.00	mg/l
	SELENIUM (Se)	0.05	mg/l
	SILVER (Ag)	0.05	mg/l
	URANIUM (U)	5.00	mg/l
	CHLORIDE (Cl)	250.00	mg/l
	COPPER (Cu)	1.00	mg/l
	IRON (Fe)	1.00	mg/l
	MANGANESE (Mu)	0.20	mg/l
	SULFATE (SO <sub>4</sub> )	600.00	mg/l
	ZINC (Zn)	10.00	mg/l
	pH	Between 6 & 9	
	ALUMINUM (Al)	5.00	mg/l
	BORON (B)	0.7	mg/l
	COBALT (Co)	0.05	mg/l
	MOLYBDENUM (Mo)	1.00	mg/l
	NICKEL (Ni)	0.20	mg/l
	PHOSPHATES (Total)	15.00	mg/l
	PHENOL	0.05	mg/l

\* See § 3.2

EXHIBIT B

CITY CODE OF THE CITY OF BLOOMFIELD (as amended)  
SELECTED SECTIONS

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SECTION 18-53 (3): "Industrial User": An industrial user is defined as a user connected to the city sewer system contributing waste to the system having a composition unlike ordinary domestic waste, produced from water used in a manufacturing or industrial process.

SECTION 18-54: The rates for sewer users shall be as follows:

- (4) Industrial users:
  - a. First 50,000 gallons, minimum per month, \$51.00.
  - b. Over 50,000 gallons, per each additional 1,000 gallons, \$1.60.

SECTION 18-70: DANGEROUS DISCHARGE NOTIFICATION  
REQUIREMENTS.

- (a.) Telephone Notification - Any person causing or suffering any discharge whether accidental or not which presents or may present an imminent or substantial endangerment to the health and welfare of persons, to the environment, or which is likely to cause interference with the POTW, shall notify the treatment plant.
- (b.) Written Report - Within five (5) days following such occurrence, the user shall provide the City with the detailed written report describing the cause of the dangerous discharge and measures to be taken by the user to prevent similar future occurrences. Such notification shall not relieve the user of any expenses, loss, damage, or other liability which may be incurred as a result of damage to the POTW, or any other damage to person or property; nor shall such notification relieve the user of any fines, civil penalties, or other liability which may be imposed by this division or other applicable law.
- (c.) Notice to Employees - A notice shall be permanently posted on the user's

bulletin board or other prominent place advising employees who to call in the event of a dangerous discharge. Employers shall insure that all employees who may cause or suffer such a dangerous discharge to occur and advise of the emergency notification procedure. (Ord. No. 203, s 7 -4-1187)

SECTION 18-71: ENFORCEMENT AND ABATEMENT

- (a.) Public Nuisances - Discharge of wastewater in any manner in violation of this division or any condition that endangers the publicly owned treatment works is declared a public nuisance and shall be corrected or abated as provided herein.
- (b.) City May Notify User of Violation - Whenever the City determines or has reasonable cause to believe that a discharge of wastewater has occurred in violation of the provisions of this division, the City may notify the user of the violation and request voluntary compliance. Failure of the City to provide notice to the user shall not in any way relieve the user from any consequences of a wrongful or illegal discharge.
- (c.) Conciliation Meeting - The City may, but shall not be required to, invite representatives of the user to a conciliation meeting to discuss the violation and methods of correcting the cause of the violation. Additional meeting may also be held as required. If the user and Mayor or his representative can agree to appropriate remedial and preventative measures, they shall commit such an agreement to writing with provisions for a reasonable compliance schedule. If an agreement is not reached through the conciliation process within sixty (60) days and a violation of the provision of this division continues, the City shall take whatever appropriate action may be required to bring the user into compliance with the division.
- (d.) Citation to Municipal Court - The plant superintendent or wastewater supervisor may also cite the user to municipal court for violation of any provision of this division.
- (e.) Injunctive Relief - As an addition means of enforcement, the City attorney may, in the name of the City of Bloomfield, file in the district court of San Juan County, or such other courts as may have jurisdiction, a suit seeking the issuance

of an injunction, damages, or other appropriate relief to enforce the provisions of this division or other applicable law or regulation. Suit may be brought to recover any and all damages suffered by the City as a result of any action or inaction of any user or other person who causes or suffers damage to occur to the POTW or for any other expense, loss or damage of any kind or nature suffered by the City.

(f.) Assessment of Damages to Users

(1) When a discharge of waste causes an obstruction, damage, or any other impairment to the facilities or any expense of whatever character or nature to the City, the City shall assess the expenses incurred by the City to clear the obstruction, repair damage to the facility, and any other expenses or damages incurred by the city. The attorney of the City shall file a claim with the user or any other person causing or suffering said damages to incur seeking reimbursement for any and all expenses or damage suffered by the City. If the claim is ignored or denied, the department shall notify the City Attorney to take such measures as shall be appropriated to recover any expenses or other damages suffered by the City.

(2) In addition to other remedies for enforcement provided herein, the City may petition the State of New Mexico or the United States, EPA, as appropriate, to exercise such methods or remedies as shall be available to such government entities to seek criminal or civil penalties, injunctive relief, or other remedies as may be provided by applicable federal or state law to insure compliance by users of applicable pretreatment standards, to prevent the pollutants into the POTW, or to prevent such other water pollution as may be required by state or federal law.

(g.) Emergency Termination of Service - In the event of an actual or threatened discharge to the POTW of any pollutant which in the opinion of the plant superintendent presents or may present an imminent and substantial endangerment to the health and welfare of persons, or cause interference with the POTW, the plant superintendent or in his absence the person then in charge of the treatment works shall immediately notify the City Planner/Engineer of the nature of the emergency. The superintendent shall also attempt to notify the user or the

person causing the emergency and request their assistance in abating the same. Following consultation with the aforementioned officials of the City or in their absence such officials of the City as may be available, the superintendent shall temporarily terminate the service of such user or users as are necessary. Such service shall be restored by the respondent, when the superintendent is satisfied that the violation has been corrected. (Ord. No. 203,m § 8,5-11-87)

SECTION 18-72:      **INSPECTIONS, MONITORING AND ENTRY.**

(a.)    **Specific Requirements and Right of Entry - Whenever required to carry out the objectives of this division, including, but not limited to; (1) developing or assisting in the development of any effluent limitations, prohibitions, or effluent standard, pretreatment standard, standard of performance, or permit condition under this division; (2) Determining whether any person is in violation of any such effluent limitation, prohibition or effluent standard, pretreatment standard, standard of any performance, or permit condition; (3) enforcing any requirement established under this section:**

- (1)    **The superintendent shall require any user to:**
  - a.      **Establish and maintain records as necessary;**
  - b.      **Make reports as necessary;**
  - c.      **Provide a sampling manhole or any other device or facility suitable and appropriate to enable the superintendent or his authorized representative to conduct gauging and sampling operations to determine conformance with criteria and effluent standards of Section 3 adopted by this ordinance;**
  - d.      **Sample such effluents, in accordance with such methods, at such locations, at such intervals, and in such manner as the superintendent shall prescribe;**
  - e.      **Provide such other information as the superintendent may reasonably require.**

(2)    **The superintendent or his authorized representative, upon notification of Plant Superintendent, presentation of his credentials:**

- a. Shall have a right of entry to, upon or through any premises in which an effluent source is located or in which any records are required to be maintained under subsection (1)(a) herein are located; and
- b. May at reasonable times have access to and copy any records, inspect any monitoring equipment or method required herein and sample any effluents which the owner or operator of such source is required to sample under such clause. (Ord. No. 203 § 9. 5-11-87)

# EL PASO FIELD SERVICES

Field Services Laboratory  
Analytical Report

## SAMPLE IDENTIFICATION

EPFS LAB ID:	990017
DATE SAMPLED:	01/20/99
TIME SAMPLED (Hrs):	0830
SAMPLED BY:	Chuck Padilla
MATRIX:	Water
EPNG LAB ID:	F99002
SAMPLE SITE NAME:	Blanco Plant
SAMPLE POINT:	Total Wastewater Discharge

FIELD REMARKS:

## GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Total Dissolved Solids	434	PPM	01/20/99
Lab Duplicate	438	PPM	01/20/99

Lab Remarks:

Duplicate at 438 mg/L for an RPD of 0.9%.  
ERA QC sample at 934 mg/L out of 930 for a % Recovery of 100.4%.

All QA/QC is acceptable.

Reported By: JAL

Approved By: John Padilla

Date: 1-21-99

990017BlancoWWTDS

**CHAIN OF CUSTODY RECORD**

PROJECT NUMBER		PROJECT NAME		CONTRACT LABORATORY																																									
		Please Delivery to City of Abilene		Field Services Eacmington																																									
SAMPLERS: (Signature)																																													
LAB ID	DATE	TIME	MATRIX	SAMPLE NUMBER	REMARKS																																								
990017	1-20-99	0830	Water	F990002																																									
<del>_____</del>																																													
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BILL NO.:		CHARGE CODE		RESULTS & INVOICES TO:		RECEIVED BY: (Signature) <i>[Signature]</i>		DATE/TIME 1-20-99 1333																																					
				LABORATORY SERVICES EL PASO NATURAL GAS COMPANY 8645 RAILROAD DRIVE EL PASO, TEXAS 79904 915-759-2228   FAX: 915-759-2335																																									



Field Services Laboratory  
Analytical Report

**SAMPLE IDENTIFICATION**

EPFS LAB ID:	990040
DATE SAMPLED:	02/17/99
TIME SAMPLED (Hrs):	0830
SAMPLED BY:	Chuck Padilla
MATRIX:	Water
EPNG LAB ID:	F990014
SAMPLE SITE NAME:	Blanco Plant
SAMPLE POINT:	Total Discharge

FIELD REMARKS:

**GENERAL CHEMISTRY WATER ANALYSIS RESULTS**

PARAMETER	RESULT	UNITS	DATE ANALYZED
Total Dissolved Solids	392	PPM	02/17/99
Lab Duplicate	400	PPM	02/17/99

Lab Remarks:

Lab duplicate at an RPD of 2.0 %.

Lab control sample (ERA#9980) at 1054 PPM (Actual = 1080) for an RPD of 2.5%

Approved By: John Padilla

Date: 2/19/99



# EL PASO FIELD SERVICES

Field Services Laboratory  
Analytical Report

## SAMPLE IDENTIFICATION

EPFS LAB ID:	990100
DATE SAMPLED:	03/17/99
TIME SAMPLED (Hrs):	0830
SAMPLED BY:	Chuck Padilla
MATRIX:	Water
EPNG LAB ID:	F990019
SAMPLE SITE NAME:	Blanco Plant
SAMPLE POINT:	Total Discharge

FIELD REMARKS:

## GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Total Dissolved Solids	432	PPM	03/19/99
Lab Duplicate	438	PPM	03/19/99

Lab Remarks:

Lab duplicate at an RPD of 3.1 %.

Lab control sample (ERA#9980) at 1052 PPM (Actual = 1080) for an RPD of 2.6%

Approved By:

*John F. ...*

Date: 3/22/99



SAMPLE KEY

SAMPLE NUMBER: F99-0019 LOCATION: BLANCO PLANT

MATRIX: WATER

SAMPLE DESCRIPTION: WASTEWATER DISCHARGE TO THE CITY OF BLOOMFIELD

S D CONTINUED: MONTHLY AND QUARTERLY ANALYSIS

S D CONTINUED:

SAMPLE TIME: 08:30 SAMPLE DATE: 03/12/99

# NEL LABORATORIES

Reno • Las Vegas  
Phoenix • Irvine

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: Blanco Discharge-Quarterly  
PROJECT NUMBER: NA

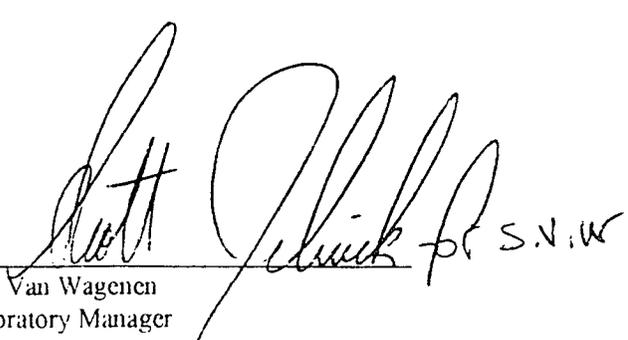
NEL ORDER ID: P9903048

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

Samples were received by NEL in good condition, under chain of custody on 3/18/99.

Samples were analyzed as received.

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

  
Stan Van Wageningen  
Laboratory Manager

03/25/99  
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>		<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0583	Idaho	Certified	Certified	
California	1707	2002	2264	Montana	Certified	Certified	
US Army Corps of Engineers	Certified	Certified	Certified	Nevada L.A.C.S.D.	NV033	NV052	CA084 10228

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge-Quarterly/NA  
 OBJECT #: NA

CLIENT ID: F990019  
 DATE SAMPLED: 3/17/99  
 NEL SAMPLE ID: P9903048-01

TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Oil & Grease	ND	2.	1	EPA 413.1	mg/L	3/23/99
Total Suspended Solids	6.80	2.	1	SM 2540 D	mg/L	3/22/99

*QUALITY CONTROL DATA:*

<u>Sample ID</u>	<u>Test</u>	<u>Result</u>	<u>Acceptable Range</u>	<u>Sample Number</u>
Blank, 990322OG -BLK	Oil & Grease	ND	< 2. mg/L	NA
LCS, 990322OG - LCS	Oil & Grease	96 %	80 - 120	NA
LCSD 990322OG - LCSD	Oil & Grease	97 %	80 - 120	NA

D.F. - Dilution Factor

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge-Quarterly/NA  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990322OG-BLK

TEST: Non-Metals

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>mg/L</u>	<u>ANALYZED</u>
Oil & Grease	ND	2	1	EPA 413.1	mg/L	3/23/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge-Quarterly/NA  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990322tss-BLK

TEST: Non-Metals

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>mg/L</u>	<u>ANALYZED</u>
Total Suspended Solids	ND	2	1	SM 2540 D	mg/L	3/22/99

D.F. - Dilution Factor

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge-Quarterly/NA  
 OBJECT #: NA

CLIENT ID: F990019  
 DATE SAMPLED: 3/17/99  
 NEL SAMPLE ID: P9903048-01

TEST: Purgeable Organic Compounds by EPA 624, July 1998

MATRIX: Aqueous  
 DILUTION: 1

ANALYST: SEJ - Las Vegas Division  
 EXTRACTED: 3/22/99  
 ANALYZED: 3/22/99

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Benzene	ND	2 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
Dibromochloromethane	ND	5. µg/L
cis-1,2-Dichloroethene	ND	5. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L
s-1,2-Dichloroethene	ND	5. µg/L
t-1,2-Dichloroethene	ND	5. µg/L
1,2-Dichloropropane	ND	5. µg/L
cis-1,3-Dichloropropene	ND	5. µg/L
trans-1,3-Dichloropropene	ND	5. µg/L
Ethylbenzene	ND	2 µg/L
Methylene chloride (Dichloromethane)	ND	5. µg/L
Styrene	ND	5. µg/L
1,1,2,2-Tetrachloroethane	ND	5. µg/L
Tetrachloroethene (PCE)	ND	5. µg/L
Toluene	ND	2 µg/L
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L
Trichloroethene (TCE)	ND	5. µg/L
Trichlorofluoromethane (Freon 11)	ND	10. µg/L
Vinyl chloride	ND	5. µg/L
m,p-Xylene	ND	2 µg/L
o-Xylene	ND	2 µg/L

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	99	86 - 115
Dibromofluoromethane	98	86 - 118
Toluene-d8	97	88 - 110

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge-Quarterly/NA  
 OBJECT #: NA

CLIENT ID: Trip Blank  
 DATE SAMPLED: 3/11/99  
 NEL SAMPLE ID: P9903048-02

TEST: Purgeable Organic Compounds by EPA 624, July 1998

MATRIX: Aqueous  
 DILUTION: 1

ANALYST: SEJ - Las Vegas Division  
 EXTRACTED: 3/22/99  
 ANALYZED: 3/22/99

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Benzene	ND	2 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
Dibromochloromethane	ND	5. µg/L
cis-1,2-Dichloroethene	ND	5. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L
trans-1,2-Dichloroethene	ND	5. µg/L
1,1,2-Dichloropropane	ND	5. µg/L
cis-1,3-Dichloropropene	ND	5. µg/L
trans-1,3-Dichloropropene	ND	5. µg/L
Ethylbenzene	ND	2 µg/L
Methylene chloride (Dichloromethane)	ND	5. µg/L
Styrene	ND	5. µg/L
1,1,2,2-Tetrachloroethane	ND	5. µg/L
Tetrachloroethene (PCE)	ND	5. µg/L
Toluene	ND	2 µg/L
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L
Trichloroethene (TCE)	ND	5. µg/L
Trichlorofluoromethane (Freon 11)	ND	10. µg/L
Vinyl chloride	ND	5. µg/L
m,p-Xylene	ND	2 µg/L
o-Xylene	ND	2 µg/L

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	100	86 - 115
Dibromofluoromethane	97	86 - 118
Toluene-d8	97	88 - 110

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge-Quarterly/NA  
 OBJECT #: NA

CLIENT ID: Method Blank  
 DATE SAMPLED: NA  
 NEL SAMPLE ID: 990322624-BLK

TEST: Purgeable Organic Compounds by EPA 624, July 1998

MATRIX: Aqueous

ANALYST: SEJ - Las Vegas Division  
 EXTRACTED: 3/22/99  
 ANALYZED: 3/22/99

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
Benzene	ND	2 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
Dibromochloromethane	ND	5. µg/L
cis-1,2-Dichloroethene	ND	5. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L
trans-1,2-Dichloroethene	ND	5. µg/L
1,2-Dichloropropane	ND	5. µg/L
cis-1,3-Dichloropropene	ND	5. µg/L
trans-1,3-Dichloropropene	ND	5. µg/L
Ethylbenzene	ND	2 µg/L
MTBE	ND	10. µg/L
Methylene chloride (Dichloromethane)	ND	5. µg/L
Styrene	ND	5. µg/L
1,1,2,2-Tetrachloroethane	ND	5. µg/L
Tetrachloroethene (PCE)	ND	5. µg/L
Toluene	ND	2 µg/L
1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L
1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L
Trichloroethene (TCE)	ND	5. µg/L
Trichlorofluoromethane (Freon 11)	ND	10. µg/L
Vinyl chloride	ND	5. µg/L
m,p-Xylene	ND	2 µg/L
o-Xylene	ND	2 µg/L

**QUALITY CONTROL DATA:**

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
4-Bromofluorobenzene	96	86 - 115
Dibromofluoromethane	98	86 - 118
Toluene-d8	98	88 - 110

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge-Quarterly/NA  
 OBJECT #: NA  
 TEST: Purgeable Organic Compounds by EPA 624, July 1998  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Benzene	990322624-LCS	20	18.88	94	37 - 151	
Benzene	P9903048-01-MS	20	19	95	37 - 151	
Benzene	P9903048-01-MSD	20	19	95	37 - 151	0.
Bromodichloromethane	990322624-LCS	20	17.8	89	35 - 155	
Bromodichloromethane	P9903048-01-MS	20	20	100	35 - 155	
Bromodichloromethane	P9903048-01-MSD	20	20	100	35 - 155	0.
Bromoform	990322624-LCS	20	17.84	89	25 - 242	
Bromoform	P9903048-01-MS	20	20	100	25 - 242	
Bromoform	P9903048-01-MSD	20	20	100	25 - 242	0.
Carbon tetrachloride	990322624-LCS	20	18.66	93	45 - 169	
Carbon tetrachloride	P9903048-01-MS	20	18	90	45 - 169	
Carbon tetrachloride	P9903048-01-MSD	20	18	90	45 - 169	0.
Chlorobenzene	990322624-LCS	20	18.48	92	70 - 140	
Chlorobenzene	P9903048-01-MS	20	18	90	70 - 140	
Chlorobenzene	P9903048-01-MSD	20	18	90	70 - 140	0.
Chloroethane	990322624-LCS	20	20.04	100	37 - 160	
Chloroethane	P9903048-01-MS	20	19	95	37 - 160	
Chloroethane	P9903048-01-MSD	20	20	100	37 - 160	5.1
Chloroform	990322624-LCS	20	18.49	92	25 - 230	
Chloroform	P9903048-01-MS	20	19	95	25 - 230	
Chloroform	P9903048-01-MSD	20	20	100	25 - 230	5.1
Chloromethane	990322624-LCS	20	16.82	84	25 - 273	
Chloromethane	P9903048-01-MS	20	17	85	25 - 273	
Chloromethane	P9903048-01-MSD	20	17	85	25 - 273	0.
Dibromochloromethane	990322624-LCS	20	16.46	82	53 - 149	
Dibromochloromethane	P9903048-01-MS	20	20	100	53 - 149	
Dibromochloromethane	P9903048-01-MSD	20	20	100	53 - 149	0.
1,2-Dichlorobenzene (o-DCB)	990322624-LCS	20	17	85	25 - 190	
1,2-Dichlorobenzene (o-DCB)	P9903048-01-MS	20	19	95	25 - 190	
1,2-Dichlorobenzene (o-DCB)	P9903048-01-MSD	20	19	95	25 - 190	0.
1,3-Dichlorobenzene (m-DCB)	990322624-LCS	20	17.9	90	59 - 156	
1,3-Dichlorobenzene (m-DCB)	P9903048-01-MS	20	18	90	59 - 156	
1,3-Dichlorobenzene (m-DCB)	P9903048-01-MSD	20	18	90	59 - 156	0.
1,4-Dichlorobenzene (p-DCB)	990322624-LCS	20	17.37	87	25 - 190	
1,4-Dichlorobenzene (p-DCB)	P9903048-01-MS	20	18	90	25 - 190	
1,4-Dichlorobenzene (p-DCB)	P9903048-01-MSD	20	18	90	25 - 190	0.
1,1-Dichloroethane (1,1-DCA)	990322624-LCS	20	19.08	95	59 - 155	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge-Quarterly/NA  
 PROJECT #: NA  
 TEST: Purgeable Organic Compounds by EPA 624, July 1998  
 MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike	Spike	Percent	Acceptable	RPD
		Amount	Result	Recovery	Range	
1,1-Dichloroethane (1,1-DCA)	P9903048-01-MS	20	19	95	59 - 155	
1,1-Dichloroethane (1,1-DCA)	P9903048-01-MSD	20	19	95	59 - 155	0.
1,2-Dichloroethane (1,2-DCA)	990322624-LCS	20	16.88	84	49 - 155	
1,2-Dichloroethane (1,2-DCA)	P9903048-01-MS	20	20	100	49 - 155	
1,2-Dichloroethane (1,2-DCA)	P9903048-01-MSD	20	20	100	49 - 155	0.
1,1-Dichloroethene (1,1-DCE)	990322624-LCS	20	17.42	87	25 - 234	
1,1-Dichloroethene (1,1-DCE)	P9903048-01-MS	20	17	85	25 - 234	
1,1-Dichloroethene (1,1-DCE)	P9903048-01-MSD	20	17	85	25 - 234	0.
trans-1,2-Dichloroethene	990322624-LCS	20	18.86	94	54 - 156	
trans-1,2-Dichloroethene	P9903048-01-MS	20	18	90	54 - 156	
trans-1,2-Dichloroethene	P9903048-01-MSD	20	19	95	54 - 156	5.4
1,2-Dichloropropane	990322624-LCS	20	18.39	92	25 - 210	
1,2-Dichloropropane	P9903048-01-MS	20	20	100	25 - 210	
1,2-Dichloropropane	P9903048-01-MSD	20	19	95	25 - 210	5.1
cis-1,3-Dichloropropene	990322624-LCS	20	18.66	93	25 - 227	
1,3-Dichloropropene	P9903048-01-MS	20	20	100	25 - 227	
cis-1,3-Dichloropropene	P9903048-01-MSD	20	20	100	25 - 227	0.
trans-1,3-Dichloropropene	990322624-LCS	20	16.5	83	25 - 183	
trans-1,3-Dichloropropene	P9903048-01-MS	20	19	95	25 - 183	
trans-1,3-Dichloropropene	P9903048-01-MSD	20	19	95	25 - 183	0.
Ethylbenzene	990322624-LCS	20	18.76	94	37 - 162	
Ethylbenzene	P9903048-01-MS	20	18	90	37 - 162	
Ethylbenzene	P9903048-01-MSD	20	18	90	37 - 162	0.
Methylene chloride (Dichloromethane)	990322624-LCS	20	20.78	104	25 - 221	
Methylene chloride (Dichloromethane)	P9903048-01-MS	20	22	110	25 - 221	
Methylene chloride (Dichloromethane)	P9903048-01-MSD	20	21	105	25 - 221	4.7
1,1,2,2-Tetrachloroethane	990322624-LCS	20	18.22	91	46 - 157	
1,1,2,2-Tetrachloroethane	P9903048-01-MS	20	21	105	46 - 157	
1,1,2,2-Tetrachloroethane	P9903048-01-MSD	20	21	105	46 - 157	0.
Tetrachloroethene (PCE)	990322624-LCS	20	18.66	93	64 - 148	
Tetrachloroethene (PCE)	P9903048-01-MS	20	17	85	64 - 148	
Tetrachloroethene (PCE)	P9903048-01-MSD	20	18	90	64 - 148	5.7
Toluene	990322624-LCS	20	19.32	97	47 - 150	
Toluene	P9903048-01-MS	20	20	100	47 - 150	
Toluene	P9903048-01-MSD	20	20	100	47 - 150	0.
1,1,1-Trichloroethane (1,1,1-TCA)	990322624-LCS	20	20.32	102	52 - 162	
1,1,1-Trichloroethane (1,1,1-TCA)	P9903048-01-MS	20	21	105	52 - 162	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge-Quarterly/NA  
 PROJECT #: NA  
 TEST: Purgeable Organic Compounds by EPA 624, July 1998  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
1,1,1-Trichloroethane (1,1,1-TCA)	P9903048-01-MSD	20	20	100	52 - 162	4.9
1,1,2-Trichloroethane (1,1,2-TCA)	990322624-LCS	20	16	80	52 - 150	
1,1,2-Trichloroethane (1,1,2-TCA)	P9903048-01-MS	20	21	105	52 - 150	
1,1,2-Trichloroethane (1,1,2-TCA)	P9903048-01-MSD	20	21	105	52 - 150	0.
Trichloroethene (TCE)	990322624-LCS	20	18.64	93	71 - 157	
Trichloroethene (TCE)	P9903048-01-MS	20	19	95	71 - 157	
Trichloroethene (TCE)	P9903048-01-MSD	20	19	95	71 - 157	0.
Trichlorofluoromethane (Freon 11)	990322624-LCS	20	25.4	127	25 - 181	
Trichlorofluoromethane (Freon 11)	P9903048-01-MS	20	24	120	25 - 181	
Trichlorofluoromethane (Freon 11)	P9903048-01-MSD	20	25	125	25 - 181	4.1
Vinyl chloride	990322624-LCS	20	21.22	106	25 - 251	
Vinyl chloride	P9903048-01-MS	20	23	115	25 - 251	
Vinyl chloride	P9903048-01-MSD	20	22	110	25 - 251	4.4

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge-Quarterly/NA  
PROJECT #: NA  
TEST: Inorganic Non-Metals  
MATRIX: Aqueous

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<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Oil & Grease	990322OG-LCS	100	96	96	80 - 120	
Oil & Grease	990322OG-LCSD	100	97	97	80 - 120	1.

ND - Not Detected

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*VEHICLE SERVICE LEASE - URGENT*  
*Due 3/25*

PROJECT NUMBER		PROJECT NAME		REQUESTED ANALYSIS		CONTRACT LABORATORY		
SAMPLES: (Signature) <i>Paul R. Padilla</i>		Blanco Discharge - Quarterly		DATE: _____		<i>H.E.L. Lab Services</i>		
LAB ID	DATE	TIME	MATRIX	SAMPLE NUMBER	TOTAL NUMBER OF CONTAINERS	COMPOSITE OR GRAB	REQUESTED ANALYSIS	REMARKS
31754	05:10	Wate	FR990019	TRIP Blank	7	G	OIL & Grease COD BOD TSS 624	FR9903048-01 02
<i>7<sup>th</sup></i>								
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)
<i>Paul R. Padilla</i>	3-17-99 09:15	<i>Tom Fedler</i>	3/18/99 9:55am	<i>Paul R. Padilla</i>	3/18/99 9:55am	<i>Tom Fedler</i>		
REQUESTED TURNAROUND TIME: <input checked="" type="checkbox"/> ROUTINE <input type="checkbox"/> 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.		CHARGE CODE						
BILL NO.:								

3725 E. Atlanta Ave.  
Suite One  
Phoenix, AZ  
85040

Fax: 602.470.0756  
Tel: 602.470.0288

April 02, 1999

Ms. Wendy Aber  
NEL Laboratories  
3021 S. 35th Street, Building B-6  
Phoenix, AZ 85034

RE: McKenzie Project ID 9903193

Dear Ms. Aber:

On March 18, 1999, NEL Laboratories submitted samples from the above referenced project for Biochemical Oxygen Demand (BOD) analysis. Due to instrument problems and procedural issues, all data acquired for this analysis was unusable, and invalid. The analysis holding time requirements had expired, so reanalysis of the sample was not possible.

We apologize for any inconvenience this may have caused and have waived the analytical fees for those analyses. We have performed a corrective action for this problem and are looking into additional instrumentation that will back up the existing system, to ensure that this type of problem will not reoccur.

Accurate, quality data is the number one priority at McKenzie Labs. In-house audits are routinely performed to ensure that we maintain the highest quality standards in the industry. McKenzie's goal is to provide you with sound, defensible data. Please feel free to contact us at (602) 470-0288 should you have any questions or need additional information.

Sincerely,



Ken Baker  
Project Manager



Melinda Jacobson  
Quality Assurance Manager

April 06, 1999

Wendy Aber  
NEL Laboratories  
3021 S. 35th Street  
Building B-6  
Phoenix, AZ 85034  
TEL: (602) 437-0099  
FAX: (602) 437-2225  
RE: BLANCO/P9903048  
Work Order No.: 9903193

Dear Wendy Aber,  
McKenzie Laboratories, Inc. received 1 sample on 3/18/99 12:00:00 PM for the analyses presented in the following report.

The Case Narrative of this report addresses any Quality Control and/or Quality Assurance issues associated with this Work Order.

If you have any questions regarding these test results, please feel free to call.

Sincerely,



Ken Baker  
Project Manager

**MCKENZIE**  
LABORATORIES

Date Printed: 06-Apr-99

CLIENT: NEL Laboratories  
Work Order: 9903193  
Lab ID: 9903193-01  
Project Name: BLANCO  
Project Number: P9903048

Client Sample ID: F990019  
Collection Date: 3/17/99 8:30:00 AM  
Matrix: AQUEOUS

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Chemical Oxygen Demand	23	10		mg/L	1	Hach8000	N/A	3/23/99	MCC	COD_HACH-3/23/99

CLIENT: NEL Laboratories  
Work Order: 9903193  
Project: BLANCO/P9903048

**QC SUMMARY REPORT**  
Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Chemical Oxygen Demand	<10	10		mg/L	1	Hach8000	N/A	3/23/99	MCC	COD_HACH-3/23/99

CLIENT: NEL Laboratories  
 Work Order: 9903193  
 Project: BLANCO/P9903048

**QC SUMMARY REPORT**  
 Sample Duplicate

Analyte	Result	PQL	Units	RPD Ref Val	% RPD	RPD Limit	Test Code	Date Prepared	Date Analyzed	Analyst	Qual
Sample ID: 9903193-01AD		Batch ID: COD_HACH-3/23/99									
Client ID: F990019											
Chemical Oxygen Demand	20	10	mg/L	23	14%	20	Hach8000	N/A	3/23/99	MCC	

CLIENT: NEL Laboratories  
 Work Order: 9903193  
 Project: BLANCO/P9903048

**QC SUMMARY REPORT**  
 Sample Matrix Spike

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: 9903193-01AS	Batch ID: COD_HACH-3/23/99		Test Code: Hach8000		Date Analyzed: 3/23/99						
Client ID: F990019			Units: mg/L		Date Prepared: N/A						
Chemical Oxygen Demand	107	10	100	11	96%	80	120				Cl

CLIENT: NEL Laboratories  
 Work Order: 9903193  
 Project: BLANCO/P9903048

**QC SUMMARY REPORT**  
 Blank Spike (primary source)

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual	
Sample ID: LCS	Batch ID: COD_HACH-3/23/99		Test Code: Hach8000			Date Analyzed: 3/23/99		Units: mg/L				Date Prepared: N/A
Chemical Oxygen Demand	97	10	100	<10	97%	85	115					

CLIENT: NEL Laboratories  
 Work Order: 9903193  
 Project: BLANCO/P9903048

**QC SUMMARY REPORT**  
 Secondary Source QC Sample

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: LCSV	Batch ID: COD_HACH-3/23/99		Test Code: Hach8000			Date Analyzed: 3/23/99		Date Prepared: N/A			
			Units: mg/L								
Chemical Oxygen Demand	90	10	100	<10	90%	85	115				

SAMPLE KEY

SAMPLE NUMBER: F99-0020 LOCATION: BLANCO PLANT

MATRIX: WATER

SAMPLE DESCRIPTION: WASTEWATER DISCHARGE TO THE CITY OF BLOOMFIELD

S D CONTINUED: SEMI-ANNUAL SAMPLE

S D CONTINUED:

SAMPLE TIME: 13:45 SAMPLE DATE: 03/18/99

NEL LABORATORIES

Reno • Las Vegas  
Phoenix • Irvine

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: Blanco Discharge - Semi-Annual  
PROJECT NUMBER: NA

NEL ORDER ID: P9903054

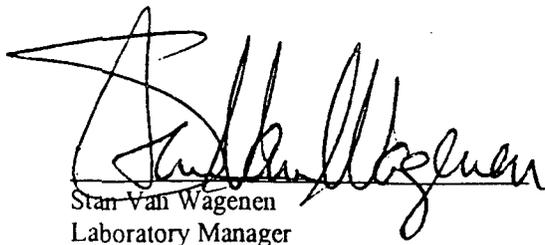
Attached are the analytical results for samples in support of the above referenced project.

Samples were received by NEL in good condition, under chain of custody on 3/19/99.

Samples were analyzed as received.

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

Samples for inorganic non-metals were received at 16°C.

  
Stan Van Wagenen  
Laboratory Manager

3/30/99  
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>		<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0583	Idaho	Certified	Certified	
California	1707	2002	2264	Montana	Certified	Certified	
US Army Corps of Engineers	Certified	Certified	Certified	Nevada	NV033	NV052	CA084
				L.A.C.S.D.			10228

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 OBJECT #: NA

CLIENT ID: F990020  
 DATE SAMPLED: 3/18/99  
 NEL SAMPLE ID: P9903054-01

TEST: Metals  
 MATRIX: Aqueous

ANALYST: JF - Reno Division

<u>PARAMETER</u>	<u>RESULT</u> mg/L	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	0.27	0.05 mg/L	1	EPA 6010	3/22/99	3/22/99
Arsenic	ND	0.1 mg/L	1	EPA 6010	3/22/99	3/22/99
Barium	0.20	0.005 mg/L	1	EPA 6010	3/22/99	3/22/99
Boron	0.10	0.02 mg/L	1	EPA 6010	3/22/99	3/22/99
Cadmium	ND	0.01 mg/L	1	EPA 6010	3/22/99	3/22/99
Chromium	ND	0.01 mg/L	1	EPA 6010	3/22/99	3/22/99
Cobalt	ND	0.01 mg/L	1	EPA 6010	3/22/99	3/22/99
Copper	0.10	0.005 mg/L	1	EPA 6010	3/22/99	3/22/99
Iron	0.23	0.1 mg/L	1	EPA 6010	3/22/99	3/22/99
Lead	ND	0.05 mg/L	1	EPA 6010	3/22/99	3/22/99
Manganese	0.016	0.005 mg/L	1	EPA 6010	3/22/99	3/22/99
Mercury	ND	0.0002 mg/L	1	EPA 7470A	3/22/99	3/22/99
Molybdenum	ND	0.01 mg/L	1	EPA 6010	3/22/99	3/22/99
Nickel	ND	0.04 mg/L	1	EPA 6010	3/22/99	3/22/99
Selenium	ND	0.1 mg/L	1	EPA 6010	3/22/99	3/22/99
Silver	ND	0.02 mg/L	1	EPA 6010	3/22/99	3/22/99
Uranium	ND	0.005 mg/L	5	EPA 6020	3/22/99	3/25/99
Zinc	ND	0.1 mg/L	1	EPA 6010	3/22/99	3/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: B03035Hg-BLK

TEST: Metals

---

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/L</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Mercury	ND	0.0002 mg/L	1	EPA 7470A	3/22/99	3/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 PROJECT #: NA

CLIENT ID: Method Blank  
 DATE SAMPLED: NA  
 NEL SAMPLE ID: P03054i-BLK

TEST: Metals

<u>PARAMETER</u>	<u>RESULT</u> mg/L	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Aluminum	ND	0.05 mg/L	1	EPA 6010	3/22/99	3/22/99
Arsenic	ND	0.1 mg/L	1	EPA 6010	3/22/99	3/22/99
Barium	ND	0.005 mg/L	1	EPA 6010	3/22/99	3/22/99
Boron	ND	0.02 mg/L	1	EPA 6010	3/22/99	3/22/99
Cadmium	ND	0.01 mg/L	1	EPA 6010	3/22/99	3/22/99
Chromium	ND	0.01 mg/L	1	EPA 6010	3/22/99	3/22/99
Cobalt	ND	0.01 mg/L	1	EPA 6010	3/22/99	3/22/99
Copper	ND	0.005 mg/L	1	EPA 6010	3/22/99	3/22/99
Iron	ND	0.1 mg/L	1	EPA 6010	3/22/99	3/22/99
Lead	ND	0.05 mg/L	1	EPA 6010	3/22/99	3/22/99
Manganese	ND	0.005 mg/L	1	EPA 6010	3/22/99	3/22/99
Molybdenum	ND	0.01 mg/L	1	EPA 6010	3/22/99	3/22/99
Nickel	ND	0.04 mg/L	1	EPA 6010	3/22/99	3/22/99
Selenium	ND	0.1 mg/L	1	EPA 6010	3/22/99	3/22/99
Silver	ND	0.02 mg/L	1	EPA 6010	3/22/99	3/22/99
Zinc	ND	0.1 mg/L	1	EPA 6010	3/22/99	3/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: P03054U-BLK

TEST: Metals

---

<u>PARAMETER</u>	<u>RESULT</u> <u>mg/L</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>DIGESTED</u>	<u>ANALYZED</u>
Uranium	ND	0.005 mg/L	5	EPA 6020	3/22/99	3/25/99

D.F. - Dilution Factor

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 PROJECT #: NA

CLIENT ID: F990020  
 DATE SAMPLED: 3/18/99  
 NEL SAMPLE ID: P9903054-01

TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Chloride	16	1.	10	EPA 300.0	mg/L	3/19/99
Cyanide, TOTAL	ND	0.02	1	SM 4500-CN E	mg/L	3/23/99
Fluoride	0.42	0.4	1	SM 4500-F C	mg/L	3/20/99
Nitrate, as N	0.1	0.1	1	EPA 300.0	mg/L-N	3/19/99
Orthophosphate, as P	0.40	0.01	1	SM 4500-P E	mg/L-P	3/19/99
pH	8.88	2.	1	EPA 150.1	pH Units	3/19/99
pH Temperature	19.8	1.	1	EPA 150.1	°C	3/19/99
Sulfate	99	5.	50	EPA 300.0	mg/L	3/22/99

*Resampled  
F99-0024*

D.F. - Dilution Factor

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
OBJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990319ICAQ-BLK

TEST: Non-Metals

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<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Chloride	ND	0.1	1	EPA 300.0	mg/L	3/19/99
Nitrate, as N	ND	0.1	1	EPA 300.0	mg/L-N	3/19/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990319po-BLK

TEST: Non-Metals

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<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Orthophosphate, as P	ND	0.01	1	SM 4500-P E	mg/L-P	3/19/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990320FAQ-BLK

TEST: Non-Metals

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<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Fluoride	ND	0.4	1	SM 4500-F C	mg/L	3/20/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
JECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990322ICAQ-BLK

TEST: Non-Metals

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Chloride	ND	0.1	1	EPA 300.0	mg/L	3/22/99
Nitrate, as N	ND	0.1	1	EPA 300.0	mg/L-N	3/22/99
Sulfate	ND	0.1	1	EPA 300.0	mg/L	3/22/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990323CNAQ-BLK

TEST: Non-Metals

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<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Cyanide, TOTAL	ND	0.02	1	SM 4500-CN E	mg/L	3/23/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 PROJECT #: NA

CLIENT ID: F990020  
 DATE SAMPLED: 3/18/99  
 NEL SAMPLE ID: P9903054-01

TEST: Extractable Phenols by EPA 625, July 1992

MATRIX: Aqueous  
 DILUTION: 1

ANALYST: JDG - Reno Division  
 EXTRACTED: 3/25/99  
 ANALYZED: 3/26/99

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
4-Chloro-3-methyl phenol	ND	10. µg/L
2-Chlorophenol	ND	10. µg/L
2,4-Dichlorophenol	ND	10. µg/L
2,4-Dimethylphenol	ND	10. µg/L
2,4-Dinitrophenol	ND	10. µg/L
4,6-Dinitro-2-methyl phenol	ND	10. µg/L
2-Nitrophenol	ND	10. µg/L
4-Nitrophenol	ND	10. µg/L
Pentachlorophenol	ND	10. µg/L
Phenol	ND	10. µg/L
2,4,6-Trichlorophenol	ND	10. µg/L

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	67	10 - 123
2-Fluorophenol	27	21 - 100
Phenol-d5	17	10 - 94

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 PROJECT #: NA

CLIENT ID: Method Blank  
 DATE SAMPLED: NA  
 NEL SAMPLE ID: 032599-E1-PHE-BLK

TEST: Extractable Phenols by EPA 625, July 1992

MATRIX: Aqueous

ANALYST: JDG - Reno Division  
 EXTRACTED: 3/25/99  
 ANALYZED: 3/25/99

<u>PARAMETER</u>	<u>Result</u>	<u>Reporting Limit</u>
4-Chloro-3-methyl phenol	ND	10. µg/L
2-Chlorophenol	ND	10. µg/L
2,4-Dichlorophenol	ND	10. µg/L
2,4-Dimethylphenol	ND	10. µg/L
2,4-Dinitrophenol	ND	10. µg/L
4,6-Dinitro-2-methyl phenol	ND	10. µg/L
2-Nitrophenol	ND	10. µg/L
4-Nitrophenol	ND	10. µg/L
Pentachlorophenol	ND	10. µg/L
Phenol	ND	10. µg/L
2,4,6-Trichlorophenol	ND	10. µg/L

QUALITY CONTROL DATA:

<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptable Range</u>
2,4,6-Tribromophenol	62	10 - 123
2-Fluorophenol	47	21 - 100
Phenol-d5	31	10 - 94

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 OBJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Chloride	990319ICAQ-LCS	100	105	105	90 - 110	
Chloride	P9903054-01-MS	100	111	95	80 - 120	
Nitrate, as N	990319ICAQ-LCS	100	97	97	90 - 110	
Nitrate, as N	P9903054-01-MS	100	99.1	99	80 - 120	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
OBJECT #: NA  
TEST: Inorganic Non-Metals  
MATRIX: Aqueous

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<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
7.00 Buffer	990319PH-LCS	7	6.995	100	99 - 101	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 OBJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Orthophosphate, as P	990319po-LCS	0.25	0.261	104	85 - 115	
Orthophosphate, as P	P9903054-01-MS	0.25	0.659	104	80 - 120	
Orthophosphate, as P	P9903054-01-MSD	0.25	0.657	103	80 - 120	0.8

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 OBJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Fluoride	990320FAQ-LCS	1	1.01	101	85 - 115	
Fluoride	P9903054-01-MS	1	1.38	96	80 - 120	
Fluoride	P9903054-01-MSD	1	1.43	101	80 - 120	5.1

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 SUBJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Chloride	990322ICAQ-LCS	100	103	103	90 - 110	
Chloride	R9903050-06-MS	100	106	106	80 - 120	
Sulfate	990322ICAQ-LCS	100	102	102	90 - 110	
Sulfate	R9903050-06-MS	100	312	102	80 - 120	
Nitrate, as N	990322ICAQ-LCS	100	96	96	90 - 110	
Nitrate, as N	R9903050-06-MS	100	98	98	80 - 120	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 OBJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Cyanide, TOTAL	990323CNAQ-LCS	0.1	0.108	108	80 - 120	
Cyanide, TOTAL	P9903054-01-MS	0.1	0.102	102	80 - 120	
Cyanide, TOTAL	P9903054-01-MSD	0.1	0.099	99	80 - 120	3.

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual/NA  
OBJECT #: NA  
TEST: Metals  
MATRIX: Aqueous

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<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Mercury	B03035Hg-LCS	0.005	0.00506	101	85 - 115	
Mercury	B9903035-01-MS	0.005	0.00447	89	70 - 130	
Mercury	B9903035-01-MSD	0.005	0.00458	92	70 - 130	2.4

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 OBJECT #: NA  
 TEST: Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Aluminum	P03054i-LCS	1	1.08	108	85 - 115	
Aluminum	P9903054-01-MS	1	1.36	109	75 - 125	
Aluminum	P9903054-01-MSD	1	1.29	102	75 - 125	6.6
Arsenic	P03054i-LCS	0.5	0.497	99	85 - 115	
Arsenic	P9903054-01-MS	0.5	0.495	99	75 - 125	
Arsenic	P9903054-01-MSD	0.5	0.507	101	75 - 125	2.4
Barium	P03054i-LCS	1	1.01	101	85 - 115	
Barium	P9903054-01-MS	1	1.22	102	75 - 125	
Barium	P9903054-01-MSD	1	1.21	101	75 - 125	1.
Boron	P03054i-LCS	1	1.02	102	85 - 115	
Boron	P9903054-01-MS	1	1.11	111	75 - 125	
Boron	P9903054-01-MSD	1	1.09	109	75 - 125	1.8
Cadmium	P03054i-LCS	0.2	0.198	99	85 - 115	
Cadmium	P9903054-01-MS	0.2	0.197	99	75 - 125	
Cadmium	P9903054-01-MSD	0.2	0.198	99	75 - 125	0.5
Cadmium	P03054i-LCS	0.5	0.523	105	85 - 115	
Chromium	P9903054-01-MS	0.5	0.517	103	75 - 125	
Chromium	P9903054-01-MSD	0.5	0.517	103	75 - 125	0.
Cobalt	P03054i-LCS	0.5	0.514	103	85 - 115	
Cobalt	P9903054-01-MS	0.5	0.505	101	75 - 125	
Cobalt	P9903054-01-MSD	0.5	0.505	101	75 - 125	0.
Copper	P03054i-LCS	0.5	0.509	102	85 - 115	
Copper	P9903054-01-MS	0.5	0.608	102	75 - 125	
Copper	P9903054-01-MSD	0.5	0.606	101	75 - 125	0.4
Iron	P03054i-LCS	1	1.03	103	85 - 115	
Iron	P9903054-01-MS	1	1.27	104	75 - 125	
Iron	P9903054-01-MSD	1	1.25	102	75 - 125	1.9
Lead	P03054i-LCS	1	1.04	104	85 - 115	
Lead	P9903054-01-MS	1	1	100	75 - 125	
Lead	P9903054-01-MSD	1	1.01	101	75 - 125	1.
Manganese	P03054i-LCS	0.5	0.508	102	85 - 115	
Manganese	P9903054-01-MS	0.5	0.517	100	75 - 125	
Manganese	P9903054-01-MSD	0.5	0.518	100	75 - 125	0.2
Molybdenum	P03054i-LCS	0.1	0.1	100	85 - 115	
Molybdenum	P9903054-01-MS	0.1	0.102	102	75 - 125	
Molybdenum	P9903054-01-MSD	0.1	0.102	102	75 - 125	0.
Nickel	P03054i-LCS	1	1.08	108	85 - 115	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 SUBJECT #: NA  
 TEST: Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Nickel	P9903054-01-MS	1	1.05	105	75 - 125	
Nickel	P9903054-01-MSD	1	1.05	105	75 - 125	0.
Selenium	P03054i-LCS	0.5	0.503	101	85 - 115	
Selenium	P9903054-01-MS	0.5	0.493	99	75 - 125	
Selenium	P9903054-01-MSD	0.5	0.498	100	75 - 125	1.
Silver	P03054i-LCS	0.5	0.508	102	85 - 115	
Silver	P9903054-01-MS	0.5	0.459	92	75 - 125	
Silver	P9903054-01-MSD	0.5	0.485	97	75 - 125	5.5
Zinc	P03054i-LCS	0.5	0.517	103	85 - 115	
Zinc	P9903054-01-MS	0.5	0.553	111	75 - 125	
Zinc	P9903054-01-MSD	0.5	0.552	110	75 - 125	0.2

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 OBJECT #: NA  
 TEST: Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Uranium	P03054U-LCS	0.05	0.0496	99	85 - 115	
Uranium	P9903054-01-MS	0.05	0.0539	108	75 - 125	
Uranium	P9903054-01-MSD	0.05	0.0524	105	75 - 125	2.8

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual/NA  
 OBJECT #: NA  
 TEST: Extractable Phenols by EPA 625, July 1992  
 MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike	Spike	Percent	Acceptable	RPD
		Amount	Result	Recovery	Range	
4-Chloro-3-methyl phenol	032599-E1-PHE-LCS	100	84.4	84	49 - 100	
4-Chloro-3-methyl phenol	P9903054-01-MS	100	70.1	70	37 - 98	
2-Chlorophenol	032599-E1-PHE-LCS	100	77.3	77	48 - 82	
2-Chlorophenol	P9903054-01-MS	100	59.5	60	34 - 92	
2,4-Dichlorophenol	032599-E1-PHE-LCS	100	77.8	78	42 - 99	
2,4-Dichlorophenol	P9903054-01-MS	100	68.5	69	37 - 90	
2,4-Dimethylphenol	032599-E1-PHE-LCS	100	85.5	86	31 - 111	
2,4-Dimethylphenol	P9903054-01-MS	100	67.3	67	5 - 110	
2,4-Dinitrophenol	032599-E1-PHE-LCS	100	82.3	82	6 - 103	
2,4-Dinitrophenol	P9903054-01-MS	100	75.7	76	5 - 110	
4,6-Dinitro-2-methyl phenol	032599-E1-PHE-LCS	100	82.1	82	9 - 113	
4,6-Dinitro-2-methyl phenol	P9903054-01-MS	100	80.7	81	5 - 118	
2-Nitrophenol	032599-E1-PHE-LCS	100	76.6	77	55 - 91	
2-Nitrophenol	P9903054-01-MS	100	71.2	71	35 - 93	
4-Nitrophenol	032599-E1-PHE-LCS	100	41	41	7 - 52	
4-Nitrophenol	P9903054-01-MS	100	32.8	33	45 - 99	
Pentachlorophenol	032599-E1-PHE-LCS	100	83.1	83	18 - 104	
Pentachlorophenol	P9903054-01-MS	100	81.5	82	5 - 107	
Phenol	032599-E1-PHE-LCS	100	35	35	29 - 44	
Phenol	P9903054-01-MS	100	27.1	27	15 - 44	
2,4,6-Trichlorophenol	032599-E1-PHE-LCS	100	85.5	86	51 - 100	
2,4,6-Trichlorophenol	P9903054-01-MS	100	82.6	83	45 - 88	

ND - Not Detected

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SAMPLE KEY

SAMPLE NUMBER: F99-0024 LOCATION: BLANCO PLANT

MATRIX: WATER

SAMPLE DESCRIPTION: BLANCO DISCHARGE - SEMI ANNUAL SAMPLE

S D CONTINUED:

S D CONTINUED:

SAMPLE TIME: 11:20 SAMPLE DATE: 03/24/99

NEL LABORATORIES

Reno • Las Vegas  
Phoenix • Irvine

Las Vegas Division  
4200 Data 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: Blanco Discharge - Semi-Annual  
PROJECT NUMBER: NA

NEL ORDER ID: P9903063

Attached are the analytical results for samples in support of the above referenced project.  
Samples were received by NEL in good condition, under chain of custody on 3/25/99.

Samples were analyzed as received.

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

Stan Van Wagenen  
Laboratory Manager

3/30/99  
Date

CERTIFICATIONS:

	<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>		<u>Reno</u>	<u>Las Vegas</u>	<u>S. California</u>
Arizona	AZ0520	AZ0518	AZ0583	Idaho	Certified	Certified	
California	1707	2002	2264	Montana	Certified	Certified	
US Army Corps of Engineers	Certified	Certified	Certified	Nevada	NV033	NV052	CA084 10228
				L.A.C.S.D.			

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge Semi-Annual  
 PROJECT #: NA

CLIENT ID: F990024  
 DATE SAMPLED: 3/24/99  
 NEL SAMPLE ID: P9903063-01

TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

PARAMETER	RESULT	REPORTING			METHOD	UNITS	ANALYZED
		LIMIT	D.F.				
Chloride	24	2.	20	EPA 300.0	mg/L	3/25/99	
Cyanide, TOTAL	ND	0.02	1	SM 4500-CN E	mg/L	3/27/99	
Flouride	0.41	0.4	1	SM 4500-F C	mg/L	3/27/99	
Nitrate, as N	0.2	0.1	1	EPA 300.0	mg/L-N	3/25/99	
Orthophosphate, as P	0.53	0.1	10	SM 4500-P E	mg/L-P	3/26/99	
pH	8.95	2.	1	EPA 150.1	pH Units	3/25/99	
pH Temperature	18.3	1.	1	EPA 150.1	°C	3/25/99	
Sulfate	94	2.	20	EPA 300.0	mg/L	3/25/99	

D.F. - Dilution Factor

ND - Not Detected

*This report shall not be reproduced except in full, without the written approval of the laboratory.*

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual  
 OBJECT #: NA

CLIENT ID: Method Blank  
 DATE SAMPLED: NA  
 NEL SAMPLE ID: 990325ICAQ-BLK

TEST: Non-Metals

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Chloride	ND	0.1	1	EPA 300.0	mg/L	3/25/99
Nitrate, as N	ND	0.1	1	EPA 300.0	mg/L-N	3/25/99
Sulfate	ND	0.1	1	EPA 300.0	mg/L	3/25/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual  
OBJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990326op-BLK

TEST: Non-Metals

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<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Orthophosphate, as P	ND	0.01	1	SM 4500-P E	mg/L-P	3/26/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual  
PROJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990327CNAQ-BLK

TEST: Non-Metals

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Cyanide, TOTAL	ND	0.02	1	SM 4500-CN E	mg/L	3/27/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
PROJECT ID: Blanco Discharge - Semi-Annual  
OBJECT #: NA

CLIENT ID: Method Blank  
DATE SAMPLED: NA  
NEL SAMPLE ID: 990327FAQ-BLK

TEST: Non-Metals

---

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>D. F.</u>	<u>METHOD</u>	<u>UNITS</u>	<u>ANALYZED</u>
Fluoride	ND	0.4	1	SM 4500-F C	mg/L	3/27/99

D.F. - Dilution Factor

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual  
 PROJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Chloride	9903251CAQ-LCS	100	99	99	90 - 110	
Chloride	B9903051-01-MS	100	137	98	80 - 120	
Sulfate	9903251CAQ-LCS	100	93	93	90 - 110	
Sulfate	B9903051-01-MS	100	170	96	80 - 120	
Nitrate, as N	9903251CAQ-LCS	100	94	94	90 - 110	
Nitrate, as N	B9903051-01-MS	100	93	93	80 - 120	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual  
 PROJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
7.00 Buffer	990325PHAQ-LCS	7	6.995	100	99 - 101	

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual  
 OBJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Orthophosphate, as P	990326op-LCS	0.25	0.256	102	85 - 115	
Orthophosphate, as P	P9903063-01-MS	0.25	0.809	112	80 - 120	
Orthophosphate, as P	P9903063-01-MSD	0.25	0.799	108	80 - 120	3.6

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual  
 SUBJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Cyanide, TOTAL	990327CNAQ-LCS	0.1	0.1	100	80 - 120	
Cyanide, TOTAL	P9903063-01-MS	0.1	0.097	97	80 - 120	
Cyanide, TOTAL	P9903063-01-MSD	0.1	0.1	100	80 - 120	3.

ND - Not Detected

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# NEL LABORATORIES

CLIENT: El Paso Natural Gas Company  
 PROJECT ID: Blanco Discharge - Semi-Annual  
 OBJECT #: NA  
 TEST: Inorganic Non-Metals  
 MATRIX: Aqueous

<u>PARAMETER</u>	<u>NEL Sample ID</u>	<u>Spike Amount</u>	<u>Spike Result</u>	<u>Percent Recovery</u>	<u>Acceptable Range</u>	<u>RPD</u>
Fluoride	990327FAQ-LCS	1	1.05	105	85 - 115	
Fluoride	P9903063-01-MS	1	1.44	103	80 - 120	
Fluoride	P9903063-01-MSD	1	1.41	100	80 - 120	3.

ND - Not Detected

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