

GW - 147

**GENERAL
CORRESPONDENCE**

YEAR(S):
2004 - 1995

ACKNOWLEDGEMENT OF RECEIPT
OF CHECK/CASH

I hereby acknowledge receipt of check No. [REDACTED] dated 1/8/04,
or cash received on 1/20/04 in the amount of \$ 1800.00
from EPNG
for GW-147

Submitted by: _____ Date: _____
(Facility Name) (DP No.)

Submitted to ASD by: ED MARTIN Date: 1/20/04

Received in ASD by: _____ Date: _____

Filing Fee ☒ New Facility _____ Renewal ☒
Modification _____ Other _____
(specify)

Organization Code 521.07 Applicable FY 2001

To be deposited in the Water Quality Management Fund.

Full Payment ☒ or Annual Increment _____

EL PASO NATURAL GAS COMPANY
P.O. BOX 4430
HOUSTON, TX 77210-4430

CITIBANK DELAWARE
A Subsidiary of Citicorp
One Penn's Way
New Castle, DE 19720

CHECK DATE 01/08/2004 CHECK NUMBER [REDACTED]

62-20
311

Amount

***\$1,800.00

VOID AFTER ONE YEAR

Pay ***ONE THOUSAND EIGHT HUNDRED AND XX / 100 US DOLLAR***

To The
Order Of

NEW MEXICO ENVIRONMENT DEPT
WATER QUALITY MANAGEMENT FUND
NMOCD ENVIRONMENTAL BUREAU
ATTN MARTYNE KIELING
1220 S ST FRANCIS DR
SANTE FE, NM 87505

[Signature]

Authorized Signature

AFFIDAVIT OF PUBLICATION

Ad No. 48471

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 meeting of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s):
Wednesday, September 3, 2003.

And the cost of the publication is \$213.56.

Connie Pruitt

ON 9-5-03 CONNIE PRUITT appeared before me, whom I know personally to be the person who signed the above document.

Ginny Beck
My Commission Expires April 2, 2004.

COPY OF PUBLICATION

September 3, 10, and 17, 2003.

918

Legals

NOTICE OF PUBLICATION

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

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

(GW-304) - El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Turley Compressor Station (Trunk O) located in the SW/4 NW/4 of Section 30, Township 30 North, Range 9 West, NMPM, San Juan County, New Mexico. Approximately 250 barrels per month of produced water, with a dissolved solids concentration ranging from 8,000 to 76,000 mg/l, is collected in closed steel tanks prior to transport to an off-site, OCD-approved disposal facility. Approximately 10 barrels per year of wastewater from equipment washdown is collected in a closed, double-walled underground sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 100 feet with a total dissolved solids concentration of approximately 300 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-147) - El Paso Natural Gas Company, Richard Duarte, (505) 831-7763, 3801 Atrisco Blvd. N.W., Albuquerque, New Mexico 87120, has submitted its discharge permit renewal application for its Deming Compressor Station located in the SE/4 SE/4 of Section 32, Township 23 South, Range 11 West, NMPM, Luna County, New Mexico. Approximately 43,200 gallons per day of cooling tower blowdown water with a total dissolved solids concentration of approximately 77,000 mg/l is stored in above-ground, lined evaporation ponds equipped with leak detection. Groundwater most likely to be affected in the event of an accidental discharge is at an estimated depth of approximately 30 feet with a total dissolved solids concentration of approximately 5,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-303) - El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Navajo City Compressor Station (Trunk L) located in the SW/4 NW/4 of Section 33, Township 30 North, Range 7 West, NMPM, San Juan County, New Mexico. Approximately 250 barrels per month of produced water, with a dissolved solids concentration ranging from 8,000 to 76,000 mg/l, is collected in closed steel tanks prior to transport to an off-site, OCD-approved disposal facility. Approximately 10 barrels per year of wastewater from equipment washdown is collected in a closed, double-walled underground sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 200 feet with a total dissolved solids concentration of approximately 1,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-302) - El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Potter Canyon Compressor Station (Trunk H/H) located in the NW/4 NE/4 of Section 19, Township 30 North, Range 10 West, NMPM, San Juan County, New Mexico. Approximately 500 barrels per month of produced water, with a dissolved solids concentration of 10,000 mg/l, is collected in closed steel tanks prior to transport to an off-site, OCD-approved disposal facility. Approximately 10 barrels per year of wastewater from equipment washdown is collected in a closed, double-walled underground sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 250 feet with a total dissolved solids concentration of approximately 2,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-298) – El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Martinez Canyon Compressor Station located in the SE/4 SE/4 of Section 16, Township 27 North, Range 6 West, NMPM, Rio Arriba County, New Mexico. Approximately 20 gallons per day of wastewater with a dissolved solids concentration of 10,000 mg/l is collected in the wash rack and a double-walled, closed steel tank sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth greater than 200 feet with a total dissolved solids concentration of approximately 500 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-301) – El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Manzaneros Compressor Station (Trunk A-R) located in the SW/4 NW/4 of Section 16, and N/E N/E of Section 17 Township 29 North, Range 9 West, NMPM, San Juan County, New Mexico. Approximately 75 Barrels per month of produced water with a dissolved solids concentration ranging from 8,000 to 76,000 mg/l is collected in closed, steel tanks prior to transport to an off-site, OCD-approved disposal facility. Approximately 10 barrels per year of wastewater from equipment washdown is collected in a double-walled, underground sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 50 feet with a total dissolved solids concentration of approximately 300 mg/l to 3,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-154) – El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Angel Peak 2B3B Compressor Station located in the NE/4 NW/4 of Section 8, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico. Approximately 2 gallons per day of process wastewater with a dissolved solids concentration of 3,500 mg/l is stored in closed, steel tanks prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth greater than 150 feet, with a total dissolved solids concentration of approximately 500 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-153) – El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Angel Peak 2B3A Compressor Station located in the SW/4 NW/4 of Section 20, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico. Approximately 2 gallons per day of process wastewater with a dissolved solids concentration of 3,500 mg/l is stored in closed, steel tanks prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of 55 feet, with a total dissolved solids concentration of approximately 500 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-352) – Williams Field Services, Michael K. Lane, (505) 632-4625, 118 CR 4900, Bloomfield, New Mexico 87413, has submitted a discharge permit application for the Williams Field Services Cabresto Compressor Station located in the NE/4 NE/4 of Section 19, Township 30 North, Range 4 West, NMPM, Rio Arriba County, New Mexico. Approximately 2000 to 9000 barrels per year of produced water is stored in an above ground storage tank prior to transport to an OCD approved off-site disposal facility. The total dissolved solids (TDS) of the produced water is approximately 1,100 milligrams per liter (mg/l). Ground water most likely to be affected in the event of an accidental discharge at the surface is at a depth of 100 to 400 feet with estimated total dissolved solids concentration of approximately 2,000 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 permit application and draft discharge permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. The draft discharge permit may also be viewed at OCD's web site <http://www.emnrd.state.nm.us/oed/>. Prior to ruling on any proposed discharge permit or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

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

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 27th day of August 2003.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

SEAL

LORI WROTENBERY, Director

Legal No. 48471 published in the Daily Times, Farmington, New Mexico, on September 3, 2003.

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

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(GW-147) - El Paso Natural Gas Company, Richard Duarte, (505) 831-7763, 3801 Atrisco Blvd. N.W., Albuquerque, New Mexico 87120, has submitted its discharge permit renewal application for its Deming Compressor Station located in the SE/4 SE/4 of Section

32, Township 23 South, Range 11 West, NMPM, Luna County, New Mexico. Approximately 43,200 gallons per day of cooling tower blowdown water with a total dissolved solids concentration of approximately 77,000 mg/l is stored in above-ground, lined evaporation ponds equipped with leak detection. Groundwater most likely to be affected in the event of an accidental discharge is at an estimated depth of approximately 30 feet with a total dissolved solids concentration of approximately 5,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-297) - Chaparral Services, Inc., P.O. Box 1769, Eunice, NM 88231, has submitted a discharge permit renewal application for its facility located in the SW/4 NW/4 of Section 20, Township 25 South, Range 37 East and the SE/4 NE/4 of Section 19, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico. Approximately 50 gallons per month of waste oil and solvents are collected in fiberglass storage tanks, then transported offsite for disposal. Groundwater most likely to be affected in the event of an accidental discharge is at an estimated depth of approximately 40 feet with a total dissolved solids concentration ranging from 700 to 1,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-303) - El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Navajo City Compressor Station (Trunk L) located in the SW/4 NW/4 of Section 33, Township 30 North, Range 7 West, NMPM, San Juan County, New Mexico. Approximately 250 barrels per month

of produced water, with a dissolved solids concentration ranging from 8,000 to 76,000 mg/l, is collected in closed steel tanks prior to transport to an off-site, OCD-approved disposal facility. Approximately 10 barrels per year of wastewater from equipment washdown is collected in a closed, double-walled underground sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 200 feet with a total dissolved solids concentration of approximately 1,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-302) - El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Potter Canyon Compressor Station (Trunk H/H) located in the NW/4 NE/4 of Section 19, Township 30 North, Range 10 West, NMPM, San Juan County, New Mexico. Approximately 500 barrels per month of produced water, with a dissolved solids concentration of 10,000 mg/l, is collected in closed steel tanks prior to transport to an off-site, OCD-approved disposal facility. Approximately 10 barrels per year of wastewater from equipment washdown is collected in a closed, double-walled underground sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 250 feet with a total dissolved solids concentration of approximately 2,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-298) - El Paso Natural Gas Company,

David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Martinez Canyon Compressor Station located in the SE/4 SE/4 of Section 16, Township 27 North, Range 6 West, NMPM, Rio Arriba County, New Mexico. Approximately 20 gallons per day of wastewater with a dissolved solids concentration of 10,000 mg/l is collected in the wash rack and a double-walled, closed steel tank sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth greater than 200 feet with a total dissolved solids concentration of approximately 500 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-301) - El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Manzanares Compressor Station (Trunk A-R) located in the SW/4 NW/4 of Section 16, and N/E N/E of Section 17, Township 29 North, Range 9 West, NMPM, San Juan County, New Mexico. Approximately 75 Barrels per month of produced water with a dissolved solids concentration ranging from 8,000 to 76,000 mg/l is collected in closed, steel tanks prior to transport to an off-site, OCD-approved disposal facility. Approximately 10 barrels per year of wastewater from equipment washdown is collected in a double-walled, underground sump prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of approximately 50 feet with a total dissolved solids concentration of approximately 300 mg/l to 3,000 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled,

including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-154) - El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Angel Peak 2B3B Compressor Station located in the NE/4 NW/4 of Section 8, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico. Approximately 2 gallons per day of process wastewater with a dissolved solids concentration of 3,500 mg/l is stored in closed, steel tanks prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth greater than 150 feet, with a total dissolved solids concentration of approximately 500 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

(GW-153) - El Paso Natural Gas Company, David Bays, (505) 599-2256, 614 Reilly Avenue, Farmington, New Mexico 87401-2634, has submitted its discharge permit renewal application for its Angel Peak 2B3A Compressor Station located in the SW/4 NW/4 of Section 20, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico. Approximately 2 gallons per day of process wastewater with a dissolved solids concentration of 3,500 mg/l is stored in closed, steel tanks prior to transport to an off-site, OCD-approved disposal facility. Groundwater most likely to be affected in the event of an accidental discharge is at a depth of 55 feet, with a total dissolved solids concentration of approximately 500 mg/l. The discharge permit addresses how oilfield products and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh

(GW-352) - Williams Field Services, Michael K. Lane, (505) 632-4625, 118 CR 4900, Bloomfield, New Mexico 87413, has submitted a discharge permit application for the Williams Field Services Cabresto Compressor Station located in the NE/4 NE/4 of Section 19, Township 30 North, Range 4 West, NMPM, Rio Arriba County, New Mexico. Approximately 2000 to 9000 barrels per year of produced water is stored in an above ground storage tank prior to transport to an OCD approved off-site disposal facility. The total dissolved solids (TDS) of the produced water is approximately 1,100 milligrams per liter (mg/l). Groundwater most likely to be affected in the event of an accidental discharge at the surface is at a depth of 100 to 400 feet with estimated total dissolved solids concentration of approximately 2,000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(BW-025) Paul Prather, P.O. Box 7169, Eunice, New Mexico 88231, has submitted a discharge plan renewal application for the CSI Brine Sales Station located in the NE/4 NE/4 of Section 20, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico. Fresh water from the City of Jal is injected into the Salado Formation at an approximate depth of 1,150 feet and brine water is extracted with an average total dissolved solids concentration of 350,000 mg/l. The brine water is stored in four 1,000 barrel above ground closed top tanks. The plan includes a chemical storage dock and a below grade concrete pit for temporary storage of exempt oilfield waste. 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 of approximately 875 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(BW-018) Key Energy Services, Inc., Bob Patterson, (505) 394-2581, P.O. Box 340, Hobbs, New Mexico, 88240, has submitted a discharge application for its

charge plan for the Trucker's #2 Brine Station located in the NE/4 SW/4 of Section 33, Township 18 South, Range 38 East, NMPM, Lea County, New Mexico. Fresh water is injected into the Salado Formation at an approximate depth of 2,000 feet and brine is extracted with an average total dissolved solids concentration of 390,000 mg/l. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 60 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.

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 permit application and draft discharge permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. The draft discharge permit may also be viewed at OCD's web site <http://www.emnrd.state.nm.us/ocd/>. Prior to ruling on any proposed discharge permit or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

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

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 27th day of August 2003.

STATE OF
NEW MEXICO
OIL CONSERVATION
DIVISION

S E A L

LORI WROTENBERY,
Director
Legal #73956
Pub. September 3, 2003

THE SANTA FE
NEW MEXICAN RECEIVED
Founded 1849

SEP 08 2003

OIL CONSERVATION
DIVISION

Ed Martin
NM OIL CONSERVATION DIV.
1220 ST. FRANCIS DR
~~ATT MARY ANAYA~~
SANTA FE NM 87505

ALTERNATE ACCOUNT: 56689
AD NUMBER: 00025904 ACCOUNT: 00002212
LEGAL NO: 73956 P.O. #: 04-199-050340
680 LINES 1 TIME(S) 465.52
AFFIDAVIT: 5.25
TAX: 31.48
TOTAL: 502.25

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, K. Voorhees, 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 # 73956 a copy of which is hereto attached was published in said newspaper 1 day(s) between 09/03/2003 and 09/03/2003 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 3rd day of September, 2003 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/s/ *K. Voorhees*
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 3rd day of September, 2003

Notary *Laura E. Harding*

Commission Expires: 11/23/03



June 26, 2003

Ed Martin, Engineer
NMOCD – Environmental Bureau
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Overnight Mail
UPS 1Z 93V 676 01 9637 8174

**Re: Discharge Plan GW-147 Renewal; El Paso Natural Gas Company's Deming Station
in Luna County, NM**

Dear Mr. Martin:

Enclosed please the subject documents. A check in amount of \$740 to cover the filing fee \$50 and renewal fee \$690 will be transmitted from our corporate offices in Houston, Texas, later next week.

Please contact me at (505) 831-7763 if you have any questions regarding this renewal application.

Sincerely,

Richard Duarte
Environmental Representative
Pipelines West – Environmental Department
El Paso Corporation

SHOULD BE \$100
\$1700.00 + 100

Enclosure (application – 1 original & 1 copy)

Copy (with enclosure): 1Z 93V 676 01 9994 5386

Mr. Mike Stubblefield, Engineer
NM Oil Conservation Division
District 2-Environmental Bureau
1301 W. Grand Avenue
Artesia, NM 88210



MAY 31 2000

NEW MEXICO OIL CONSERVATION DIVISION

VIA FEDERAL EXPRESS

May 26, 2000

Mr. Wayne Price
New Mexico Oil Conservation Division
Environmental Bureau
2040 S. Pacheco
Santa Fe, New Mexico 87505

Re: NMOCD Inspections Conducted on March 13-14, 2000

Dear Mr. Price:

Attached for your perusal, is the information requested by you during the inspections of the following natural gas compressor stations currently owned and operated by El Paso Natural Gas (EPNG): Afton, Deming, Florida, Lordsburg, and Station No. 4.

Afton

- Legal Description: SW/4 SW/4, Section 21 and E/2 SE/4 SE/4, Section 20 T-25-S, R-1-E, Dona Ana County, New Mexico
- Afton has one producing water well whose depth is 550 feet.
- A Spill Prevention, Control and Countermeasure Plan (SPCC) is not required for Afton Station because a potential spill would not reach navigable waterways of the U.S.
- Afton Station was not registered as a hazardous waste generator facility during 1999.

Florida

- Florida has two producing water wells which are located approximately 1.3 miles off-site. Water depths of Well No. 1 and 3 are 295 feet and 299 feet, respectively.
- A SPCC Plan is not required for Florida Station because a potential spill would not reach navigable waterways of the U.S.
- Hazardous Waste Generator I.D. No. NMD 986 684 769.
- The capacity of the lube oil tank is 6,300 gallons.

Lordsburg

- Lordsburg has two producing water wells. The depth of Well No. 1 and 2 are 410 feet and 450 feet, respectively.
- A SPCC Plan is not required for Lordsburg Station because a potential spill would not reach navigable waterways of the U.S.
- Lordsburg Station was not registered as a hazardous waste generator facility during 1999.

Deming

- The water in the oil-water cooling and/or jacket water sumps are treated with 1070 and 2010 chemicals.
- The engine oil sump is equipped with a leak detection system but does not have secondary containment.

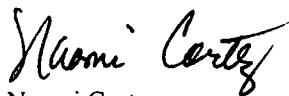
- Hazardous Waste Generator I.D. No. NMD 000 839 159.
- Wastewater Lined Pond: EPNG is cognizant of the potential leaks in the pond. However, a leak survey has not been conducted because EPNG is presently contemplating the future abandonment of this facility. As a temporary solution, EPNG proposes to pump out any accumulated liquids in the leak detection monitor well, which has been re-installed since the date of your last visit. EPNG believes that the potential leak(s) will not pose an adverse effect on the environment since no oil-bearing wastewater is conveyed to the pond. Depth to the groundwater in this area is in excess of 400 feet and the nearest surface water is over 68 miles from the plant. The pond continues to receive minimal cooling tower blowdown due to Deming's infrequent mode of operation (see table below). EPNG assures that the subject pond issues will be addressed when Deming's operating status is further defined. In the meantime, the leak detection well will continue to be sampled on a monthly basis.

Unit #	Annual Hours of Operation		
	1997	1998 *	1999
A-1	46	767	47
A-2	0	736	8
A-3	0	172	4
A-4	0	425	35
A-5	0	373	28
A-6	0	564	15
A-7	24	239	68
A-8	0	698	15
A-9	0	496	8
A-10	24	481	44
A-11	24	557	12
A-12	24	502	18
A-13	24	386	11
A-14	0	411	12
B-1	0	24	0
B-2	0	24	0
B-3	24	24	0
B-4	0	24	0
B-5	0	0	0
B-6	0	0	0
B-7	0	0	0
Aux-1	25	0	0
Aux-2	68	96	0
Aux-3	18	0	0
Aux-4	0	0	0

* Note: The pond was last repaired during April of 1998.

It was a pleasure meeting you back in March. Please contact me at (915) 496-3519 if you have any questions regarding this submittal.

Sincerely,



Naomi Cortez
Sr. Environmental Engineer
Pipelines West Department

OCD ENVIRONMENTAL BUREAU

SITE INSPECTION SHEET

DATE: 3-14-00 Time: 10:20 AM

Type of Facility: Refinery ☐ Gas Plant ☐ Compressor St. ☒ Brine St. ☐ OilField Service Co. ☐
Surface Waste Mgt. Facility ☐ E&P Site ☐ Crude Oil Pump Station ☐
Other ☐ _____

Discharge Plan: No ☐ Yes ☒ DP# GLW-147

FACILITY NAME: DEMING STATION

PHYSICAL LOCATION: 13 MILES WEST of DEMING - NOR

Legal: QRT _____ QRT _____ Sec 32 T S235 R 11+120 County LUNA

OWNER/OPERATOR (NAME) EL PASO NATURAL GAS

Contact Person: NAOMI CORTEZ Tele:# 915-496-3519

MAILING

ADDRESS: P.O. 1492 EL PASO State TX ZIP 79978

Owner/Operator Rep's: SAB ARMANDO HERNANDEZ

OCD INSPECTORS: 2. PRICE & ED MARTIN

1. **Drum Storage:** All drums containing materials other than fresh water must be stored on an impermeable pad with curbing. All empty drums will be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets will also be stored on an impermeable pad and curb type containment.

OK

2. **Process Areas:** All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

OK

3. **Above Ground Tanks:** All above ground tanks which contain fluids other than fresh water must be bermed to contain a volume of one-third more than the total volume of the largest tank or of all interconnected tanks. All new tanks or existing tanks that undergo a major modification, as determined by the Division, must be placed within an impermeable bermed enclosure.

OK

4. **Above Ground Saddle Tanks:** Above ground saddle tanks must have impermeable pad and curb type containment unless they contain fresh water or fluids that are gases at atmospheric temperature and pressure.

OK

5. **Labeling:** All tanks, drums and containers will be clearly labeled to identify their contents and other emergency notification information.

OK

6. **Below Grade Tanks/Sumps:** All below grade tanks, sumps, and pits must be approved by the OCD prior to installation or upon modification and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing to 3 pounds per square inch above normal operating pressure and/or visual inspection of cleaned out tanks and/or sumps, or other OCD approved methods. The OCD will be notified at least 72 hours prior to all testing.

OK

7. **Underground Process/Wastewater Lines:** All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years thereafter, or prior to discharge plan renewal. The permittee may propose various methods for testing such as pressure testing to 3 pounds per square inch above normal operating pressure or other means acceptable to the OCD. The OCD will be notified at least 72 hours prior to all testing.

OK

8. **Onsite/Offsite Waste Disposal and Storage Practices:** Are all wastes properly characterized and disposed of correctly? Does the facility have an EPA hazardous waste number? Yes No

ARE ALL WASTE CHARACTERIZED AND DISPOSED OF PROPERLY? YES ☒ NO ☐ IF NO DETAIL BELOW.

ALL USED OIL DISPOSED OFF-SITE AT MESA OIL-ALBR

WASTEWATER DISPOSED OF INTO WASTEWATER POND
EVAPORATION POND.

9. **Class V Wells:** Leach fields and other wastewater disposal systems at OCD regulated facilities which inject non-hazardous fluid into or above an underground source of drinking water are considered Class V injection wells under the EPA UIC program. All Class V wells that inject non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes will be closed unless it can be demonstrated that groundwater will not be impacted in the reasonably foreseeable future. Closure of Class V wells must be in accordance with a plan approved by the Division's Santa Fe Office. The OCD allows industry to submit closure plans which are protective of human health, the environment and groundwater as defined by the WQCC, and are cost effective. Class V wells that inject domestic waste only must be permitted by the New Mexico Environment Department.

ANY CLASS V WELLS NO ☒ YES ☐ IF YES DESCRIBE BELOW! Undetermined ☐

10. **Housekeeping:** All systems designed for spill collection/prevention will be inspected weekly and after each storm event to ensure proper operation and to prevent overtopping or system failure. A record of inspections will be retained on site for a period of five years.

GOOD

11. **Spill Reporting:** All spills/releases will be reported pursuant to OCD Rule 116 and WQCC 1203 to the proper OCD District Office.

OK

12. **Does the facility have any other potential environmental concerns/issues?**

NO

13. **Does the facility have any other environmental permits - i.e. SPCC, Stormwater Plan, etc.?**

SPCC - NO STORMWATER - NO NO WATERS of U.S.

14. ANY WATER WELLS ON SITE? NO ☒ YES ☐ IF YES, HOW IS IT BEING USED?

Miscellaneous Comments:

WASTE WATER POND LEAK DETECTION & PRIMARY LINE
SHOULD BE INSPECTED - OBSERVED SOLIDS IN LEAK DETECTION
PIPE, MAY INDICATE A PROBLEM.

Number of Photos taken at this site: 17/16
attachments-

EL PASO NATURAL GAS-DEMING
COMPRESSOR STATIONS. GW-147

March 14, 2000

Pictures by Wayne Price



Plant entrance-looking north.



Auxiliary jacket cooling water below-grade sump. No secondary containment.



A plant below-grade sump-NO containment.



A engine room-Looking North-North-East.



Auxiliary building oil cooling water below-grade sump. No secondary containment.

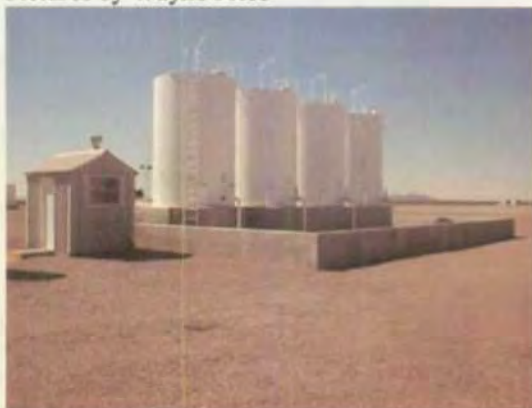


Plant waste water underground valve testing box.

EL PASO NATURAL GAS-DEMING
COMPRESSOR STATIONS. GW-147

March 14, 2000

Pictures by Wayne Price



Antifreeze and lube oil storage. Located west of cooling towers.



West side of plant-sandblast & painting area.



Auxiliary building below-grade cooling water sump-no containment.



Wastewater pond has synthetic liner and leak detection. Pond is dry at time of inspection.



Cooling tower chemical storage. Looking SW.



Wastewater pond leak detection system. System is plugged with evaporate solids.

EL PASO NATURAL GAS-DEMING
COMPRESSOR STATIONS. GW-147
March 14, 2000
Pictures by Wayne Price



B plant old reciprocating engine room-looking north.



Used oil below-grade sump-no containment.



B plant inlet scrubbers and below-grade sump with leak detector.



Fin-fan coolers and below-grade water jacket tank-No secondary containment. Located northwest of cooling towers.



September 25, 1998

007-1 AS

Mr. Roger Anderson
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, NM 87505

Subject : El Paso Natural Gas Company's Deming Compressor Station Discharge Plan
Renewal

Dear Mr. Anderson:

Earlier this year, we obtained renewed a Deming Station Discharge Plan. As part of the renewal, we agreed to pressure test the wastewater piping or conduct a visual inspection. Attached is a report of the pressure tests. Any sections that were found to be leaking were replaced.

If you need additional information or have any questions regarding the submittal, please contact me at (520) 663-4222 or send e-mail to pundaria@epenergy.com.

Sincerely

A handwritten signature in cursive script that reads 'Anu Pundari'.

Anu Pundari
Principal Engineer

Handwritten initials, possibly 'JP', in a stylized, cursive script.

DEMING STATION
GROUND WATER DISCHARGE

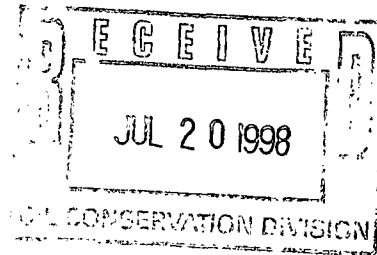
The following pressure tests were made on the piping and held for one hour:

	Date	Pressure	Signed
A Plant Cooling Tower Blowdown	<u>7-6-98</u>	<u>5#</u>	<u>E. L. Smylie</u>
B Plant Cooling Tower Blowdown	<u>7-6-98</u>	<u>5#</u>	<u>E. L. Smylie</u>
A Plant AIR Blowdown Piping	<u>7-6-98</u>	<u>5#</u>	<u>E. L. Smylie</u>
Test Box to Lined Pond	<u>7-6-98</u>	<u>5#</u>	<u>E. L. Smylie</u>
* A & B Plant Basement Sump Line	<u>7-10-98</u>	<u>6#</u>	<u>B. Jones</u>

Comments: * It is recommended that this line be
replaced in 2002 with Sch 80 PVC. Also a new
ditch should be dug. There is 1400 ft of pipe
to be replaced. This line is on the budget for
2002. This line is 4" Sch 40 PVC at the
present time.

bc: Don Payne
Sandra Miller/Tom Hutchins
Deming Station - Wastewater
AP File

July 14, 1998



Mr. Roger Anderson
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, NM 87505

Subject : El Paso Natural Gas Company's Deming Compressor Station Discharge Plan
Renewal - GW-147

Dear Mr. Anderson:

As per our conversation today, this letter is being sent to clarify a paragraph in the Deming Compressor Station Discharge Plan Renewal sent in April 1998. The Discharge Plan Renewal application stated the following:

EPNG petitions for exemption from OCD Order No. R-8952 which requires that all pits over 16 feet be screened, netted, or covered. A very small amount of contact wastewater discharges to the double lined pond. The pond will be equipped with an oil boom to trap any oil near the pond inlet. In addition, the pond will be inspected periodically for any oil on the pond surface. If floating oil is detected, measures will be undertaken to remove the oil as quickly as possible.

Please accept the paragraph below in lieu of the original language since it was discovered that the pond inlet is in the center of the pond rather than at the edge. The pond is usually dry since the station is operating in a low pipeline throughput mode.

EPNG petitions for exemption from OCD Order No. R-8952 which requires that all pits over 16 feet be screened, netted, or covered. A very small amount of contact wastewater discharges to the double lined pond. When there is evidence of oil, the pond will be equipped with an oil boom to trap any oil at the edge of the pond. In addition, the pond will be inspected periodically for any oil on the pond surface. If floating oil is detected, measures will be undertaken to remove the oil as quickly as possible.

Page 2 - Deming Discharge Plan GW-147 Clarification

We appreciate your assistance in clarifying the interpretations of the discharge plan approval conditions. If you have any questions, please contact me at (520) 663-4222.

Sincerely,

A handwritten signature in cursive script that reads "Anu Pundari".

Anu Pundari, P.E.
Principal Engineer

cc: Mr. Tim Gum
NMOCD - District II
811 S. First
Artesia, NM 88210

Mr. Donald R. Payne (EPNG)

Detach and retain for your records

Check Date:

04/02/98

EL PASO NATURAL GAS COMPANY

Check No.

Refer Pmt Inquires to (915) 496-5354

Invoice Number	Invoice Date	Voucher ID	Gross Amount	Discount Available	Paid Amount
CKREQ980326	03/26/98	00035097	740.00	0.00	740.00

DEMITING CS
GW-147

Vendor Number	Vendor Name		Total Discounts		
8000001207	Nmed Water Quality Management		\$0.00		
Check Number	Date		Total Amount	Discounts Taken	Total Paid Amount
	04/02/98		\$ 740.00	\$ 0.00	\$740.00

The Santa Fe New Mexican

Since 1849. We Read You.

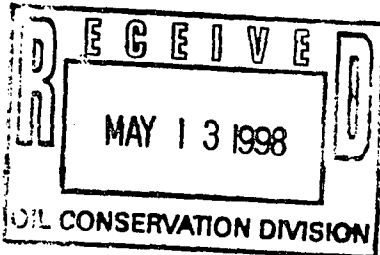
NM OCD

AD NUMBER: 23232

ACCOUNT: 56689

LEGAL NO: 63435

P.O. #: 98-199-000



301 LINES ONCE at \$ 120.40
Affidavits: 5.25
Tax: 7.85
Total: \$ 133.50

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, BETSY PERNER being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily news paper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a News paper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 63435 a copy of which is hereto attached was published in said newspaper once each WEEK for ONE consecutive week(s) and that the notice was published in the newspaper proper and not in any supplement; the first publication being on the 1 day of MAY 1998 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

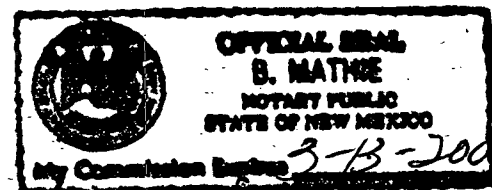
/S/

Betsy Perner
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this
1 day of MAY A.D., 1998

Notary

B. Matthe
Commission Expires 3-13-2001



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

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

(GW-144) - Union Pacific Resources, Karen Singletary, (817) 877-6764, 801 Cherry Street, Fort Worth, Texas 76102-6803, has submitted a discharge application for its previously approved discharge plan for the Westall Compressor Station located in the SW/4 NW/4 of Section 35, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico. Approximately 3 gallons per day of wash down water is stored in an above ground steel tank prior to disposal at an OCD approved site. Ground water 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 7,843 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-146) - Burlington Resources, Jeff Schoenbecker, (505) 326-9537, P.O. Box 4289, Farmington, New Mexico, 87409-4289, has submitted a discharge application for its previously approved discharge plan for the Sims Mesa Compressor Station located in the NE/4 of Section 22, Township 30 North, Range 7 West, NMPM, Rio Arriba County, New Mexico. Approximately 36 gallons per day of waste water is stored in an above ground closed top steel tanks prior to disposal at an OCD approved site. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 160 feet with a total dissolved solids concentration of approximately 600 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(GW-147) - El Paso Natural Gas Company, Donald R. Payne, (915) 759-2270, P.O. Box 1492, El Paso, Texas, 79901-1442, has submitted a discharge application for its previously approved discharge plan for the Deming Compressor Station located in the SE/4 SE/4 of Section 32, Township 23 South, Range 11 West, NMPM, Luna County, New Mexico. Approximately 43,200 gallons per day of cooling tower blowdown water with a total dissolved solids concentration of approximately 77,000

mg/l. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 30 feet with a total dissolved solids concentration of approximately 5,000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

(BW-018) Rowland Trucking Company, Bob Patterson, (505) 394-2581, P.O. Box 340, Hobbs, New Mexico, 88240, has submitted a discharge application for its previously approved discharged plan for the Trucker's #2 Brine Station located in the NE/4 SW/4 of Section 33, Township 18 South, Range 38 East, NMPM, Lea County, New Mexico. Fresh water is injected into the Salado Formation at an approximately depth of 2,000 feet and brine is extracted with an average total dissolved solids concentration of 390,000 mg/l. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 60 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.

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(s) may be viewed at the above address between 8:00 a.m. and 4:00 p.m. Monday through Friday. Prior to ruling on any proposed discharge plan application(s), 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. Requests for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

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

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 24th day of April 1998.

STATE OF NEW MEXICO
OIL CONSERVATION
DIVISION
LORI WROTENBERY,
Director

NOTICE OF PUBLICATION

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

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(GW-147) El Paso Natural Gas Company, Donald R. Payne, (915) 759-2270, P.O. Box 1492, El Paso, Texas, 79901-1442, has submitted a discharge application for its previously approved discharge plan for the Deming Compressor Station located in the SE/4 SE/4 of Section 32, Township 23 South, Range 11 West, NMPM, Luna County, New Mexico. Approximately 43,200 gallons per day of cooling tower blowdown water with a total dissolved solids concentration of approximately 77,000 mg/l is stored in above ground lined evaporation pond equipped with leak detection. Ground water most likely to be affected in the event of an accidental discharge is at a depth of approximately 30 feet with a total dissolved solids concentration of

approximately 5,000 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

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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(s) may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday. Prior to ruling on any proposed discharge plan application(s), 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 and a public hearing may be requested by any interested person. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

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

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 24th day of April 1998.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



LORI WROTENBERY, Director

SEAL



April 14, 1998

Mr. Mark Ashley
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, NM 87505

Subject: El Paso Natural Gas Company's Deming Compressor Station Discharge Plan Renewal

Dear Mr. Ashley:

Attached is the Deming Compressor Station Discharge Plan Renewal. Deming Station has not operated continuously for the past few years. The A Plant may run for a few days for short periods as needed to meet customer demands for natural gas in California but it is predicted that it will not run continuously. It is predicted that B Plant will not run for the foreseeable future. Therefore, current cooling tower blowdown discharge flowrates and generation of used oil at the station is low and not at design conditions.

Operations indicated that there is no cooling tower blowdown currently since the cooling tower water is recirculated and the plants are not running. When the plants run, there will be cooling tower blowdown to the double lined pond when high silica and calcium concentrations are found in the cooling tower water. Since the plants are not running most of the time, the water currently in the double lined pond is predominantly rainwater and possibly a very small fraction of water from the oil/water separator. As indicated during our conversation on March 31, 1998, water has been detected in the leak detection well of the double lined pond. There is no indication that there is a leak in the secondary liner. There is a tear in the primary liner that will be repaired after the pond is dry.

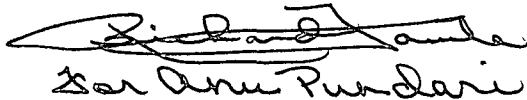
Page 2 - EPNG Deming Station Discharge Plan Renewal

In 1996, the leak detection sump was sampled for the constituents requested by NMOCD. A copy of the analytical results were sent to NMOCD. If there is a necessity to resample the leak detection sump, please let us know. EPNG is currently evaluating the economics of demolishing the cooling towers. If the towers will be demolished and replaced with fin fans or evaporative coolers, EPNG will provide additional information to NMOCD.

A check in the amount of \$740.00 to cover the application and processing fee is enclosed.

If you need additional information or have any questions regarding the submittal, please contact me at (520)663-4222 or send e-mail to pundaria@epenergy.com.

Sincerely

A handwritten signature in black ink, appearing to read "Anu Pundari", written over a horizontal line.

Anu Pundari
Principal Engineer

cc: Mr. Tim Gum
NMOCD - District II
811 S. First
Artesia, NM 88210

Mr. Donald Payne (EPNG)

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 Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Revised 12/1/95

Submit Original
Plus 1 Copies
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 the OCD Guidelines for assistance in completing the application)

☐ New

☒ Renewal

☐ Modification

1. Type: Natural Gas Compressor Station
2. Operator: El Paso Natural Gas Company
Address: Star Route 1, P.O. Box 500, Deming, NM 88030
Contact Person: Anu Pundari Phone: (520) 663-4222
3. Location: SE 1/4 SE 1/4 Section 32 Township 23-S Range 11-W
Submit large scale topographic map showing exact location.
4. Attach the name, telephone number and address of the landowner of the facility site.
5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility.
6. Attach a description of all materials stored or used at the facility.
7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included.
8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures.
9. Attach a description of proposed modifications to existing collection/treatment/disposal systems.
10. Attach a routine inspection and maintenance plan to ensure permit compliance.
11. Attach a contingency plan for reporting and clean-up of spills or releases.
12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included.
13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.
14. CERTIFICATION

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

NAME: Anu Pundari Title: Principal Compliance Engineer
Signature: Anu Pundari Date: April 14, 1998

GW-~~118~~
147

NMOCD DISCHARGE PLAN

DEMING COMPRESSOR STATION

LUNA COUNTY, NEW MEXICO

Submitted to :

New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Submitted by :

El Paso Natural Gas Company
6005 S. Belvedere
Tucson, AZ 85706

APRIL 1998

**EL PASO NATURAL GAS COMPANY
DEMING COMPRESSOR STATION**

DISCHARGE PLAN RENEWAL

This Discharge Plan has been prepared in accordance with New Mexico Oil Conservation Division (OCD) "Guidelines for the Preparation of Ground Water Discharge Plans at Natural Gas Processing Plants, Refineries, Compressor and Crude Oil Pump Stations (Revised 12-95)".

1. Type of Operation

The EPNG Deming Compressor Station is a natural gas compressor station which transports pipeline quality natural gas to various customers along the pipeline. The facility consists of the following combustion equipment: 21 Cooper Bessemer, GMV-10TF natural gas-fired, naturally aspirated, reciprocating engines; and 4 Worthington CCG-8, natural gas-fired, naturally aspirated, reciprocating engines. The units are available for operation 8,760 hours per year.

The natural gas flows into each of the twenty one single stage compressors by way of a common suction header from the pipeline. The compressor engines are natural gas fueled, two cycle engines. Two pipelines feed natural gas to Deming Compressor Station for additional increase in pressure of the pipeline gas. One of the pipelines (2611 California Line) is served by 14 compressors ("A" Plant) and the other (3011 California Loop Line) is served by 7 compressors ("B" Plant). There are four Worthington CCG-8 auxiliary units used to generate electrical power for the facility.

The maximum "A" Plant and "B" Plant horsepower at standard conditions of 14.696 psia and 59° F is 23,100 horsepower (twenty one units at 1100 HP each). The normal site rated horsepower based on NMED's deration policy for naturally aspirated reciprocating engines, adjusted for site altitude of 4,456 feet above mean seal level (12.482 psia) is 21,042 horsepower (twenty one units at 1002 HP each). The maximum auxiliary horsepower at standard conditions of 14.696 psia and 59° F is 2200 horsepower (four units at 550 HP each). The normal site rated horsepower based on NMED's deration policy for naturally aspirated reciprocating engines, adjusted for site altitude of 4,456 feet above mean seal level (12.482 psia) is 2004 horsepower (four units at 501 HP each).

2. Name of Operator or Legally Responsible Party and Local Representative

A. Name of Operator or Legally Responsible Party

All correspondence regarding this discharge plan should be sent to EPNG headquarters at the address below:

Donald R. Payne
Manager of Compliance Services
El Paso Natural Gas Company
P.O. Box 1492
El Paso, Texas 79901-1442 (915) 759-2270

B. Local Representative

A copy of all correspondence and all questions should be directed to the Compliance Engineer :

Anu Pundari
Principal Compliance Engineer
El Paso Natural Gas Company
6005 S. Belvedere
Tucson, AZ 85706 (520)663-4222

3. **Location of the Discharge Plan Facility**

Deming Compressor Station is located in the SE/4 SW/4, SW/4 SE/4, And W/2 SE/4 SE/4 of Section 32 Township 23-S, Range 11W, in Luna County, New Mexico. Approximately 10 miles West of Deming, New Mexico and 1 mile North of U.S. Highway No. 80. The station is approximately one mile north of Exit 68 of I-10.

4. **Landowners**

El Paso Natural Gas Company in the landowner of the facility site.

5. **Facility Description**

The main operating process at Deming Compressor Station is natural gas compression. A topographic map is shown under Tab 1. The station facilities are shown in the plan drawing attached under Tab 2. Additionally, mechanical flow diagrams are shown in Tab 3. Detail drawings of the double lined pond are shown under Tab 4.

6. **Materials Stored or Used at the Facility**

A list of cooling tower chemical used at the station and their respective Material Data Safety sheets can be found under Tab 5.

7. **Sources and Quantities of Effluent and Waste Solids Generated at the Facility**

a) **Inlet and Fuel Gas Scrubbers**

Any entrained liquids from upstream compressor stations in the two pipelines that enter the station are trapped by the inlet gas scrubbers. These scrubbers are manually drained into a high pressure blowdown vessel. The liquid (hydrocarbons) phase of this vessel is automatically dumped into an underground tank equipped with a vent and a leak detection system. The accumulated liquid from the below-grade tank is hauled from the site by an oil recycler.

This below-grade tank is a fiberglass-reinforced plastic (FRP) tank has a maximum capacity of 4,250 gallons of natural gas liquids. It serves as receptor and accumulator of waste liquids originated from high pressure systems or equipment such as inlet scrubbers and fuel scrubbers. The tank is provided with a leak detection system that is regularly checked for possibility of leakage.

Any natural gas liquids originated from fuel gas scrubbers are also drained into and accumulated in the below grade tank for further hauling from the site.

The discharge from inlet and fuel scrubbers consists of light hydrocarbons also known as natural gas liquids, and used lubricating oil. These high pressure systems are depressurized when discharged into the underground tank as described above.

b) **Cooling Tower**

The process of natural gas compression results in an increase of temperature of the compressed gas which requires cooling before it can leave the plant. This cooling is accomplished through the process of heat exchange which uses water as the cooling media. This water is not in contact with the natural gas, and is itself cooled by partial evaporation in a cooling tower.

The process of heat exchange to lower the temperature of the compressed natural gas leaving the station requires the partial evaporation of the cooling media (water). This evaporation takes place when the recirculating cooling water is itself cooled in the water cooling towers. This continuous process of evaporation increases the concentration of dissolved solids in the cooling water, and were it not for the periodic discharge of a portion of the circulating water and corresponding make up with fresh water, solids would deposit on heat exchange surfaces as well as piping.

This blowdown stream is discharged from each of the two cooling towers into a double lined evaporation pond with leak detection located outside the southeast corner of the station. The estimate quantity of cooling tower blowdown is 43, 200 gallons per day under design conditions. Cooling tower additives include sulfuric acid, CWT 6110 (corrosion inhibitor), chlorine, and Chemic 8056 (Biocide) as needed. The approval letter for the double lined evaporation pond is under Tab 6.

The water discharged from the cooling towers carries a concentration of dissolved solids approximately ten times greater than the available fresh water.

c) Compressor Building Basement Drain

Any leaks or spills of lubricating oil , washwater, or other fluids from the compressors drains to a sump located in the basements. The liquids are pumped into the oil/water separator below grade storage tank. This FRP tank has a maximum capacity for 4,250 gallons. The oil/water separator FRP tank liquids are pumped through the oil/water separator. The oil phase from the oil/water separator accumulates in a below grade fiberglass reinforced plastic tank with leak detection and a maximum capacity of 4,250 gallons. The water phase from the oil/water separator discharges to the double lined pond. Both below-grade FRP tanks are provided with a leak detection system that is regularly checked for any possibility of leakage. The contents of oil storage tank is hauled from the site by an oil recycler.

d) Solvent/degreaser use

Only non-hazardous degreasers such as Solvent 140 and Electrical Solvent are currently used at the station. The degreasers are used until the container meets the definition of "empty" container. Once the container is "empty", the container is crushed and placed in the location dumpster. The contents of the dumpster are hauled by a contractor to the City of Deming municipal landfill. Approximately one drum of degreaser is used per year.

e) Spent acids or caustics

EPNG has not had the occasion to generate any spent acids. If spent acids are generated, a determination will be made as to whether the waste meets the definition of hazardous waste. Upon sampling, proper disposal methods will be evaluated.

f) Used engine coolants

Any engine coolants that are drained from the engines are pumped into storage tanks and reused. There is no generation of used engine coolants on a regular basis except those attributed to minor leaks which are collected in the basements. Coolant additives include Nashchem 7040.

g) Used lubrication and motor oils

There is one 872 gallon aboveground metal storage tank at the east end of the each compressor building, "A" Plant and "B" Plant, that is used to contain used lubricating oils from the compressor engines. The used oil is recycled by a oil recycler. No motor oils are disposed in the tanks. Any motor oil from company vehicles is disposed as per the procedures of the off-site garage performing maintenance services on the vehicles. The operation of the compressors requires the use of lubricating oil which results in minor used oil discharges consisting of 100 percent heavy hydrocarbon liquids which may contain traces of entrained water originating from lubrication and maintenance of the compressors and engines.

h) Used lube oil and process filters

Used oil lubricating filters are completely drained of free liquids, dried, and then placed in the location dumpster. The contents of the dumpster are hauled by a contractor to the City of Deming municipal landfill. Approximately ten oil filters are generated each year. Approximately one hundred and fifty air filters are generated every two years.

i) Painting wastes

Any empty paint cans are completely dried out prior to placement in the location dumpster. Any sandblast media contaminated with lead paint will be characterized and disposed accordingly.

j) Sewage

The sewage system design allows for completely independent systems at each of the three septic tank installations. one of the systems serves the main office of the station, it consists of a 1,000 gallon tank with its corresponding leach field. The second septic tank serves the "A" compressor building and also has a 1,000 tank with its own leach field. Finally, the third system serves the sewage discharge of the "B" compressor building, and it consists of another 1,000 gallon tank with its corresponding leach field. All these systems meet NMED guidelines for on-site disposal systems. There are no other wastes mixed with the sewage system.

k) Other waste solids

Office trash, empty paint cans, empty and crushed drums, wood, paper, small pieces of metal are disposed in the location dumpster. The contents of the dumpster are hauled by a contractor for disposal at the City of Deming municipal landfill.

l) Used Oil

It is difficult to estimate the amount of used oil generated from each source such as inlet scrubbers, fuel scrubbers, compressor lubricating oils, and oil fraction from oil/water separator since there is no measurement device associated with each discharge. The total amount of used oil generated per month is approximately 200 gallons from November 1995 to August 1997. The amount was calculated based on the invoices from the used oil recycler.

m) Wastewater and Used Oil Quality

Several wastewater streams were sampled in 1993. A copy of the analytical results are under Tab 7. More recent sampling results are noted under Post 1993 analytical results under Tab 7. Richard - resend the 1993 analytical results and put any new analytical results Darrell may have under Post 1993 analytical results. (send leak detection analytical results.)

8. Description of Current Liquid and Solid Waste Collection/Storage/Disposal Procedures

A. Summary Information

- a) Inlet and fuel scrubbers: Onsite collection is a below grade FRP tank with leak detection. The tank contents are recycled at an offsite recycling facility. The line leading from the high pressure scrubber blowdown tank to the below grade FRP is gravity drain to FRP.
- b) cooling tower blowdown discharges to a double lined pond with synthetic liners. The buried line gravity drains from the cooling tower to the double lined pond.
- c) Compressor building basement drains discharge to a below grade FRP oil/water storage tank with leak detection. The oil fraction from the oil/water separator collects in a below grade FRP storage tank. The tank contents are recycled at an offsite recycling facility. The buried lines from the basements to the oil/water storage tank operate at approximately 1-3 psia. The water fraction from the oil/water separator discharges in a buried line to the pond.

- d) Degreaser use: Onsite storage is in drums. Upon drum meeting the definition of "empty" container, drums are crushed and placed in location dumpster. The contents of the dumpster are hauled by a contractor to the City of Deming municipal landfill.
- e) Spent acids: Onsite storage would be in plastic drums if it is ever generated. It will be characterized and disposed accordingly. If the waste meets the definition of hazardous waste, the waste would be disposed offsite at an approved hazardous waste landfill.
- f) Used lubrication oils: Used lubrication oils are stored in two 872 gallon skid mounted metal aboveground storage tanks. The tank contents are recycled at an offsite recycling facility. Aboveground lines from the compressor buildings gravity drain to the aboveground tanks.
- g) Used lube oil and process filters: Used lube oil filters are first drained completely free of any liquids in a drum. Then the dried filters are placed in the location dumpster. The contents of the dumpster are hauled by a contractor to the City of Deming municipal landfill.
- h) Painting wastes: Any empty paint cans are placed in the location dumpster. The contents of the dumpster are hauled by a contractor to the City of Deming municipal landfill. Any sandblast media contaminated with lead paint will be characterized and disposed accordingly.
- i) Sewage: There are three 1000 gallon belowgrade tanks for sewage collection. The water fraction discharges to leach fields.
- j) Other waste solids are placed in the location dumpster. The contents of the dumpster are hauled by a contractor to the City of Deming municipal landfill.

B1. Tankage and Chemical Storage Area

The lubricating oil storage tanks, used oil tanks, acid tanks, and drum storage areas have a concrete curb such that spills or leaks are contained on the pads.

B2. Buried Piping Integrity

The facility contains underground wastewater piping. The age and specifications of all such lines are not known. EPNG plans to conduct integrity testing by end of 1998. EPNG plans to take the following steps to demonstrate the integrity of buried piping :

- a) Review available drawings of wastewater piping systems.
- b) Identify test sections.
- c) Excavate and conduct visual inspection of some test sections that operate under pressure.
- d) For those sections where visual inspection is not conducted , excavate at beginning and end of test section.
- e) Install fittings at beginning and end of test section so that section can be isolated.
- f) Connect tube filled with water or use other means to pressure system to a pressure of 3 pounds per square inch above the normal operating pressure for one hour.
- g) Record test results.

C1. Existing Effluent and Solids Disposal

- a) Surface Impoundments - Drawings 3DE-1-M12 and 3DE-1-M13 show the double lined pond plan and details.
- b) The pond is not in a wellhead protection area pursuant to NMOCD Order R7940.
- c) Leach Fields - There are three leach fields associated with the three sewage storage tanks. Volume is estimated to be approximately 100 to 200 gallons per day. There is no non-sewage wastewater connected to the sewage system.
- d) Solids disposal - If sandblast media and cooling tower basin sediment is generated, it will be characterized and disposed accordingly. Wastes listed in Section 8.A.j are disposed at the City of Deming municipal landfill.

C2. Offsite Disposal

Waste lubricating oils are trucked by Mesa Oil to their offsite recycling facility.

Name: Mesa Oil

Address: 20 Lucero Road, Belen, NM 87002

EPA Number - NMD0000096024

Phone Number : 1-800-873-3645 Ext 41 or 42

Non-hazardous solid waste is trucked to the City of Deming municipal landfill by a contractor.

Name: City of Deming Municipal Landfill

Address: P.O. Box 706, Deming, NM 888031

Location: Approximately three miles east of downtown Deming, on East 4th Street.

9. Proposed Modifications

Although the collection and storage systems are protective of groundwater, EPNG is considering demolition of the cooling towers. The feasibility and economics of replacing the cooling tower with fin-fans or an evaporative cooling system are being evaluated at this time. An evaporative cooling system would most likely result in a lower flowrate to the double lined pond than the design flowrate from the cooling towers. If a project is funded, information regarding the modifications will be sent to NMOCD.

10. Inspection, Maintenance and Reporting

It is proposed that secondary leak detection systems be inspected on a quarterly basis. Records will be kept of the inspections at the Laboratory Office in El Paso or at the Deming Station Complex office located at the station. In the event that wastewater is believed to be leaking through the primary liner of the double lined pond, NMOCD will be notified. In the event that oil is believed to be leaking from any of the below-grade FRP oil storage tanks, NMOCD will be notified.

Curbing around the aboveground lubricating oil storage tanks, used oil storage tanks, acid storage area, and drum storage area contain any spills/leaks and prevent commingling of hazardous constituents with runoff. The depth to groundwater is in excess of 400 feet and the nearest surface water is over 60 miles from the station.

11. Spill/Leak Prevention and Reporting Procedures (Contingency Plans)

The Deming Station is operated in a manner that prevents and mitigates any unplanned releases to the environment. Station process and storage units are regularly observed by a number of personnel during normal operations, and any evidence or sign of spills/leaks is routinely reported to supervisory personnel so that repairs or cleanup can be promptly effected. Non fresh water aboveground storage tanks are bermed to contain any minor spills/leaks. The drum storage area has a concrete curb to contain any minor spills/leaks. Routine maintenance procedures conducted at Deming Station also help to assure that equipment remains functional and that the possibility of spills/leaks is minimized.

Should spills or leaks occur, measures to minimize any potential harm to the environment will be taken. Any liquid and solid wastes generated by these efforts will be characterized, segregated, and managed in separate containers for further recycling if possible, or for off-site disposal in accordance with its analytical profile.

Verbal and written notification of leaks or spills will be made to OCD in accordance with OCD Rule 116 and WQCC Section 1203. Any release of a chemical with a reportable quantity regulated by Title 40 Code of Federal Regulations Parts 300 through 372 will be reported to the National Response Center, and where applicable to the NMED.

12. SITE CHARACTERISTICS

Introduction

Deming Compressor Station is located in SE/4, SW/4, SW/4, SE/4, and W/2 SE/4 SE/4 of Section 32, T-23-R, R-11-W in Luna County, New Mexico. The station is situated approximately 6 miles southwest of the Mimbres River. The surrounding area consists largely of a desert or bolson underlain by thick deposits of sand and gravel. A large amount of groundwater is obtained from the water-bearing formations of the bolson deposits. The groundwater in these deposits is derived largely from local precipitation and seepage losses from the run-off of the tributary streams and arroyos which drain into the county. More than 200 wells have been drilled for the purposes of securing groundwater for the irrigation of crops.

Regional Geologic Setting

PRECAMBRIAN STRATA

Granites, granite gneisses, and associated metamorphic rocks occur beneath pre-Tertiary strata in most of the region (Kottlowski, 1963). However, there are some large areas of Precambrian metasedimentary rocks, and those rocks are types that could be mistaken for metamorphosed Paleozoic strata in isolated fault blocks. In the Sacramento Mountains, it has been reported that shale, siltstone, and fine-grained quartzitic sandstone, intruded by dioritic sills, beneath the Bliss (Cambrian ?) Sandstone. Precambrian quartzite and granodiorite have been found beneath the Abo Redlands south of Sierra Blanca near the village of Bent.

PALEOZOIC STRATA

Paleozoic sedimentary rocks in south-central and southwestern New Mexico include the Cambrian-Ordovician Bliss Sandstone; the Ordovician El Paso Limestone and Montoya Dolomite; the Silurian Fusselman Dolomite; the Devonian Onate, Sly Gap, Contadero, and Percha formations; the Mississippian Caballero, Lake Valley, Escabrosa, Rancheria, Helms, and Paradise formations; various Pennsylvanian units; and the Permian Bursum, Hueco, Abo, Yeso, Glorieta, and San Andres, Bernal, Earp, Colina, Epitaph, Scherrer, and Concha formations (Kottlowski, 1963). Somewhere near Deming is the poorly defined meeting ground where units bearing central New Mexico terminology mingle with those named from type sections in southeastern Arizona.

MESOZOIC STRATA

Triassic beds, the Dockum Formation, or the Santa Rosa Sandstone overlain by the Chinle Formation have been left beneath an erosion surface only in the north part of the region (Kottlowski, 1963). No Jurassic rocks are known from this area. Early Cretaceous rocks are thick to the southwest but thin or absent in the northern part of south-central and southwestern New Mexico, whereas Late Cretaceous strata, where left after Cenozoic erosion, are thick in the northern part of the region but absent to the southwest. Both Early and Late Cretaceous sequences locally include thick masses of volcanic detritus.

Triassic Units

Triassic rocks occur only along the north edge of the region (Kottlowski, 1963). On Horse Mountain the remnant of the Triassic strata in fault contact with Tertiary volcanic and sedimentary rocks consists of light gray, grayish orange, and light red, cross-laminated pebbly sandstone above the San Andres

Limestone. In the Sun-Victorio oil test, the Triassic is about 180 feet thick, with the upper 120 feet of red claystone, siltstone, and sandstone perhaps and equivalent of the Chinle Formation, and the lower 60 feet of gray to red silty sandstone representative of the Santa Rosa Sandstone. In the northern San Andres Mountains, the Triassic is referred to the Dockum Formation and consists of 50 to 100 feet of red to gray, calcareous, stone with laminae of feldspathic sandstone.

Cretaceous Units

Late Cretaceous rocks remain as erosional remnants in the northern part of the region and appear to be thin or absent above the thick sequence of Early Cretaceous strata of southwestern most New Mexico (Kottowski, 1963). Near D-Cross Mountain, along the Socorro-Catron county line west-northwest of Socorro, typical central New Mexico Cretaceous rocks crop out. The Dakota Sandstone is about 20 feet thick and unconformably overlies the Triassic Chinle Formation. Above is the Mancos Shale consisting of a lower 105-foot-thick shale member, a middle 25-foot-thick Tres Hermanos Sandstone member, and an upper 165-foot-thick shale member. The shales are sandy, fossiliferous, calcareous, gypsiferous, and carbonaceous. The overlying Mesaverde Group consists of the lower La Cruz Peak Formation and the upper 70-foot thick marine sandstone. The Crevasse Canyon Formation is made up of quartzose sandstones interbedded with mudstones, nonmarine shales, and coals, about 600 feet in thickness. The Late Cretaceous rocks are about 1275 feet thick beneath the early Tertiary Baca Formation.

Early Cretaceous strata unconformably overlie the Montoya and Fusselman Dolomites in the Victorio Mountains. This Cretaceous sequence also had been called the Lobo Formation; it is 600 to 800 feet thick and consists of interbedded conglomerates, siltstones, sandstones, and fossiliferous limestones, overlain unconformably by Tertiary andesitic agglomerates, breccias, tuffs, and sandstones. Minor lenses of feldspathic sandstones occur amid the Cretaceous sequence but most of the detrital fragments are of quartz, chert, silicified limestone, limestone, and dolomite. Locally, lenses of andesite breccia and andesite conglomerate occur near the base of this Early Cretaceous section. The overlying Tertiary andesite units contain rounded boulders and pebbles of andesite, Early Paleozoic dolomites, various Early Cretaceous rocks, and minor amounts of schist, granite, and pegmatite (Precambrian).

Local Geology

The Deming area is composed of alluvium and bolson deposits and other superficial deposits. The station is located in the Basin and Range Province in southwestern New Mexico which consists largely of a desert or bolson underlain by thick deposits of sand and gravel (Fiedler, 1927).

A generalized site subsurface description is presented based on drill logs from EPNG wells. Sand and gravel with some clay can be expected within the first 110 feet. A thirteen foot shale unit was encountered at 124 feet. This was followed by another sand and gravel unit containing some clay at 230 feet. A 148 foot thick sandstone unit was encountered terminating at a depth of 486 feet. This was followed by a 30 foot thick clay unit. Bedrock was encountered at 516 feet.

Regional Groundwater Setting

The average annual rainfall in the area is less than 10 inches. Groundwater, generally, is available everywhere in the area. Depths to water range from less than 5 feet at some points on the valley floors to as much as 550 feet on the upper alluvial slopes that apron the mountain ranges (Anonymous, 1970). The depth to water in wells within the mountains commonly is less than 500 feet. However, the few wells that have been successfully developed in the more rugged parts of the mountains probably tap small bodies of perched water. The water table under the mountain ranges seems to stand at an altitude only slightly higher than under the adjacent valley floors.

Large quantities of water have been pumped from wells tapping the valley fill, or so-called "bolson deposits" in the San Simon, Animas, Playas, Lordsburg, and Mimbres (Deming) valleys. In each of these areas irrigation wells have developed, some of which have yields up to 1,800 gpm (gallons per minute). City-supply and industrial wells in the vicinity of Silver City obtain yields of up to 500 gpm from parts of the Gila Conglomerate (Anonymous, 1970). On the other hand, wells that tap the crystalline in marine sedimentary rocks commonly yield less than 10

gpm; in some areas, particularly in the more rugged mountains, yields of 1 to 2 gpm are considered good. Each of the rock formations has its own lithologic characteristics, and these determine the ability of the formation to yield water to wells.

The great thicknesses of limestone rocks that undoubtedly underlie much of the bolson fill generally have been discounted as potential supplies of large quantities of water. Yet evidence exists that this belief may be erroneous. It is true that in the upland areas, the limestone rocks do not commonly yield large quantities of water. But at depth, the situation may be different where deep circulation of water may have developed solution permeability or where fracturing along zones of faulting may have increased storage and permeability. Records of deep wells at Apache Tejo, in Grant County, indicate that the original storage yield of wells come from the limestones at depths of over 1,000 feet, and that subsequent caving greatly reduced the yields.

At the present time the quality of the groundwater found in the region, in all aquifers, and at all depths, is generally fair to excellent (Anonymous, 1970). The few reported instances of poor to impotable water are local, and are commonly associated with mineral deposits. No data are available concerning the quality of water that might be available in the deep-lying limestones, but, except for the probability that it would be very hard, there is no reason to expect it to be saline as is most water in the deep-lying formation in New Mexico east of the Rio Grande.

The generally good quality of most groundwater in southwestern New Mexico may be attributed largely to two factors; a general absence of saline deposits, or saline-rich formations, and to an apparently freer circulation of water, both shallow and deep. Water moves through the formations underlying the San Samon, Animas, Playas, and Lordsburg valleys and probably discharges along the valley of the Gila River.

Groundwater in the drainage basin of the Mimbres River and in Hachita Valley follows a southerly course, moving toward points of discharge in the series of great playa lakes few miles south of the United States-Mexican boundary.

Local Groundwater

Deming is located in Luna County, an area in southwestern New Mexico, which consists largely of a desert or bolson underlain by thick deposits of sand and gravel. The vegetation of the desert plains consists chiefly of mesquite brush and scattered mesquite trees, cactus, and yacca. At times of sufficient rainfall native grasses furnish feed for stock. Yucca grows extensively on the sandy plains and at the foot of the ridges. The region is essentially a stock grazing country.

A large amount of groundwater is obtained from the waterbearing formations of bolson deposits. The groundwater in these deposits is derived largely from local precipitation and seepage losses from the run-off of the tributary streams and arroyos which drain into the county. More than 200 wells have been drilled for the purpose of securing groundwater for the irrigation of crops, but for various reasons much of the early development has been abandoned.

A considerable portion of the water contained within the sand and gravel underlying the bolsons is derived from local rainfall. There appears to be no continuous cover of tight formations throughout the area, though in places there are beds of clay near the surface which prevent deep percolation. This water is returned to the surface by capillary action and is lost by evaporation.

The chief contributions to the underground supply coming from streams are derived from the seepage losses of the Mimbres River and the San Vincent Arroyo. At times of heavy rainfall the flood flow extends as far south as Deming and during unusual periods of rainfall the waters flow southward along the west side of the Florida Mountains.

Water-Bearing-Formations

A large portion of Luna County is underlain by thick deposits of sand, gravel, and clay (Fiedler, 1927) The deposits form a comparatively smooth desert plain rising quite regularly from an elevation of less than 4,000 feet above sea

level on the southeast to 5,400 feet above sea level in the northwest corner. The thick bodies of sand and gravel underlying the wide bolson of Luna County contain the groundwater that is reclaimed for irrigation and other uses in the area.

The water-bearing formations are composed of deposits of sand and gravel of varying degrees of fineness (Fiedler, 1927). The character and water-yielding capacities of the sands and gravels in the area vary greatly from place to place. The largest supplies of water are usually obtained from the coarser, loose sands and gravels and yields appear to be larger from the lower horizons. The thickness of the waterbearing beds also varies considerably. The maximum thickness of the beds appears to be about 40 to 50 feet, though in most places the thickness is much less.

The largest volume of water in Luna County underlies the broad bolson extending southward from Deming on the west side to the Florida Mountains, and extending south to the foot of the Tres Hermanas Mountains and southeastward through the gap to Palomas Lakes in Mexico (Fiedler, 1927). To the east of Deming and north and northeast of the Little Florida Mountains is an area much smaller in extent which contains a good supply of water that rises within 20 to 70 feet to the surface. The area to the east and southeast of the Florida Mountains and the broad basin south of the Cedar Grove Mountains appears to have but a scanty water supply.

Water Quality

Water quality data from three EPNG water wells is presented in Table 1. The wells are located approximately within a two mile radius of the station. The wells were completed at the following depths:

- Well No. 6 - 450 feet,
- Well No. 10 - 550 feet,
- Well No. 12 - 600 feet.

The wells were perforated at the following depths:

- Well No. 6 - 232 to 330 feet and 330 to 440 feet;
- Well No. 10 - 315 to 350 feet, 370 to 420 feet, 450 to 515 feet, and 545 to 550 feet;
- Well No. 12 - 397 to 597 feet.

TABLE 1
DEMING COMPRESSOR STATION
WATER QUALITY DATA

PARAMETERS	WELL No. 6	WELL No. 10	WELL No. 12
Conductivity	428 umho/cm	385 umho/cm	444 umho/cm
Total Hardness	112 ppm	56 ppm	132 ppm
pH	7.7	7.7	7.2
TDS	366 ppm	395 ppm	380 ppm
Ca	84 ppm	36 ppm	80 ppm
Mg-CaCO ₃	28 ppm	20 ppm	52 ppm
Na	46 ppm	76 ppm	53 ppm
Fe			0.03 ppm
Alkalinity	150 ppm	170 ppm	160 ppm
Cl	18 ppm	14 ppm	21 ppm
Fl	0.7 ppm	0.54 ppm	1.52 ppm
SiO ₂	40 ppm	50.5 ppm	29 ppm
SO ₄	37.6 ppm	27.6 ppm	48.4 ppm

REFERENCES

Anonymous, 1970. Ground Water in Southwestern New Mexico, New Mexico Geological Society Guidebook, Tyrone-Big Hatchet Mountains, Florida Mountains Region.

Fiedler, Albert G., 1927. Report on a Reconnaissance of the Ground-Water area of the Mimbres Valley, United States Geological Survey.

Kottowski, Frank E., 1963. Paleozoic and Mesozoic Strata of Southwestern and South-Central New Mexico, State Bureau of Mines and Mineral Resources, New Mexico Institute of Mining and Technology.

Groundwater in Southwestern New Mexico - Tyrone, Big Hatchet Mountains, and Florida Mountains Region, by the New Mexico Geological Society (1970).

13. Other Compliance Information

EPNG commits to report spills and leaks as per the requirements of NMOCD Rule 116 and WQCC Section 1203 for spill/leak reporting.

EPNG petitions for exemption from OCD Order No. R-8952 which requires that all pits over 16 feet be screened, netted, or covered. A very small amount of contact wastewater discharges to the double lined pond. The pond will be equipped with an oil boom to trap any oil near the pond inlet. In addition, the pond will be inspected periodically for any oil on the pond surface. If floating oil is detected, measures will be undertaken to remove the oil as quickly as possible.

DEMING STATION

April 8, 1998

BARREL RACK

Mobil. Motor Oil	20 Gallons
Diesel	30 " "
Hydraulic Fluid	Empty
Governor Oil	40 Gallons
Turbine Oil	Empty
Pegasus Oil 490	40 Gallons
Solvent 140	55 " "
Solvent Electrical	25 " "

ACID TANKS BERMS

A-Plant

B-Plant

CST-7040	275 Gallons	110 Gallons
CWT-6110	55 " "	
Sulfuric Acid	1200 " "	20 " "

WATER LAB

Brom Cresol Green Methel Red Indicator
H2504 Sulfuric Acid
Ceric Sulfate Solution
Ferroln, Nitrate Indicator
PH7 Buffer
Clorax

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

Phone: (518) 385-4085

DIAL COMM 8*235-4085

MATERIALS
SERVICES
INFORMATION

No. 9

SULFURIC ACID,
CONCENTRATED

REVISION B

Date October 1980

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: SULFURIC ACID, CONCENTRATED

OTHER DESIGNATIONS: Oil of Vitriol, Hydrogen Sulfate, H_2SO_4 , GE Material D4A2,
CAS #007 664 939

DESCRIPTION: Material consists of about 93-98% H_2SO_4 with water and traces of
impurities.

MANUFACTURER: Available from many suppliers.

SECTION II. INGREDIENTS AND HAZARDS

Hydrogen Sulfate (H_2SO_4)
Water

%

93-98
Balance*

HAZARD DATA

TLV 1 mg/m³ for
sulfuric acid†

*Material is obtained by the reaction of SO_3 and water.
Can contain low impurity levels, such as 0.02% max of
iron as Fe. Properties vary with H_2SO_4 content.

†Current OSHA standard and ACGIH (1980) TLV. NIOSH has
a 10-hr-TWA, 40 hr work week, of 1 mg/m³.

Human, mist inhal.
TCLo 3 mg/m³, 24 wk
(Toxic Mouth Effects)

Rat, Oral
LD₅₀ 2140 mg/kg

SECTION III. PHYSICAL DATA

	93.19% H_2SO_4	98.33% H_2SO_4	100% H_2SO_4
Boiling point, 1 atm, deg C -----	ca 281	ca 338	ca 330 (dc)
Specific gravity (60/60 F) -----	1.8354	1.84	1.84
Deg. Baume -----	66	--	--
Volatiles, % at 340 C -----	ca 100	ca 100	ca 100
Melting point, deg C -----	ca -34	ca 3	10.4
Vapor press, mm Hg @ 100 F -----	<1	--	--

Water solubility: Completely miscible.

Appearance & Odor: Clear, colorless, hygroscopic oily liquid with no odor.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER
None - nonflammable	N/A	N/A	N/A	N/A

Even though sulfuric acid is nonflammable, it is hazardous when present in a fire area.
Small fires may be smothered with suitable dry chemical. Cool exterior of storage
tanks of H_2SO_4 with water to avoid rupture if exposed to fire. Do not add water or
other liquid to the acid! The acid, especially when diluted with water, can react
with metals to liberate flammable hydrogen gas.

Sulfuric acid mists and vapors from a fire area are corrosive. (See Sect. V.)

Firefighters to wear self-contained breathing equipment and full protective clothing.

SECTION V. REACTIVITY DATA

Sulfuric acid is stable under normal conditions of use and storage. It does not undergo
hazardous polymerization.

It is a strong mineral acid reacting with bases and metals. The concentrated acid is a
strong oxidizing agent and can cause ignition of combustible materials on contact.
The concentrated acid is also a dehydrating agent, picking up moisture readily from
the air or other materials.

Reacts exothermically with water. (Acid should always be added slowly to water.
Water added to acid can cause boiling and uncontrolled splashing of the acid.)

Sulfur oxides can result from decomposition and from oxidizing reactions of sulfuric acid.

SECTION VI. HEALTH HAZARD INFORMATION

TLV 1 mg/m³

Concentrated sulfuric acid is a strong mineral acid, an oxidizing agent, and a dehydrating agent that is rapidly damaging to all human tissue with which it comes in contact. Ingestion may cause severe injury or death. Eye contact gives severe or permanent injury. Inhalation of mists can damage both the upper respiratory tract and the lungs.

FIRST AID:

Eye Contact: Immediately flush eyes with plenty of running water for at least 15 minutes (including under the eyelids). Speed in diluting and rinsing out acid with water is extremely important if permanent eye damage is to be avoided. Obtain medical help as soon as possible.

Skin Contact: Immediately flush affected areas with water, removing contaminated clothing under the safety shower. Continue washing with water and get medical attention.

Inhalation: Remove to fresh air. Restore breathing. Call a physician immediately.

Ingestion: Dilute acid immediately with large amounts of milk or water, then give milk of magnesia to neutralize. Do not induce vomiting; if it occurs spontaneously, continue to administer fluid. Obtain medical attention as soon as possible.

Maintain observation of patient for possible delayed onset of pulmonary edema.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Prevent contact with the acid. Provide adequate ventilation to control workplace concentrations. Minor leaks or spills can be diluted with plenty of water and neutralized with soda ash or lime. If water is not available, cover contaminated area with sand, ashes, or gravel and neutralize with soda ash or lime.

Major spills must be handled by a predetermined plan. Contact supplier for assistance in this planning and to meet local requirements and disposing of large amounts.

DISPOSAL: Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide general ventilation to meet current TLV requirements in the workplace. Where mists are up to 50 mg/m³, a high efficiency particulate respirator with full facepiece is warranted; a Type C supplied air respirator with full facepiece operated in pressure demand mode is used to 100 mg/m³. Avoid eye contact by use of chemical safety goggles or face shield where splashing may occur. Imperious protective clothing, such as rubber gloves, aprons, boots, and suits are recommended to avoid body contact with this acid. Eyewash fountain and safety showers with deluge type heads should be readily available where this material is handled or stored.

Comprehensive preplacement and annual medical examinations with emphasis on dental erosion, cardiopulmonary system, and mucous membrane irritation and cough.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Sulfuric acid in carboys or drums should be stored in clean ventilated storage areas having acid resistant floors with good drainage. Keep out of direct sunlight, do not store above 32 C. Storage facilities to be separate from metallic powders, chromates, chlorates, nitrates, carbides, oxidizables, etc. Soda ash, sand or lime should be kept in general storage or work areas for emergency use. Protect containers against physical damage. Glass bottles need extra protection. Sulfuric acid is highly corrosive to most metals especially below 77% H₂SO₄. Avoid breathing mist or vapors. Avoid contact with skin or eyes. Do not ingest. Do not add water to concentrated acid. Do not smoke. Use nonsparking tools and vapor-proof type electrical fixtures.

DATA SOURCE(S) CODE: 2-12, 19, 20, 24, 26, 31, 37-39

Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

APPROVALS: MIS
CRDIndustrial Hygiene
and Safety

MEDICAL REVIEW: Oct. 26, 1980

CWT 6110

MATERIAL SAFETY DATA SHEET
EFFECTIVE DATE: APRIL, 1989

MANUFACTURER'S NAME:

NASH-CHEM INC.
3311 W. INDUSTRIAL
MIDLAND, TEXAS 79701
(915) 685-1823FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL
(800) 424-9300

PRODUCTION INFORMATION

PRODUCT NAME:	CWT 6110	CHEMICAL FAMILY:	Mixture
CHEMICAL NAME:	Cooling Water Treatment	N.F.P.A. CODE:	2-0-0
HAZARD CLASSIFICATION:	Corrosive	MOLECULAR WT:	Mixture
FORMULA:	Mixture		
D.O.T. HAZARD CLASS:	U.N. - 1760		
CAS #:	Mixture		

PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT:	212°F (100 C)
FREEZE POINT:	22°F
SPECIFIC GRAVITY: (H ₂ O=1):	1.045
VAPOR PRESSURE (mm Hg):	N.D.
VAPOR DENSITY (AIR=1):	N.D.
EVAPORATION RATE (BUTYL ACETATE=1):	<1
SOLUBILITY IN WATER: % BY WEIGHT:	100
APPEARANCE AND ODOR:	Dark brown liquid; pH 12.9-13.5

INGREDIENTS/IDENTITY INFORMATION

COMPONENTS:	OSHA PEL	ACGIH TLV	OTHER LIMITS	% (OPTIONAL)
Potassium hydroxide (45%)	2.0 mg/m ³	N.D.		<8%
CAS # 1310-58-3	15 minutes			
Hydroxyethylidene	N.E.	N.E.		<3%
Diphosphonic acid (60%)				
CAS # 2009-21-4				
Sodium Polytriazole (50%)	N.E.	N.E.		<2%
CAS # 64665-57-2				
Proprietary Ingredients				
CAS # Trade secret				

THIS DOCUMENT IS PREPARED PURSUANT TO THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200). IN ADDITION, OTHER SUBSTANCES NOT 'HAZARDOUS' PER THIS OSHA STANDARD MAY BE LISTED. WHERE PROPRIETARY INGREDIENT SHOWS, THE IDENTITY MAY BE MADE AVAILABLE AS PROVIDED IN THIS STANDARD.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	None
FLAMMABLE LIMITS:	N/A
LOWER:	N/A
UPPER:	N/A
EXTINGUISHING MEDIA:	Foam, CO ₂ , dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES:	Alkaline, corrosive product, keep drums cool and in tact. Fire fighters should wear full protective gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None known.

HEALTH HAZARD DATA

INHALATION:	Avoid breathing mist.
SKIN:	May irritate skin.
INGESTION:	Harmful if swallowed.
EYES:	Will irritate eyes on direct contact.
CARCINOGENICITY:	N.E.

CWT 6110

EMERGENCY AND FIRST AID PROCEDURES

INHALATION

Avoid breathing mist, alkaline corrosive product. Remove affected persons to fresh air.

EYES:

Flush eyes immediately with water. Seek medical attention.

SKIN:

Wash with soap and water. Wash contaminated clothing before reuse.

INGESTION:

If ingested do not induce vomiting. Immediately give large amounts of water and citrus juice or diluted vinegar. Consult with physician.

REACTIVITY DATA

STABILITY:

Stable

CONDITIONS TO AVOID:

None

INCOMPATIBILITY (MATERIALS TO AVOID):

Will react with strong acids.

HAZARDOUS DECOMPOSITION OF BY PRODUCTS:

Carbon dioxide, nitrogen oxide, and phosphoric oxide.

HAZARDOUS POLYMERIZATION:

Will not occur

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIALS RELEASED OR SPILLED: Mop up major spills. Flush residues to drain with plenty of water.

WASTE DISPOSAL METHOD: As above. In the event of major spills, scavenger service is recommended. Observe all federal, state and local regulations in the disposal of chemicals.

OTHER PRECAUTIONS: For industrial use only. Keep out of reach of children.

SPECIAL PRECAUTIONS

RESPIRATORY PROTECTION:

None special. Do not breathe mists.

VENTILATION:

MECHANICAL:

Should be adequate

PROTECTIVE GLOVES:

Rubber gloves

EYE PROTECTION:

Goggles or face shield

OTHER PROTECTIVE CLOTHING:

Alkali resistant, apron, boots, etc.

SARA-TITLE III INGREDIENT INFORMATION

INGREDIENTS

NAME:

Potassium Hydroxide

CAS #

1310-58-3

APPLICABLE SARA SUBSECTIONS:

304

THRESHOLD PLANNING QUANTITY:

8

THRESHOLD REPORTING QUANTITY:

1000

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

Phone: (518) 385-4085

DIAL COMM: 8*235-4085

MATERIALS SERVICES INFORMATION

No. 53

CHLORINE

Date July 1979

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: CHLORINE

OTHER DESIGNATIONS: Cl_2 , CAS # 007 782 505

DESCRIPTION: A gas shipped in steel cylinders as a liquid under its own vapor pressure.

MANUFACTURER: Available from many suppliers.

SECTION II. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
Chlorine	> 99	8-hr TWA 1 ppm (C) or 3 mg/m ³ *
<p>*Current OSHA ceiling limit. ACGIH TLV (1978) is 1 ppm with a STEL of 3 ppm for up to 15 minutes exposure. NIOSH (1976) proposed a ceiling limit of 0.5 ppm (15 minute sampling time).</p> <p>(Controversy going on whether OSHA standard should include ceiling limit or not.)</p>		

SECTION III. PHYSICAL DATA

Density at 0°C:

Boiling point at 1 atm, deg C -----	-34	Gas at 1 atm, g/liter ----	3.214
Vapor pressure at 20 C, mm Hg -----	4800	Liquid at 3.65 atm, g/cc --	1.47
Vapor density (Air=1) -----	2.49	Molecular weight -----	70.91
Water solubility at 20 C, 1 atm, g/l --	7.3		

Appearance & Odor: A greenish-yellow gas or clear, amber-colored liquid with a suffocating, pungent, irritating odor. The odor recognition threshold (100% of test panel, unfatigued) is reported at 0.314 ppm. The odor is easily noticed at 1.9-3.5 ppm and has been reported as intolerable at 2.6-41 ppm, depending on the observer.

SECTION IV. FIRE AND EXPLOSION DATA

	LOWER	UPPER
Flash Point and Method		
Autoignition Temp.		
Flammability Limits In Air		
Non-flammable		

Use extinguishing media that is appropriate for the surrounding fire. Use water spray to cool intact, fire-exposed containers (one ton tanks and cylinders will release chlorine when a fusible metal safety plug melts at 158-165F.) If possible, have specially trained personnel remove intact cylinders from fire area.

Chlorine will support the burning of most combustible materials, just as oxygen does. Flammable gases and vapors can form explosive mixtures with chlorine.

Firefighters must use self-contained breathing equipment, eye protection, and full protective clothing when fighting fires in which chlorine is involved.

SECTION V. REACTIVITY DATA

Chlorine is stable in steel containers at room temperature when dry. [Intense local heat (above 215°C) on steel walls can cause steel to ignite in chlorine.]

It is a powerful oxidizing agent which reacts violently with reducing agents and combustible materials. Materials such as acetylene, turpentine, other hydrocarbons, ammonia, hydrogen, ether, powdered metals, etc. must be kept away from chlorine.

It reacts with H_2S and H_2O forming HCl ; it combines with CO and SO_2 to form phosgene and sulfuryl chloride (toxic and corrosive materials).

Wet chlorine (150 ppm water) corrosively attacks most common metals. Handling chlorine requires special materials technology.

SECTION VI. HEALTH HAZARD INFORMATION	TLV 1 ppm or 3 mg/m ³ (C)
<p>Chlorine believed to damage the body by local corrosive effects only; no systemic effects. 5-8 ppm in air will be severely irritating to eyes, nose, and respiratory tract of most individuals in a few minutes (10 ppm intolerable for avg. person). Higher level exposures produce coughing, dyspnea, burns of the skin, conjunctivitis, pulmonary edema (may be delayed) and death, depending on concentration and time of exposure (35-51 ppm, lethal in an hour; a few deep breaths fatal at 1000 ppm). Reduced respiratory capacity (especially among smokers) and dental erosion can result from chronic low level exposure. Any contact with liquid chlorine causes burns, blistering and tissue destruction.</p> <p>FIRST AID: Call physician IMMEDIATELY for any person overexposed to chlorine!</p> <p>Eye Contact: Flush eyes with water for at least 15 minutes, holding eyelids open. If medical help is not readily available, continue flushing with water.</p> <p>Skin Contact: (Treat for inhalation exposure first!) Remove contaminated clothing under a safety shower. Wash exposed skin areas thoroughly with water.</p> <p>Inhalation: Remove to fresh air. Restore breathing when required. Have trained person administer oxygen until victim breathes easily on his own. Keep warm and at rest! In mild cases, give milk to relieve throat irritation.</p>	
SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES	
<p>Establish written emergency plans and special training of personnel where chlorine is used.</p> <p>Notify safety personnel. Provide ventilation. Exclude from area all except specially trained, assigned personnel with approved self-contained breathing equipment and appropriate protective clothing. Find and stop leak. (Large uncontrollable leaks require environmental consideration and possible evacuation of surrounding area.) Move leaking container to isolated area. Position to release gas <u>not</u> liquid. When possible draw off chlorine to process or to disposal system.</p> <p>DISPOSAL: Bubble through a large volume of 15% aqueous NaOH or other alkali. Suitably dispose of resulting solution. Follow Federal, State and local regulations.</p>	
SECTION VIII. SPECIAL PROTECTION INFORMATION	
<p>Provide general and local exhaust ventilation to meet TLV requirements. Provide suitable venting for low lying areas. Use enclosed, isolated processing and handling whenever possible. Full face-piece respirators must be available for non-routine and emergency use: canister gas mask below 5000 ppm in air and self-contained breathing equipment for other conditions.</p> <p>Workers should be provided with chemical safety goggles and impervious gloves. Full protective clothing must be used when needed to prevent exposure to chlorine, liquid or gas. Daily change of work clothes and showering after work shift are recommended. Eyewash stations and chemical safety showers must be available in areas of handling and storage of chlorine.</p>	
SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS	
<p>Store chlorine containers in well-ventilated areas of low fire potential, away from incompatible materials (see Sec. V) and away from sources of heat and ignition. Protect containers from weather and physical damage; follow standard safety procedures for containers of compressed, corrosive gases. Provide special training to workers handling chlorine. Regularly inspect (and test) piping and containment used for chlorine service. Liquid levels should be less than 85% of tank or cylinder capacity. Use preplacement and periodic medical exams; preclude from workplace exposure to chlorine those with cardiac, pulmonary or chronic respiratory problems.</p> <p>Special Ref: "Chlorine and Hydrogen Chloride", Chapter 5, National Academy of Science, Washington, DC (1976).</p>	
DATA SOURCE(S) CODE: 2-12, 17, 19, 24, 26	APPROVALS: MIS, <i>J.M. Nielson</i>
<p><small>Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.</small></p>	Industrial Hygiene and Safety <i>DE White</i>
	MEDICAL REVIEW: 12/79

SAMPLE KEY

SAMPLE NUMBER: S95-0425 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: "A" PLANT USED OIL TANK
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 12:05 SAMPLE DATE: 08/29/95

SAMPLE KEY

SAMPLE NUMBER: S95-0426 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: SCRUBBER BLOWDOWN USED OIL TANK
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 12:10 SAMPLE DATE: 08/29/95

SAMPLE KEY

SAMPLE NUMBER: S95-0427 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: OIL/WATER SEPARATOR USED OIL TANK
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 12:20 SAMPLE DATE: 08/29/95

SAMPLE KEY

SAMPLE NUMBER: S95-0428 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: "B" PLANT USED OIL TANK
S D CONTINUED:
S D CONTINUED:
SAMPLE TIME: 12:30 SAMPLE DATE: 08/29/95



Burlington Environmental, Inc. Corporate Laboratory
d/b/a Philip Environmental (Corporate Laboratory)
Washington Accreditation Number C021
955 Powell Avenue SW
Renton WA 98055-2908
TEL (206) 227-6124
FAX (206) 227-6196

Friday, 22 Sep 95
El Paso Natural Gas

Job Number:	P.E. Lab Sample Number(s):	Client Sample Number(s):
4742	95-A15629	S95-0425
	95-A15630	S95-0426
	95-A15631	S95-0427
	95-A15632	S95-0428
	95-A15633	S95-0429
	95-A15634	S95-0430

Dear Darrel Campbell

We received 6 samples on 31 Aug 95.

The following analyses were performed:

TCLP Metals: 1311, 6010, 7470

Total Halogen (TX): 9076

Flashpoint (D001): 1020

PCB: 8080

Total Metals: 3010, 3020, 3050, 6010

Samples were prepared and analyzed according to methods specified on the chain(s) of custody or in the work plan -- and within required holding times -- unless otherwise noted.

Thank you for the opportunity to be of service.

Sincerely,

Al Flores-Serrano
Project Manager/Chemist

PHILIP ENVIRONMENTAL INC.
CORPORATE LABORATORY
ANALYTICAL REPORT

Client:
El Paso Natural Gas Co.
Transmission Operations Lab
8645 Railroad Drive
El Paso, TX
79904

Date Received: 8/31/95
Date Sampled: 8/29/95
Date Reported: 9/21/95

Laboratory No.: 95-A15629
Sample ID.: S95-0425

Job Number: 4742

Analyte	Results	Units	Method	Analyst	Date	
TOTAL METALS						
Arsenic	< 2.6	MG/KG	6010	EML	9/13/95	
Cadmium	< 0.13	MG/KG	6010	EML	9/13/95	
Chromium	0.43	MG/KG	6010	EML	9/13/95	
Lead	8.2	MG/KG	6010	EML	9/13/95	
TCLP METALS						
TCLP Arsenic	< 0.11	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Barium	< 0.23	mg/L	6010/200.7	EML	9/13/95	100
TCLP Cadmium	< 0.006	mg/L	6010/200.7	EML	9/13/95	1.0
TCLP Chromium	< 0.011	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Lead	< 0.11	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Mercury	< 0.057	mg/L	6010	EML	9/13/95	0.20
TCLP Selenium	< 0.34	mg/L	6010/200.7	EML	9/13/95	1.0
TCLP Silver	< 0.011	mg/L	6010/200.7	EML	9/13/95	5.0
LIMIT						
Method 1311 Date Extracted: 9/13/95 Sample Wt.: 100. grams						
PCBs						
Aroclor-1016	< 0.95	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1221	< 0.95	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1232	< 0.95	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1242	< 0.95	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1248	< 0.95	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1254	< 0.95	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1260	< 0.95	MG/KG	4-81-045	RHP	8/31/95	
PCB Extraction					8/31/95	

Surrogates	% Recovery	Limits
Tetrachloro-m-xylene	136.1	50.0-150.0
Decachlorobiphenyl	121.4	50.0-150.0

MISCELLANEOUS

Total Halogens	< 500	mg/L	9076	SME	8/31/95
Flash Closed Cup	> 200	F	1020	SME	8/31/95

Reviewed By :

One Plus

9/21/95

PHILIP ENVIRONMENTAL INC.
CORPORATE LABORATORY
ANALYTICAL REPORT

Client:

El Paso Natural Gas Co.
Transmission Operations Lab
8645 Railroad Drive
El Paso, TX
79904

Date Received: 8/31/95
Date Sampled: 8/29/95
Date Reported: 9/21/95

Laboratory No.: 95-A15630
Sample ID.: S95-0426

Job Number: 4742

Analyte	Results	Units	Method	Analyst	Date	
TOTAL METALS						
Arsenic	< 1.8	MG/KG	6010	EML	9/13/95	
Cadmium	0.11	MG/KG	6010	EML	9/13/95	
Chromium	2.6	MG/KG	6010	EML	9/13/95	
Lead	4.7	MG/KG	6010	EML	9/13/95	
TCLP METALS						
TCLP Arsenic	< 0.11	mg/L	6010/200.7	EML	9/13/95	LIMIT 5.0
TCLP Barium	< 0.23	mg/L	6010/200.7	EML	9/13/95	100
TCLP Cadmium	< 0.006	mg/L	6010/200.7	EML	9/13/95	1.0
TCLP Chromium	< 0.011	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Lead	< 0.11	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Mercury	< 0.057	mg/L	6010	EML	9/13/95	0.20
TCLP Selenium	< 0.34	mg/L	6010/200.7	EML	9/13/95	1.0
TCLP Silver	< 0.011	mg/L	6010/200.7	EML	9/13/95	5.0
Method 1311 Date Extracted: 9/13/95 Sample Wt.: 100. grams						
PCBs						
Aroclor-1016	< 2.0	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1221	< 2.0	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1232	< 2.0	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1242	< 2.0	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1248	< 2.0	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1254	< 2.0	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1260	< 2.0	MG/KG	4-81-045	RHP	8/31/95	
PCB Extraction					8/31/95	

Surrogates	% Recovery	Limits
Tetrachloro-m-xylene	169.4	50.0-150.0
Note: matrix interference		
Decachlorobiphenyl	125.3	50.0-150.0

Reviewed By :

albes

9/21/95

Analyte	Results	Units	Method	Analyst	Date
MISCELLANEOUS					
Total Halogens	< 500	mg/L	9076	SME	8/31/95
Flash Closed Cup	> 200	F	1020	SME	8/31/95

Reviewed By :

Alf

9/21/95

PHILIP ENVIRONMENTAL INC.
CORPORATE LABORATORY
ANALYTICAL REPORT

Client:
El Paso Natural Gas Co.
Transmission Operations Lab
8645 Railroad Drive
El Paso, TX
79904

Date Received: 8/31/95
Date Sampled: 8/29/95
Date Reported: 9/21/95

Laboratory No.: 95-A15631
Sample ID.: S95-0427

Job Number: 4742

Analyte	Results	Units	Method	Analyst	Date	
TOTAL METALS						
Arsenic	< 2.1	MG/KG	6010	EML	9/13/95	
Cadmium	0.15	MG/KG	6010	EML	9/13/95	
Chromium	21.	MG/KG	6010	EML	9/13/95	
Lead	10.	MG/KG	6010	EML	9/13/95	
TCLP METALS						
TCLP Arsenic	< 0.11	mg/L	6010/200.7	EML	9/13/95	LIMIT 5.0
TCLP Barium	< 0.23	mg/L	6010/200.7	EML	9/13/95	100
TCLP Cadmium	< 0.006	mg/L	6010/200.7	EML	9/13/95	1.0
TCLP Chromium	< 0.011	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Lead	< 0.11	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Mercury	< 0.057	mg/L	6010	EML	9/13/95	0.20
TCLP Selenium	< 0.34	mg/L	6010/200.7	EML	9/13/95	1.0
TCLP Silver	< 0.011	mg/L	6010/200.7	EML	9/13/95	5.0

Method 1311 Date Extracted: 9/13/95 Sample Wt.: 100. grams

PCBs						
Aroclor-1016	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1221	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1232	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1242	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1248	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1254	7.0	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1260	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
PCB Extraction					8/31/95	

Surrogates	% Recovery	Limits
Tetrachloro-m-xylene	123.0	50.0-150.0
Decachlorobiphenyl	114.5	50.0-150.0

MISCELLANEOUS

Total Halogens	< 500	mg/L	9076	SME	8/31/95
Flash Closed Cup	> 200	F	1020	SME	8/31/95

Reviewed By :

alhus

9/21/95

PHILIP ENVIRONMENTAL INC.
CORPORATE LABORATORY
ANALYTICAL REPORT

Client:

El Paso Natural Gas Co.
Transmission Operations Lab
8645 Railroad Drive
El Paso, TX
79904

Date Received: 8/31/95
Date Sampled: 8/29/95
Date Reported: 9/21/95

Laboratory No.: 95-A15632
Sample ID.: S95-0428

Job Number: 4742

Analyte	Results	Units	Method	Analyst	Date	
TOTAL METALS						
Arsenic	< 2.2	MG/KG	6010	EML	9/13/95	
Cadmium	< 0.11	MG/KG	6010	EML	9/13/95	
Chromium	2.2	MG/KG	6010	EML	9/13/95	
Lead	17.	MG/KG	6010	EML	9/13/95	
TCLP METALS						
TCLP Arsenic	< 0.11	mg/L	6010/200.7	EML	9/13/95	LIMIT 5.0
TCLP Barium	< 0.23	mg/L	6010/200.7	EML	9/13/95	100
TCLP Cadmium	< 0.006	mg/L	6010/200.7	EML	9/13/95	1.0
TCLP Chromium	< 0.011	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Lead	< 0.11	mg/L	6010/200.7	EML	9/13/95	5.0
TCLP Mercury	< 0.057	mg/L	6010	EML	9/13/95	0.20
TCLP Selenium	< 0.34	mg/L	6010/200.7	EML	9/13/95	1.0
TCLP Silver	< 0.011	mg/L	6010/200.7	EML	9/13/95	5.0
Method 1311 Date Extracted: 9/13/95 Sample Wt.: 100. grams						
PCBs						
Aroclor-1016	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1221	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1232	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1242	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1248	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1254	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
Aroclor-1260	< 0.97	MG/KG	4-81-045	RHP	8/31/95	
PCB Extraction					8/31/95	

Surrogates	% Recovery	Limits
Tetrachloro-m-xylene	114.0	50.0-150.0
Decachlorobiphenyl	114.0	50.0-150.0

MISCELLANEOUS

Total Halogens	< 500	mg/L	9076	SME	8/31/95
Flash Closed Cup	> 200	F	1020	SME	8/31/95

Reviewed By :

alflor

9/21/95

CHEMIC 7040

MATERIAL SAFETY DATA SHEET
EFFECTIVE DATE APRIL, 1989

MANUFACTURER'S NAME:

CHEMIC INC.
18131 AMMI TRAIL
HOUSTON, TEXAS 77060
(713) 821-6885FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL
(713) 821-6885SECTION 1
PRODUCT INFORMATION

PRODUCT NAME:	CHEMIC 7040	CHEMICAL FAMILY:	Mixture
CHEMICAL NAME:	Cooling Water Treatment	N.F.P.A. CODE:	2-0-0
HAZARD CLASSIFICATION:	Corrosive	MOLECULAR WT:	Mixture
FORMULA:	Mixture		
D.O.T. HAZARD CLASS:	U.N. - 1760		
CAS #	Mixture		

SECTION 2
PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT:	Approximately 220° F
FREEZE POINT:	0° F
SPECIFIC GRAVITY: (H ₂ O=1):	1.165
VAPOR PRESSURE (mm Hg):	N.E.
VAPOR DENSITY (AIR=1):	N.E.
EVAPORATION RATE (BUTYL ACETATE=):	<1
SOLUBILITY IN WATER: % BY WEIGHT:	Same as water
APPEARANCE AND ODOR:	No odor, red liquid: pH=11.9+

SECTION 3
INGREDIENTS/IDENTITY INFORMATION

COMPONENTS:	OSHA PEL	ACGIH TLV	OTHER LIMITS	% (OPTIONAL)
Sodium Nitrite CAS# 7632-00-0	N.E.	N.E.		<15%
Liquid Caustic Soda (50%) CAS# 1310-73-2	2.0 mg/m ³ 15 minutes	2.0 mg/m ³		<10%
Sodium Tetraborate CAS# 1303-96-4	N.A.	N.A.		<5%
Sodium tolytriazole (50%) CAS# 64665-57-2	N.E.	N.E.		<1%
Proprietary Ingredients CAS# Trade secret				

THIS DOCUMENT IS PREPARED PURSUANT TO THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200). IN ADDITION, OTHER SUBSTANCES NOT "HAZARDOUS" PER THIS OSHA STANDARD MAY BE LISTED. WHERE PROPRIETARY INGREDIENT SHOWS, THE IDENTITY MAY BE MADE AVAILABLE AS PROVIDED IN THIS STANDARD.

SECTION 4
FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	None
FLAMMABLE LIMITS:	N/A
LOWER:	N/A
UPPER:	N/A
EXTINGUISHING MEDIA:	None
SPECIAL FIRE FIGHTING PROCEDURES:	None
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None

SECTION 5
HEALTH HAZARD DATA

INHALATION:	Avoid breathing mist.
EYES:	Avoid eye contact - alkaline liquid.
SKIN:	Avoid skin contact.
INGESTION:	Harmful if swallowed.

CHEMIC 7040

CARCINOGENICITY: NO

SECTION 6

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Avoid breathing mist. Remove to fresh air.
EYES: If eye contact occurs, flush with water for at least 15 minutes. If eye irritation continues, get medical attention.
SKIN: If skin contact occurs, wash skin and change contaminated clothing. Alkaline corrosive liquid.
INGESTION: In case of swallowing, induce vomiting with emetic. After vomiting, provide as much milk as can be tolerated. Consult with physician.

SECTION 7
REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID): Acidic materials
HAZARDOUS DECOMPOSITION OF BY PRODUCTS: N.E.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 8
SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIALS ARE RELEASED OR SPILLED: Collect with absorbent and bury or burn.

WASTE DISPOSAL METHOD: Use authorized chemical scavenger. Tender drums to drum reconditioner. Remove label.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Protect from freezing and physical damage. Freezes at 0°F.

OTHER PRECAUTIONS: For industrial use only. Keep out of reach of children.

SECTION 9
SPECIAL PRECAUTIONS

RESPIRATORY PROTECTION: None
VENTILATION: Local exhaust is adequate.
PROTECTIVE GLOVES: Rubber gloves.
EYE PROTECTION: Goggles or face shield.
OTHER PROTECTIVE CLOTHING: Alkali resistant.
WORK/HYGIENIC PRACTICES: Do not get on skin or breathe vapors.

SECTION 10
SARA-TITLE III INGREDIENT INFORMATION

INGREDIENTS

NAME: Sodium Nitrate
CAS# 7632-00-0
APPLICABLE SARA SUBSECTIONS: 304
THRESHOLD PLANNING QUANTITY: 0
THRESHOLD REPORTING QUANTITY: 100

NAME: Sodium Hydroxide
CAS # 1310-73-2
APPLICABLE SARA SUBSECTIONS: 304, 313
THRESHOLD PLANNING QUANTITY: 0
THRESHOLD REPORTING QUANTITY: 1000

The information herein is given in good faith but no warranty, expressed or implied, is made. Consult CHEMIC INC. for further information.

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072



IDENTITY (As Used on Label and List)

CHEMIC 8056

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name CHEMIC INC.	Emergency Telephone Number (713) 440-9868
Address (Number, Street, City, State, and ZIP Code) P. O. Box 680542	Telephone Number for Information (713) 440-9868
Houston, Texas 77268-0542	Date Prepared March 6, 1987
	Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Alkyl dimethyl benzyl- * CAS #68391-01-5 ammonium chloride	N.E.	N.D.		13.44%
Dialkyl methylbenzyl * CAS #73049-75-9 ammonium chloride	N.E.	N.D.		2.56%
Isopropanol * CAS #67-63-0	N.E.	400 ppm		3.0 %

Biocide

N.F.P.A. Code: 1-0-0

Section III — Physical/Chemical Characteristics

Boiling Point	N.D.	Specific Gravity (H ₂ O = 1)	.990
Vapor Pressure (mm Hg.)	N.D.	Melting Point	N.A.
Vapor Density (AIR = 1)	Heavier than air	Evaporation Rate (Butyl Acetate = 1)	N.D.

Solubility in Water

Appreciable

Appearance and Odor

Colorless liquid with a slightly aromatic odor

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) over 200° F. PMCC	Flammable Limits N.D.	LEL N.D.	UEL N.D.
--	--------------------------	-------------	-------------

Extinguishing Media

Dry chemical, Water fog, CO₂, Foam

Special Fire Fighting Procedures

Cool fire exposed containers with spray, Must wear MSHA/NIOSH approved self contained breathing apparatus.

Unusual Fire and Explosion Hazards

Explosive mixtures can form with air. Combustion products are toxic. Solvents vapors can travel to an ignition source and flash back.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	

Incompatibility (Materials to Avoid)

Feed separately. Product incompatible with anionic material

Hazardous Decomposition or Byproducts

Oxides, nitrogen, and tin

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation? Yes	Skin? yes	Ingestion? yes
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Health Hazards (Acute and Chronic)

Irritant to mucous membranes, eyes (corrosive), and skin. May be fatal. Burning pain

in the mouth, throat, abdomen, severe swelling of the larynx, skeletal muscle paralysis

affecting the ability to breathe, circulatory shock, convulsions.

Carcinogenicity: N.E.	NTP?	IARC Monographs?	OSHA Regulated?
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Signs and Symptoms of Exposure
See Health Hazards

Medical Conditions

Generally Aggravated by Exposure See Health Hazards

Skin and eye: In case of contact, immediately flush the eyes and skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing

Emergency and First Aid Procedures before reuse.

If ingested, induce vomiting with soapy water, get medical attention. Skin contact: wash

off with soap and water. Eyes: flood with water and seek medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled

Stop up spills. Flush residues to drain with plenty of water. Scavenger service preferred.

Waste Disposal Method

Do not flush large quantities to drain that could upset waste treatment systems. Scavenger service recommended. Tender metallic drums to drum reconditioner. Destroy labels.

Precautions to Be Taken in Handling and Storing

Keep container closed and protect from freezing. Freezes at 24° F.

Other Precautions

FOR INDUSTRIAL USE ONLY. KEEP AWAY FROM CHILDREN.

Section VIII — Control Measures

Respiratory Protection (Specify Type)

None required if good ventilation is maintained. If not, wear an approved respirator.

Ventilation	Local Exhaust	Adequate	Special
	Mechanical (General)	Explosion proof	Other

Protective Gloves

Chemical gloves

Eye Protection

Goggles or face shield

Other Protective Clothing or Equipment

Impervious apron, eyewash facility, emergency shower, faceshield

Work/Hygienic Practices

Refer to above

REPORT NUMBER: 571

VAN WATERS & ROGERS INC.

PAGE: 001

MSDS NO. PG0410

MATERIAL SAFETY DATA SHEET

REVISIONS: 05/02/93

VERSION: 004

PRODUCT: PPG CALCIUM HYPOCHLORITE TABLETS

ORDER NO:

PROD NO :

VAN WATERS & ROGERS INC. , SUBSIDIARY OF UNIVAR (206)889-3400
6100 CARILLON POINT , KIRKLAND , WA 98033

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

PRODUCT NAME:

PPG CALCIUM HYPOCHLORITE TABLETS

MSDS #: PG0410

----- PPG CALCIUM HYPOCHLORITE TABLETS

DATE: 05/20/93

EDITION: 003

TRADE NAME: PPG CALCIUM HYPOCHLORITE TABLETS

CHEM NAME/SYN: PPG 5" CALCIUM HYPOCHLORITE TABLETS, CAL HYPO

CHEMICAL FAMILY: HYPOCHLORITE

FORMULA: Ca(OCl)2

CAS NUMBER: 307778-54-3

U.S. DOT SHIPPING NAME: CALCIUM HYPOCHLORITE, HYDRATED

U.S. DOT HAZARD CLASS: 5.1 (OXIDIZER)

SUBSIDIARY RISK: N/A

I.C. NUMBER: UN2890

PACKING GROUP: 11

REPORTABLE QUANTITY: 10 LBS/4.5 KG

IMO DESCRIPTION: CALCIUM HYPOCHLORITE, HYDRATED, CLASS 5.1, UN2890,

PACKING GROUP (1, 2).

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VAN WATERS & ROGERS INC.

PAGE: 002

PROD NO: PEO410

MATERIAL SAFETY DATA SHEET

MANUFACTURE UPLOAD DATE: 05/22/91

VERSION: 004

PRODUCT: PVO CALCIUM HYPOCHLORITE TABLETS

ORDER NO:

PROD NO :

SECTION 1 - PHYSICAL DATA

BOILING POINT @ 760 MM HG: DECOMPOSES @ 180 C

VAPOR DENSITY (AIR=1): N/A

SPECIFIC GRAVITY (H2O=1): N/A

PH OF SOLUTIONS: ALKALINE

FREEZING/MELTING POINT: N/A

SOLUBILITY (WEIGHT % IN WATER): 217 G/L @ 27 C

BULK DENSITY: N/A

RELATIVE VOLATILE: N/A

VAPOR PRESSURE: N/A

EVAPORATION RATE: N/A

HEAT OF SOLUTION: SLIGHTLY EXOTHERMIC

APPEARANCE AND ODOR:

WHITE TABLETS WITH SLIGHT CHLORINE ODOR

SECTION 2 - INGREDIENTS

MATERIAL	PERCENT
CALCIUM HYPOCHLORITE (65% AVAILABLE CHLORINE)	65
INERT (INCLUDES 5.5 - 10% MOISTURE)	35

SECTION 3 - FIRE/EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED):

NONE

FLAMMABLE LIMITS IN AIR (% BY VOLUME)

LEL: N/A

UEL: N/A

EXTINGUISHING MEDIA:

WATER ONLY, SMOTHERING INEFFECTIVE-PRODUCT SUPPLIES OWN OXYGEN

SPECIAL FIRE FIGHTING PROCEDURES:

FIRE FIGHTERS MUST WEAR NIOSH/MSHA APPROVED, PRESSURE DEMAND SELF-CONTAINED
BREATHING APPARATUS WITH FULL FACE PIECE FOR POSSIBLE EXPOSURE TO
HAZARDOUS GASES.

UNUSUAL FIRE AND EXPLOSION HAZARDS

DECOMPOSES AT 180 C RELEASING OXYGEN GAS; CONTAINERS MAY EXPLODE.

REPORT NUMBER: 971

VAN WATERS & PETERS INC.

PAGE: 003

WHS NO: P30410

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 05/22/76

VERSION: 004

PRODUCT: PPG CALCIUM HYPOCHLORITE TABLETS

ORDER NO:

PROD NO:

SECTION 4 - HEALTH HAZARD DATA

TOXICITY DATA:

LC50 INHALATION: (RAT) NO MORTALITY @ 3.5 MG/L (1 HR)
LC50 DERMAL: (RABBIT) >1000 MG/KG
SKIN/EYE IRRITATION: SEE SECTION 5
LC50 INGESTION: SEE SECTION 5
FISH LC50 (LEYNAH CONCENTRATION): TLM 96 HR.: 10-1 PPM

CLASSIFICATION:

INHALATION: IRRITATING
SKIN: SLIGHTLY TOXIC
SKIN/EYE: CORROSIVE
INGESTION: SLIGHTLY TOXIC
AQUATIC: HIGHLY TOXIC

SECTION 5 - EFFECTS OF OVEREXPOSURE

IS CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?

NTP - NO IARC - NO OSHA - NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

NONE KNOWN

PERMISSIBLE EXPOSURE LIMITS:

NONE ESTABLISHED BY OSHA OR ACGIH FOR THIS PRODUCT.

PPG INTERNAL PERMISSIBLE EXPOSURE LIMIT (IPEL): 1 MG/CU.M., 8-HOUR TWA
(TIME WEIGHTED AVERAGE); 2 MG/CU.M. STEL (SHORT-TERM EXPOSURE LIMIT).

ACUTE:

INHALATION: INHALATION OF CALCIUM HYPOCHLORITE DUST AND DEPOSITION OF PARTICLES IN THE RESPIRATORY TRACT CAN LEAD TO IRRITATION OF THE TISSUE AND CAUSE A VARIETY OF EFFECTS. THESE EFFECTS ARE DEPENDENT ON CONCENTRATION AND INCLUDE: UPPER RESPIRATORY TRACT IRRITATION, NASAL CONGESTION, COUGHING, SORE THROAT, LARYNGITIS AND SHORTNESS OF BREATH. IN OPERATIONS WHERE THERE ARE HIGH CONCENTRATIONS OF RESPIRABLE PARTICULATES, PULMONARY EDEMA (FLUID IN THE LUNG) MAY BE PRODUCED. IF NOT TREATED IMMEDIATELY, PULMONARY EDEMA CAN BE LIFE THREATENING. SINCE THIS PRODUCT IS IN TABLET FORM, PARTICLES OF RESPIRABLE SIZE ARE NOT GENERALLY ENCOUNTERED.

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VAN WATERS & ROGERS INC.

PAGE: 004

FORM NO: PSC-10

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 05/22/96

VERSION: 004

PRODUCT: PPG CALCIUM HYPOCHLORITE TABLETS

ORDER NO:

PROD NO :

EYE/SKIN: CALCIUM HYPOCHLORITE IS CORROSIVE TO THE EYES. CONTACT OF CALCIUM HYPOCHLORITE DUST WITH THE EYES, EVEN A MINUTE AMOUNT FOR A SHORT DURATION, CAN CAUSE SEVERE IRRITATION AND EVEN BLINDNESS. CONTACT WITH THE SKIN MAY CAUSE SEVERE IRRITATION, BURNS, OR TISSUE DESTRUCTION.

IN STUDIES UTILIZING RABBITS, THE SKIN IRRITATION SCORE WAS 2/0 AND THE EYE IRRITATION SCORE WAS 99.5/110. THE CLASSIFICATION FOR BOTH OF THESE IS CORROSIVE.

INGESTION: CALCIUM HYPOCHLORITE, IF SWALLOWED, CAUSES SEVERE BURNS TO THE DIGESTIVE TRACT AND CAN BE FATAL.

CHRONIC:

GENOTOXICITY: CALCIUM HYPOCHLORITE PRODUCED POSITIVE RESPONSES IN IN-VITRO ASSAYS USING BACTERIAL SYSTEMS (THE AMES TEST) AND CHROMOSOMAL ABERRATIONS IN CHINESE HAMSTER FIBROBLASTS. IN A WHOLE ANIMAL EXPERIMENT (MUSE MICRONUCLEUS TEST), EXPOSURES RANGING FROM 20 TO 160 MG/KG PRODUCED NO COMPOUND RELATED CHROMOSOMAL ABNORMALITIES.

CARCINOGENESIS: ALTHOUGH NO STUDY HAS BEEN CONDUCTED WITH CALCIUM HYPOCHLORITE, THE CARCINOGENIC POTENTIAL OF SODIUM HYPOCHLORITE WAS STUDIED IN F344 RATS. AFTER 104 WEEKS OF DRINKING WATER CONTAINING UP TO 2000 PPM SODIUM HYPOCHLORITE, THERE WAS NO EVIDENCE THAT THIS CHEMICAL PRODUCED ANY CARCINOGENIC RESPONSE. IN ADDITION, THIS EXPOSURE DID NOT RESULT IN ANY ADVERSE EFFECTS IN BLOOD, CLINICAL CHEMISTRY, OR OTHER TARGET ORGANS.

ONE OF THE MAJOR USES OF CALCIUM HYPOCHLORITE IS AS A SOURCE OF CHLORINE FOR WATER SANITIZATION IN DRINKING AND RECREATIONAL WATER. STUDIES HAVE BEEN CONDUCTED TO DETERMINE THE LONG-TERM EFFECTS OF CHLORINATED DRINKING WATER. SEVEN GENERATIONS OF RATS WERE GIVEN 100 PPM CHLORINE IN THEIR DRINKING WATER. NO DIFFERENCE IN FERTILITY, GROWTH, BLOOD PARAMETERS, OR SPECIFIC ORGAN TOXICITY WAS OBSERVED BETWEEN CONTROL AND EXPOSED ANIMALS. TWO SEPARATE ANIMAL STUDIES CONDUCTED BY DIFFERENT GOVERNMENT AGENCIES DETERMINED THAT THE CHLORINATION OF MUNICIPAL BATHING WATER DID NOT RESULT IN TOXICITY TO THE DEVELOPING MOUSE FETUS.

SAFE HANDLING OF THIS MATERIAL ON A LONG-TERM BASIS SHOULD EMPHASIZE MINIMIZING REPEATED ACUTE EXPOSURES.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.

PRODUCT: PPS CALCIUM HYPOCHLORITE TABLETS

ORDER NO:

PROD NO :

PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
CALL A PHYSICIAN.

EYE OR SKIN CONTACT:

FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, WHILE REMOVING
CONTAMINATED CLOTHING AND SHOES. FOR EYE CONTACT, GET IMMEDIATE
MEDICAL ATTENTION. IF SKIN IRRITATION OCCURS, GET MEDICAL ATTENTION.

INGESTION:

IF CONSCIOUS, DRINK LARGE QUANTITIES OF WATER AND ANY COMMON COOKING
(VEGETABLE) OIL, IF AVAILABLE. DO NOT INDUCE VOMITING. TAKE IMMEDIATELY
TO A HOSPITAL OR PHYSICIAN. IF UNCONSCIOUS, OR IN CONVULSIONS, TAKE
IMMEDIATELY TO A HOSPITAL. DO NOT ATTEMPT TO INDUCE VOMITING OR GIVE
ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

NOTES TO PHYSICIAN (INCLUDING ANTIDOTES):

TREAT SYMPTOMATICALLY.

SECTION 6 -- REACTIVITY DATA

STABILITY:

UNSTABLE

CONDITIONS TO AVOID:

CONTAMINATION OR EXCESSIVE HEAT ABOVE 177 C

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NONE-WILL NOT POLYMERIZE

INCOMPATIBILITY (MATERIALS TO AVOID):

ACIDS, COMBUSTIBLE MATERIALS, ORGANICS, REDUCING AGENTS

HAZARDOUS DECOMPOSITION PRODUCTS:

ACID OR AMMONIA CONTAMINATION WILL RELEASE TOXIC GASES. EXCESSIVE
HEAT WILL CAUSE DECOMPOSITION RESULTING IN THE RELEASE OF OXYGEN AND
CHLORINE GAS.

SECTION 7 -- SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED:

NONE. USE EXTREME CAUTION IN HANDLING SPILLED MATERIAL. CONTAMINATION WITH
ORGANIC OR COMBUSTIBLE MATERIAL MAY CAUSE FIRE OR VIOLENT DECOMPOSITION. IF
FIRE OR DECOMPOSITION OCCURS IN AREA OF SPILL, IMMEDIATELY SOUSE WITH PLENTY
OF WATER. OTHERWISE, SUEP UP ALL VISIBLE MATERIAL USING A CLEAN, DRY SHOVEL
AND BRUSH AND DISSOLVE MATERIAL IN WATER. DISPOSE OF WASTE MATERIAL AS

REPORT NUMBER: 971

LAN WATER & ROBERTS INC.

PAGE: 006

PROD NO: 900410

MATERIAL SAFETY DATA SHEET

MANUFACTURE DATE: 05/22/91

VERSION: 004

PRODUCT: 990 CALCIUM HYPOCHLORITE TABLETS

ORDER NO:

PROD NO :

OUTLINED BELOW.

WASTE DISPOSAL METHOD:

SPIILLED MATERIAL THAT HAS BEEN SWEPT UP AND DISSOLVED IN WATER SHOULD BE USED IMMEDIATELY IN THE NORMAL APPLICATION FOR WHICH CALCIUM HYPOCHLORITE IS BEING CONSUMED. IF THIS IS NOT POSSIBLE, CAREFULLY NEUTRALIZE DISSOLVED MATERIAL BY ADDING HYDROGEN PEROXIDE (ONE PINT OF 35% HYDROGEN PEROXIDE SOLUTION PER POUND OF CALCIUM HYPOCHLORITE TO BE NEUTRALIZED) THEN DILUTE THE NEUTRALIZED MATERIAL WITH PLENTY OF WATER AND FLUSH TO SEWER. NOTE: ONLY PROPERLY NEUTRALIZED MATERIAL SHOULD BE FLUSHED TO SEWER. UNNEUTRALIZED MATERIAL CAN CAUSE ENVIRONMENTAL DAMAGE TO RECEIVING WATER OR CAN INTERFERE WITH TREATMENT PLANT OPERATION. FOR ON-SITE NEUTRALIZATION, CAREFULLY AND SLOWLY POUR THE APPROPRIATE QUANTITY OF 35% HYDROGEN PEROXIDE SOLUTION OVER ALL SPIILLED MATERIAL THEN FILLER AREA WITH PLENTY OF WATER.

COMMENTS: CARE MUST BE TAKEN WHEN USING OR DISPOSING OF CHEMICAL MATERIALS AND/OR THEIR CONTAINERS TO PREVENT ENVIRONMENTAL CONTAMINATION. IT IS YOUR DUTY TO DISPOSE OF THE CHEMICAL MATERIALS AND/OR THEIR CONTAINERS IN ACCORDANCE WITH THE CLEAN AIR ACT, THE CLEAN WATER ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, FIFRA, AS WELL AS ANY OTHER RELEVANT FEDERAL, STATE, OR LOCAL LAWS/REGULATIONS REGARDING DISPOSAL.

SECTION 8 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

IF DUSTY CONDITIONS ARE ENCOUNTERED, USE NIOSH/MSHA APPROVED RESPIRATOR WITH ACID GAS CARTRIDGE AND DUST PREFILTER. THE RESPIRATOR USE LIMITATIONS SPECIFIED BY NIOSH/MSHA OR THE MANUFACTURER MUST BE OBSERVED. RESPIRATORY PROTECTION PROGRAMS MUST BE IN ACCORDANCE WITH 29 CFR 1910.134.

VENTILATION(TYPE):

NONE, UNLESS DUSTY CONDITIONS ARE ENCOUNTERED.

EYE PROTECTION:

CHEMICAL SAFETY GOGGLES

GLOVES:

NATURAL OR SYNTHETIC RUBBER

OTHER PROTECTIVE EQUIPMENT:

BOOTS, APRONS, OR CHEMICAL SUITS SHOULD BE USED WHEN NECESSARY TO PREVENT SKIN CONTACT. PERSONAL PROTECTIVE CLOTHING AND USE OF EQUIPMENT MUST BE IN ACCORDANCE WITH 29 CFR 1910.132 (GENERAL REQUIREMENTS), .133 (EYE & FACE PROTECTION) AND .136 (HAND PROTECTION).

PRODUCT: FPG CALCIUM HYPOCHLORITE TABLETS

ORDER NO:

PROD NO :

SECTION 9 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORING:

- DO NOT GET IN EYES, ON SKIN OR ON CLOTHING.
- KEEP IN ORIGINAL CONTAINER IN A COOL, DRY PLACE.
- KEEP CONTAINER CLOSED WHEN NOT IN USE.
- KEEP AWAY FROM HEAT SOURCES, SPARKS, OPEN FLAMES AND LIGHTED TOBACCO PRODUCTS.
- USE ONLY A CLEAN, DRY SCOOP MADE OF METAL OR PLASTIC EACH TIME THIS PRODUCT IS TAKEN FROM CONTAINER.
- DO NOT ADD THIS PRODUCT TO ANY DISPENSING DEVICE CONTAINING REMNANTS OF ANY OTHER PRODUCT. SUCH USE MAY CAUSE VIOLENT REACTION LEADING TO FIRE OR EXPLOSION.
- ADD THIS PRODUCT ONLY TO WATER.
- MAY CAUSE FIRE OR EXPLOSION IF MIXED WITH OTHER CHEMICALS.
- FIRE MAY RESULT IF CONTAMINATED WITH ACIDS OR EASILY COMBUSTIBLE MATERIAL SUCH AS OIL, KEROSENE, GASOLINE, PAINT PRODUCTS AND MOST OTHER ORGANIC MATERIALS.
- WASH HANDS AFTER HANDLING.
- DO NOT REUSE CONTAINER. RESIDUAL MATERIAL REMAINING IN EMPTY DRUM CAN REACT TO CAUSE FIRE. THOROUGHLY FLUSH EMPTY CONTAINER WITH WATER THEN DESTROY BY PLACING IN TRASH COLLECTION. DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.

OTHER PRECAUTIONS:

- KEEP OUT OF REACH OF CHILDREN.
- STRONG OXIDIZER - FIRE MAY RESULT FROM CONTACT WITH HEAT, ACIDS, ORGANIC OR COMBUSTIBLE MATTER.
- MAY BE FATAL OR HARMFUL IF SWALLOWED.
- MAY CAUSE CHEMICAL BURNS.
- IRRITATING TO NOSE AND THROAT - AVOID BREATHING DUST.

COMMENTS:

MSDS - CALCIUM HYPOCHLORITE TO BE THE MSDS IN EFFECT UNDER DTD 17720-04-2.

OSHA TITLE III - A) 311/312 DATES/YES - ACUTE AND REACTIVITY, 1) NOT LISTED IN SECTION 313, 2) NOT LISTED AS AN "EXTREMELY HAZARDOUS SUBSTANCE" IN SECTION 302.

CECLA - LISTED IN TABLE 302.4 OF 40 CFR PART 302 AS A HAZARDOUS SUBSTANCE WITH A REPORTABLE QUANTITY OF 10 POUNDS. RELEASES TO AIR, LAND OR WATER WHICH EXCEED THE RQ MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

RCRA - WASTE CALCIUM HYPOCHLORITE AND CONTAMINATED SOILS/MATERIALS FROM SPILL CLEANUP ARE E001 HAZARDOUS WASTE AS PER 40 CFR 261.21(a)(1) AND MUST BE DISPOSED OF ACCORDINGLY UNDER RCRA.

REPORT NUMBER: 971

VAN WATERS & ROGERS INC

PAGE: 008

MSDS NO: 900410

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 05/22/96

VERSION: 004

PRODUCT: PPG CALCIUM HYPOCHLORITE TABLETS

ORDER NO:

PROD NO:

FIFRA - CALCIUM HYPOCHLORITE IS REGISTERED WITH EPA AS A PESTICIDE (EPA REG NO. 748-295).

NSF - PPG CALCIUM HYPOCHLORITE IS CERTIFIED FOR MAXIMUM USE AT 45 MG/L UNDER ANSI/NSF STANDARD 60.

REVISIONS MADE TO 6/16/93, 2ND EDITION: DATE, EDITION, INC DESCRIPTION UPDATED (PAGE 1), OTHER PROTECTIVE EQUIPMENT UPDATED (PAGE 6), FIFRA STATEMENT UPDATED (PAGE 7).

FOR ADDITIONAL INFORMATION

CONTACT: MSDS COORDINATOR

VAN WATERS & ROGERS INC.

DURING BUSINESS HOURS, PACIFIC TIME

(206)889-3400

12/10/95 13:11

PRODUCT:

CUST NO:

ORDER NO:

NOTICE

AA VAN WATERS & ROGERS INC. ("VW&R") EXPRESSLY DISCLAIMS ALL EXPRESS OR

IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE,

WITH RESPECT TO THE PRODUCT OR INFORMATION PROVIDED HEREIN, AND SHALL UNDER

NO CIRCUMSTANCES BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. AA

ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA OBTAINED FROM THE MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS BELIEVED TO BE ACCURATE, VW&R MAKES NO REPRESENTATIONS AS TO ITS ACCURACY OR SUFFICIENCY. CONDITIONS OF USE ARE BEYOND VW&R'S CONTROL AND THEREFORE USERS ARE RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND THEY ASSUME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM THE FULFILLMENT OR USE OF, OR RELIANCE UPON, INFORMATION CONTAINED HEREIN. THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER PROCESS.

*** E N D O F P A G E ***

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

January 18, 1989

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-106-675-556

Mr. Loren E. Gearhart, P.E.
El Paso Natural Gas Company
P. O. Box 1492
El Paso, Texas 79978

RE: Lined Disposal Pond
Deming Compressor Station

Dear Mr. Gearhart:

The Oil Conservation Division (OCD) has received and evaluated the application and construction design drawings you submitted for the proposed lined pond at the Deming Compressor Station. The pond is to accept primarily waste fluids from the compressor station.

The design and specifications of the lined pit are adequate for the protection of ground and surface water and approved with the following provision:

1. An adequate free board will be maintained at all times to prevent over-topping of the side walls.

The application was submitted pursuant to Rule 8 of the OCD Rules and Regulations and is approved pursuant to that rule. The application, dated December 14, 1988, was received by the OCD on December 16, 1988, and supplemental information, dated January 3, 1989, was received by the OCD on January 9, 1989.

Please be advised that this approval does not relieve you of liability should your operation result in actual pollution of surface or ground waters which may be actionable under other laws and/or regulations.

If you have any questions, please do not hesitate to call Roger Anderson at (505) 827-5884.

Sincerely,

Victor L. Lyon

for William J. LeMay
Director

RCA/sl

cc: OCD Santa Fe District

1993

ANALYTICAL
PROFILES

SAMPLE KEY

SAMPLE NUMBER: S93-0222 LOCATION: DEMING STATION
MATRIX: WATER
SAMPLE DESCRIPTION: COOLING TOWER BLOWDOWN POND
S D CONTINUED: MAP SITE #1
S D CONTINUED:
SAMPLE TIME: 14:00 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0223 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: SCRUBBER BLOWDOWN USED OIL TANK
S D CONTINUED: MAP SITE #2
S D CONTINUED:
SAMPLE TIME: 15:20 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0224 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: "B" PLANT USED OIL TANK
S D CONTINUED: MAP SITE #3
S D CONTINUED:
SAMPLE TIME: 15:30 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0225 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: "A" PLANT USED OIL TANK
S D CONTINUED: MAP SITE #4
S D CONTINUED:
SAMPLE TIME: 15:35 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0226 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: OIL/WATER SEPARATOR USED OIL TANK
S D CONTINUED: MAP SITE #5
S D CONTINUED:
SAMPLE TIME: 15:40 SAMPLE DATE: 05/04/9

SAMPLE KEY

SAMPLE NUMBER: S93-0227 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: OIL/WATER SEPARATOR FEED TANK
S D CONTINUED: MAP SITE #6
S D CONTINUED:
SAMPLE TIME: 15:45 SAMPLE DATE: 05/04/93

TRANSMISSION OPERATIONS LABORATORY SAMPLE REPORT

SAMPLE NO.: S93-0329

FACILITY NO.:

SAMPLE LOCATION: DEMING STATION

SAMPLE SITE DESCRIPTION: OIL/WATER SEPARATOR FEED TANK

SAMPLE DATE (YY MM DD): 93 06 09 TIME: 1133

SAMPLE COLLECTED BY: Jerry LaFarelle

Analysis		Analysis	
Results_(mg/l)		Results_(mg/l)	
Ammonia (N)		Color	
Chemical Oxygen Demand		Fluoride	
Kjeldahl Nitrogen (N)		Iodide	
Nitrate (N)		Odor	
Nitrite (N)		Residue, Total	
Oil & Grease		Residue, Filterable (TDS)	
Organic Carbon		Residue, Nonfilterable (TSS)	
Orthophosphate (PO ₄)		Residue, Settleable	
Phosphorus, Total (P)		Residue, Volatile	
Cyanide, Total		Silica	
Cyanide, Free		Specific Conductance (umho)	
Phenols		Sulfate	
Antimony		Sulfite	
Arsenic		Surfactants-MBAS	
Barium		Turbidity	NTU
Beryllium		BHC Isomers	
Boron		Chlordane	
Cadmium		DDT Isomers	
Calcium		Dieldrin	
Chromium, Total		Endrin	
Chromium, VI		Heptachlor	
Copper		Heptachlor Epoxide	
Hardness (CaCO ₃)		Lindane	
Iron		Methoxychlor	
Lead		Toxaphene	
Magnesium		2,4-D	
Manganese		2,4,5-TP-Silvex	
Mercury		2,4,5-T	
Nickel		Sulfides	
Potassium		Bromoform	
Selenium		Bromodichloromethane	
Silver		Carbon Tetrachloride	
Sodium		Chloroform	
Thallium		Chloromethane	
Zinc		Dibromochloromethane	
pH		Methylene Chloride	
Acidity, Total		Tetrachloroethylene	
Alkalinity, Total (CaCO ₃)		1,1,1-Trichloroethane	
Alkalinity, Bicarbonate (CaCO ₃)		Trichloroethylene	
Bromide		Trihalomethanes	
Carbon Dioxide		PCBs (1254)	24.
Chloride			

COMMENTS: Resample_of_S93-0227

ANALYST:

Daniel Campbell

DATE: 06/12/93

SAMPLE KEY

SAMPLE NUMBER: S93-0228 LOCATION: DEMING STATION
MATRIX: WATER
SAMPLE DESCRIPTION: LEAK DETECTION WELL
S D CONTINUED: COOLING TOWER BLOWDOWN POND
S D CONTINUED: MAP SITE #7
SAMPLE TIME: 13:50 SAMPLE DATE: 05/04/93



CHAIN OF CUSTODY RECORD

Page 1 of 1[illegible]

PCB Laboratory Report

Page 1

Lab Number : 46779

Plant/Generator Name : / EL PASO NATURAL GAS - SOUTH REGION LABOR
Sample Type : WATERS, OILS
Date of Receipt : 05/06/93 Analyst: AFS/IL
Date of Report : 05/13/93 QC Checked: *CKW* 5/14/93
Outside Lab : Outside Lab Report No:
Number of Samples : 7

Run #	Sample ID	Code Numbers	# Drums in Composite	Aroclor #	Total PCB (ppm)
CAFZ53	46779-1	S93-0222		1248	2.5
BALF63	46779-2	S93-0223		1232, 1242, 1248	<100
BALF55	46779-2			1254, 1260	<10
		CLOR-D-TEC >1000 PPM CHLORIDE SCREEN <1.0%			
BALD104	46779-3	S93-0224			<1.0
BALD105	46779-4	S93-0225			<1.0
BALD106	46779-5	S93-0226		1254	20
BALD107	46779-6	S93-0227		1254, 1260	35
CAFZ54	46779-7	S93-0228			<0.1
ALD101	B05063-2	BLANK			<0.1
ALD102	M05063-2	METHOD SPIKE		1248	115%
BALD100	A1260	A1260 CCV (5.0 PPM)		1260 5.16	103%
BALD109	A1254	A1254 CCV (5.0 PPM)		1254 4.29	86%
BALF54	A1260	A1260 CCV (5.0 PPM)		1260 4.95	99%
BALF65	A1248	A1248 CCV (5.0 PPM)		1248 5.21	104%
CAFZ55	B05073-1	BLANK			<0.1
CAFZ56	M05073-1	METHOD SPIKE		1248	105%
CAFZ46	A1248	A1248 CCV (5.0 PPM)		1248 4.89	98%
CAFZ57	A1254	A1254 CCV (5.0 PPM)		1254 5.91	118%

Metals Laboratory Report

Lab Number : 46779

Plant/Generator Name : EL PASO NATURAL GAS - SOUTH REGION LABORATORY

Sample Type : WATERS, OILS

Date of Receipt : 05/06/93

Analyst: BLW, EL

Date of Report : 05/24/93

QC Checked:

Parameters for Analysis: TOTAL METALS

Outside Lab :

Outside Lab Report No:

TOTAL METALS BY SW-846 6010, 7470, 7421, 7740.

Metals:	46779-7 S93-0228	% MATRIX SPIKE RECOVERY
Silver	<0.010	103.0
Arsenic	<0.10	98.6
Boron	0.15	87.5
Barium	<0.20	102.9
Cadmium	<0.005	102.2
Chromium	<0.010	100.0
Copper	<0.025	103.7
Iron	<0.10	108.5
Mercury	<0.002	87.8
Manganese	2.7	101.0
Lead	<0.006	109.5
Selenium	<0.005	111.1
Zinc	0.31	103.0

Comments and Conclusions:

RESULTS REPORTED AS MG/L.

Metals Laboratory Report

Lab Number : 46779

Plant/Generator Name : EL PASO NATURAL GAS - SOUTH REGION LABORATORY
Sample Type : WATERS, OILS
Date of Receipt : 05/06/93 Analyst: BLW, EL
Date of Report : 05/24/93 QC Checked: *[Signature]*
Parameters for Analysis: TOTAL METALS
Outside Lab : Outside Lab Report No:

METALS BY SW-846 3051, 6010.

Metals:	46779-5 S93-0226	46779-6 S93-0227	% RECOVERY MATRIX SPIKE	POST DIG. SPIKE % RECOVERY
Silver	<0.98	<0.93	56.8	95.0
Arsenic	<9.8	<9.3	60.0	81.2
Boron	<9.8	<9.3	82.2	
Barium	280	26.	61.7	84.4
Cadmium	<0.49	<0.46	69.2	92.0
Chromium	49.	26.	73.8	92.2
Copper	15.	8.6	80.1	88.2
Iron	120	230		
Mercury	<4.9	<4.6	57.0	87.4
Manganese	<4.9	<4.6	67.5	88.0
Lead	11.	<9.3	62.5	87.7
Selenium	<20.	<19.	69.2	81.4
Zinc	65.	41.	65.0	89.5

Comments and Conclusions:

RESULTS ARE REPORTED IN MG/KG "AS RECEIVED."

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Burlington Environmental, Date: May 24, 1993
Seattle Facility

Report On: Analysis of Water

Lab No.: 31903

Page 1 of 8

IDENTIFICATION:

Samples received on 05-07-93

Project: EPNG

P.O. No. 31903

ANALYSIS:

Lab Sample No. 31903-1

Client ID: S93-0222
46779-1

Volatile Organics by Method 8240

Date Analyzed: 5-12-93

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	5	
Toluene	ND	5	
Carbon Tetrachloride	ND	5	
1,2-Dichloroethane	ND	5	
1,1-Dichloroethene	ND	5	
Tetrachloroethene	ND	5	
Trichloroethene	ND	5	
Ethyl Benzene	ND	5	
Total Xylenes	ND	5	
Methylene Chloride	3.2	5	B1, J
Chloroform	ND	5	
1,1-Dichloroethane	ND	5	
1,1,1-Trichloroethane	ND	5	
1,1,2-Trichloroethane	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Vinyl Chloride	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Toluene - D8	98	88 - 110	81 - 117
Bromofluorobenzene	113	86 - 115	74 - 121
1,2-Dichloroethane-D4	94	76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
Project: EPNG
Lab No. 31903
Page 3 of 8
May 24, 1993

Lab Sample No. 31903-1

Client ID: S93-0222
46779-1

Anions Per EPA Method 300.0
Date Analyzed: 5-12-93

<u>Parameter</u>	<u>Result, mg/L</u>	<u>PQL</u>
Chloride	9,200	1,000
Sulfate	46,000	5,000

ND - Not Detected

PQL - Practical Quantitation Limit

EDB Per EPA Method 504
Date Extracted: 5-13-93
Date Analyzed: 5-13-93

<u>Parameter</u>	<u>Result</u>	<u>Flag</u>
Ethylene Dibromide, ug/L	0.04	J

<u>Parameter</u>	<u>Result</u>
Fluoride	< 0.1
Nitrate Nitrogen	< 0.05
Total Phenols, mg/L	0.014
Total Dissolved Solids, mg/L	77,000
pH	7.82

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
Project: EPNG
Lab No. 31903
Page 5 of 8
May 24, 1993

Lab Sample No. 31903-2

Client ID: S93-0228
46779-7

Semivolatile Organics Per EPA SW-846 Method 8270

Date Extracted: 5-11-93

Date Analyzed: 5-13-93

Compound	Concentration ug/L	PQL	Flag
Naphthalene	ND	0.1	
Benzo(a)pyrene	ND	0.1	

ND - Not Detected

PQL - Practical Quantitation Limit

Semi-Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Nitrobenzene - d ₅	17	35 - 114	23 - 120
2-Fluorobiphenyl	57	43 - 116	30 - 115
p-Terphenyl-d ₁₄	91	33 - 141	18 - 137
Phenol-d ₆	35	10 - 94	24 - 113
2-Fluorophenol	40	21 - 100	25 - 121
2,4,6-Tribromophenol	85	10 - 123	19 - 122

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
 Project: EPNG
 Lab No. 31903
 Page 7 of 8
 May 24, 1993

Lab Sample No. 31903-3

Client ID: S93-0222
 TB #1

Volatile Organics by Method 8240
 Date Analyzed: 5-12-93

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	5	
Toluene	ND	5	
Carbon Tetrachloride	ND	5	
1,2-Dichloroethane	ND	5	
1,1-Dichloroethene	ND	5	
Tetrachloroethene	ND	5	
Trichloroethene	ND	5	
Ethyl Benzene	ND	5	
Total Xylenes	ND	5	
Methylene Chloride	4.0	5	B1, J
Chloroform	ND	5	
1,1-Dichloroethane	ND	5	
1,1,1-Trichloroethane	ND	5	
1,1,2-Trichloroethane	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Vinyl Chloride	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Toluene - D8	96	88 - 110	81 - 117
Bromofluorobenzene	115	86 - 115	74 - 121
1,2-Dichloroethane-D4	96	76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qcl
Units: ug/L
Date: May 24, 1993
Blank No: Z0335

METHOD BLANK

Compound	Result	PQL	Flags
Benzene	ND	5	
Toluene	ND	5	
Carbon Tetrachloride	ND	5	
1,2-Dichloroethane	ND	5	
1,1-Dichloroethene	ND	5	
Tetrachloroethene	ND	5	
Trichloroethene	ND	5	
Ethyl Benzene	ND	5	
Total Xylenes	ND	5	
Methylene Chloride	11	5	
Chloroform	ND	5	
1,1-Dichloroethane	ND	5	
1,1,1-Trichloroethane	ND	5	
1,1,2-Trichloroethane	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Vinyl Chloride	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

VOLATILE SURROGATES

Surrogate	Percent Recovery	Control Limits	
		Water	Soil
Toluene - d8	101	86 - 115	81 - 117
Bromofluorobenzene	99	76 - 114	74 - 121
1,2-Dichloroethane d4	94	88 - 110	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Anions by IC Per EPA Method 300.0

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qc4
Units: mg/L
Date: May 24, 1993

METHOD BLANK

Parameter	Result	Detection Limit
Fluoride	ND	0.2
Chloride	ND	1.0
Sulfate	ND	1.0

ND - Not Detected

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Total Dissolved Solids

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qc6
Matrix: Water
Units: mg/L
Date: May 24, 1993

METHOD BLANK

Parameter	Result
Total Dissolved Solids	< 2

DUPLICATE

Parameter	Sample (S)	Duplicate (D)	RPD
Total Dissolved Solids	77,000	78,000	1.3

RPD = Relative Percent Difference
$$= [(S - D) / ((S + D) / 2)] \times 100$$

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

DATA QUALIFIER FLAGS

- ND: Indicates that the analyte was analyzed for but was not detected. The associated numerical value is the practical quantitation limit, corrected for sample dilution.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- C: The identification of this analyte was confirmed by GC/MS.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- A: This TIC is a suspected aldol-condensation product.
- M: Quantitation Limits are elevated due to matrix interferences.
- S: The calibration quality control criteria for this compound were not met. The reported concentration should be considered an estimated quantity.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside QC limits. Sample was re-analyzed with similar results. Sample matrix is nonhomogeneous.
- X4a: RPD for duplicates outside QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: RPD value for MS/MSD outside QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside QC limits due to matrix composition.
- X10: Surrogate recovery outside QC limits due to high contaminant levels.



CORE
LABORATORIES

Date

Sample Receipt Acknowledgment

Date 05/10/93

R
e
p
o
r
t
t
WASHINGTON ENVIRONMENTAL INC.
8100 12TH AVE SOUTH
SUITE 100
SEATTLE WA 98134
KATHY KNEES

I
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S A R E

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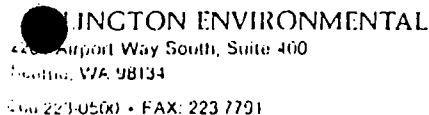
T
o

Core Laboratories Job Number	Customer Project ID	Estimated Completion Date
530799	see Remarks	05/26/93
Sample #	Customer ID	Remarks
3791 1000	593-0222 593-0228	593-1222 593-0228

You have an order. Please call Core Laboratories, Order # (800) 333-0741

THIS IS NOT AN INVOICE

Order subject to our sales agreement, if any.
Otherwise subject to our current terms of sale as shown on reverse side.
Please contact laboratory immediately, if any discrepancies are observed.



Continuation of Custody/ Laboratory Analysis Request

DATE 5/2/93 PAGE 1 of 1

[illegible]



JOB NUMBER: 930799

PAGE : 1

The analyses, opinions or interpretations contained in this report are based upon observations and material furnished by the client for whose exclusive and confidential use this report has been made. The analyses, opinions or interpretations expressed herein are the best judgment of Curren's laboratories. Curren's laboratories, however, assumes no responsibility and makes no warranty or representation, express or implied, as to the timeliness, accuracy, completeness or otherwise of the information furnished by the client, or as to the results of the analyses, opinions or interpretations expressed herein. The client shall not be held responsible for any errors or omissions in the information furnished by the client, or for any consequences resulting therefrom.



CORE LABORATORIES

QUALITY ASSURANCE REPORT 05/19/93

JOB NUMBER: 930799

CUSTOMER: BURLINGTON ENVIRONMENTAL INC.

ATTN: KATHY KREPS

ANALYSIS

DUPLICATES

REFERENCE STANDARDS

MATRIX SPIKES

ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or (A-B)	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: URANIUM NATURAL, TOTAL (UNAT)			DATE/TIME ANALYZED: 05/11/93 13:47				QC BATCH NUMBER: 133793			
REPORTING LIMIT/DF: 0.001 UNITS: mg/l			METHOD REFERENCE : EPA 908.1				TECHNICIAN: RS			

BLANK	MB	MB1UN0511	<0.001			0.848	108			
STANDARD	LCS	LC1UN0511	0.920							
SPIKE	MS	930439-76	0.103					0.0	0.085	121
DUPLICATE	MD	930439-65	<0.001	<0.001	NC					

PARAMETER: Radium 228, total			DATE/TIME ANALYZED: 05/17/93 09:15				QC BATCH NUMBER: 133968			
REPORTING LIMIT/DF: UNITS: pci/l			METHOD REFERENCE : EPA 904.0				TECHNICIAN: DW			

BLANK	MB	MB3R80513	ND			17.0	106			
STANDARD	LCS	LC1R80513	18.0							
SPIKE	MS	930778-1	30.4					8.8	21.3	101
DUPLICATE	MD	930799-2	4.7	4.1	14					

PARAMETER: Radium 226, total			DATE/TIME ANALYZED: 05/18/93 08:43				QC BATCH NUMBER: 133979			
REPORTING LIMIT/DF: UNITS: pci/l			METHOD REFERENCE : EPA 903.1				TECHNICIAN: NRF			

BLANK	MB	MB4R60513	ND			15.0	101			
STANDARD	LCS	LC2R60513	15.1							
SPIKE	MS	930809-1	30.7					4.0	37.5	71
DUPLICATE	MD	930799-2	0.4	0.5	22					

420 West First Street
Casper, WY 82601
(307) 235-5741

POST 1993

ANALYTICAL
PROFILES

TRANSMISSION OPERATIONS LABORATORY - EL PASO NATURAL GAS COMPANY

11:33 AM

STATION: DEMING

REPORT DATE: 8/1/94

	SAMPLE DATE:	P ALK.		M ALK.		HARDNESS		Ca	Mg	SC	NO2	NO3	TREATMENT	
		pH	(AS CaCO3)	(AS CaCO3)	Cl	SO4	(AS CaCO3)	(AS CaCO3)	(AS CaCO3)	SiO2	(umhos)	(AS NaNO2)		(AS NaNO2)
X A COOLING TOWER	7/20/94	8.2		119	80	1950	660	520	140	95	3870		DEARBORN C-3355	
X B COOLING TOWER	7/20/94	3.7			50	1450	880	620	260	120	2563		DEARBORN C-3355	
CTMU	7/20/94	8.2		159	7	18	60	45	15	29	348			
A ENGINE JACKET	7/20/94	9.4	222	427	5		8	4				1700	2	NASHCHEM 7040
A & B OIL COOLING WATER	7/20/94	9.2	110	324	6		12	12				1160	2	NASHCHEM 7040
B ENGINE JACKET	7/20/94	9.4	141	321	8		8	8				360	150	NASHCHEM 7040

REMARKS:

ALL RESULTS IN PPM UNLESS SPECIFIED OTHERWISE

A.C.T. TOTAL ALKALINITY IS TOO HIGH, INCREASE ACID FEED; MAINTAIN TOTAL ALKALINITY BETWEEN 80-100 PPM

A.C.T. SPECIFIC CONDUCTANCE IS TOO HIGH, INCREASE BLOWDOWNS TO MAINTAIN COOLING TOWER CIRCULATION WATER BETWEEN 2800-3300 MICROMHOS

B.C.T. TOTAL ALKALINITY IS TOO LOW, DECREASE ACID FEED; MAINTAIN TOTAL ALKALINITY BETWEEN 80-100 PPM

B.C.T. SPECIFIC CONDUCTANCE IS TOO LOW, DECREASE BLOWDOWN TO MAINTAIN COOLING TOWER CIRCULATION WATER BETWEEN 2800-3300 MICROMHOS

A PLANT ENGINE JACKET SODIUM NITRITE LEVEL LOOKS GOOD

A & B PLANT OIL SODIUM NITRITE LEVEL IS TOO LOW, ADD NASHCHEM 7040 MAINTIAN BETWEEN 1200-1800 PPM

B PLANT ENGINE JACKET SODIUM NITRITE LEVEL IS TOO LOW, ADD NASHCHEM 7040 TO MAINTIAN BETWEEN 1200-1800 PPM

SOFT WATER SAMPLE NOT AVAILABLE

Edie Arch
ANALYST

Danell Campbell
LABORATORY SUPERINTENDENT

8/8/94
DATE

TRANSMISSION OPERATIONS LABORATORY - EL PASO NATURAL GAS COMPANY

11:43 AM

STATION: DEMING

REPORT DATE: 3/13/97

SAMPLE DATE:	pH	P ALK.	M ALK.	Cl	SO4	HARDNESS	Ca	Mg	Na	K	F	SiO2	TDS	SC	NO3	Br
		(AS CaCO3)	(AS CaCO3)			(AS CaCO3)	(AS CaCO3)	(AS CaCO3)						(umhos)	(AS NO3-N)	
WATER WELL #6 Q96-0123	10-10/96	8.4	2	160	< 10	21	84	57	27	51	4	0.30	45	349	370	< 1.25
WATER WELL #10 Q96-0123	10-10/96	8.5	4	164	< 10	19	34	27	7	83	4	0.30	45	377	371	< 1.25

REMARKS:

RESULTS IN PPM UNLESS SPECIFIED OTHERWISE

Longo Deming
ANALYST
David L. Campbell
LABORATORY SUPERINTENDENT

3/21/97

DATE

GENERAL CHEMISTRY - QUALITY CONTROL

QA/QC GROUP: Q96-0123

PARAMETER	UNITS	SAMPLE RESULT	DUPLICATE RESULT	RPD	SPIKED SAMPLE RESULT	SPIKE CONC.	% REC	SAMPLE RESULT	DUPLICATE RESULT	RPD	SPIKED SAMPLE RESULT	SPIKE CONC.	% REC	BLANK	CHECK STANDARD	CHECK STANDARD RESULT	RPD CHECK STANDARD
pH	UNITS	8.10	8.10	0.0%		NA	NA					NA	NA	NA	7.38	7.38	0.0%
P ALK (CaCO ₃)	mg/L					NA	NA					NA	NA	NA	52	50	4.4%
M ALK (CaCO ₃)	mg/L	129	128	0.8%		NA	NA					NA	NA	NA	53	50	4.9%
Cl	mg/L	58	58	0.0%											40	40	0.2%
SO ₄	mg/L	135	130	3.8%											50	50	0.5%
TOTAL HARDNESS	mg/L	144	144	0.0%		NA	NA					NA	NA	NA	19	20	5.1%
Ca (CaCO ₃)	mg/L	114	114	0.0%											19	20	5.1%
Mg (CaCO ₃)	mg/L	30	30	0.0%		NA	NA					NA	NA	NA			
Na	mg/L	83	83	0.0%											5	5	0.0%
K	mg/L	4.2	4.1	2.4%											3	3	0.0%
F	mg/L														10	10	0.0%
SiO ₂	mg/L	30	30	0.0%											10	10	2.1%
TDS	mg/L	530	514	3.1%		NA	NA					NA	NA	NA			
SC	mg/L	689	689	0.0%		NA	NA					NA	NA	NA	700	718	2.5%
NO ₃	mg/L	2	2	0.0%											5	5	1.0%
NO ₂	mg/L																
Br	mg/L	<1.25	<1.25	#VALUE!											5	5	1.0%
F.P.	degree F					NA	NA					NA	NA	NA	NA	NA	NA
TREATMENT	mg/L					NA	NA					NA	NA	NA	NA	NA	NA
RESERVE ALK.	mg/L					NA	NA					NA	NA	NA	NA	NA	NA

RECEIVED
JUN 1 8 1993
OIL CONSERVATION DIV.
SANTA FE

DEMING COMPRESSOR STATION
DISCHARGE PLAN

EL PASO NATURAL GAS COMPANY

Prepared for:

New Mexico Oil Conservation Division
June 1993

El Paso Natural Gas Company
304 Texas Street
El Paso, Texas 79901
(915) 541-2323

DEMING COMPRESSOR STATION

DISCHARGE PLAN

This Discharge Plan has been prepared in accordance with New Mexico Oil Conservation Division (OCD) "Guidelines for the Preparation of Ground Water Discharge Plans at Natural Gas Processing Plants".

I. GENERAL INFORMATION

A. Discharger

All correspondence regarding this discharge plan should be sent to EPNG headquarters at the address below:

Donald N. Bigbie
Transmission Operations Vice President
El Paso Natural Gas Company
304 Texas Street
El Paso, Texas 79901
(915) 541-5215

B. Local Representative

A copy of all correspondence and all questions should be directed to the Manager of Compliance Engineering:

Philip L. Baca
Compliance Engineering Manager
El Paso Natural Gas Company
304 Texas Street
El Paso, Texas 79901
(915) 541-2323

C. Location of Discharge

Deming Compressor Station is located in the SE/4 SW/4, SW/4 SE/4, And W/2 SE/4 SE/4 of Section 32 Township 23-S, Range 11-W, in Luna County, New Mexico. Approximately 10 miles West of Deming, New Mexico and 1 mile North of U.S. Highway No. 80. Tab "A" shows a highway map to the site.

D. Type of Natural Gas Operation

The EPNG Deming Compressor Station is engaged in the compression of natural gas by means of 21 reciprocating compressor engines. Two pipelines feed natural gas to Deming Compressor Station for additional increase in pressure of the pipeline gas. One of the pipelines (26" California Line) is served by 14 compressors ("A" Plant) and the other (30" California Loop Line) is served by 7 compressors ("B" Plant).

The process of natural gas compression results in an increase of temperature of the compressed gas which requires cooling before it can leave the plant. This cooling is accomplished through the process of heat exchange which uses water as the cooling media. This water is not in contact with the natural gas, and is itself cooled by partial evaporation in a cooling tower.

Affirmation

I hereby certify that I am familiar with the information contained in this application submitted for the Deming Compressor Station Discharge Plan, and that such information is true, accurate, and complete to the best of my knowledge and belief.

Donald N. Bigbie
Signature

6/14/93
Date

Donald N. Bigbie

Vice President

Printed Name

Title

II. PLANT PROCESSES

The main operating process at Deming Compressor Station is natural gas compression. The station facilities are shown in the plan drawing attached in Tab "B". Additionally, a mechanical flow diagram is also attached in Tab "C".

A. Sources of Effluent and Process Fluids

Compressors

The compressors are installed in two buildings designed in a manner to ensure containment of drips, spills, and washdown water. Any waste or used oil generated by the operation of the compressors is contained in waste oil tanks located outside the east end of each building. These tanks are provided with piping to allow hauling from the site by an oil recycler.

Any spills or waste water from washdowns is sent to a holding tank upstream of an oil-water separator. The oil phase outlet of the separator goes to an oil storage tank. The content of this tank is hauled from the site by an oil recycler.

Inlet and Fuel Gas Scrubbers

Any entrained liquids carried by the two pipelines that enter the station are trapped by the inlet gas scrubbers. These scrubbers are manually drained into a high pressure blowdown vessel. The liquid (hydrocarbons) phase of this vessel is automatically dumped into an underground tank equipped with a vent and a leak detection system. The accumulated liquid of this below-grade tank is also hauled from the site by an oil recycler.

Likewise, any other natural gas liquids originated from fuel gas scrubbers are also drained into and accumulated in the below grade tank for further hauling from the site.

Below-Grade Holding Tank

This fiberglass-reinforced plastic tank has a maximum capacity for 4,250 gallons of natural gas liquids. It serves as receptor and accumulator of waste liquids originated from high pressure systems or equipment such as inlet scrubbers and fuel scrubbers. The tank is provided with a leak detection system that is regularly checked, at least once a month, for any possibility of leakage. The contents of this tank is hauled from the site by an oil recycler.

Below-Grade Waste Oil Storage Tank

This fiberglass-reinforced plastic tank has a maximum capacity for 4,250 gallons. It accumulates the oil phase components generated by the oil/water separator mentioned above. The tank is provided with a leak detection system that is regularly checked for any possibility of leakage. The contents of this tank is hauled from the site by an oil recycler.

Cooling Tower

The process of heat exchange to lower the temperature of the compressed natural gas leaving the station requires the partial evaporation of the cooling media (water). This evaporation takes place when the recirculating cooling water is itself cooled in the water cooling towers. This continuous process of evaporation increases the concentration of dissolved solids in the cooling water, and were it not for the periodic discharge of a portion of the circulating water and corresponding make up with fresh water, solids would deposit on heat exchange surfaces as well as piping.

This blowdown stream is discharged from each of the two cooling towers into a double lined evaporation pond located outside the southeast corner of the station.

Evaporation Pond

The water discharged from the cooling towers carries a concentration of dissolved solids approximately ten times greater than the available fresh water. This cooling tower blowdown stream constitutes the only feed to a 435' x 300' x 5' deep double lined, evaporation pond. This pond is provided with a leak detection system that allows for verification of the integrity of the pond. The leak detection system is checked regularly to verify the leak-free operation of the pond. Pond drawings are attached in Tab "D".

Sewage

The sewage system design allows for completely independent systems at each of the three septic tank installations. One of the systems serves the main office of the station, it consists of a 1,000 gallon tank with its corresponding leach field. The second septic tank serves the "A" compressor building and also has a 1,000 tank with its own leach field. Finally, the third system serves the sewage discharge of the "B" compressor building, and it consists of another 1,000 gallon tank with its corresponding leach field. All these systems meet NMED guidelines for on-site disposal systems.

B. Quality Characteristics

Compressors

The operation of the compressors requires the use of lubricating oil which results in minor used oil discharges consisting of 100 percent heavy hydrocarbon liquids which may contain traces of entrained water originating from lubrication and maintenance of the compressors and engines. These used oils are accumulated in the tanks as described above.

Inlet and Fuel Gas Scrubbers

The discharge from inlet and fuel scrubbers is constituted of light hydrocarbons also known as natural gas liquids, and used lube oil. These high pressure systems are depressurized when discharged into the underground tank as described above.

Below-Grade Holding Tank

The inlet feed to this tank is made up of liquids trapped by the inlet and fuel gas scrubbers. The content of the discharge is nearly 100 percent light hydrocarbon liquids with traces of entrained water. The discharge is periodically collected by the oil recycler as indicated above.

Below-Grade Waste Oil Storage Tank

The inlet feed to this tank is almost 100 percent oil originating from the oil/water separator mentioned above. The tank is provided with a leak detection system that is regularly checked for any possibility of leakage. The contents of this tank is hauled from the site by an oil recycler.

Cooling Tower

The cooling tower blowdown stream is 100 percent water with dissolved solids as described above, and as depicted in the analyses attached in Tab E.

Evaporation Pond

The double lined evaporation pond contains water saturated with dissolved solids as shown in the laboratory analyses attached in Tab E.

Sewage

The three septic tank systems are used for discharge of domestic sewer. They do not commingle with any other source and only receive sewage from washrooms designed with one toilet and one wash basin.

C. Effluent Handling and Site Housekeeping

The Deming Station is operated in a manner that prevents and mitigates any unplanned releases to the environment. Station process and storage units are regularly observed by a number of personnel during normal operations, and any evidence or sign of spills/leaks is routinely reported to supervisory personnel so that repairs or cleanup can be promptly effected. Routine maintenance procedures conducted at Deming Station also help to assure that equipment remains functional and that the possibility of spills/leaks is minimized.

Should spills or leaks occur, measures to minimize any potential harm to the environment will be taken. Any liquid and solid wastes generated by these efforts will be characterized, segregated, and managed in separate containers for further recycling if possible, or for off-site disposal in accordance with its analytical profile.

Verbal and written notification of leaks or spills will be made to OCD in accordance with OCD Rule 116. Any release of a chemical with a reportable quantity regulated by Title 40 Code of Federal Regulations Parts 300 through 372 will be reported to the National Response Center, and where applicable to the NMED.

III. EFFLUENT DISPOSAL

Existing Operations

Existing facilities for effluent disposal can be categorized into two types: Facilities for on-site effluent disposal and facilities for effluent to be shipped off-site.

The first type of facility is made up of one double-lined evaporation pond used for evaporative disposal of cooling tower water blowdown. This impoundment is provided with a leak detection system that is periodically inspected for any leaks of the lined pond. On-site effluent disposal also takes place through the operation of three independent leach fields that serve three buildings where a sink/toilet combination is available.

The second type of effluent disposal allows for off-site disposal of used oils that are accumulated in four tanks. These tank facilities are periodically emptied by an outside firm that recycles the used oil.

IV. SITE CHARACTERISTICS

Introduction

Deming Compressor Station is located in SE/4, SW/4, SW/4, SE/4, and W/2 SE/4 SE/4 of Section 32, T-23-R, R-11-W in Luna County, New Mexico. The station is situated approximately 6 miles southwest of the Mimbres River. The surrounding area consists largely of a desert or bolson underlain by thick deposits of sand and gravel. A large amount of groundwater is obtained from the water-bearing formations of the bolson deposits. The groundwater in these deposits is derived largely from local precipitation and seepage losses from the run-off of the tributary streams and arroyos which drain into the county. More than 200 wells have been drilled for the purposes of securing groundwater for the irrigation of crops.

Regional Geologic Setting

PRECAMBRIAN STRATA

Granites, granite gneisses, and associated metamorphic rocks occur beneath pre-Tertiary strata in most of the region (Kottowski, 1963). However, there are some large areas of Precambrian metasedimentary rocks, and those rocks are types that could be mistaken for metamorphosed Paleozoic strata in isolated fault blocks. In the Sacramento Mountains, it has been reported that shale, siltstone, and fine-grained quartzitic sandstone, intruded by dioritic sills, beneath the Bliss (Cambrian ?) Sandstone. Precambrian quartzite and granodiorite have been found beneath the Abo Redlands south of Sierra Blanca near the village of Bent.

PALEOZOIC STRATA

Paleozoic sedimentary rocks in south-central and southwestern New Mexico include the Cambrian-Ordovician Bliss Sandstone; the Ordovician El Paso Limestone and Montoya Dolomite; the Silurian Fusselman Dolomite; the Devonian Onate, Sly Gap, Contadero, and Percha formations; the Mississippian Caballero, Lake Valley, Escabrosa, Rancheria, Helms, and Paradise formations; various Pennsylvanian units; and the Permian Bursum, Hueco, Abo, Yeso, Glorieta, and San Andres, Bernal, Earp, Colina, Epitaph, Scherrer, and Concha formations (Kottowski, 1963). Somewhere near Deming is the poorly defined meeting ground where units bearing central New Mexico terminology mingle with those named from type sections in southeastern Arizona.

MESOZOIC STRATA

Triassic beds, the Dockum Formation, or the Santa Rosa Sandstone overlain by the Chinle Formation have been left beneath an erosion surface only in the north part of the region (Kottlowski, 1963). No Jurassic rocks are known from this area. Early Cretaceous rocks are thick to the southwest but thin or absent in the northern part of south-central and southwestern New Mexico, whereas Late Cretaceous strata, where left after Cenozoic erosion, are thick in the northern part of the region but absent to the southwest. Both Early and Late Cretaceous sequences locally include thick masses of volcanic detritus.

Triassic Units

Triassic rocks occur only along the north edge of the region (Kottlowski, 1963). On Horse Mountain the remnant of the Triassic (?) strata in fault contact with Tertiary volcanic and sedimentary rocks consists of light gray, grayish orange, and light red, cross-laminated pebbly sandstone above the San Andres Limestone. In the Sun-Victorio oil test, the Triassic is about 180 feet thick, with the upper 120 feet of red claystone, siltstone, and sandstone perhaps and equivalent of the Chinle Formation, and the lower 60 feet of gray to red silty sandstone representative of the Santa Rosa Sandstone. In the northern San Andres Mountains, the Triassic is referred to the Dockum Formation and consists of 50 to 100 feet of red to gray, calcareous, stone with laminae of feldspathic sandstone.

Cretaceous Units

Late Cretaceous rocks remain as erosional remnants in the northern part of the region and appear to be thin or absent above the thick sequence of Early Cretaceous strata of southwesternmost New Mexico (Kottlowski, 1963). Near D-Cross Mountain, along the Socorro-Catron county line west-northwest of Socorro, typical central New Mexico Cretaceous rocks crop out. The Dakota Sandstone is about 20 feet thick and unconformably overlies the Triassic Chinle Formation. Above is the Mancos Shale consisting of a lower 105-foot-thick shale member, a middle 25-foot-thick Tres Hermanos Sandstone Member, and an upper 165-foot-thick shale member. The shales are sandy, fossiliferous, calcareous, gypsiferous, and carbonaceous. The overlying Mesaverde Group consists of the lower La Cruz Peak Formation and the upper 70-foot-thick marine sandstone. The Crevasse Canyon Formation is made up of quartzose sandstones interbedded with mudstones, nonmarine shales, and coals, about 600 feet in thickness. The Late Cretaceous rocks are about 1275 feet thick beneath the early Tertiary Baca Formation.

Early Cretaceous strata unconformably overlies the Montoya and Fusselman Dolomites in the Victorio Mountains. This Cretaceous sequence also had been called the Lobo Formation; it is 600 to 800 feet thick and consists of interbedded conglomerates, siltstones, sandstones, and fossiliferous limestones, overlain unconformably by Tertiary (?) andesitic agglomerates, breccias, tuffs, and sandstones. Minor lenses of feldspathic sandstones occur amid the Cretaceous sequence but most of the detrital fragments are of quartz, chert, silicified limestone, limestone, and dolomite. Locally, lenses of andesite breccia and andesite conglomerate occur near the base of this Early Cretaceous section. The overlying Tertiary (?) andesite units contain rounded boulders and pebbles of andesite, Early Paleozoic dolomites, various Early Cretaceous rocks, and minor amounts of schist, granite, and pegmatite (Precambrian?).

Local Geology

The Deming area is composed of alluvium and bolson deposits and other superficial deposits. The station is located in the Basin and Range Province in southwestern New Mexico which consists largely of a desert or bolson underlain by thick deposits of sand and gravel (Fiedler, 1927).

A generalized site subsurface description is presented based on drill logs from EPNG wells. Sand and gravel with some clay can be expected within the first 110 feet. A thirteen foot shale unit was encountered at 124 feet. This was followed by another sand and gravel unit containing some clay at 230 feet. A 148 foot thick sandstone unit was encountered terminating at a depth of 486 feet. This was followed by a 30 foot thick clay unit. Bedrock was encountered at 516 feet.

Regional Groundwater Setting

The average annual rainfall in the area is less than 10 inches. Groundwater, generally, is available everywhere in the area. Depths to water range from less than 5 feet at some points on the valley floors to as much as 550 feet on the upper alluvial slopes that apron the mountain ranges (Anonymous, 1970). The depth to water in wells within the mountains commonly is less than 500 feet. However, the few wells that have been successfully developed in the more rugged parts of the mountains probably tap small bodies of perched water. The water table under the mountain ranges seems to stand at an altitude only slightly higher than under the adjacent valley floors.

Large quantities of water have been pumped from wells tapping the valley fill, or so-called "bolson deposits" in the San Simon, Animas, Playas, Lordsburg, and Mimbres (Deming) valleys. In each of these areas irrigation wells have developed, some of which have yields up to 1,800 gpm (gallons per minute). City-supply and industrial wells in the vicinity of Silver City obtain yields of up to 500 gpm from parts of the Gila Conglomerate (Anonymous, 1970). On the other hand, wells that tap the crystalline in marine sedimentary rocks commonly yield less than 10 gpm; in some areas, particularly in the more rugged mountains, yields of 1 to 2 gpm are considered good. Each of the rock formations has its own lithologic characteristics, and these determine the ability of the formation to yield water to wells.

The great thicknesses of limestone rocks that undoubtedly underlie much of the bolson fill generally have been discounted as potential supplies of large quantities of water. Yet evidence exists that this belief may be erroneous. It is true that in the upland areas, the limestone rocks do not commonly yield large quantities of water. But at depth, the situation may be different where deep circulation of water may have developed solution permeability or where fracturing along zones of faulting may have increased storage and permeability. Records of deep wells at Apache Tejo, in Grant County, indicate that the original storage yield of wells come from the limestones at depths of over 1,000 feet, and that subsequent caving greatly reduced the yields.

At the present time the quality of the groundwater found in the region, in all aquifers, and at all depths, is generally fair to excellent (Anonymous, 1970). The few reported instances of poor to impotable water are local, and are commonly associated with mineral deposits. No data are available concerning the quality of water that might be available concerning the quality of water that might be available in the deep-lying limestones, but, except for the probability that it would be very hard, there is no reason to expect it to be saline as is most water in the deep-lying formation in New Mexico east of the Rio Grande.

The generally good quality of most groundwater in southwestern New Mexico may be attributed largely to two factors; a general absence of saline deposits, or saline-rich formations, and to an apparently freer circulation of water, both shallow and deep. Water moves through the formations underlying the San Samon, Animas, Playas, and Lordsburg valleys and probably discharges along the valley of the Gila River.

Groundwater in the drainage basin of the Mimbres River and in Hachita Valley follows a southerly course, moving toward points of discharge in the series of great playa lakes few miles south of the United States-Mexican boundary.

Local Groundwater

Deming is located in Luna County, an area in southwestern New Mexico, which consists largely of a desert or bolson underlain by thick deposits of sand and gravel. The vegetation of the desert plains consists chiefly of mesquite brush and scattered mesquite trees, cactus, and yucca. At times of sufficient rainfall native grasses furnish feed for stock. Yucca grows extensively on the sandy plains and at the foot of the ridges. The region is essentially a stock grazing country.

A large amount of groundwater is obtained from the water-bearing formations of bolson deposits. The groundwater in these deposits is derived largely from local precipitation and seepage losses from the run-off of the tributary streams and arroyos which drain into the county. More than 200 wells have been drilled for the purpose of securing groundwater for the irrigation of crops, but for various reasons much of the early development has been abandoned.

A considerable portion of the water contained within the sand and gravel underlying the bolsons is derived from local rainfall. There appears to be no continuous cover of tight formations throughout the area, though in places there are beds of clay near the surface which prevent deep percolation. This water is returned to the surface by capillary action and is lost by evaporation.

The chief contributions to the underground supply coming from streams are derived from the seepage losses of the Mimbres River and the San Vincent Arroyo. At times of heavy rainfall the flood flow extends as far south as Deming and during unusual periods of rainfall the waters flow southward along the west side of the Florida Mountains.

Water-Bearing Formations

A large portion of Luna County is underlain by thick deposits of sand, gravel, and clay (Fiedler, 1927). The deposits form a comparatively smooth desert plain rising quite regularly from an elevation of less than 4,000 feet above sea level on the southeast to 5,400 feet above sea level in the northwest corner. The thick bodies of sand and gravel underlying the wide bolson of Luna County contain the groundwater that is reclaimed for irrigation and other uses in the area.

The water-bearing formations are composed of deposits of sand and gravel of varying degrees of fineness (Fiedler, 1927). The character and water-yielding capacities of the sands and gravels in the area vary greatly from place to place. The largest supplies of water are usually obtained from the coarser, loose sands and gravels and yields appear to be larger from the lower horizons. The thickness of the water-bearing beds also varies considerably. The maximum thickness of the beds appears to be about 40 to 50 feet, though in most places the thickness is much less.

The largest volume of water in Luna County underlies the broad bolson extending southward from Deming on the west side to the Florida Mountains, and extending south to the foot of the Tres Hermanas Mountains and southeastward through the gap to Palomas Lakes in Mexico (Fiedler, 1927). To the east of Deming and north and northeast of the Little Florida Mountains is an area much smaller in extent which contains a good supply of water that rises within 20 to 70 feet to the surface. The area to the east and southeast of the Florida Mountains and the broad basin south of the Cedar Grove Mountains appears to have but a scanty water supply.

Water Quality

Water quality data from three EPNG water wells is presented in Table 1. The wells are located approximately within a two mile radius of the station. The wells were completed at the following depths:

- Well No. 6 - 450 feet,
- Well No. 10 - 550 feet,
- Well No. 12 - 600 feet.

The wells were perforated at the following depths:

- Well No. 6 - 232 to 330 feet and 330 to 440 feet;
- Well No. 10 - 315 to 350 feet, 370 to 420 feet,
450 to 515 feet, and 545 to 550 feet;
- Well No. 12 - 397 to 597 feet.

TABLE 1
DEMING COMPRESSOR STATION
WATER QUALITY DATA

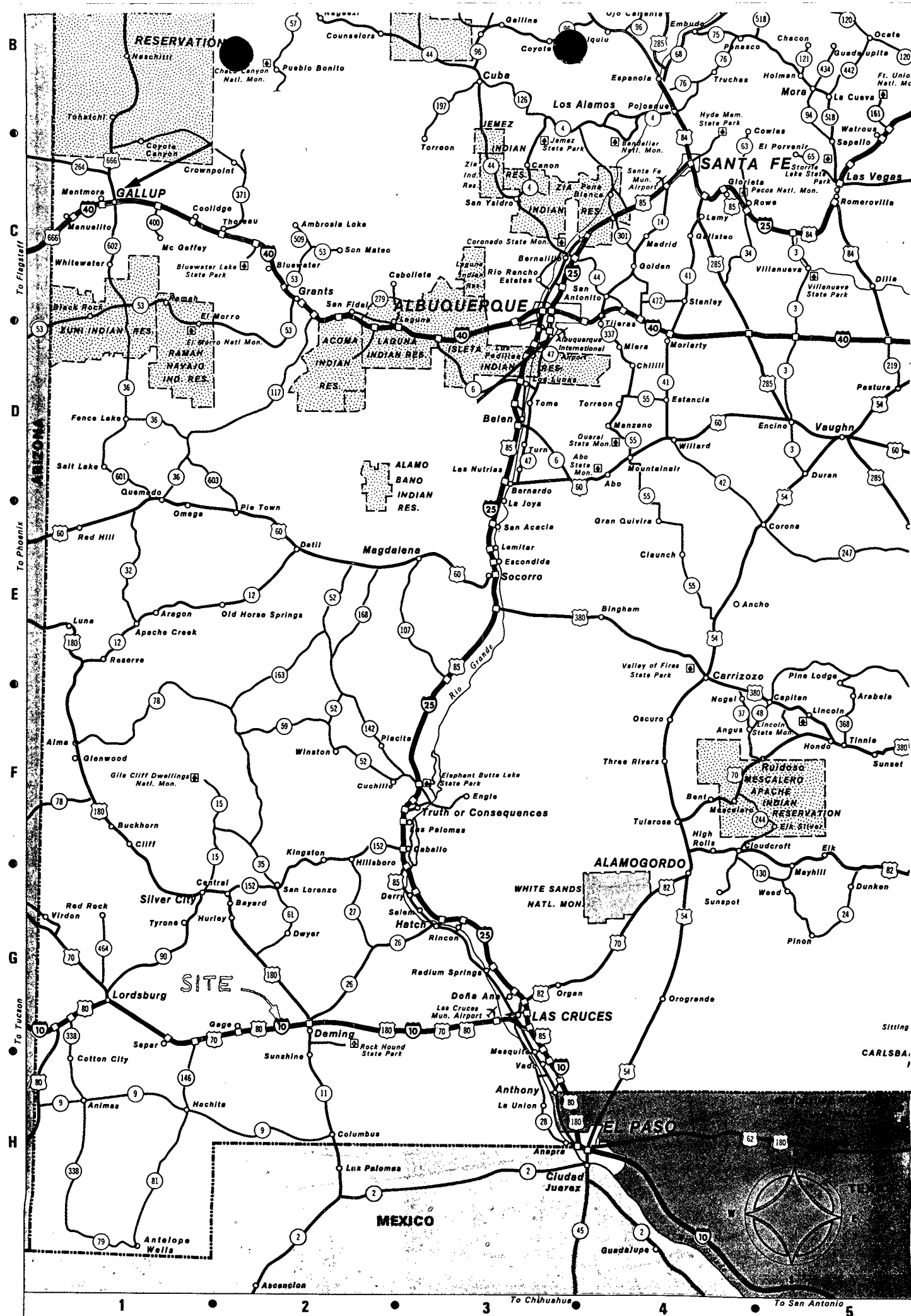
	WELL No. 6	WELL No. 10	WELL No. 12
PARAMETERS			
Conductivity	428 umho/cm	385 umho/cm	444 umho/cm
Total Hardness	112 ppm	56 ppm	132 ppm
pH	7.7	7.7	7.2
TDS	366 ppm	395 ppm	380 ppm
Ca	84 ppm	36 ppm	80 ppm
Mg-CaCO ₃	28 ppm	20 ppm	52 ppm
Na	46 ppm	76 ppm	53 ppm
Fe			0.03 ppm
Alkalinity	150 ppm	170 ppm	160 ppm
Cl	18 ppm	14 ppm	21 ppm
F1	0.7 ppm	0.54 ppm	1.52 ppm
SiO ₂	40 ppm	50.5 ppm	29 ppm
SO ₄	37.6 ppm	27.6 ppm	48.4 ppm

REFERENCES

Anonymous, 1970. Ground Water in Southwestern New Mexico, New Mexico Geological Society Guidebook, Tyrone-Big Hatchet Mountains, Florida Mountains Region.

Fiedler, Albert G., 1927. Report on a Reconnaissance of the Ground-Water area of the Mimbres Valley, United States Geological Survey.

Kottowski, Frank E., 1963. Paleozoic and Mesozoic Strata of Southwestern and South-Central New Mexico, State Bureau of Mines and Mineral Resources, New Mexico Institute of Mining and Technology.



TRANSMISSION OPERATIONS LABORATORY SAMPLE REPORT

SAMPLE NO.: S93-0328

FACILITY NO.:

SAMPLE LOCATION: DEMING STATION

SAMPLE SITE DESCRIPTION: SCRUBBER BLOWDOWN USED OIL TANK

SAMPLE DATE (YY MM DD): 93 06 09 TIME: 1143

SAMPLE COLLECTED BY: Jerry LaFarelle

Analysis		Analysis	
	Results_(mg/l)		Results_(mg/l)
Ammonia (N)	_____	Color	_____
Chemical Oxygen Demand	_____	Fluoride	_____
Kjeldahl Nitrogen (N)	_____	Iodide	_____
Nitrate (N)	_____	Odor	_____
Nitrite (N)	_____	Residue, Total	_____
Oil & Grease	_____	Residue, Filterable (TDS)	_____
Organic Carbon	_____	Residue, Nonfilterable (TSS)	_____
Orthophosphate (PO ₄)	_____	Residue, Settleable	_____
Phosphorus, Total (P)	_____	Residue, Volatile	_____
Cyanide, Total	_____	Silica	_____
Cyanide, Free	_____	Specific Conductance (umho)	_____
Phenols	_____	Sulfate	_____
Antimony	_____	Sulfite	_____
Arsenic	_____	Surfactants-MBAS	_____
Barium	_____	Turbidity	_____ NTU
Beryllium	_____	BHC Isomers	_____
Boron	_____	Chlordane	_____
Cadmium	_____	DDT Isomers	_____
Calcium	_____	Dieldrin	_____
Chromium, Total	_____	Endrin	_____
Chromium, VI	_____	Heptachlor	_____
Copper	_____	Heptachlor Epoxide	_____
Hardness (CaCO ₃)	_____	Lindane	_____
Iron	_____	Methoxychlor	_____
Lead	_____	Toxaphene	_____
Magnesium	_____	2,4-D	_____
Manganese	_____	2,4,5-TP-Silvex	_____
Mercury	_____	2,4,5-T	_____
Nickel	_____	Sulfides	_____
Potassium	_____	Bromoform	_____
Selenium	_____	Bromodichloromethane	_____
Silver	_____	Carbon Tetrachloride	_____
Sodium	_____	Chloroform	_____
Thallium	_____	Chloromethane	_____
Zinc	_____	Dibromochloromethane	_____
pH	_____	Methylene Chloride	_____
Acidity, Total	_____	Tetrachloroethylene	_____
Alkalinity, Total (CaCO ₃)	_____	1,1,1-Trichloroethane	_____
Alkalinity, Bicarbonate (CaCO ₃)	_____	Trichloroethylene	_____
Bromide	_____	Trihalomethanes	_____
Carbon Dioxide	_____	PCBs	<5.
Chloride	_____		_____

COMMENTS: Resample_of_S93-0223

ANALYST:

Daniel Campbell

DATE: 06/12/93

TRANSMISSION OPERATIONS LABORATORY SAMPLE REPORT

SAMPLE NO.: S93-0329

FACILITY NO.:

SAMPLE LOCATION: DEMING STATION

SAMPLE SITE DESCRIPTION: OIL/WATER SEPARATOR FEED TANK

SAMPLE DATE (YY MM DD): 93 06 09 TIME: 1133

SAMPLE COLLECTED BY: Jerry LaFarelle

Analysis		Analysis	
Results_(mg/l)		Results_(mg/l)	
Ammonia_(N)	_____	Color	_____
Chemical Oxygen Demand	_____	Fluoride	_____
Kjeldahl Nitrogen_(N)	_____	Iodide	_____
Nitrate_(N)	_____	Odor	_____
Nitrite_(N)	_____	Residue, Total	_____
Oil & Grease	_____	Residue, Filterable (TDS)	_____
Organic Carbon	_____	Residue, Nonfilterable_(TSS)	_____
Orthophosphate_(PO ₄)	_____	Residue, Settleable	_____
Phosphorus, Total_(P)	_____	Residue, Volatile	_____
Cyanide, Total	_____	Silica	_____
Cyanide, Free	_____	Specific Conductance_(umho)	_____
Phenols	_____	Sulfate	_____
Antimony	_____	Sulfite	_____
Arsenic	_____	Surfactants-MBAS	_____
Barium	_____	Turbidity_____NTU	_____
Beryllium	_____	BHC Isomers	_____
Boron	_____	Chlordane	_____
Cadmium	_____	DDT Isomers	_____
Calcium	_____	Dieldrin	_____
Chromium, Total	_____	Endrin	_____
Chromium, VI	_____	Heptachlor	_____
Copper	_____	Heptachlor Epoxide	_____
Hardness_(CaCO ₃)	_____	Lindane	_____
Iron	_____	Methoxychlor	_____
Lead	_____	Toxaphene	_____
Magnesium	_____	2,4-D	_____
Manganese	_____	2,4,5-TP-Silvex	_____
Mercury	_____	2,4,5-T	_____
Nickel	_____	Sulfides	_____
Potassium	_____	Bromoform	_____
Selenium	_____	Bromodichloromethane	_____
Silver	_____	Carbon Tetrachloride	_____
Sodium	_____	Chloroform	_____
Thallium	_____	Chloromethane	_____
Zinc	_____	Dibromochloromethane	_____
pH	_____	Methylene Chloride	_____
Acidity, Total	_____	Tetrachloroethylene	_____
Alkalinity, Total (CaCO ₃)	_____	1,1,1-Trichloroethane	_____
Alkalinity, Bicarbonate_(CaCO ₃)	_____	Trichloroethylene	_____
Bromide	_____	Trihalomethanes	_____
Carbon Dioxide	_____	PCBs (1254)	24.
Chloride	_____		_____

COMMENTS: Resample_of_S93-0227

ANALYST:

Daniel Campbell

DATE: 06/12/93

TRANSMISSION OPERATIONS LABORATORY SAMPLE REPORT

SAMPLE NO.: S93-0330

FACILITY NO.:

SAMPLE LOCATION: DEMING STATION

SAMPLE SITE DESCRIPTION: OIL/WATER SEPARATOR USED OIL TANK

SAMPLE DATE (YY MM DD): 93 06 09 TIME: 1135

SAMPLE COLLECTED BY: Jerry LaFarelle

Analysis		Analysis	
	Results_(mg/l)		Results_(mg/l)
Ammonia (N)		Color	
Chemical Oxygen Demand		Fluoride	
Kjeldahl Nitrogen (N)		Iodide	
Nitrate (N)		Odor	
Nitrite (N)		Residue, Total	
Oil & Grease		Residue, Filterable (TDS)	
Organic Carbon		Residue, Nonfilterable (TSS)	
Orthophosphate (PO ₄)		Residue, Settleable	
Phosphorus, Total (P)		Residue, Volatile	
Cyanide, Total		Silica	
Cyanide, Free		Specific Conductance (umho)	
Phenols		Sulfate	
Antimony		Sulfite	
Arsenic		Surfactants-MBAS	
Barium		Turbidity NTU	
Beryllium		BHC Isomers	
Boron		Chlordane	
Cadmium		DDT Isomers	
Calcium		Dieldrin	
Chromium, Total		Endrin	
Chromium, VI		Heptachlor	
Copper		Heptachlor Epoxide	
Hardness (CaCO ₃)		Lindane	
Iron		Methoxychlor	
Lead		Toxaphene	
Magnesium		2,4-D	
Manganese		2,4,5-TP-Silvex	
Mercury		2,4,5-T	
Nickel		Sulfides	
Potassium		Bromoform	
Selenium		Bromodichloromethane	
Silver		Carbon Tetrachloride	
Sodium		Chloroform	
Thallium		Chloromethane	
Zinc		Dibromochloromethane	
pH		Methylene Chloride	
Acidity, Total		Tetrachloroethylene	
Alkalinity, Total (CaCO ₃)		1,1,1-Trichloroethane	
Alkalinity, Bicarbonate (CaCO ₃)		Trichloroethylene	
Bromide		Trihalomethanes	
Carbon Dioxide		PCBs (1254)	20.
Chloride			

COMMENTS: Resample_of_S93-0226

ANALYST: Daniel Campbell DATE: 06/12/93

SAMPLE KEY

SAMPLE NUMBER: S93-0222 LOCATION: DEMING STATION
MATRIX: WATER
SAMPLE DESCRIPTION: COOLING TOWER BLOWDOWN POND
S D CONTINUED: MAP SITE #1
S D CONTINUED:
SAMPLE TIME: 14:00 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0223 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: SCRUBBER BLOWDOWN USED OIL TANK
S D CONTINUED: MAP SITE #2
S D CONTINUED:
SAMPLE TIME: 15:20 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0224 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: "B" PLANT USED OIL TANK
S D CONTINUED: MAP SITE #3
S D CONTINUED:
SAMPLE TIME: 15:30 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0225 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: "A" PLANT USED OIL TANK
S D CONTINUED: MAP SITE #4
S D CONTINUED:
SAMPLE TIME: 15:35 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0226 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: OIL/WATER SEPARATOR USED OIL TANK
S D CONTINUED: MAP SITE #5
S D CONTINUED:
SAMPLE TIME: 15:40 SAMPLE DATE: 05/04/9

SAMPLE KEY

SAMPLE NUMBER: S93-0227 LOCATION: DEMING STATION
MATRIX: OIL
SAMPLE DESCRIPTION: OIL/WATER SEPARATOR FEED TANK
S D CONTINUED: MAP SITE #6
S D CONTINUED:
SAMPLE TIME: 15:45 SAMPLE DATE: 05/04/93

SAMPLE KEY

SAMPLE NUMBER: S93-0228 LOCATION: DEMING STATION
MATRIX: WATER
SAMPLE DESCRIPTION: LEAK DETECTION WELL
S D CONTINUED: COOLING TOWER BLOWDOWN POND
S D CONTINUED: MAP SITE #7
SAMPLE TIME: 13:50 SAMPLE DATE: 05/04/93



BURLINGTON
ENVIRONMENTAL

General Laboratory Report

Lab Number : 46779

Plant/Generator Name : El Paso Natural Gas; Transmission Operations Lab
Sample Type : Waters, Oils; S93-0222 through S93-0228
Date of Receipt : 05/06/93 Analyst: BLW, EL, AFS, LL
Date of Report : 05/28/93 QC Checked: *Kathy B. [signature]*
Parameters for Analysis: Metals, CN, Gen. Chem., Phenol, Rad., 8240, PCBs, EDB, PAHs
Outside Lab : Sound/Core Outside Lab Report No: 31903/930799

Data:

Two water samples (S93-0222 and S93-0228) were analyzed for Cyanide by the Burlington Environmental Corporate Laboratory, for Anions, Nitrate, and EDB by Sound Analytical and for Uranium and Radium 226 & 228 by Core Laboratories. The water samples (S93-0222 & S93-0228) and six oil samples (S93-0223 through S93-0227) were analyzed for Metals and PCBs by the Burlington Environmental Corporate Laboratory and for Volatiles by 8240 and Naphthalene and Benzo(a)pyrene by Sound Analytical Laboratories. Cyanide results are listed below. Copies of all other results are attached.

BEI Lab #:	46779-1	46779-7
EPNG Lab #:	S93-0222	S93-0228
Cyanide:	<0.10 ppm	<0.10 ppm
Analysis Date:	5/10/93	5/10/93

Method #: Standard Methods 4500-CN-C (Ed.17)

Comments and Conclusions:

Please, make sure
the detection limits
are below these
limits for
S93-0222-0228

ITEM #	PARAMETER	NMWQCC LIMITS (MG/L)
1	ARSENIC (MG/L)	0.1
2	BARIUM (MG/L)	1.0
3	CADMIUM (MG/L)	0.01
4	CHROMIUM (MG/L)	0.05
5	CYANIDE, TOTAL (MG/L)	0.2
6	FLUORIDE (MG/L)	1.6
7	LEAD (MG/L)	0.05
8	TOTAL MERCURY (MG/L)	0.002
9	NITRATE AS NITROGEN (MG/L)	10
10	SELENIUM (MG/L)	0.05
11	SILVER (MG/L)	0.05
12	URANIUM (MG/L)	5.0
13	RADIUM-226 AND RADIUM-228 (pCi/L)	30.0
14	BENZENE (MG/L)	0.01
15	POLYCHLORINATED BIPHENYLS (PCBs) (MG/L)	0.001
16	TOLUENE (MG/L)	0.75
17	CARBON TETRACHLORIDE (MG/L)	0.01
18	1,2-DICHLOROETHANE (EDC) (MG/L)	0.01
19	1,1-DICHLOROETHYLENE (1,1-DCE) (MG/L)	0.005
20	1,1,2-TETRACHLOROETHYLENE (PCE) (MG/L)	0.02
21	1,1,2-TRICHLOROETHYLENE (TCE) (MG/L)	0.1
22	ETHYLBENZENE (MG/L)	0.75
23	TOTAL XYLENES (MG/L)	0.62
24	METHYLENE CHLORIDE (MG/L)	0.1
25	CHLOROFORM (MG/L)	0.1
26	1,1-DICHLOROETHANE (MG/L)	0.025
27	ETHYLENE DIBROMIDE (EDB) (MG/L 7778)	0.0001
28	1,1,1-TRICHLOROMETHANE (MG/L)	0.06
29	1,1,2-TRICHLOROMETHANE (MG/L)	0.01
30	1,1,2,2-TETRACHLOROETHANE (MG/L)	0.01
31	VINYL CHLORIDE (MG/L)	0.001
32	PAHs: TOTAL NAPHTHALENE (MG/L)	0.03
33	BENZO-A-PYRENE (MG/L)	0.0007
34	CHLORIDE (MG/L)	* 250
35	COPPER (MG/L)	* 1.0
36	IRON (MG/L)	* 1.0
37	MANGANESE (MG/L)	* 0.2
38	PHENOLICS, TOTAL (MG/L)	* 0.005
39	SULFATE (MG/L)	* 600
40	TOTAL DISSOLVED SOLIDS (MG/L)	* 1000
41	ZINC (MG/L)	* 10.0
42	pH (UNITS)	* 6-9
43	BORON (MG/L)	** 0.75

* standard for domestic water supply

** standard for irrigation use

Lab Number : 46779

Plant/Generator Name : / EL PASO NATURAL GAS - SOUTH REGION LABOR
 Sample Type : WATERS, OILS
 Date of Receipt : 05/06/93 Analyst: AFS/LL
 Date of Report : 05/13/93 QC Checked: *CKW Jan 5/14/93*
 Outside Lab : Outside Lab Report No:
 Number of Samples : 7

Run #	Sample ID	Code Numbers	# Drums in Composite	Aroclor #	Total PCB (ppm)
CAFZ53	46779-1	S93-0222		1248	2.5
BALF63	46779-2	S93-0223		1232, 1242, 1248	<100
BALF55	46779-2			1254, 1260	<10
		CLOR-D-TEC >1000 PPM CHLORIDE SCREEN <1.0%			
BALD104	46779-3	S93-0224			<1.0
BALD105	46779-4	S93-0225			<1.0
BALD106	46779-5	S93-0226		1254	20
BALD107	46779-6	S93-0227		1254, 1260	35
CAFZ54	46779-7	S93-0228			<0.1
BALD101	B05063-2	BLANK			<0.1
BALD102	M05063-2	METHOD SPIKE		1248	115%
BALD100	A1260	A1260 CCV (5.0 PPM)		1260 5.16	103%
BALD109	A1254	A1254 CCV (5.0 PPM)		1254 4.29	86%
BALF54	A1260	A1260 CCV (5.0 PPM)		1260 4.95	99%
BALF65	A1248	A1248 CCV (5.0 PPM)		1248 5.21	104%
CAFZ55	B05073-1	BLANK			<0.1
CAFZ56	M05073-1	METHOD SPIKE		1248	105%
CAFZ46	A1248	A1248 CCV (5.0 PPM)		1248 4.89	98%
CAFZ57	A1254	A1254 CCV (5.0 PPM)		1254 5.91	118%

Metals Laboratory Report

Lab Number : 46779

Plant/Generator Name : EL PASO NATURAL GAS - SOUTH REGION LABORATORY
Sample Type : WATERS, OILS
Date of Receipt : 05/06/93 Analyst: BLW, EL
Date of Report : 05/24/93 QC Checked: *[Signature]*
Parameters for Analysis: TOTAL METALS
Outside Lab : Outside Lab Report No:

TOTAL METALS BY SW-846 6010, 7470, 7421, 7740.

Metals:	PREP BLANK	LCS % RECOVERY	46779-1 S93-0222	46779-1 DUP S93-0222 DUP
Silver	<0.010	102.8	<0.010	<0.010
Arsenic	<0.10	95.7	1.4	1.5
Boron	<0.10	93.4	33	33
Barium	<0.20	98.7	0.21	0.21
Cadmium	<0.005	105.2	<0.005	<0.005
Chromium	<0.010	101.8	0.034	0.036
Copper	<0.025	103.6	0.030	0.032
Iron	<0.10	104.9	0.20	0.19
Mercury	<0.002	86.7	<0.002	--
Manganese	<0.10	100.4	<0.10	<0.10
Lead	<0.003	103.5	<0.30	<0.30
Selenium	<0.005	102.2	<0.50	<0.50
Zinc	<0.020	102.4	0.032	0.030

Comments and Conclusions:

RESULTS REPORTED AS MG/L.

Lead and Selenium detection limits higher because
of sample interferences.

Metals Laboratory Report

Lab Number : 46779

Plant/Generator Name : EL PASO NATURAL GAS - SOUTH REGION LABORATORY

Sample Type : WATERS, OILS

Date of Receipt : 05/06/93

Analyst: BLW, EL

Date of Report : 05/24/93

QC Checked:

Parameters for Analysis: TOTAL METALS

Outside Lab :

Outside Lab Report No:

TOTAL METALS BY SW-846 6010, 7470, 7421, 7740.

Metals:	46779-7 S93-0228	% MATRIX SPIKE RECOVERY
Silver	<0.010	103.0
Arsenic	<0.10	98.6
Boron	0.15	87.5
Barium	<0.20	102.9
Cadmium	<0.005	102.2
Chromium	<0.010	100.0
Copper	<0.025	103.7
Iron	<0.10	108.5
Mercury	<0.002	87.8
Manganese	2.7	101.0
Lead	<0.006	109.5
Selenium	<0.005	111.1
Zinc	0.31	103.0

Comments and Conclusions:

RESULTS REPORTED AS MG/L.

Metals Laboratory Report

Lab Number : 46779

Plant/Generator Name : EL PASO NATURAL GAS - SOUTH REGION LABORATORY
Sample Type : WATERS, OILS
Date of Receipt : 05/06/93 Analyst: BLW, EL
Date of Report : 05/24/93 QC Checked: *J. P. Sullivan 5/24/93*
Parameters for Analysis: TOTAL METALS
Outside Lab : Outside Lab Report No:

METALS BY SW-846 3051, 6010.

	46779-2	46779-2	46779-3	46779-4
Metals:	S93-0223	DUPLICATE	S93-0224	S93-0225
Silver	<0.99	<0.85	<0.93	<0.98
Arsenic	<20.	<17.	<19.	<20.
Boron	<9.9	<8.5	<9.3	<9.8
Barium	33.	33.	19.	<20.
Cadmium	<0.50	2.1	<0.46	<0.49
Chromium	4.2	7.8	1.7	<0.98
Copper	32.	32.	45.	26.
Iron	420	420	14.	27.
Mercury	<5.0	<4.2	<4.6	<4.9
Manganese	<5.0	<4.2	<4.6	<4.9
Lead	5.1	<4.2	8.7	<9.8
Selenium	<20.	<17.	<19.	<20.
Zinc	14.	15.	140	140

Comments and Conclusions:

RESULTS ARE REPORTED IN MG/KG "AS RECEIVED."

Metals Laboratory Report

Lab Number : 46779

Plant/Generator Name : EL PASO NATURAL GAS - SOUTH REGION LABORATORY

Sample Type : WATERS, OILS

Date of Receipt : 05/06/93

Analyst: BLW, EL

Date of Report : 05/24/93

QC Checked: *[Signature]*

Parameters for Analysis: TOTAL METALS

Outside Lab :

Outside Lab Report No:

METALS BY SW-846 3051, 6010.

Metals:	46779-5 S93-0226	46779-6 S93-0227	% RECOVERY MATRIX SPIKE	POST DIG. SPIKE % RECOVERY
Silver	<0.98	<0.93	56.8	95.0
Arsenic	<9.8	<9.3	60.0	81.2
Boron	<9.8	<9.3	82.2	
Barium	280	26.	61.7	84.4
Cadmium	<0.49	<0.46	69.2	92.0
Chromium	49.	26.	73.8	92.2
Copper	15.	8.6	80.1	88.2
Iron	120	230		
Mercury	<4.9	<4.6	57.0	87.4
Manganese	<4.9	<4.6	67.5	88.0
Lead	11.	<9.3	62.5	87.7
Selenium	<20.	<19.	69.2	81.4
Zinc	65.	41.	65.0	89.5

Comments and Conclusions:

RESULTS ARE REPORTED IN MG/KG "AS RECEIVED."

CHAIN OF CUSTODY RECORD

Project Number		Project Name		Total No. of Containers	Composite or Grab	Requested Analysis													Contract Laboratory P.O. Number						
Samplers: (Signature)		Date:				Metals	Total CN	As	Cd	Cr	Pb	Hg	Se	Ag	Cu	Fe	Mn	Zn	B	pH	TDS	F ⁻	Cl ⁻	SO ₄ ²⁻	Remarks
Lab ID		Date	Time																						
Daniel Campbell		5/4/93																							
4-77-1	5/4/93	12	50	Water	S93-0222	G	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	① Metals - As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Cu, Fe, Mn, Zn, B	
2				Oil	S93-0223	G	X						X	X											
3				"	S93-0224	G	X						X	X											
4				"	S93-0225	G	X						X	X										② pH, TDS, F ⁻ , Cl ⁻ , SO ₄ ²⁻	
5				"	S93-0226	G	X						X	X											
6				"	S93-0227	G	X						X	X											
7				Water	S93-0228	G	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
<p style="text-align: center;">Total metals</p> <p style="text-align: center;">digest 0.5g</p> <p style="text-align: center;">dilute to 50mls</p>																									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)									
Daniel Campbell		5/5/93 1400		T. O. Auld																					
Requested Turnaround Time:		Sample Receipt Remarks		Results & Invoices to:																					
<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush <u>ASAP</u>		<u>Shelf EC-4</u>		South Region Laboratory El Paso Natural Gas Company 8645 Railroad Drive El Paso, Texas 79904																					
Carrier Co.		Charge Code		915-541-9228 FAX: 915-541-9335																					
Bill No :																									

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Burlington Environmental, Date: May 24, 1993
Seattle Facility

Report On: Analysis of Water

Lab No.: 31903

Page 1 of 8

IDENTIFICATION:

Samples received on 05-07-93

Project: EPNG

P.O. No. 31903

ANALYSIS:

Lab Sample No. 31903-1

Client ID: S93-0222
46779-1

Volatile Organics by Method 8240

Date Analyzed: 5-12-93

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	5	Bl, J
Toluene	ND	5	
Carbon Tetrachloride	ND	5	
1,2-Dichloroethane	ND	5	
1,1-Dichloroethene	ND	5	
Tetrachloroethene	ND	5	
Trichloroethene	ND	5	
Ethyl Benzene	ND	5	
Total Xylenes	ND	5	
Methylene Chloride	3.2	5	
Chloroform	ND	5	
1,1-Dichloroethane	ND	5	
1,1,1-Trichloroethane	ND	5	
1,1,2-Trichloroethane	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Vinyl Chloride	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Toluene - D8	98	88 - 110	81 - 117
Bromofluorobenzene	113	86 - 115	74 - 121
1,2-Dichloroethane-D4	94	76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
Project: EPNG
Lab No. 31903
Page 2 of 8
May 24, 1993

Lab Sample No. 31903-1

Client ID: S93-0222
46779-1

Semivolatile Organics Per EPA SW-846 Method 8270

Date Extracted: 5-11-93

Date Analyzed: 5-13-93

Compound	Concentration ug/L	PQL	Flag
Naphthalene	ND	0.1	
Benzo(a)pyrene	ND	0.1	

ND - Not Detected

PQL - Practical Quantitation Limit

Semi-Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Nitrobenzene - d ₅	15	35 - 114	23 - 120
2-Fluorobiphenyl	48	43 - 116	30 - 115
p-Terphenyl-d ₁₄	81	33 - 141	18 - 137
Phenol-d ₆	49	10 - 94	24 - 113
2-Fluorophenol	31	21 - 100	25 - 121
2,4,6-Tribromophenol	57	10 - 123	19 - 122

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
Project: EPNG
Lab No. 31903
Page 3 of 8
May 24, 1993

Lab Sample No. 31903-1

Client ID: S93-0222
46779-1

Anions Per EPA Method 300.0
Date Analyzed: 5-12-93

<u>Parameter</u>	<u>Result, mg/L</u>	<u>PQL</u>
Chloride	9,200	1,000
Sulfate	46,000	5,000

ND - Not Detected
PQL - Practical Quantitation Limit

EDB Per EPA Method 504
Date Extracted: 5-13-93
Date Analyzed: 5-13-93

<u>Parameter</u>	<u>Result</u>	<u>Flag</u>
Ethylene Dibromide, ug/L	0.04	J

<u>Parameter</u>	<u>Result</u>
Fluoride	< 0.1
Nitrate Nitrogen	< 0.05
Total Phenols, mg/L	0.014
Total Dissolved Solids, mg/L	77,000
pH	7.82

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
 Project: EPNG
 Lab No. 31903
 Page 4 of 8
 May 24, 1993

Lab Sample No. 31903-2

Client ID: S93-0228
 46779-7

Volatile Organics by Method 8240
 Date Analyzed: 5-12-93

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	5	
Toluene	ND	5	
Carbon Tetrachloride	ND	5	
1,2-Dichloroethane	ND	5	
1,1-Dichloroethene	8.2	5	
Tetrachloroethene	ND	5	
Trichloroethene	31	5	
Ethyl Benzene	ND	5	
Total Xylenes	ND	5	
Methylene Chloride	4.1	5	B1, J
Chloroform	1.4	5	J
1,1-Dichloroethane	28	5	
1,1,1-Trichloroethane	59	5	
1,1,2-Trichloroethane	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Vinyl Chloride	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Toluene - D8	97	88 - 110	81 - 117
Bromofluorobenzene	103	86 - 115	74 - 121
1,2-Dichloroethane-D4	95	76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility

Project: EPNG

Lab No. 31903

Page 5 of 8

May 24, 1993

Lab Sample No. 31903-2

Client ID: S93-0228
46779-7

Semivolatile Organics Per EPA SW-846 Method 8270

Date Extracted: 5-11-93

Date Analyzed: 5-13-93

Compound	Concentration ug/L	PQL	Flag
Naphthalene	ND	0.1	
Benzo(a)pyrene	ND	0.1	

ND - Not Detected

PQL - Practical Quantitation Limit

Semi-Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Nitrobenzene - d ₅	17	35 - 114	23 - 120
2-Fluorobiphenyl	57	43 - 116	30 - 115
p-Terphenyl-d ₁₄	91	33 - 141	18 - 137
Phenol-d ₆	35	10 - 94	24 - 113
2-Fluorophenol	40	21 - 100	25 - 121
2,4,6-Tribromophenol	85	10 - 123	19 - 122

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
Project: EPNG
Lab No. 31903
Page 6 of 8
May 24, 1993

Lab Sample No. 31903-2

Client ID: S93-0228
46779-7

Anions Per EPA Method 300.0
Date Analyzed: 5-12-93

<u>Parameter</u>	<u>Result, mg/L</u>	<u>PQL</u>
Fluoride	0.4	0.2
Chloride	34	2
Sulfate	99	10

ND - Not Detected
PQL - Practical Quantitation Limit

EDB Per EPA Method 504
Date Extracted: 5-13-93
Date Analyzed: 5-13-93

<u>Parameter</u>	<u>Result</u>
Ethylene Dibromide, ug/L	< 0.08

<u>Parameter</u>	<u>Result</u>
Nitrate Nitrogen	< 0.05
Total Phenols, mg/L	0.077
Total Dissolved Solids, mg/L	490
pH	7.59

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
 Project: EPNG
 Lab No. 31903
 Page 7 of 8
 May 24, 1993

Lab Sample No. 31903-3

Client ID: S93-0222
 TB #1

Volatile Organics by Method 8240
 Date Analyzed: 5-12-93

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	5	B1, J
Toluene	ND	5	
Carbon Tetrachloride	ND	5	
1,2-Dichloroethane	ND	5	
1,1-Dichloroethene	ND	5	
Tetrachloroethene	ND	5	
Trichloroethene	ND	5	
Ethyl Benzene	ND	5	
Total Xylenes	ND	5	
Methylene Chloride	4.0	5	
Chloroform	ND	5	
1,1-Dichloroethane	ND	5	
1,1,1-Trichloroethane	ND	5	
1,1,2-Trichloroethane	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Vinyl Chloride	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Toluene - D8	96	88 - 110	81 - 117
Bromofluorobenzene	115	86 - 115	74 - 121
1,2-Dichloroethane-D4	96	76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Burlington Environmental, Seattle Facility
 Project: EPNG
 Lab No. 31903
 Page 8 of 8
 May 24, 1993

Lab Sample No. 31903-4

Client ID: S93-0228
 TB #7

Volatile Organics by Method 8240
 Date Analyzed: 5-12-93

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	5	B1, J J
Toluene	ND	5	
Carbon Tetrachloride	ND	5	
1,2-Dichloroethane	ND	5	
1,1-Dichloroethene	7.8	5	
Tetrachloroethene	ND	5	
Trichloroethene	30	5	
Ethyl Benzene	ND	5	
Total Xylenes	ND	5	
Methylene Chloride	3.1	5	
Chloroform	1.3	5	
1,1-Dichloroethane	28	5	
1,1,1-Trichloroethane	58	5	
1,1,2-Trichloroethane	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Vinyl Chloride	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Control Limits	
		Water	Soil
Toluene - D8	96	88 - 110	81 - 117
Bromofluorobenzene	114	86 - 115	74 - 121
1,2-Dichloroethane-D4	96	76 - 114	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qc1
Units: ug/L
Date: May 24, 1993
Blank No: Z0335

METHOD BLANK

Compound	Result	PQL	Flags
Benzene	ND	5	
Toluene	ND	5	
Carbon Tetrachloride	ND	5	
1,2-Dichloroethane	ND	5	
1,1-Dichloroethene	ND	5	
Tetrachloroethene	ND	5	
Trichloroethene	ND	5	
Ethyl Benzene	ND	5	
Total Xylenes	ND	5	
Methylene Chloride	11	5	
Chloroform	ND	5	
1,1-Dichloroethane	ND	5	
1,1,1-Trichloroethane	ND	5	
1,1,2-Trichloroethane	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Vinyl Chloride	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

VOLATILE SURROGATES

Surrogate	Percent Recovery	Control Limits	
		Water	Soil
Toluene - d8	101	86 - 115	81 - 117
Bromofluorobenzene	99	76 - 114	74 - 121
1,2-Dichloroethane d4	94	88 - 110	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

SEMIVOLATILE ORGANICS PER EPA METHOD 8270

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qc3
Units: ug/L
Date: May 24, 1993
Blank No: P4325

METHOD BLANK

Compound	Result	PQL	Flags
Naphthalene	ND	1.0	
Benzo(a)pyrene	ND	1.0	

PQL - Practical Quantitation Limit

ND - Not Detected

SEMIVOLATILE SURROGATES

Surrogate	Percent Recovery	Control Limits	
		Water	Soil
Nitrobenzene - d5	67	35 - 114	23 - 120
2-Fluorobiphenyl	77	43 - 116	30 - 115
p-Terphenyl-d14	110	33 - 141	18 - 137
Phenol-d6	38	10 - 94	24 - 113
2-Fluorophenol	51	21 - 100	25 - 121
2,4,6-TBP	75	10 - 123	19 - 122

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Anions by IC Per EPA Method 300.0

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qc4
Units: mg/L
Date: May 24, 1993

METHOD BLANK

Parameter	Result	Detection Limit
Fluoride	ND	0.2
Chloride	ND	1.0
Sulfate	ND	1.0

ND - Not Detected

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

General Chemistry

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qc5
Units: mg/L
Date: May 24, 1993

METHOD BLANK

Parameter	Result	Detection Limit
Total Phenols	ND	0.005
Nitrate Nitrogen	ND	0.05
Fluoride	ND	0.1

ND - Not Detected

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Total Dissolved Solids

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qc6
Matrix: Water
Units: mg/L
Date: May 24, 1993

METHOD BLANK

Parameter	Result
Total Dissolved Solids	< 2

DUPLICATE

Parameter	Sample (S)	Duplicate (D)	RPD
Total Dissolved Solids	77,000	78,000	1.3

RPD = Relative Percent Difference
$$= [(S - D) / ((S + D) / 2)] \times 100$$

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

EDB Per EPA Method 504

Client: Burlington Environmental, Seattle Facility
Lab No: 31903qc7
Units: ug/L
Date: May 24, 1993

METHOD BLANK

Parameter	Result
EDB	< 0.08

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

DATA QUALIFIER FLAGS

- ND: Indicates that the analyte was analyzed for but was not detected. The associated numerical value is the practical quantitation limit, corrected for sample dilution.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- C: The identification of this analyte was confirmed by GC/MS.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- A: This TIC is a suspected aldol-condensation product.
- M: Quantitation Limits are elevated due to matrix interferences.
- S: The calibration quality control criteria for this compound were not met. The reported concentration should be considered an estimated quantity.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside QC limits. Sample was re-analyzed with similar results. Sample matrix is nonhomogeneous.
- X4a: RPD for duplicates outside QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: RPD value for MS/MSD outside QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside QC limits due to matrix composition.
- X10: Surrogate recovery outside QC limits due to high contaminant levels.



BURLINGTON ENVIRONMENTAL

2203 Airport Way South, Suite 400
Seattle, WA 98134

206-223-0500 • FAX: 223-7791

Chain of Custody/ Laboratory Analysis Request

DATE 5/7/93 PAGE 1 OF 1

PROJECT <u>CEPNG</u>					ANALYSIS REQUESTED										OTHER (Specify)		NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?			
CLIENT INFO CONTACT <u>Kathy Krups / Jennifer Boulton</u>																					
CHEMPRO DIVISION/GENERATOR NAME																					
TELEPHONE # <u>223 7797 / 654 6620</u>																					
SAMPLE RS NAME																					
PHONE #																					
SAMPLERS SIGNATURE																					
SAMPLE ID	DATE	TIME	LAB ID.	TYPE	BASE/NEU ACID ORGAN. GC/MS/625 E270	VOLATILE ORGANICS GC/MS/624 E240	PCB'S 608/8080	TPH (circle method) 418.1 or 8015	BETX (circle method) 8240 or 8020	F-LISTED SOLVENTS E240	TCLP F-LISTED SOLVENTS 1311/8240	TCLP METALS D004-11	METALS (TOTAL) As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn	TCLP ORGANICS (specify methods) • VOA's E240 • BNA's E270 • Pesticides 8080 • Herbicides 8150	DISCHARGE TESTING	<u>pH, TDS, F, Cl, SO₄</u>	<u>NO₃-N</u>	<u>Total Phosphates</u>	<u>EDB (504)</u>		
1. <u>593-0222</u>	<u>5/4/93</u>	<u>13:50</u>	<u>46779-1</u>	<u>WATER</u>	*	X										X	X	X	+		6
2. <u>593-0228</u>	<u>5/4/93</u>	<u>13:50</u>	<u>46779-7</u>	<u>WATER</u>	*	X										X	X	X	+		6
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					

Relinquished By <u>Kathy Krups</u> Signature <u>KATHY KRUPS</u> Printed Name <u>BEI LAB</u> Firm <u>5/7/93 1000</u> Date/Time	Relinquished By <u>[Signature]</u> Signature <u>JALINQUIST</u> Printed Name <u>SAS</u> Firm <u>5/7/93 1:50P</u> Date/Time	Relinquished By <u>[Signature]</u> Signature <u>[Signature]</u> Printed Name <u>[Signature]</u> Firm <u>5/7 1:50.</u> Date/Time	SPECIAL INSTRUCTIONS/COMMENTS: * <u>Naphthalene + Benzo(a)pyrene only</u> <u>(see attached list for detection limits required)</u> <u>Need Results on or before May 26</u> <u>NOTE: DETECTION LIMITS FOR ALL PARAMETERS REQUESTED ARE ON THE ATTACHED LIST. MOST ARE LOW LEVEL</u>
Received By <u>[Signature]</u> Signature <u>JALINQUIST</u> Printed Name <u>SAS</u> Firm <u>5/7/93 16:40A</u> Date/Time	Received By <u>[Signature]</u> Signature <u>D. NEWIEN</u> Printed Name <u>SAS</u> Firm <u>5/7 1:50.</u> Date/Time	Received By <u>[Signature]</u> Signature <u>[Signature]</u> Printed Name <u>[Signature]</u> Firm <u>[Signature]</u> Date/Time	

Sample Receipt Acknowledgment

Date 05/10/93

R
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DUBLINGTON ENVIRONMENTAL INC.
8105 HEPBURN WAY SOUTH
SUITE 100
SEATTLE WA 98134
KATHY KREPS

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S A M E

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Core Laboratories Job Number	Customer Project ID	Estimated Completion Date
933799	see Remarks	05/26/93
Sample #	Customer ID	Remarks
0001 0002	593-0222 593-0228	593-0222 593-0228

If you have any questions please call Core Laboratories, Casper, W (307) 235-5741

THIS IS NOT AN INVOICE

Order subject to our sales agreement, if any.
Otherwise subject to our current terms of sale as shown on reverse side.
Please contact laboratory immediately, if any discrepancies are observed.

White - Customer Blue - Lab File

JOB NUMBER: 930799 CUSTOMER: (BU0326) BURLINGTON ENVIRONMENTAL INC. CONTACT: KATHY KREPS PHONE: (206) 223-0500

SAMPLE NUMBER: 0001

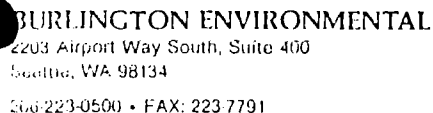
DATE RECEIVED: 05/10/93 TIME RECEIVED: 09:44 SAMPLE DATE: 05/04/93 SAMPLE TIME: 13:50 DUE DATE: 05/26/93
PROJECT ID: 593-0222 SAMPLE ID: 593-0222 REM: WATER
LAB NOTES: 21 IQT CUBES SHORT ID: 46779-1 BIN NUMBER: R01

CODE	TEST DESCRIPTION	TEST LIMITS	UNITS OF MEASURE	TEST METHOD	COMMENTS
R209	URANIUM NATURAL, TOTAL (UNAT)	0.001	mg/l	EPA 908.1	
R540	Radium 226, total		pCi/l	EPA 903.1	
R541	Radium 226, total, error, +/-		pCi/l		
R542	Radium 226, total, LLD		pCi/l		
R543	Radium 228, total		pCi/l	EPA 904.0	
R544	Radium 228, total, error, +/-		pCi/l		
R545	Radium 228, total, LLD		pCi/l		

SAMPLE NUMBER: 0002

DATE RECEIVED: 05/10/93 TIME RECEIVED: 09:44 SAMPLE DATE: 05/04/93 SAMPLE TIME: 13:50 DUE DATE: 05/26/93
PROJECT ID: 593-0228 SAMPLE ID: 593-0228 REM: WATER
LAB NOTES: 21 IQT CUBES SHORT ID: 46779-7 BIN NUMBER: R01

CODE	TEST DESCRIPTION	TEST LIMITS	UNITS OF MEASURE	TEST METHOD	COMMENTS
R209	URANIUM NATURAL, TOTAL (UNAT)	0.001	mg/l	EPA 908.1	
R540	Radium 226, total		pCi/l	EPA 903.1	
R541	Radium 226, total, error, +/-		pCi/l		
R542	Radium 226, total, LLD		pCi/l		
R543	Radium 228, total		pCi/l	EPA 904.0	
R544	Radium 228, total, error, +/-		pCi/l		
R545	Radium 228, total, LLD		pCi/l		



Chain of Custody/ Laboratory Analysis Request

DATE 5/7/93 PAGE 1 OF 1

PROJECT EPNG CLIENT INFO CONTACT Kathy Kreps CHILDPRO DIVISION GENERATOR NAME _____ TELEPHONE # 206-223-7797 SAMPLERS NAME _____ PHONE # _____ SAMPLERS SIGNATURE _____					ANALYSIS REQUESTED <table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td>BASE NEU ACID ORGANICS GC MS 625 8270</td> <td>VOLATILE ORGANICS GC MS 624 8240</td> <td>PCB's 608 6080</td> <td>TPH (circle method) 418 1 or 8015</td> <td>BTEX (circle method) 8240 or 8020</td> <td>FLUORIDED SOLVENTS 8240</td> <td>TCLP FLUORIDED SOLVENTS 1311 8240</td> <td>TCLP METALS D002-1</td> <td>METALS (TOTAL) As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn</td> <td>TCLP ORGANICS SPECIFIC METALS As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn</td> <td>DISCHARGE TESTING</td> <td>OTHER (Specify) Uranium</td> <td>Radium 226 + 228</td> </tr> </table>										BASE NEU ACID ORGANICS GC MS 625 8270	VOLATILE ORGANICS GC MS 624 8240	PCB's 608 6080	TPH (circle method) 418 1 or 8015	BTEX (circle method) 8240 or 8020	FLUORIDED SOLVENTS 8240	TCLP FLUORIDED SOLVENTS 1311 8240	TCLP METALS D002-1	METALS (TOTAL) As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn	TCLP ORGANICS SPECIFIC METALS As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn	DISCHARGE TESTING	OTHER (Specify) Uranium	Radium 226 + 228	NUMBER OF CONTAINERS <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>
BASE NEU ACID ORGANICS GC MS 625 8270	VOLATILE ORGANICS GC MS 624 8240	PCB's 608 6080	TPH (circle method) 418 1 or 8015	BTEX (circle method) 8240 or 8020	FLUORIDED SOLVENTS 8240	TCLP FLUORIDED SOLVENTS 1311 8240	TCLP METALS D002-1	METALS (TOTAL) As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn	TCLP ORGANICS SPECIFIC METALS As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn	DISCHARGE TESTING	OTHER (Specify) Uranium	Radium 226 + 228																
1	SAMPLE ID 593-0222	DATE 5/4/93	TIME 1350	LAB I.D. 46779-1	TYPE H₂O																							
2	593-0228	5/4/93	1350	46779-7	H₂O																							
3																												
4																												
5																												
6																												
7																												
8																												
Relinquished By Kathy Kreps Signature KATHY KREPS Printed Name BEI LAB Firm 5/7/93 1000 Date/Time						Relinquished By _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____						Relinquished By _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____						SPECIAL INSTRUCTIONS/COMMENTS: <div style="font-size: large; padding: 10px;"> Detection Limits must be at or below: 5.0 mg/L (Uranium) 30.0 pCi/L (Radium 226 + 228) Need Results on or before May 26 </div>										
Received By J. Osborn Signature J. Osborn Printed Name Core Labs Firm Date 5/10/93 9:49						Received By _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____						Received By _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____																



CORE LABORATORIES

CORE LABORATORIES ANALYTICAL REPORT

Job Number: 930799

Prepared For:


BURLINGTON ENVIRONMENTAL INC.

KATHY KREPS

2203 AIRPORT WAY SOUTH

SEATTLE, WA 98134

Date: 05/19/93


Signature

20 May 93
Date:

Name: Dr. John M. DeHart

Core Laboratories, Inc.
420 West First Street
Casper, WY 82601

Title: Laboratory Supervisor



JOB NUMBER: 930799

PAGE : 1

The analyses, opinions or interpretations contained in this report are based upon observations and material supplied by the client for whose exclusive and confidential use this report has been made. The interpretations or opinions expressed herein represent the best judgment of Core Laboratories. Core Laboratories, however, assumes no responsibility and makes no warranty or representations, express or implied, as to the productivity, proper operation, or performance of any of its gas chromatographs, or any other material, property, method or service in connection with which such report is used or relied upon for any reason whatsoever. This report shall not be reproduced except in its entirety without the written consent of Core Laboratories.



CORE LABORATORIES

LABORATORY TESTS RESULTS 05/19/93

JOB NUMBER: 930799	CUSTOMER: BURLINGTON ENVIRONMENTAL INC.	ATTN: KATHY KREPS
SAMPLE NUMBER: 1	DATE RECEIVED: 05/10/93	TIME RECEIVED: 09:44
SAMPLE DATE: 05/04/93	SAMPLE TIME: 13:50	
PROJECT: 593-0222	SAMPLE: 593-0222	REM: WATER

SAMPLE NUMBER: 2	DATE RECEIVED: 05/10/93	TIME RECEIVED: 09:44
SAMPLE DATE: 05/04/93	SAMPLE TIME: 13:50	
PROJECT: 593-0228	SAMPLE: 593-0228	REM: WATER

TEST DESCRIPTION	SAMPLE 1	SAMPLE 2					UNITS OF MEASURE
URANIUM NATURAL, TOTAL (UNAT)	0.003	0.001					mg/l
Radium 226, total	0.3	0.4					pCi/l
Radium 226, total, error, +/-	0.7	0.7					pCi/l
Radium 226, total, LLD	1.1	1.1					pCi/l
Radium 228, total	4.9	4.7					pCi/l
Radium 228, total, error, +/-	2.3	2.3					pCi/l
Radium 228, total, LLD	3.3	3.3					pCi/l

420 West First Street
Casper, WY 82601
(307) 235-5741



CORE LABORATORIES

QUALITY ASSURANCE REPORT 05/19/93

JOB NUMBER: 930799 CUSTOMER: BURLINGTON ENVIRONMENTAL INC. ATTN: KATHY KREPS

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or (A-B)	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: URANIUM NATURAL, TOTAL (UMAT)				DATE/TIME ANALYZED: 05/11/93 13:47				QC BATCH NUMBER: 133793		
REPORTING LIMIT/DF: 0.001 UNITS: mg/l				METHOD REFERENCE :EPA 908.1				TECHNICIAN: RS		
BLANK	MB	MB1UN0511	<0.001							
STANDARD	LCS	LC1UN0511	0.920			0.848	108			
SPIKE	MS	930439-76	0.103					0.0	0.085	121
DUPLICATE	MD	930439-65	<0.001	<0.001	NC					
PARAMETER: Radium 228, total				DATE/TIME ANALYZED: 05/17/93 09:15				QC BATCH NUMBER: 133968		
REPORTING LIMIT/DF: UNITS: pCi/l				METHOD REFERENCE :EPA 904.0				TECHNICIAN: DW		
BLANK	MB	MB3R80513	ND							
STANDARD	LCS	LC1R80513	18.0			17.0	106			
SPIKE	MS	930778-1	30.4					8.8	21.3	101
DUPLICATE	MD	930799-2	4.7	4.1	14					
PARAMETER: Radium 226, total				DATE/TIME ANALYZED: 05/18/93 08:43				QC BATCH NUMBER: 133979		
REPORTING LIMIT/DF: UNITS: pCi/l				METHOD REFERENCE :EPA 903.1				TECHNICIAN: NRF		
BLANK	MB	MB4R60513	ND							
STANDARD	LCS	LC2R60513	15.1			15.0	101			
SPIKE	MS	930809-1	30.7					4.0	37.5	71
DUPLICATE	MD	930799-2	0.4	0.5	22					

420 West First Street
Casper, WY 82601
(307) 235-5741



Western Atlas
International
A Union Dresser Company

CORE LABORATORIES

QUALITY ASSURANCE FOOTER 05/19/93

NC = Not Calculable due to values lower than the detection limit
ND = Not detected at level in limits column

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
 - (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, November 1986
 - (3) Standards Methods for the Examination of Water and Wastewater, 16th, 1985
 - (4) EPA/600/4-80-032, Prescribed Procedures for Measurement of Radioactivity in Drinking Water, August 1980
 - (5) Federal Register, Friday, October 26, 1984 (40 CFR Part 136)
 - (6) EPA 600/8-78-017, Microbiological Methods for Monitoring the Environment, December 1978
- NOTE - Data reported in QA report may differ from values on data page due to dilution of sample into analytical ranges.
NOTE - The "TIME ANALYZED" as indicated in the QA Report may not reflect the actual time of analysis.
The "DATE ANALYZED" is the actual date of analysis.

420 West First Street
Casper, WY 82601
(307) 235-5741



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

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

February 24, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. P-288-259-033

Mr. Donald R. Payne
El Paso Natural Gas Company
P.O. Box 1492
El Paso, Texas 79978

**RE: Discharge Plan GW-147 Renewal
Deming Compressor Station
Luna County, New Mexico**

Dear Mr. Payne:

On August 19, 1993, the groundwater discharge plan, GW-147, for the El Paso Natural Gas Company (EPNG) Deming Compressor Station located in the SE/4 SE/4 of Section 32, Township 23 South, Range 11 West, NMPM, Luna County, New Mexico, was approved by the Director of the New Mexico Oil Conservation Division (OCD). This discharge plan was required and submitted pursuant to Water Quality Control Commission (WQCC) regulation 3106 and was approved pursuant to section 3109 for a period of five years. The approval will expire on August 19, 1998.

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

The discharge plan renewal application for the Deming Compressor Station is subject to the WQCC Regulation 3114. Every billable facility submitting a discharge plan renewal will be assessed a fee equal to the filing fee of \$50 plus a flat fee of \$690 for compressor stations. The \$50 filing fee is to be submitted with the discharge plan renewal application and is nonrefundable. The flat fee for an approved discharge plan renewal may be paid in a single

Mr. Donald R. Payne
February 24, 1998
Page 2

payment due at the time of approval, or in equal annual installments over the duration of the discharge plan with the first payment due the at the time of approval.

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

Please submit the original and one copy to the OCD Santa Fe Office and one copy to the OCD Artesia District Office. **Note that the completed and signed application form must be submitted with the discharge plan renewal request.** Copies of the WQCC regulations and discharge plan application form and guidelines have been provided in the past. If EPNG requires additional copies of these items notify the OCD at (505) 827-7152. A complete copy of the regulations is also available on the OCD's website at www.emnrd.state.nm.us/ocd/.

If EPNG no longer have any actual or potential discharges and a discharge plan is not needed, please notify this office. If EPNG has any questions, please do not hesitate to contact Mark Ashley at (505) 827-7155.

Sincerely,



Roger C. Anderson
Environmental Bureau Chief

RCA/mwa

xc: OCD Artesia Office

P 288 259 033

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

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

PS Form 3800, April 1995

SAMPLE KEY

SAMPLE NUMBER: S96-0231 LOCATION: DEMING STATION
MATRIX: WATER
SAMPLE DESCRIPTION: LEAK DETECTION WELL
S D CONTINUED: COOLING TOWER BLOWDOWN POND
S D CONTINUED:
SAMPLE TIME: 15:00 SAMPLE DATE: 04/19/96

SAMPLE KEY

SAMPLE NUMBER: S96-0232 LOCATION: DEMING STATION
MATRIX: WATER
SAMPLE DESCRIPTION: LEAK DETECTION WELL
S D CONTINUED: COOLING TOWER BLOWDOWN POND
S D CONTINUED: DUPLICATE
SAMPLE TIME: 15:00 SAMPLE DATE: 04/19/96

Zenon
Environmental
Laboratories

5555 North Service Road Tel 905 332 8788
Burlington Ontario Fax 905 332 9169
Canada L7L 5H7



Certificate of Analysis

CLIENT INFORMATION

Attention: Darrell Campbell
Client Name: El Paso Natural Gas Company
Project:
Project Desc:

Address: 8645 Railroad Drive
El Paso, TX
79904

Fax Number: 915-759-2335

Phone Number: 915-759-2228

LABORATORY INFORMATION

Contact: M. Johnson, B.A., B.Sc.
Project: AN960104
Date Received: 96/04/20
Date Reported: 96/04/29

Submission No.: 6D0480
Sample No.: 011784-011787

Regional

Laboratories:

British Columbia

Ontario

Quebec

NOTES:

'.' = not analysed 'C' = less than Method Detection Limit (MDL) 'NA' = no data available

LOQ can be determined for all analytes by multiplying the appropriate MDL X 3.33

Solids data is based on dry weight except for biota analyses.

Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)

Methods used by Zenon are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Seventeenth Edition. Other methods are based on the principles of MISA or EPA methodologies.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at Zenon for a period of three weeks from receipt of data or as per contract.

COMMENTS:

Certified by:

4/29/96

Zenon Environmental Laboratories - Certificate of Analysis

Page 1 of 1

Component	Client ID:		Method		Trip	
	Zenon ID:		Blank		Blank	
	Date Sampled:		011784 96		011786 96	
	MDL		Units		011787 96	
Vinyl Chloride	1.0	ug/L	<	<	<	<
Chloroethane	1.0	"	<	<	<	<
1,1-Dichloroethene	0.6	"	<	23	22	<
trans-1,2-Dichloroethene	0.5	"	<	<	<	<
1,1-Dichloroethane	0.6	"	<	23	22	<
cis-1,2-Dichloroethene	0.8	"	<	<	<	<
1,2-Dichloroethane	0.3	"	<	<	<	<
Benzene	0.5	"	<	<	<	<
Trichloroethane	0.4	"	<	28	26	<
Toluene	1.2	"	<	<	<	<
Tetrachloroethene	0.7	"	<	<	<	<
Ethylbenzene	0.5	"	<	<	<	<
m&p-Xylene	0.8	"	<	<	<	<
o-Xylene	0.5	"	<	<	<	<
Surrogate Recoveries		%				
d4-1,2-Dichloroethane			97	96	95	96
d8-Toluene			96	99	100	97
Bromofluorobenzene			87	88	91	86

Client:El Paso Natural Gas Company Project:

STATE OF
NEW MEXICO

OR
CONSERVATION
DIVISION



MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone

☐ Personal

Time

10:15 AM

Date

3-14-86

Originating Party

MARK ASHLEY

Other Parties

MARTIN FONG

Place

DEMING CS

Discussion

MARTIN SENT SAMPLE RESULTS FROM THE FLUID IN THE
LEAK DETECTION SYSTEM. THERE ARE TRACE ELEMENTS
OF HYDROCARBONS PRESENT, INCLUDING 1,1,1 TRICHLOR.

Conclusions or Agreements

MARTIN WILL SUBMIT A LETTER EXPLAINING
THEIR PRESENTS IN THE WATER, & IS CONSIDERING
RESAMPLING.

Signature

Signed

Mark Ashley



NEW MEXICO OIL CONSERVATION DIVISION
RECEIVED

1995 MAR 8 52 P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-541-2600

March 4, 1996

Mr. Mark Ashley
New Mexico Oil Conservation Division
P. O. Box 6429
Santa Fe, New Mexico 87505-6429

Re: El Paso Natural Gas Company's Deming Compressor Station; Discharge Plan GW-147.

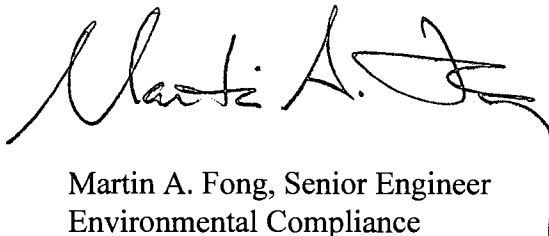
Dear Mr. Ashley:

The New Mexico Oil Conservation Division (OCD) conducted an on-site inspection of El Paso Natural Gas Company's (EPNG) Deming Compressor Station on December 1, 1995 for the purpose of assessing compliance with the facility's Discharge Plan (GW-147).

During the inspection, it was noted that fluid was present in the leak detection monitor well for the lined surface impoundment used for evaporation of industrial wastewater generated by the facility. Attached please find the analytical results of the sample secured from the leak detection system in response to your audit recommendation.

If you should have any questions regarding EPNG's submittal, please feel free to contact me at 915/541-3057.

Sincerely,



Martin A. Fong, Senior Engineer
Environmental Compliance

Attachment

SAMPLE KEY

SAMPLE NUMBER: S96-0025 LOCATION: DEMING STATION
MATRIX: WATER
SAMPLE DESCRIPTION: LEAK DETECTION WELL
S D CONTINUED: COOLING TOWER BLOWDOWN POND
S D CONTINUED:
SAMPLE TIME: 11:45 SAMPLE DATE: 01/16/96

Monday, 05 Feb 96
El Paso Natural Gas

Job Number:	P.E. Lab Sample Number(s):	Client Sample Number(s):
6376	96A852 96A863	S96-0025 TRIP BLANK

Dear Darrel Campbell

We received 2 samples on 17 Jan 96.

The following analyses were performed:

Total Metals: 3010, 3020, 3050, 6010

pH (D002): 9041, 9045

Total Dissolved Solids: 2540C

Volatile Organic Compounds (VOC): 8260

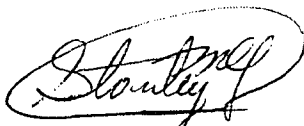
PAH: 8100

Cations, Anions

Samples were prepared and analyzed according to methods specified on the chain(s) of custody or in the work plan -- and within required holding times -- unless otherwise noted.

Thank you for the opportunity to be of service.

Sincerely,



Stanley Melo
Project Manager/Chemist

PHILIP ENVIRONMENTAL INC.
CORPORATE LABORATORY
ANALYTICAL REPORT

Client:

El Paso Natural Gas Co.
Transmission Operations Lab
8645 Railroad Drive
El Paso, TX
79904

Date Received: 1/17/96
Date Sampled: 1/16/96
Date Reported: 2/ 5/96

Laboratory No.: 96-A852
Sample ID.: S96-0025

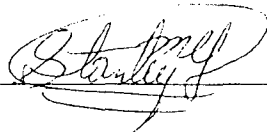
Job Number: 6376

Analyte	Results	Units	Method	Analyst	Date
GENERAL CHEMISTRY					
pH	7.4	pH	150.1	BLW	1/17/96
Total Dissolved Solids	1200	mg/L	2540 C	ECK	1/30/96
Chloride	64.	mg/L	4110	EML	1/24/96
Fluoride (1.6)	2.3✓	mg/L	4110	EML	1/24/96
Nitrate	< 2.0	mg/L	4110	EML	1/24/96
Sulfate	380	mg/L	4110	EML	1/24/96
TOTAL METALS					
Arsenic	< 0.10	mg/L	6010/200.7	EML	1/25/96
Barium	< 0.20	mg/L	6010/200.7	EML	1/25/96
Boron	0.20	mg/L	6010/200.7	EML	1/30/96
Cadmium	< 0.005	mg/L	6010/200.7	EML	1/25/96
Calcium	110	mg/L	6010/200.7	EML	1/25/96
Chromium	< 0.010	mg/L	6010/200.7	EML	1/25/96
Copper	< 0.025	mg/L	6010/200.7	EML	1/25/96
Iron	< 0.10	mg/L	6010/200.7	EML	1/25/96
Lead	< 0.10	mg/L	6010/200.7	EML	1/25/96
Magnesium	19.	mg/L	6010/200.7	EML	1/25/96
Manganese	0.031	mg/L	6010/200.7	EML	1/25/96
Mercury	< 0.0008	mg/L	7470/3112	ECK	1/25/96
Potassium	7.0	mg/L	6010/200.7	EML	1/25/96
Selenium	< 0.30	mg/L	6010/200.7	EML	1/25/96
Silver	< 0.010	mg/L	6010/200.7	EML	1/25/96
Sodium	140	mg/L	6010/200.7	EML	1/25/96
Zinc	0.37	mg/L	6010/200.7	EML	1/25/96
Volatile Organics	See Attached Report.			CRB	1/18/96

NOTES:

PAH (8100)

Reviewed By :



2/ 5/96

BURLINGTON ENVIRONMENTAL INC. -CORPORATE LABORATORY

EPA Method 624/8260

SAMPLE: S96-0025
GCMS FILE: 011814.D
LAB ID: 96a852
DIL. FAC: 1
ml SAMP: 5 ML

ANALYZED: 01/18/96
RECEIVED: 01/16/96
ANALYST: CRB

SURR. REC%
SS1 = 103
SS2 = 100
SS3 = 102

CAS NO.	COMPOUND	DETECTION LIMIT PPB	SAMPLE UG/L PPB (FLAGS)
75-71-8	Dichlorodifluoromethane	1	ND
74-87-3	Chloromethane	1	ND
75-01-4	Vinyl chloride	1	ND
74-83-9	Bromomethane	1	ND
75-00-3	Chloroethane	1	ND
75-69-4	Trichlorofluoromethane	1	ND
306-83-2	1,1-Dichloro-1,2,2-Trifluoroethane	5	ND
75-35-4	1,1-Dichloroethene	1	013
76-13-1	1,1,2-Trichlorotrifluoroethane	5	ND
67-64-1	Acetone	5	ND
75-15-0	Carbon Disulfide	1	ND
107-83-5	2-Methylpentane	5	ND
75-09-2	Methylene Chloride	5	ND
96-14-0	3-Methylpentane	5	ND
107-13-1	Acrylonitrile	5	ND
156-60-5	trans-1,2-Dichloroethene	1	ND
75-34-3	1,1-Dichloroethane	1	35✓
108-05-4	Vinyl Acetate	1	ND
96-37-7	Methylcyclopentane	1	ND
107-02-8	Acrolin	20	ND
594-20-7	2,2-Dichloropropane	1	ND
156-59-2	cis-1,2-Dichloroethene	1	ND
78-93-3	2-Butanone (MEK)	5	ND
74-97-5	Bromochloromethane	1	ND
67-66-3	Chloroform	1	2
71-55-6	1,1,1-Trichloroethane	1	26
563-58-6	1,1-Dichloropropene	1	ND
56-23-5	Carbon Tetrachloride	1	ND
107-06-2	1,2-Dichloroethane	1	ND
71-43-2	Benzene	1	ND
79-01-6	Trichloroethene	2	33
78-87-5	1,2-Dichloropropane	1	ND
74-95-3	Dibromomethane	1	ND
75-27-4	Bromodichloromethane	1	ND
110-75-8	2-Chlorethyl vinyl ether	1	ND
10061-01-5	cis-1,3-Dichloropropene	1	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	5	ND
108-88-3	Toluene	2	ND
96-18-4	1,2,3-Trichloropropane	1	ND
10061-02-6	Trans-1,3-Dichloropropene	1	ND
79-00-5	1,1,2-Trichloroethane	1	ND
142-28-9	1,3-Dichloropropane	1	ND
127-18-4	Tetrachloroethene	1	ND

BURLINGTON ENVIRONMENTAL INC. -CORPORATE LABORATORY

EPA Method 624/8260

SAMPLE:	S96-0025	ANALYZED:	01/18/96
GCMS FILE:	011814.D	RECEIVED:	01/16/96
LAB ID:	96a852	ANALYST:	CRB
DIL. FAC:	1		
ml SAMP:	5 ML		

CAS NO.	COMPOUND	DETECTION LIMIT PPB	SAMPLE UG/L PPB	(FLAGS)
=====	=====	=====	=====	=====
591-78-6	2-Hexanone	5	ND	
106-93-4	1,2-Dibromoethane	1	ND	
124-48-1	Dibromochloromethane	1	ND	
630-20-6	1,1,1,2-Tetrachloroethane	3	ND	
108-90-7	Chlorobenzene	1	ND	
100-41-4	Ethylbenzene	1	ND	
108-38-3	m-Xylene	1	ND	
106-42-3	p-Xylene	1	ND	
95-47-6	o-Xylene	1	ND	
100-42-5	Styrene	1	ND	
75-25-2	Bromoform	1	ND	
98-32-8	Isopropylbenzene	1	ND	
79-34-5	1,1,2,2-Tetrachloroethane	3	ND	
108-86-1	Bromobenzene	1	ND	
103-65-1	n-propylbenzene	1	ND	
108-67-8	1,3,5-Trimethylbenzene	1	ND	
95-49-8	2-Chlorotoluene	1	ND	
106-43-4	4-Chlorotoluene	1	ND	
98-06-6	tert-Butylbenzene	1	ND	
95-63-6	1,2,4-Trimethylbenzene	1	ND	
135-98-8	sec-Butylbenzene	1	ND	
541-73-1	1,3-Dichlorobenzene	1	ND	
106-46-7	1,4-Dichlorobenzene	1	ND	
104-51-8	n-Butylbenzene	1	ND	
99-87-6	p-Isopropyltoluene	1	ND	
95-50-1	1,2-Dichlorobenzene	1	ND	
96-12-8	1,2-Dibromo-3-chloropropane	5	ND	
120-82-1	1,2,4-Trichlorobenzene	1	ND	
87-68-3	Hexachlorobutadiene	1	ND	
91-20-3	Naphthalene	5	ND	
87-61-6	1,2,3-Trichlorobenzene	1	ND	

NOTE: ALL HITS CONFIRMED BY DUPLICATE RUNS AT DIFFERENT DILUTION LEVELS.

ND = NOT DETECTED AT DETECTION LIMIT; B = IN BLANK; J = DETECTED BELOW DL.

E = THE CONCENTRATION OF THIS ANALYTE EXCEEDED THE INSTRUMENT CALIBRATION RANGE.

BURLINGTON ENVIRONMENTAL INC. -CORPORATE LABORATORY

EPA Method 624/8260

SAMPLE: Trip Blank
 GCMS FILE: 011815.D
 LAB ID: 96a863
 DIL. FAC: 1
 ml SAMP: 5 ML

ANALYZED: 01/18/96
 RECEIVED: 01/16/96
 ANALYST: CRB

SURR. REC%
 SS1 = 104
 SS2 = 97
 SS3 = 102

CAS NO.	COMPOUND	DETECTION LIMIT PPB	SAMPLE UG/L PPB (FLAGS)
75-71-8	Dichlorodifluoromethane	1	ND
74-87-3	Chloromethane	1	ND
75-01-4	Vinyl chloride	1	ND
74-83-9	Bromomethane	1	ND
75-00-3	Chloroethane	1	ND
75-69-4	Trichlorofluoromethane	1	ND
306-83-2	1,1-Dichloro-1,2,2-Trifluoroethane	5	ND
75-35-4	1,1-Dichloroethene	1	ND
76-13-1	1,1,2-Trichlorotrifluoroethane	5	ND
67-64-1	Acetone	5	ND
75-15-0	Carbon Disulfide	1	ND
107-83-5	2-Methylpentane	5	ND
75-09-2	Methylene Chloride	5	ND
96-14-0	3-Methylpentane	5	ND
107-13-1	Acrylonitrile	5	ND
156-60-5	trans-1,2-Dichloroethene	1	ND
75-34-3	1,1-Dichloroethane	1	ND
108-05-4	Vinyl Acetate	1	ND
96-37-7	Methylcyclopentane	1	ND
107-02-8	Acrolin	20	ND
594-20-7	2,2-Dichloropropane	1	ND
156-59-2	cis-1,2-Dichloroethene	1	ND
78-93-3	2-Butanone (MEK)	5	ND
74-97-5	Bromochloromethane	1	ND
67-66-3	Chloroform	1	ND
71-55-6	1,1,1-Trichloroethane	1	ND
563-58-6	1,1-Dichloropropene	1	ND
56-23-5	Carbon Tetrachloride	1	ND
107-06-2	1,2-Dichloroethane	1	ND
71-43-2	Benzene	1	ND
79-01-6	Trichloroethene	2	ND
78-87-5	1,2-Dichloropropane	1	ND
74-95-3	Dibromomethane	1	ND
75-27-4	Bromodichloromethane	1	ND
110-75-8	2-Chlorethyl vinyl ether	1	ND
10061-01-5	cis-1,3-Dichloropropene	1	ND
108-10-1	4-Methyl-2-Pentanone (MIBK)	5	ND
108-88-3	Toluene	2	ND
96-18-4	1,2,3-Trichloropropane	1	ND
10061-02-6	Trans-1,3-Dichloropropene	1	ND
79-00-5	1,1,2-Trichloroethane	1	ND
142-28-9	1,3-Dichloropropane	1	ND
127-18-4	Tetrachloroethene	1	ND

BURLINGTON ENVIRONMENTAL INC. -CORPORATE LABORATORY

EPA Method 624/8260

SAMPLE: Trip Blank ANALYZED: 01/18/96
 GCMS FILE: 011815.D RECEIVED: 01/16/96
 LAB ID: 96a863 ANALYST: CRB
 DIL. FAC: 1
 ml SAMP: 5 ML

CAS NO.	COMPOUND	DETECTION LIMIT PPB	SAMPLE UG/L PPB	(FLAGS)
591-78-6	2-Hexanone	5	ND	
106-93-4	1,2-Dibromoethane	1	ND	
124-48-1	Dibromochloromethane	1	ND	
630-20-6	1,1,1,2-Tetrachloroethane	3	ND	
108-90-7	Chlorobenzene	1	ND	
100-41-4	Ethylbenzene	1	ND	
108-38-3	m-Xylene	1	ND	
106-42-3	p-Xylene	1	ND	
95-47-6	o-Xylene	1	ND	
100-42-5	Styrene	1	ND	
75-25-2	Bromoform	1	ND	
98-32-8	Isopropylbenzene	1	ND	
79-34-5	1,1,2,2-Tetrachloroethane	3	ND	
108-86-1	Bromobenzene	1	ND	
103-65-1	n-propylbenzene	1	ND	
108-67-8	1,3,5-Trimethylbenzene	1	ND	
95-49-8	2-Chlorotoluene	1	ND	
106-43-4	4-Chlorotoluene	1	ND	
98-06-6	tert-Butylbenzene	1	ND	
95-63-6	1,2,4-Trimethylbenzene	1	ND	
135-98-8	sec-Butylbenzene	1	ND	
541-73-1	1,3-Dichlorobenzene	1	ND	
106-46-7	1,4-Dichlorobenzene	1	ND	
104-51-8	n-Butylbenzene	1	ND	
99-87-6	p-Isopropyltoluene	1	ND	
95-50-1	1,2-Dichlorobenzene	1	ND	
96-12-8	1,2-Dibromo-3-chloropropane	5	ND	
120-82-1	1,2,4-Trichlorobenzene	1	ND	
87-68-3	Hexachlorobutadiene	1	ND	
91-20-3	Naphthalene	5	ND	
87-61-6	1,2,3-Trichlorobenzene	1	ND	

ND = NOT DETECTED AT DETECTION LIMIT; B = IN BLANK; J = DETECTED BELOW DL.

E = THE CONCENTRATION OF THIS ANALYTE EXCEEDED THE INSTRUMENT CALIBRATION RANGE.

Date of Analysis: 1/22/96
Samples Submitted: 1/17/96
File ID: 01-048
Analysis: T & P Alkalinity

Client: Philip Environmental
Project: EPNG
Project #:
Matrix: Water

Lab ID	Client ID	Sample Volume	Initial pH	Initial Buret (ml)	Buret @ pH 8.1	Final	Vol. P	Vol. T	HCO ₃	CO ₃ -2	OH
						Buret @ pH 4.5					
01-048-1	S96-0025/ 96A852	50	7.5	13.6	13.6	23.9	0	10.3	251	0	0

Quality Assurance

01-048-1 Duplicate	50	7.5	23.9	23.9	34.1	0	10.2	249	0	0
--------------------	----	-----	------	------	------	---	------	-----	---	---



Date of Analysis: 1/22/96
Samples Submitted: 1/17/96
File ID: 01-048
Analysis: Hardness
Units: mg/L (ppm)

Client: Philip Environmental
Project: EPNG
Project #:
Matrix: Water

Lab ID	Client ID	Result
01-048-1	S96-0025 (96A852)	392

ppm - parts per million



Date of Analysis: 1/26/96
Samples Submitted: 1/17/96
File ID: 01-048
Analysis: Silica
Units: mg/L (ppm)

Client: Philip Environmental
Project: EPNG
Project #:
Matrix: Water

Lab ID	Client ID	Result
01-048-1	S96-0025/96A852	54.19
<u>Quality Assurance</u>		
01-048-1 Duplicate		57.02

ppm - parts per million



Date of Analysis: 1/23/96
Samples Submitted: 1/17/96
File ID: 01-048
Analysis: Bromide
Units: mg/L (ppm)

Client: Philip Environmental
Project: EPNG
Project #:
Matrix: Water

Lab ID	Client ID	Dil. Fac	Result
01-048-I	S96-0025/96A852	1	0.21

Quality Assurance

01-048-I Duplicate	1	0.26
Method Blank	1	<0.1

ppm - parts per million



Date of Analysis: 1/22/96
Samples Submitted: 1/17/96
File ID: 01-048
Analysis: Specific Conductance
Units: umhos/cm

Client: Philip Environmental
Project: EPNG
Project #:
Matrix: Water

Lab ID	Client ID	Result
01-048-1	S96-0025/96A852	1,505



Sample #: **Method Blank**

Method:	EPA 8270	AALI#:	1/22/96-MB	
Analyst:	T. Meadows	Data File:	C:\HPCHEM\1\DATA\960123\	1601016.D
Matrix:	Blank	Instrument:	GCMS2	
Sample (g or ml):	250	Extraction:	01/22/96	
Extract (final ml):	1.0	Analysis:	01/24/96	

Surrogates	Recovery	Limits
2-Fluorobiphenyl	74%	30 - 115
Terphenyl-d14	86%	18 - 137

Target Analytes	CAS #	Concentration (ppm)
Naphthalene	91-20-3	0.02 U
2-Methylnaphthalene	91-57-6	0.02 U
Acenaphthylene	208-96-8	0.02 U
Acenaphthene	83-32-9	0.02 U
Fluorene	86-73-7	0.02 U
Phenanthrene	85-01-8	0.02 U
Anthracene	120-12-7	0.02 U
Fluoranthene	206-44-0	0.02 U
Pyrene	129-00-0	0.02 U
Benzo[a]anthracene	56-55-3	0.02 U
Chrysene	218-01-9	0.02 U
Benzo[b]fluoranthene	205-99-2	0.02 U
Benzo[j]fluoranthene		0.02 U
Benzo[k]fluoranthene	207-08-9	0.02 U
Benzo[a]pyrene	50-32-8	0.02 U
Dibenzo[a,e]pyrene	192-65-4	0.02 U
Dibenzo[a,h]pyrene	189-64-0	0.02 U
Dibenzo[a,i]pyrene	189-55-9	0.02 U
Indeno[1,2,3-cd]pyrene	193-39-5	0.02 U
Dibenz[a,h]anthracene	53-70-3	0.02 U
Benzo[g,h,i]perylene	191-24-2	0.02 U
Dibenzo[a,h]acridine	53-70-3	0.02 U
Dibenzo[a,j]acridine	224-42-0	0.02 U
7H-Dibenzo[c,g]carbazole	194-59-2	0.02 U
3-Methylcholanthrene	56-49-5	0.02 U

U = Analyzed for but not detected at the indicated level
B = Found in the Method Blank at a comparable level
Q = Quality control limits exceeded
J = Detected at a level below normal reporting limits.



Sample #: S96-0025/96A852

Method:	EPA 8270	AAI#:	01-048-1	
Analyst:	T. Meadows	Data File:	C:\HPCHEM\1\DATA\960123\	1701017.D
Matrix:	Water	Instrument:	GCMS2	
Sample (g or ml):	250	Extraction:	01/22/96	
Extract (final ml):	1.0	Analysis:	01/24/96	

Surrogates	Recovery	Limits
2-Fluorobiphenyl	32%	30 - 115
Terphenyl-d14	60%	18 - 137

Target Analytes	CAS #	Concentration (ppm)
Naphthalene	91-20-3	0.02 U
2-Methylnaphthalene	91-57-6	0.02 U
Acenaphthylene	208-96-8	0.02 U
Acenaphthene	83-32-9	0.02 U
Fluorene	86-73-7	0.02 U
Phenanthrene	85-01-8	0.02 U
Anthracene	120-12-7	0.02 U
Fluoranthene	206-44-0	0.02 U
Pyrene	129-00-0	0.02 U
Benzo[a]anthracene	56-55-3	0.02 U
Chrysene	218-01-9	0.02 U
Benzo[b]fluoranthene	205-99-2	0.02 U
Benzo[j]fluoranthene		0.02 U
Benzo[k]fluoranthene	207-08-9	0.02 U
Benzo[a]pyrene	50-32-8	0.02 U
Dibenzo[a,e]pyrene	192-65-4	0.02 U
Dibenzo[a,h]pyrene	189-64-0	0.02 U
Dibenzo[a,i]pyrene	189-55-9	0.02 U
Indeno[1,2,3-cd]pyrene	193-39-5	0.02 U
Dibenz[a,h]anthracene	53-70-3	0.02 U
Benzo[g,h,i]perylene	191-24-2	0.02 U
Dibenzo[a,h]acridine	53-70-3	0.02 U
Dibenzo[a,j]acridine	224-42-0	0.02 U
7H-Dibenzo[c,g]carbazole	194-59-2	0.02 U
3-Methylcholanthrene	56-49-5	0.02 U

U = Analyzed for but not detected at the indicated level
B = Found in the Method Blank at a comparable level
Q = Quality control limits exceeded
J = Detected at a level below normal reporting limits.

AMERICAN ANALYTICAL LABORATORIES, INC.

(206) 762-7599 / FAX (206) 762-7665 / 8220 7th Avenue South / Seattle, WA 98108





CHAIN OF CUSTODY RECORD

Page 1 of 1[illegible]

ANIONS & CATIONS

- pH
- P Alkalinity
- T Alkalinity
- Chloride
- Sulfate
- T Hardness
- Calcium
- Magnesium
- Sodium
- Silica
- Fluoride
- Potassium
- Bromide
- Nitrate
- Total Dissolved Solids
- Specific Conductance
- Iron
- Manganese
- Copper
- Zinc
- Boron

Chain of Custody/ Laboratory Analysis Request

DATE 1/17/96 PAGE 1 OF 1

PROJECT <u>EING</u> # _____ CLIENT INFO. CONTACT _____ GENERATOR NAME <u>Philip Lab</u> TELEPHONE # _____ SAMPLERS NAME _____ PHONE # _____ SAMPLERS SIGNATURE _____					ANALYSIS REQUESTED <table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width:10%;">BASE/NEU/ACID ORGAN. GC/MS/625/8270</td> <td style="width:10%;">VOLATILE ORGANICS GC/MS/624/8240</td> <td style="width:10%;">PCB's 608/8080</td> <td style="width:10%;">TPH (circle method) 418.1 or 8015</td> <td style="width:10%;">BETX (circle method) 8240 or 8020</td> <td style="width:10%;">F-LISTED SOLVENTS 8240</td> <td style="width:10%;">TCLP F-LISTED SOLVENTS 1311/8240</td> <td style="width:10%;">TCLP METALS D004-11</td> <td style="width:10%;">METALS (TOTAL) As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn</td> <td style="width:10%;">TCLP ORGANICS (specify methods) • VOA's 8240 • BNA's 8270 • Pesticides 8080 • Herbicides 8150</td> <td style="width:10%;">DISCHARGE TESTING</td> <td style="width:10%;">OTHER (Specify) <u>74 P ALKALINITY</u></td> </tr> </table>										BASE/NEU/ACID ORGAN. GC/MS/625/8270	VOLATILE ORGANICS GC/MS/624/8240	PCB's 608/8080	TPH (circle method) 418.1 or 8015	BETX (circle method) 8240 or 8020	F-LISTED SOLVENTS 8240	TCLP F-LISTED SOLVENTS 1311/8240	TCLP METALS D004-11	METALS (TOTAL) As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn	TCLP ORGANICS (specify methods) • VOA's 8240 • BNA's 8270 • Pesticides 8080 • Herbicides 8150	DISCHARGE TESTING	OTHER (Specify) <u>74 P ALKALINITY</u>	NUMBER OF CONTAINERS RECEIVED IN GOOD CONDITION?
BASE/NEU/ACID ORGAN. GC/MS/625/8270	VOLATILE ORGANICS GC/MS/624/8240	PCB's 608/8080	TPH (circle method) 418.1 or 8015	BETX (circle method) 8240 or 8020	F-LISTED SOLVENTS 8240	TCLP F-LISTED SOLVENTS 1311/8240	TCLP METALS D004-11	METALS (TOTAL) As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn	TCLP ORGANICS (specify methods) • VOA's 8240 • BNA's 8270 • Pesticides 8080 • Herbicides 8150	DISCHARGE TESTING	OTHER (Specify) <u>74 P ALKALINITY</u>																
SAMPLE I.D.	DATE	TIME	LAB I.D.	TYPE																							
1. <u>S-76-0035/96A852</u>	<u>1/16/96</u>	<u>11:45</u>		<u>water</u>													X	X	X	X	X		1				
2.																											
3.																											
4.																											
5.																											
6.																											
7.																											
8.																											

Relinquished By Signature <u>Philip Lab</u> Printed Name <u>Philip Lab</u> Firm <u>Philip Lab</u> Date/Time <u>1/17/96</u>	Relinquished By Signature _____ Printed Name _____ Firm _____ Date/Time _____	Relinquished By Signature _____ Printed Name _____ Firm _____ Date/Time _____	SPECIAL INSTRUCTIONS/COMMENTS: <u>Send out to America Analytical</u>
Received By Signature <u>[Signature]</u> Printed Name <u>Tom S. [Signature]</u> Firm <u>AMC</u> Date/Time <u>1-17-96 1507</u>	Received By Signature _____ Printed Name _____ Firm _____ Date/Time _____	Received By Signature _____ Printed Name _____ Firm _____ Date/Time _____	



El Paso
Natural Gas Company

NEW MEXICO OIL CONSERVATION DIVISION
RECEIVED

JAN 15 1996 8 52 AM

January 15, 1996

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-541-2600

Transmitted Via Certified Mail
RETURN RECEIPT REQUESTED

Mr. Mark Ashley
New Mexico Oil Conservation Division
P. O. Box 6429
Santa Fe, New Mexico 87505-6429

Re: Response to New Mexico Oil Conservation Division's Inspection Report Covering the El Paso Natural Gas Company Deming Compressor Station; Discharge Plan GW-147.

Dear Mr. Ashley:

El Paso Natural Gas (EPNG) Company confirms receipt of the New Mexico Oil Conservation Division's (OCD) letter dated December 8, 1995 covering the on-site inspection conducted at the Deming Compressor Station on December 1, 1995 by yourself and Mr. Roger Anderson. A number of issues were identified in the letter for EPNG to address and respond back to OCD by January 15, 1996. Each of the items listed in your correspondence are addressed in the order presented:

- Drum Storage - In your letter, the OCD requires that all drums that contain materials other than fresh water be stored on an impermeable pad (i.e. concrete, asphalt, or other suitable containment) with curbing. Chemicals in other containers such as sacks or buckets should also be stored on an impermeable pad with curbing and all empty drums should be stored on their sides with the bungs in and lined up on a horizontal plane.

As a normal work practice and in accordance with Discharge Plan GW-147, all storage drums that contain materials other than fresh water are stored on concrete secondary containment provisions with curbing. Chemicals in other containers such as sacks or buckets are also stored on secondary containment provisions or in other suitable storage areas such as inside existing work buildings and shops to protect the materials from the elements. OCD recommendations for storage of chemicals in other containers and storage practices for empty drums will be utilized when possible. Alternative methods for storage of these materials in keeping with good housekeeping practice will continue to be used. To EPNG's knowledge, no regulatory requirements for modifying or installing secondary containment provisions or curbing around existing storage buildings is applicable.

- Process Area - During the inspection, it was noted that the A-Plant cooling tower appears to be leaking process water to the ground surface. In your letter, OCD requires that all process and maintenance areas which show evidence that leaks and spills are reaching ground

surface must be either paved and curbed or have some type of spill collection device incorporated into the design. EPNG is to present a plan to mitigate leaks from reaching the ground surface to the OCD.

EPNG will assess the extent of spillage from the A-plant cooling tower. Maintenance work will be performed to eliminate or minimize leaks and spills to the ground surface resulting from the cooling tower with an expected completion of all work by September 1996. EPNG will also evaluate current work practices to determine if leaks and spills of the process water at the cooling tower can be eliminated. Due to current market conditions for transportation of natural gas at this facility, the cooling towers are not operating in the most optimal condition. The need to incorporate paved and/or curbed containment provisions or spill collection design to the cooling tower basins will be considered if maintenance work and reviewed work practices do not reduce the potential for leaks from reaching ground surface.

- *Above Ground Tanks - Above ground storage tanks which contain materials other than fresh water or alcohol at the Deming Station must be bermed to contain a volume of one-third more than the total volume of the largest or all interconnected tanks.*

Above ground storage tanks at the facility are bermed in accordance with OCD requirements in Discharge Plan GW-147. Drain valves installed on the impermeable containment areas and on the secondary containment provisions for the drum storage area will be kept in a closed position at all times to prevent chemicals from reaching ground surface, except when used for draining fluids for disposal.

- *Tank Labeling - OCD requires all tanks to be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill or ignite.*

Storage tanks with improper labeling information or without labels have been appropriately labeled to identify their contents. Written procedures with emergency information for handling spills or other emergency response requirements specific for the chemicals stored at the facility are available to location personnel for reference and use.

- *Below Grade Tanks/Sumps - OCD requires all below grade tanks, sumps, and pits be approved by the agency prior to installation and incorporate secondary containment and leak detection provisions into the design. Pre-existing sumps and below grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing and visual inspection of cleaned out tanks or sumps.*

In accordance with EPNG's Discharge Plan for the Deming facility, pre-existing sumps are to be cleaned out on an annual basis and visually inspected. No conditions exist in the current discharge plan for integrity testing of existing below grade tanks. During the inspection, it was noted that a sump for collecting fluids from the drum storage area at the A-plant containment pad did not incorporate secondary containment provisions. EPNG will modify the existing 5 gallon capacity sump to incorporate secondary containment provisions by the fourth quarter of 1996.

Annual visual inspections of all pre-existing sumps will be performed as required by the facility discharge plan. The Company maintenance tracking system will be used to incorporate the inspections as a routine maintenance activity to be completed every calendar year by facility personnel. Records of the inspections will be maintained by the site.

A sample of the fluid observed in the leak detection well for the evaporation pond will be collected during the month of January 1996 and submitted for analysis to an outside laboratory. The sample will be analyzed for the constituents requested by OCD; i.e. metals, PAH, halogenated and aromatic organics, major cations and anions. Results of the water analysis will be provided to the OCD as soon as available.

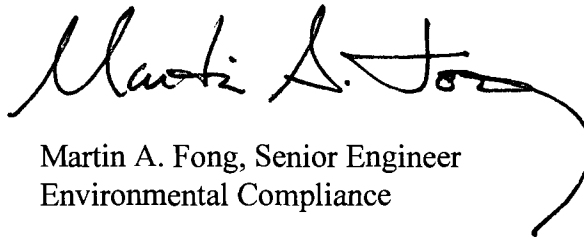
- Underground Process/Wastewater Lines - As stated in your letter, all underground process/wastewater piping must be tested to demonstrate their mechanical integrity at present and then every 5 years thereafter. Companies may propose various methods for testing such as pressure testing or other means acceptable to the OCD.

EPNG's existing discharge plan states that pressure testing of all underground piping in service of all discharge plan facilities require pressure testing at the time of discharge plan renewal. No requirement or condition is applicable in the Deming discharge plan for pressure testing at the present time as requested by OCD. Renewal of the Deming Discharge Plan GW-147 is not required until August 1998 at which time demonstration of the mechanical integrity of all underground process/wastewater lines must be submitted to OCD.

As stated in your letter, systems designed for spill prevention and collection will be inspected frequently to prevent system failures and all spills/releases to the environment shall be reported in accordance with OCD Rule 116 and WQCC 1-203 to the appropriate OCD District Office.

If you should have any questions regarding EPNG's response to the Deming facility inspection report, please do not hesitate to contact me at 915/541-3057. EPNG appreciates your efforts in fostering a good working relationship with the New Mexico Oil and Gas industry.

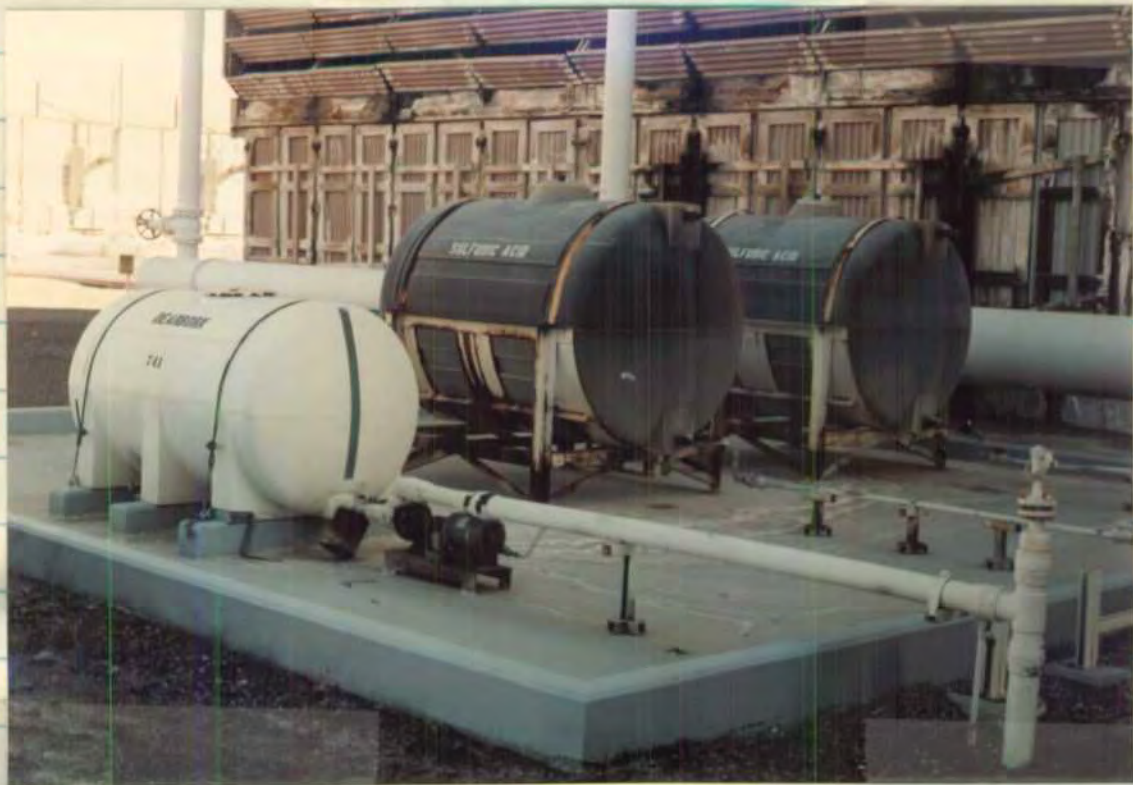
Sincerely,



Martin A. Fong, Senior Engineer
Environmental Compliance

cc: Mr. Roger Anderson, OCD - Santa Fe

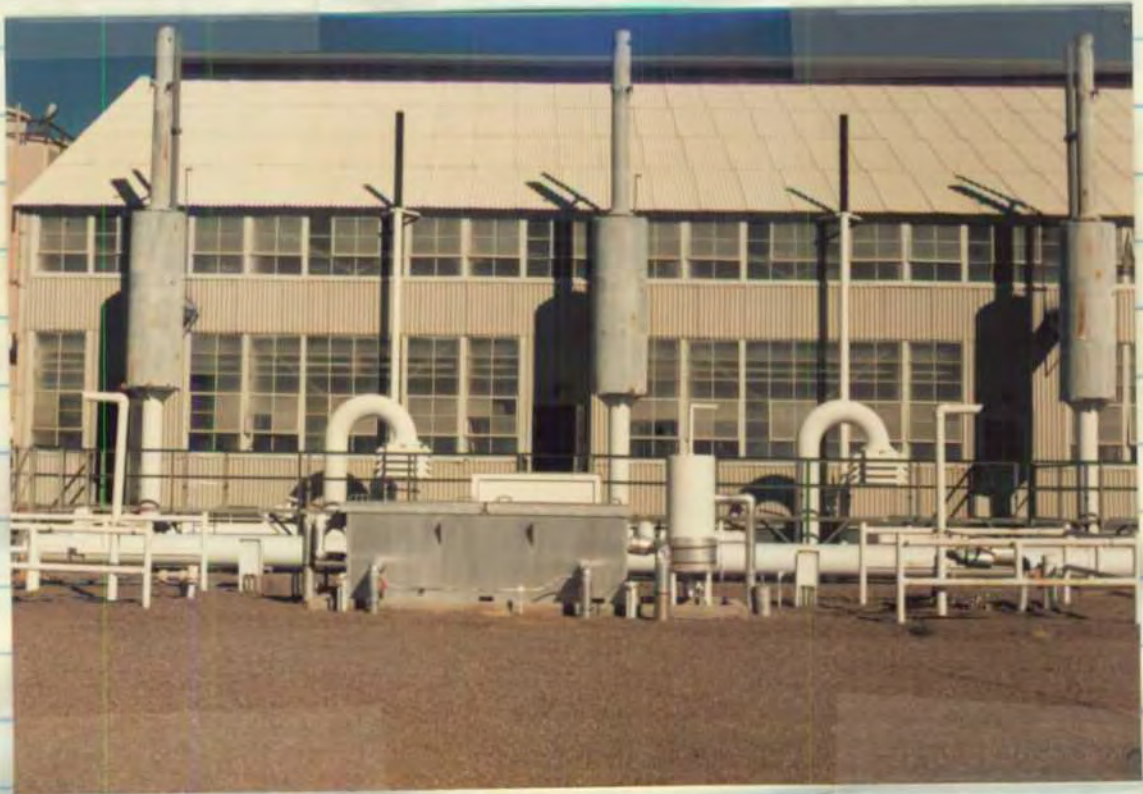














OIL CONSERVATION DIVISION

December 8, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-962-910

Mr. Henry Van
 El Paso Natural Gas Company
 P.O. Box 1492
 El Paso, Texas 79978

Re: Deming Compressor Station
Discharge Plan GW-147
Inspection Report

Dear Mr. Van:

The New Mexico Oil Conservation Division (OCD) would like to thank you for your cooperation during the December 1, 1995 inspection of the Deming Compressor Station located in Luna County, New Mexico. Comments from the inspection conducted are as follows:

1. **Drum Storage:** All drums that contain materials other than fresh water must be stored on an impermeable pad (i.e. concrete, asphalt, or other suitable containment) with curbing. All Empty drums should be stored on their sides with the bungs in and lined up on a horizontal plane. Chemicals in other containers such as sacks or buckets should also be stored on an impermeable pad with curbing.

The drain valves installed on the impermeable containment areas were open. Please keep the valves closed at all times, except when draining fluids for disposal, to prevent any fluids from reaching the ground surface.

2. **Process Area:** All process and maintenance areas which show evidence that leaks and spills are reaching the ground surface must be either paved and curbed or have some type of spill collection device incorporated into the design.

Water from the A-Plant cooling tower appears to be leaking to the ground surface. Please submit a plan to the OCD to address this issue in order to prevent any further leaks from reaching the ground surface.

3. Above Ground Tanks: All above ground tanks which contain fluids other than fresh water or alcohol must be bermed to contain a volume of one-third more than the total volume of the largest or all interconnected tanks. All new facilities or modifications to existing facilities must have the tanks placed on an impermeable pad so that leaks can be identified.

The drain valves installed on the impermeable containment areas were open. Please keep the valves closed at all times, except when draining fluids for disposal, to prevent any fluids from reaching the ground surface.

4. Above Ground Saddle Tanks: Above ground saddle tanks must have pad and curb type of containment below them unless they contain alcohol or fluids which are gases at normal atmospheric pressure and temperature. No berms are required for saddle tanks.
5. Tank Labeling: All tanks should be clearly labeled to identify their contents and other emergency information necessary if the tank were to rupture, spill, or ignite.
6. Below Grade Tanks/Sumps: All below grade tanks, sumps, and pits must be approved by the OCD prior to installation and must incorporate secondary containment and leak-detection into the design. All pre-existing sumps and below-grade tanks must demonstrate integrity on an annual basis. Integrity tests include pressure testing and visual inspection of cleaned out tanks /or sumps.

Please submit a method and time schedule to the OCD for integrity testing.

The drum storage area at the A-Plant has a sump for collecting fluids from the containment. The sump does not have any secondary containment. Please submit a plan to the OCD to install secondary containment that will allow for visual inspection of any potential leaks.

The leak detection system at the pond appears to have fluid present in it even though the pond is currently dry. Please submit a plan and time schedule to the OCD for sampling the leak detection for metals, PAH, halogenated and aromatic organics, and major cations and anions with results submitted to the OCD.

7. Underground Process/Wastewater Lines: All underground process/wastewater pipelines must be tested to demonstrate their mechanical integrity at present and then every 5 years thereafter. Companies may propose various methods for testing such as pressure testing or other means acceptable to the OCD.

Mr. Henry Van
December 8, 1995
Page 3

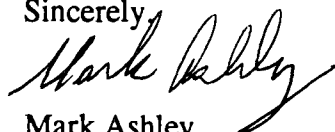
Please submit a method and time schedule to the OCD for integrity testing.

8. Housekeeping: All systems designed for spill collection/prevention should be inspected frequently to ensure proper operation and to prevent overtopping or system failure.
9. Spill Reporting: All spills/releases shall be reported pursuant to OCD Rule 116 and WQCC 1203 to the appropriate OCD District Office.

Please submit the above mentioned information to the OCD by January 15, 1996.

Once again, thank you for your time during our recent visit to your facility, and for your commitment to operate in an environmentally conscience manner. If you have any questions, please call me at (505) 827-7155.

Sincerely,



Mark Ashley
Geologist

xc: OCD Artesia Office

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Mr. Chris Eustice
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

**Subject: El Paso Natural Gas Company's Deming Compressor Station
Discharge Plan, GW-147.**

Dear Mr. Eustice:

This letter is a written follow up to our telephone conversation on January 7, 1994 concerning the subject discharge plan for El Paso Natural Gas (EPNG) Company's Deming Compressor Station.

EPNG received an approved NMOCD discharge plan for the subject facility on August 19, 1993. As a condition of approval for the Deming Station plan, EPNG is required to install secondary containment provisions around all tanks that contain materials other than fresh water. The design capacity for any berm is required to be 1-1/3 the capacity of the largest tank within the berm or 1-1/3 the total capacity of all interconnected tanks contained in a berm area.

EPNG was not able to allocate funds during its planning and budgeting process to perform the above described work in 1994. As per our phone conversation, the NMOCD concurred with EPNG's proposed schedule to perform the necessary berm work during the first quarter of 1995 in keeping with the Deming Station discharge plan conditions. If funds become available such that the work can be performed during 1994, the secondary containment provisions will be installed prior to the 1995 time frame.

Should you have questions or concerns with regard to the above understanding between EPNG and the NMOCD, please do not hesitate to contact me at 915/541-3057 or in writing.

Sincerely,

Martin A. Fong, Senior Engineer
Environmental Compliance