

GW - 71-0

**GENERAL
CORRESPONDENCE**

YEAR(S):

1995

*Chaco Plant
Waste.*

Chaco Plant Non-Contact Wastewater Use December 21, 1995

Four-Four has requested the use of the non-contact wastewater generated and discharged at El Paso Natural Gas Company's ("El Paso") Chaco Plant pursuant to the approved NMOCD Discharge Plan. El Paso will allow Four-Four Inc. to use the non-contact Wastewater provided Four-Four agree in advance to the following:

1. Prior to obtaining the wastewater from the Chaco Ponds, Four-Four truck drivers will notify the Chaco Plant Superintendent;
2. Use of the wastewater is limited to Four-Four's oil and natural gas exploration and production activities and will never be used in a way that allows the water to be discharged to any water of the U.S. as defined in the U.S. Clean Water Act (33 U.S.C. §§ 1251 to 1387) and the New Mexico Water Quality Act (N.M. Stat. Ann §§ 74-6-1 to 74-6B-14);
3. The wastewater will never be discharged less than one hundred feet (100') from the nearest natural boundary of any wash or arroyo; and,
4. Four-Four Inc. releases El Paso from any liability, claims or causes of action which may arise from the procurement, use and discharge of the wastewater by Four-Four, its agent, or its contractors.

If Four-Four agrees to abide by the above terms and conditions, please indicate Four-Four approval by signing in the space below and return this letter to El Paso Natural Gas (Mr. Patrick Marquez).

AGREED TO AND ACCEPTED

this 21 day December 1995.

Four-Four Inc.

Signed By Mr. Bernie Strunk

Title President

Chaco Plant
Non-Contact Wastewater Use
December 21, 1995

Four-Four has requested the use of the non-contact wastewater generated and discharged at El Paso Natural Gas Company's ("El Paso") Chaco Plant pursuant to the approved NMOCD Discharge Plan. El Paso will allow Four-Four Inc. to use the non-contact Wastewater provided Four-Four agree in advance to the following:

1. Prior to obtaining the wastewater from the Chaco Ponds, Four-Four truck drivers will notify the Chaco Plant Superintendent;
2. Use of the wastewater is limited to Four-Four's oil and natural gas exploration and production activities and will never be used in a way that allows the water to be discharged to any water of the U.S. as defined in the U.S. Clean Water Act (33 U.S.C. §§ 1251 to 1387) and the New Mexico Water Quality Act (N.M. Stat. Ann §§ 74-6-1 to 74-6B-14);
3. The wastewater will never be discharged less than one hundred feet (110') from the nearest natural boundary of any wash or arroyo; and,
4. Four-Four Inc. releases El Paso from any liability, claims or causes of action which may arise from the procurement, use and discharge of the wastewater by Four-Four, its agent, or its contractors.

If Four-Four agrees to abide by the above terms and conditions, please indicate Four-Four approval by signing in the space below and return this letter to El Paso Natural Gas (Mr. Patrick Marquez).

AGREED TO AND ACCEPTED

this 21 day December 1995.

Four-Four Inc.

Signed By Mr. Bernie Strunk

Title President

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
1/3/96	El Paso Natural Gas	143	36" line test for 143 bbls Hydro 1.2.2.2	Returned to pond at Chaco	[Signature]
1/3/96	El Paso Natural Gas	143	36" line test for 143 bbls Hydro 1.2.2.2	Returned to pond at Chaco	[Signature]
1/4/96	El Paso Natural Gas	143	[Faint text]	Returned to pond at Chaco	[Signature]
1/4/96	El Paso Natural Gas	143	[Faint text]	Returned to pond at Chaco	[Signature]
1/4/96	El Paso Natural Gas	143	[Faint text]	Returned to pond at Chaco	[Signature]
1/4/96	El Paso Natural Gas	143	[Faint text]	Returned to pond at Chaco	[Signature]

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
12/17/95	El Paso Natural Gas San Juan Triangle Pro.	143	Hydrotest 36" pipe 3228 line	dumped back into Pond @ Est. Pond	Benjamin Key
12/17/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Hydrotest 36" Pipe 3228 Line		Benjamin Key
12/17/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Hydrotest 36" Pipe 3228 Line		Benjamin Key
12/17/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Hydrotest 36" Pipe 3228 Line		Benjamin Key
12/17/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Hydrotest 36" Pipe 3228 Line		Benjamin Key
12/21/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Dewatering Pipe 3228 Line	dumped back into CHACO PLANT POND	Benjamin Key
12/21/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Dewatering Pipe 3228 Line	dumped back into CHACO PLANT POND	Benjamin Key
12/21/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Dewatering Pipe 3228 Line	Dumped back into CHACO PLANT POND	Benjamin Key
12/21/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Dewatering Pipe 3228 Line	Dumped back into CHACO PLANT POND	Benjamin Key
12/21/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Dewatering Pipe 3228 Line	Dumped back into CHACO PLANT POND	Benjamin Key
12/21/95	EL Paso Natural Gas San Juan Triangle Pro.	143	Dewatering Pipe 3228 Line	Pumped back into CHACO PLANT POND	Benjamin Key

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
11/16/95	El Paso Natural Gas (San Juan Triangletro)	143	Dust control on Right of way on 1219 line	Sprayed on Right of way	Benjamin Kary
11/16/95	"	143	"	"	Benjamin Kary
11/16/95	El Paso Natural Gas (San Juan Triangletro)	143	Dust Control on Right of way	"	Benjamin Kary
11/17/95	El Paso Natural Gas San Juan Triangletro	143	Dust Control on Right of way ON 1219 LINE	SPRAYED ON Right of way	Benjamin Kary

2.0 GENERAL WORKING SPACE REQUIREMENTS AND RESTRICTIONS

- 2.1** Working space details are provided in DWG. # 1219.1-1. The new pipeline will be constructed on the Navajo Nation, 20 ft. west of an existing EPNG pipeline. The majority of the construction right of way is 80 ft in width. However, there are 18 different areas along the proposed route that will require special right-of-way restrictions or avoidance measures due to cultural resources and one area that will require right-of-way restriction and avoidance due to biological resources. These areas are identified both on Drwgs. 1219.0-1 thru 1219.0-7 and on the Line List in Section 9 of the Environmental Construction Handbook. Where fences or other special barriers are required, they will be put in place by a third-party cultural resources contractor provided by EPNG. The proposed pipeline does not cross any wetlands.
- 2.2** All personnel and equipment shall remain within the working space requirements at all times.

3.0 FURNISHED BY EPNG

- 3.1** EPNG will furnish all material as listed on the "Bill of Material" illustrated in Tab 1 of Exhibit "A". EPNG will also furnish water for dust control, hydrostatic testing and tamping from EPNG's Chaco Compressor Station. EPNG will furnish test heads and pigs for hydrostatic testing, sizing pig, corrosion test leads and wire, paint, primer, and coal tar epoxy materials. All other materials and supplies, including form material, reinforcing steel, concrete, transportation (truck and/or pipeline) of water, Fusion Bonded Epoxy Coating for field joints and patch sticks are to be furnished by the Contractor.
- 3.2** Pipe for this project is located at two EPNG Compressor Stations: White Rock and Gallup. Major valves are located at EPNG's Gallup Compressor Station. The remaining items on the Bill of Materials will be available at EPNG's Farmington Warehouse. The Contractor shall load, transport and unload at the site of work all such materials and equipment. Upon receiving such materials and equipment, the Contractor shall assume care for, custody of, and control of it.
- 3.3** Excess pipe and material shall be transported to EPNG's Farmington Warehouse by Contractor.
- 3.4** EPNG will provide the necessary survey control during the course of the job and mark the route of the pipeline with centerline or offset stakes.
- 3.5** EPNG will provide third party environmental compliance inspectors.

2.0 GENERAL WORKING SPACE REQUIREMENTS AND RESTRICTIONS

- 2.1** Working space details are provided in DWG. # 1219.1-1. The new pipeline will be constructed on the Navajo Nation, 20 ft. west of an existing EPNG pipeline. The majority of the construction right of way is 80 ft in width. However, there are 18 different areas along the proposed route that will require special right-of-way restrictions or avoidance measures due to cultural resources and one area that will require right-of-way restriction and avoidance due to biological resources. These areas are identified both on Drwgs. 1219.0-1 thru 1219.0-7 and on the Line List in Section 9 of the Environmental Construction Handbook. Where fences or other special barriers are required, they will be put in place by a third-party cultural resources contractor provided by EPNG. The proposed pipeline does not cross any wetlands.
- 2.2** All personnel and equipment shall remain within the working space requirements at all times.

3.0 FURNISHED BY EPNG

- 3.1** EPNG will furnish all material as listed on the "Bill of Material" illustrated in Tab 1 of Exhibit "A". EPNG will also furnish water for dust control, hydrostatic testing and tamping from EPNG's Chaco Compressor Station. EPNG will furnish test heads and pigs for hydrostatic testing, sizing pig, corrosion test leads and wire, paint, primer, and coal tar epoxy materials. All other materials and supplies, including form material, reinforcing steel, concrete, transportation (truck and/or pipeline) of water, Fusion Bonded Epoxy Coating for field joints and patch sticks are to be furnished by the Contractor.
- 3.2** Pipe for this project is located at two EPNG Compressor Stations: White Rock and Gallup. Major valves are located at EPNG's Gallup Compressor Station. The remaining items on the Bill of Materials will be available at EPNG's Farmington Warehouse. The Contractor shall load, transport and unload at the site of work all such materials and equipment. Upon receiving such materials and equipment, the Contractor shall assume care for, custody of, and control of it.
- 3.3** Excess pipe and material shall be transported to EPNG's Farmington Warehouse by Contractor.
- 3.4** EPNG will provide the necessary survey control during the course of the job and mark the route of the pipeline with centerline or offset stakes.
- 3.5** EPNG will provide third party environmental compliance inspectors.

Chaco Plant Non-Contact Waste Water Acceptance Log

42 gal^{hr} barrel

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
11/5/95	El Paso Natural Gas (San Juan Triangle Proj.)	(48,000 gals) 1,143	Hydro Test new 36" Line (Line # 3228, W/O G-0384)	Returned to pond at Chaco Plant	<i>Duncan Wall</i>
11/3/95	El Paso Natural Gas (San Juan Triangle Proj.)	80	Dust Control on Right of Way on line 1219	Sprayed on Right of way	<i>Duncan Wall</i>
11/3/95	El Paso Natural Gas (San Juan Triangle Proj.)	80	Dust control on Right of way on line 1219	Sprayed on Right of way	<i>Duncan Wall</i>
11/3/95	El Paso Natural Gas (San Juan Triangle Proj.)	80	Dust control on Right of way on line 1219	Sprayed on right of way	<i>Duncan Wall</i>
11/14/95	El Paso Natural Gas (San Juan Triangle Proj.)	80	Dust control on Right of way on line 1219	Sprayed on right of way	<i>Duncan Wall</i>
11/14/95	El Paso Natural Gas (San Juan Triangle Proj.)	80	Dust control on right of way on line 1219	Sprayed water on right of way	<i>Duncan Wall</i>



RECEIVED
NEW MEXICO OIL CONSERVATION DIVISION
95 DE 17 11 8 52

December 11, 1995

Mr. Chris Eustice
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, NM 87504

Re: Contact Water Ponds at El Paso Natural Gas Company's Chaco Plant

Mr. Eustice,

As per our conversation on December 5th, EPNG submits this formal request to supplement the information/request faxed to your office on December 4th outlining EPNG's difficulties regarding the contact water ponds at Chaco Plant.

Summary

- The two lined, contact water ponds at Chaco Plant are only days away from full capacity as the aeration system was not fully functional until after the end of the 1995 summer (evaporation season).
- Initial estimates to dispose of water run about \$110,000/pond
- EPNG request permission to place the contact water in an existing pond at Chaco. A temporary 12 mil liner will be installed and maintained through June of 1996.

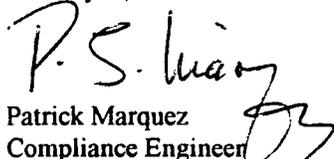
Proposal

- Drain both ponds to the temporarily lined pond (see attached map).
- Take advantage, while the ponds are dry, to repair the leaks in the liners as long as the weather permits (as per letter from EPNG David Bays to Roger Anderson - November 17, 1995).
- Several contractors are currently using the non-contact water for hydrostatic tests in the area - this contact water will be isolated from all other ponds so that no contractors may access it.
- The contact water from the temporary pond will be placed in the permanent lined ponds as space is made available through evaporation.

This course of action should allow the lined ponds to operate through the winter months while EPNG re-evaluates the capacity and operation of the lined ponds. At that time EPNG will request approval for any change in operation of the ponds.

Please call if you require further information at 505 599 2175.

Thank you,


Patrick Marquez
Compliance Engineer

cc:

S.Miller/D Bays/File: 5212 Regulatory
B.Yungert/J.Smith

December 4, 1995

Roger Anderson,

Summary

- The two contact lined ponds at Chaco Plant are only days away from full capacity because the aeration system was not fully functional until after the end of the 1995 summer (evaporation season).
- Initial estimates to dispose of water run about \$110,000/pond
- EPNG request permission to place the contact water in an existing unlined pond at Chaco.

Proposal

- Drain both ponds to an existing dry, unlined pond (see attached map). Estimate 50,000 bbls/pond
- Take advantage, while the ponds are dry, to repair the leaks in the liners as long as the weather permits (letter from EPNG David Bays to Roger Anderson - November 17, 1995).
- EPNG will fertilize and sample the fill pond to ensure minimum impact from the contact water.
- Several contractors are currently using the non-contact water for hydrostatic tests in the area - this contact water will be isolated from all other ponds so that no contractors may access it.

This should allow the lined ponds to operate through the winter months while EPNG re-evaluates the capacity and operation of the lined ponds.

Please call at 505 599 2175 at your earliest convenience.

Thank you,



Patrick Marquez
Compliance Engineer



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

OIL CONSERVATION DIVISION
DEC 8 1995

December 5, 1995

Mr. William J. Lemay
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Lemay:

This responds to the Energy, Minerals, and Natural Resources Department Oil Conservation Division's public notice dated October 31, 1995, regarding the State of New Mexico's proposal to approve the discharge plan for the applicant listed below.

(GW-71) - El Paso Natural Gas Company. The Compliance Engineer has submitted a discharge plan modification for the Chaco Gas Processing Plant located in Section 16, Township 26 North, Range 12 West, San Juan County, New Mexico. The modification consists of adding a replacement unit to the facility. Approximately 2405 gallons per day of produced water will be stored in an above ground double lined evaporation pond equipped with leak detection.

The U.S. Fish and Wildlife Service (Service) recommends the use of excluding technology (nets, fences, enclosed tanks, closed-forced evaporation systems, etc.) to prevent migratory bird and other wildlife access to any ponds or lagoons that contain toxic chemicals. We make this recommendation because produced water has the potential to pose a risk to the health of migratory birds.

The composition of produced waters from this and other areas has been known to contain chemicals in toxic quantities (Carey et al. 1992, Fucik 1992, Jacobs et al. 1992, Rogers et al. 1992, Shepherd et al. 1992, Stephenson 1992). The Service's primary concern is that birds that land on waterbodies with an oil sheen have the potential to contaminate their eggs during nesting season. Birkhead et al. (1973) reported that petroleum pollutants carried to the nest on breast feathers, feet, or nesting materials caused reduced hatchability of contaminated eggs. Albers (1977) and Hoffman (1978) showed that as little as 1 to 10 microliters of crude or refined oil topically applied to eggs of various bird species was embryotoxic or teratogenic. We recommend that the Oil Conservation Division or the applicant demonstrate that the pond will have no oil sheen and continue periodic testing to characterize the water quality and determine if any bioaccumulation or ecological risks seem imminent.

Mr. William J. Lemay

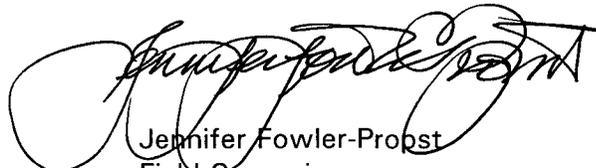
2

During flight, migratory birds may not distinguish between a pond or lagoon from a natural waterbody. Therefore, rather than allow migratory birds access to an attractive nuisance waterbody, we recommend that ponds and lagoons be constructed in a manner that is "bird-free" (i.e., netted), or the applicant demonstrate that the pond or lagoon is "bird-safe" (i.e., can meet New Mexico general water quality standards 1102B, 1102F, and 3101K).

The Service would rather solve the problem of migratory bird access to contaminated ponds and lagoons than take enforcement actions, which are expensive and disruptive to legitimate mineral extraction and production activities. The Migratory Bird Treaty Act (MBTA) makes it unlawful for anyone at anytime or in any manner to take (i.e., pursue, hunt, take, capture, kill, transport, or possess) any migratory bird unless authorized by a permit issued by the Department of the Interior. The courts have interpreted "illegal take" to include accidental poisoning or accumulation of harmful concentrations of contaminants by migratory birds, even if the contamination event was accidental or the perpetrator was unaware of the fact that his/her actions (or failure to take action) could ultimately prove harmful to migratory birds. The liability provisions of the MBTA preclude the necessity of proving intent and permits criminal prosecution of persons, associations, partnerships, or corporations that inadvertently or intentionally kill or illegally take one or more migratory birds. Therefore, if the creation and operation of a pond or lagoon results in migratory bird death, the operators may be held liable under the enforcement provisions of the MBTA.

Thank you for the opportunity to review and comment on this discharge plan application. If you have any questions, please contact Joel D. Lusk at (505) 761-4525.

Sincerely,



Jennifer Fowler-Probst
Field Supervisor

cc:

Chief, New Mexico Environment Department, Surface Water Quality Bureau, Santa Fe, New Mexico

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico

Senior Resident Agent, U.S. Fish and Wildlife Service, Division of Law Enforcement, Albuquerque, New Mexico

References Cited

- Albers, P.H. 1977. *Effects of external application of fuel oil on hatchability of mallard eggs*. Pages 158-173 in *Fate and Effects of Petroleum Hydrocarbons in Marine Ecosystems and Organisms*, D.A. Wolfe, Ed., Pergamon Press, New York, New York, USA.
- Birkhead, T.R., C. Lloyd, and P. Corkhill. 1973. *Oiled seabirds successfully cleaning their plumage*. *Br Birds* 66:535-543.
- Carey, J., A. Zaidi, and J. Ribo. 1992. *Specific toxic organics in produced waters from in-situ heavy oil recovery operations in western Canada*. Pages 133-150 in *Produced Water: Technological/Environmental Issues and Solutions*, J.P. Ray and F.R. Engelhardt, eds.. Plenum Publishing Corp., New York, New York, USA.
- Fucik, K.W. 1992. *Toxicity identification and characteristics of produced water discharges from Colorado and Wyoming*. Pages 187-198 in *Produced Water: Technological/Environmental Issues and Solutions*, J.P. Ray and F.R. Engelhardt, eds.. Plenum Publishing Corp., New York, New York, USA.
- Jacobs, R.P.W.M., R.O.H. Grant, J. Kwant, J.M. Marquenie, and E. Mentzer. 1992. *The composition of produced water from Shell operated oil and gas production in the North Sea*. Pages 14-21 in *Produced Water: Technological/Environmental Issues and Solutions*, J.P. Ray and F.R. Engelhardt, eds.. Plenum Publishing Corp., New York, New York, USA.
- Hoffman, D.J. 1978. *Embryotoxic effects of crude oil in mallard ducks and chicks*. *Toxicology and Applied Pharmacology* 46:183-191.
- Rogers, J.L., R.T. Hicks, B. Shaw, and J. Jensen. 1992. *Procedure for development of contingency plans to mitigate produced water releases on BLM lands*. Pages 35-44 in *Produced Water: Technological/Environmental Issues and Solutions*, J.P. Ray and F.R. Engelhardt, eds.. Plenum Publishing Corp., New York, New York, USA.
- Shepherd, M.C., F.L. Shore, S.K. Mertens, and J.S. Gibson. 1992. *Characterization of produced waters from natural gas production and storage operations: Regulatory analysis of a complex matrix*. Pages 163-173 in *Produced Water: Technological/Environmental Issues and Solutions*, J.P. Ray and F.R. Engelhardt, eds.. Plenum Publishing Corp., New York, New York, USA.
- Stephenson, M.T. 1992. *A survey of produced water studies*. Pages 1-11 in *Produced Water: Technological/Environmental Issues and Solutions*, J.P. Ray and F.R. Engelhardt, eds.. Plenum Publishing Corp., New York, New York, USA.

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 FAX: (505) 334-6170

Certified: P-987-892-159

December 6, 1995

El Paso Natural Gas Company
Att. Patrick Marquez
Compliance Engineer
PO Box 4990
Farmington NM 87499

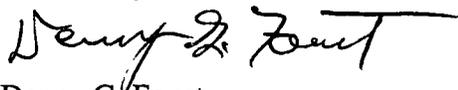
RE: Over spray pooling at the lined contact water ponds EPNG Chaco Plant

Dear Mr. Marquez:

During a visit to observe the closure of the abandoned earthen contact water ponds on November 30, 1995, over spray from the lined contact water ponds was observed pooling at the base of the pond containment berms. We specifically discussed this matter and the need for an immediate solution. Over spray from the contact water ponds is to be limited always and never allowed to pool on or run off the berms. Adjustments must be made with the anemometer or pump pressure to eliminate over spray. Plant personnel are responsible for either making these adjustments when over spray occurs or shutting down the system until qualified personnel can make the necessary adjustments.

Hopefully there will be no recurrence of the over spray problem if the anemometer is adjusted properly and is operating. Please contact this office at 334-6178 if you have questions.

Yours truly,



Denny G. Foust
Environmental Geologist

DF/sh

xc: Chris Eustice
Environmental File
DGF File



P. O. Box 4990
FARMINGTON, NEW MEXICO 87499

November 17, 1995

Registered Mail - Receipt No. P 645 521 867

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

Dear Mr. Anderson:

During October 1995, El Paso Natural Gas Co. (EPNG) conducted integrity testing on the liners of four ponds in the San Juan Basin. The locations tested are the Ballard Separator pond, the Kutz Separator Pond, and the two contact wastewater ponds at the Chaco Plant. The testing was conducted by Leak Location Services, Inc. of San Antonio, Texas, using an electrical continuity test probe.

Leaks were found in all four of the pond liners. In the Ballard pond we identified 8 leaks; in the Kutz pond, 19 leaks; in the north Chaco pond, 15 leaks; and in the south Chaco pond, 9 leaks. Almost all of the leaks appeared to be in straight lines, indicating leaking seams.

Attached are the work plans we have developed to repair the liners. Please have your staff review these plans, and provide any comments you may have. For any additional information needed, please contact me at the above address, or at (505) 599-2256.

Sincerely yours,

David Bays, REM
Sr. Environmental Scientist

cc: Denny Foust, NMOCD - Aztec
David Hall
S. D. Miller/P. J. Marquez/R. D. Cosby

Chaco Plant Contact Wastewater Ponds Liner Repair Work Plan

1. Introduction

During liner integrity testing conducted on the Chaco Plant contact wastewater pond liners, several leaks were identified. This work plan identifies the steps to be followed in making the necessary repairs to those liners.

The liners were tested using an electrical conductivity probe. In order for this type of test method to work properly, it was necessary to inject approximately 20,000 gallons of water into the interstitial space between the upper and lower liners. This water allowed a complete electrical circuit between two probes, one placed in the pond and the other placed in the leak detection zone. When a pin hole was encountered, current flowed between the two probes and tripped an audible alarm to indicate the location of the leak.

2. Leak Detection System Monitoring

The first step of the repair process is removal of the water from the interstitial space. The leak detection monitoring wells, located immediately adjacent to each pond will be checked every other week to determine if free liquids are present. A small electric pump will be used to remove any liquids found, and to pump those liquids back into the lined ponds. Biweekly inspections will continue until the beginning of repairs on the liners.

3. Leak Repair Process

EPNG proposes to start actual repairs to the liners in May, 1996. It is prudent to delay repairs until the warm weather months, since it is very difficult to ensure a proper seal on the repair material when the liner is too cold. The repairs will be done in several phases. Once construction of the temporary holding pond begins (Paragraph 3.1, below), EPNG estimates that the total repair project can be completed within six weeks.

3.1. Temporary Holding Pond

The first phase of the repairs will be to construct a temporary pond to hold excess water from the large wastewater ponds. The temporary pond will be lined with a 10 mil thick hypalon liner, and sized to contain approximately one-half of the water volume from one of the permanent ponds.

3.2. North Pond Wastewater Transfer

Using a high volume oil field blender pump, (100 barrels per minute capacity) water will be transferred from the north wastewater pond to the south wastewater pond, until the south pond is full. The remaining volume will then be transferred into the temporary pond.

3.3 Liner Repair

Each leak point will be located, based on data from the leak survey. The area around each leak will be thoroughly cleaned using a solvent that is compatible with the liner system. A repair patch will be installed over the leak using a system which extrudes additional plastic into the repair joint, making a "welded" seam. Repair patches will not be attached by using a glue joint only. The minimum sized repair patch will be 18 inches by 18 inches. Larger patches will be used as necessary, depending on the size and location of the leak.

Where patches are placed over existing seams, the seam will first be sanded to a smooth surface. This will prevent attempting to weld the repair patch over an uneven surface.

3.4 Testing

All seams around each repair patch will be vacuum tested to ensure a proper seal around all edges of the patch.

3.5 South Pond Wastewater Transfer

Again using the high volume blender pump, all wastewater from the south pond will be transferred back to the north pond. The liner repair and testing procedures as described above will then be repeated on the south pond.

3.6 Temporary Pond Closure

Finally, the stored water from the temporary pond will be transferred back into the two contact wastewater ponds. Once emptied, the temporary pond will be allowed to air dry, the liner will be destroyed in place using a backhoe, and the area will be leveled to original grade.

Kutz Separator Wastewater Pond Liner Repair Work Plan

1. Introduction

During liner integrity testing conducted on the Kutz Separator wastewater pond liner, several leaks were identified. This work plan identifies the steps to be followed in making the necessary repairs to that liner.

The liner was tested using an electrical conductivity probe. In order for this type of test method to work properly, it was necessary to inject approximately 5,000 gallons of water into the interstitial space between the upper and lower liners. This water allowed a complete electrical circuit between two probes, one placed in the pond and the other placed in the leak detection zone. When a pin hole was encountered, current flowed between the two probes and tripped an audible alarm to indicate the location of the leak.

2. Leak Detection System Monitoring

The first step of the repair process is removal of the water from the interstitial space. The leak detection monitoring well, located immediately adjacent to the pond will be checked every other week to determine if free liquids are present. A small electric pump will be used to remove any liquids found, and pump those liquids back into the lined pond. Biweekly inspections will continue until the beginning of repairs on the liner.

3. Leak Repair Process

EPNG proposes to both repair the existing liner, and to construct an additional lined pond adjacent to the existing pond. We currently plan to start the project in February, 1996. In anticipation of the construction activity, EPNG will submit an application for a Discharge Plan permit for the facility during January, 1996. The construction and repairs will be done in several phases.

3.1 Discharge Plan

The first step will be the submission of a Discharge Plan to obtain NMOCD approval for the expansion of the wastewater handling capacity of the facility. The application will fully identify existing equipment and operations, the planned additional wastewater capacity, and all waste streams handled at the location.

3.2 New Pond Construction

Following NMOCD approval, a new pond will be constructed north of the existing lined pond. The new cell will be 120 feet by 120 feet by 4 feet deep. It will be double lined with a leak detection system. Design criteria and installation drawings will be furnished with the Discharge Plan application.

The new cell liner will be tested for leaks prior to use. Once the liner integrity has been confirmed, all water from the existing pond will be transferred into the new pond, using a high volume oil field blender pump, (100 barrels per minute capacity).

3.3 Liner Repair

Each leak point in the existing pond will be identified based on data from the leak survey. An area around each leak will be thoroughly cleaned, using a solvent that is compatible with the liner system. A repair patch will then be installed over the leak using a system which extrudes additional plastic into the repair joint, making a "welded" seam. Repair patches will not be attached by using a glue joint only. The minimum sized repair patch will be 18 inches by 18 inches. Larger patches will be used as necessary, depending on the size and location of the leak.

Where patches are placed over existing seams, the seam will first be sanded to a smooth surface. This will prevent attempting to weld the repair patch over an uneven surface.

3.4 Testing

All seams around each repair patch will be vacuum tested to ensure a proper seal around all edges of the patch.

Ballard Separator Wastewater Pond Liner Repair Work Plan

1. Introduction

During liner integrity testing conducted on the Ballard Separator wastewater pond liner, several leaks were identified. This work plan identifies the steps to be followed in making the necessary repairs to that liner.

The liner was tested using an electrical conductivity probe. In order for this type of test method to work properly, it was necessary to inject approximately 3,500 gallons of water into the interstitial space between the upper and lower liners. This water allowed a complete electrical circuit between two probes, one placed in the pond and the other placed in the leak detection zone. When a pin hole was encountered, current flowed between the two probes and tripped an audible alarm to indicate the location of the leak.

2. Leak Detection System Monitoring

The first step of the repair process is removal of the water from the interstitial space. The leak detection monitoring well, located immediately adjacent to the pond will be checked every other week to determine if free liquids are present. A small electric pump will be used to remove any liquids found, and pump those liquids back into the lined pond. Biweekly inspections will continue until the beginning of repairs on the liner.

3. Leak Repair Process

EPNG proposes to both repair the existing liner, and to construct an additional lined pond adjacent to the existing pond. We currently plan to start the project in February, 1996. In anticipation of the construction activity, EPNG will submit an application for a Discharge Plan permit for the facility during January, 1996. The construction and repairs will be done in several phases.

3.1 Discharge Plan

The first step will be the submission of a Discharge Plan to obtain NMOCD approval for the expansion of the wastewater handling capacity of the facility. The application will fully identify existing equipment and operations, the planned additional wastewater capacity, and all waste streams handled at the location.

3.2 New Pond Construction

Following NMOCD approval, a new pond will be constructed east of the existing lined pond. The new cell will be 120 feet by 120 feet by 4 feet deep. It will be double lined with a leak detection system. Design criteria and installation drawings will be furnished with the Discharge Plan application.

The new cell liner will be tested for leaks prior to use. Once the liner integrity has been confirmed, all water from the existing pond will be transferred into the new pond, using a high volume oil field blender pump, (100 barrels per minute capacity).

3.3 Liner Repair

Each leak point will be located based on data from the leak survey. An area around each leak will be thoroughly cleaned, using a solvent that is compatible with the liner system. A repair patch will then be installed over the leak using a system which extrudes additional plastic into the repair joint, making a "welded" seam. Repair patches will not be attached by using a glue joint only. The minimum sized repair patch will be 18 inches by 18 inches. Larger patches will be used as necessary, depending on the size and location of the leak.

Where patches are placed over existing seams, the seam will first be sanded to a smooth surface. This will prevent attempting to weld the repair patch over an uneven surface.

3.4 Testing

All seams around each repair patch will be vacuum tested to ensure a proper seal around all edges of the patch.

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505

November 17, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-962-515

Mr. Patrick Marquez
Compliance Engineer
El Paso Natural Gas Company
P.O. Box 4990
Farmington, New Mexico 87499

**RE: PIT INVESTIGATION REPORT
CHACO GAS PLANT, GW-71
SAN JUAN COUNTY, NEW MEXICO**

Dear Mr. Marquez:

The New Mexico Oil Conservation Division (OCD) has reviewed El Paso Natural Gas Company's (EPNG) November 16, 1995 "REQUEST APPROVAL FOR CLOSURE OF CHACO INDUSTRIAL PONDS AND FLARE PIT". This document contains the results of EPNG's investigation of the extent of contamination related to the former use of the unlined flare pit and industrial ponds #1 and #2. The document also contains EPNG's proposed remediation/closure plan for these former disposal areas.

The above referenced remediation/closure plan is approved with the following conditions:

1. EPNG will provide the OCD with a report on the remediation/closure activities by February 2, 1996.
2. Since monitor well MW-1 is offgradient to monitor well MW-8b, the OCD requests that EPNG submit a work plan to the OCD by February 2, 1995 for additional delineation of the extent of ground water contamination.
3. Monitor wells MW-1 and MW-8b will be sampled on a semi-annual basis. Ground water from these wells be sampled and analyzed for benzene, toluene, ethylbenzene, xylene (BTEX), polynuclear aromatic hydrocarbons and heavy metals using EPA approved methods.
4. All documents submitted to the OCD for approval will be submitted to the OCD Santa Fe Office with copies provided to the OCD Aztec District Office.

Mr. Patrick Marquez
October 13, 1995
Page 2

Please be advised that OCD approval does not relieve EPNG of liability if the remediation/closure activities fail to adequately remediate or contain contamination related to EPNG's activities. In addition, OCD approval does not relieve EPNG of responsibility for compliance with any other federal, state and local laws and/or regulations.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,



William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec District Office

Z 765 962 515



**Receipt for
Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, March 1993

Sent to	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

Fold at line over top of envelope to the right of the return address



OIL CONSERVATION DIVISION
RECEIVED

1995 NOV 24 AM 8 52

November 16, 1995

RECEIVED

NOV 29 1995

Environmental Bureau
Oil Conservation Division

Mr. Bill Olson
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Re: Request Approval for Closure of Chaco Industrial Ponds and Flare Pit

Dear Mr. Olson:

EPNG has completed the investigation of the Industrial Ponds and Flare Pit according to the EPNG's Work Plan for Closure. Based on the information gained, EPNG request approval for closure of the subject ponds.

Investigation

Some generalities existed throughout the investigation: 1) As outlined in the work plan, one source sample was taken approximately five feet beneath the surface of each pond and each was visibly contaminated 2) the perched aquifer was encountered at all but one bore hole (#8) at a depth of eight to fifteen feet from an estimated datum 3) clay was first reported on all drilling logs at depths ranging from fifteen to twenty feet and 4) all drilling logs recorded dry soil immediately beneath the perched aquifer to depth of bore.

As you recall, seven bore locations were drilled to establish the extent of contamination while one monitor well installation was scheduled to monitor the perched aquifer quality immediately down gradient of the ponds. As stated above, the perched aquifer was encountered at locations 1-7 but not at location #8. Soil samples were taken at the eighth location and the monitor well was installed just south of #8 and is referred to as 8b (see site sketch). The absence of ground water at location #8 would indicate that ground water is not moving northward as expected.

Ground water movement has been re-calculated using the latest ground water data and is shown to be moving northwest rather than just east of north as previously believed - see ground water elevation map.

Conclusions

The data gathered during the investigation is summarized in Tables 1 & 2 (Please note: metals analyses are reported as Totals - divide all values by 20 to get a TCLP equivalent). As expected, the source and shallow (1-10 ft) soil samples showed the highest levels of TPH while the deeper analyses show low or no levels of TPH or BTEX. This along with the absence of water at depths below the recorded clay layer would suggest that the contamination and perched aquifer are confined to the shallow depths of the pond area.

The analyses from monitor well #8b show the level of benzene in the perched aquifer immediately (< 30 ft) north of Industrial Pond #1 to be 29.5 parts per billion. This result is not surprising considering the proximity of MW8b to this pond. The historical data from the existing monitor wells and the depth at which each bore hole "cleaned-up" support EPNG's belief that contaminants are not moving offsite in spite of this data point. This is confirmed by the absence of BTEX in monitor well #1 which is directly down gradient of the subject ponds.

Proposed Closure Plan

Based on the data presented in this document and the historical monitor well data provided to your office in October of this year, EPNG proposes fill the ponds with a mixture of earth and manure. The manure will be added to promote the natural biodegradation of the shallow layer of contamination identified by this investigation. Each pond will be capped and contoured with a 6-8" layer of clay to prevent pooling and infiltration of stormwater. EPNG will continue to sample the existing monitor wells as instructed by The NMOCD (Water Quality Monitoring - NMOCD to Patrick Marquez, October 13, 1995).

Further justification for this proposal are as follows:

- Monitor well analyses show that no hydrocarbon constituents have moved off-site via the subsurface water generated by the operation of the ponds.

The analyses provided in the Annual Report show the absence of Benzene, Toluene, Ethylbenzene, Xylene in monitor wells 1-7.

- Presence of 50+ feet of low permeability shale is present above the regional aquifer at the Plant site.

Driller's log show that the Plant site is resting on less than fifty feet of sandy deposits above the lower shale unit of the Nacimiento Formation. Fifteen to Twenty feet of sandstone was encountered below the shale layer. Log provided under Tab 3.

- Depth to ground water is approximately 120 feet.

Driller's log reports that water was encountered at a depth of 120 feet in the Ojo Alamo Formation. No other water bearing zones were encountered to a total depth of 505 feet.

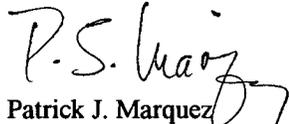
- All contact water is and will continue to go to the new lined ponds as directed by NMOCD.

Attachments

- Tab 1 A water table elevation map for all monitor wells at this facility.
- Tab 2 The geologic log for each boring and the monitor well and the as built well completion diagram for each monitor well.
- Tab 3 Driller's Log showing soil classifications to a depth of 500+ feet.

EPNG respectfully request approval to close the Chaco Ponds as described above. Should you require more information, please do not hesitate to call at 505-599-2175.

Thank you,

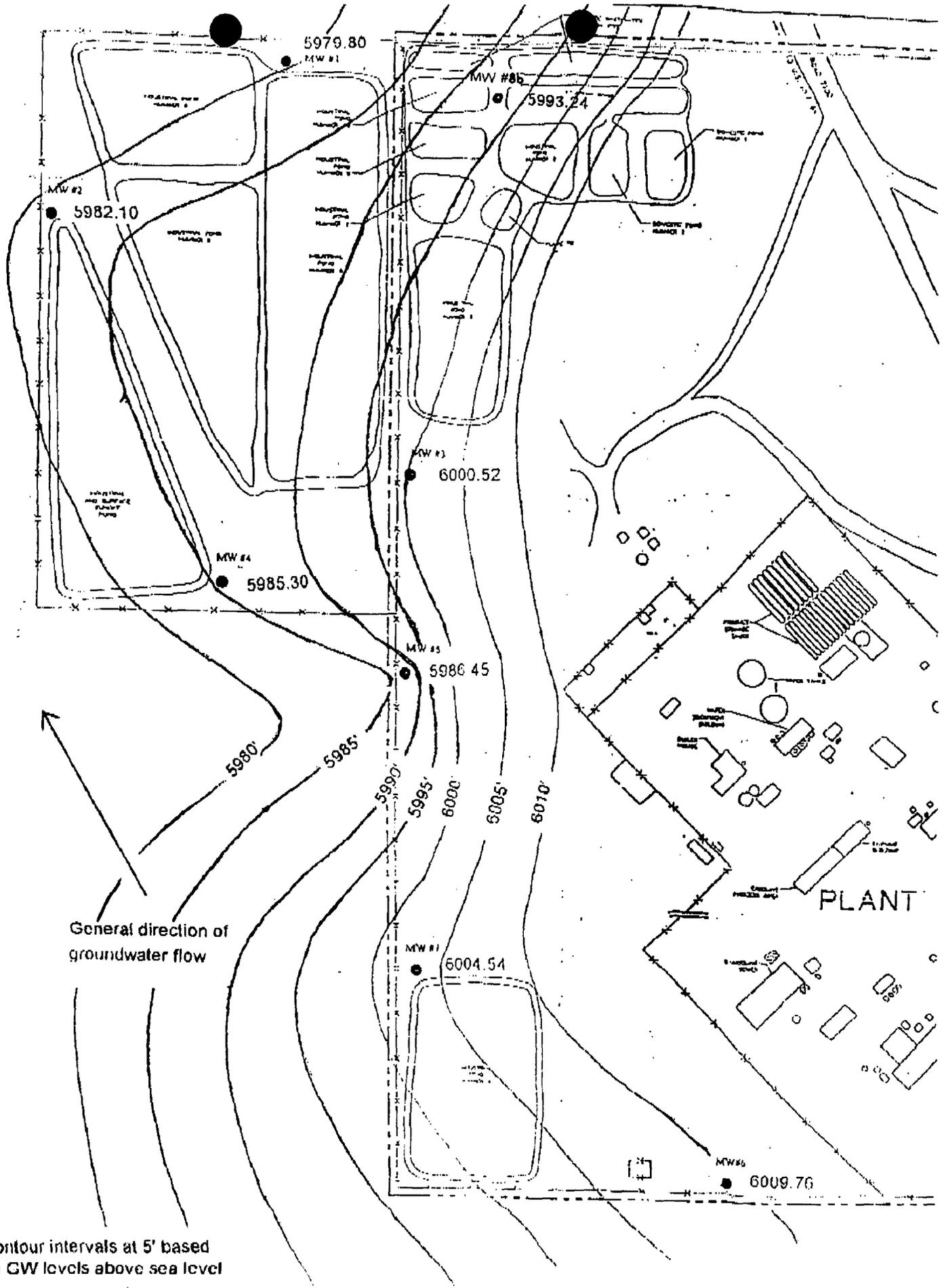

Patrick J. Marquez
Compliance Engineer

cc:

Denny Foutz NMOCD- Aztec
Sandra Miller/David Bays/File: 5212

Table 2

		Monitor Well 8b							
			Sample #951068						
Total Metals	Result	Units	Polynuclear Aromatics	Result	Units	Cations/Anions	Result	Units	
Aluminum	2.8	mg/l	Naphthalene	ND	ug/L	pH	8.02	umhos	
Arsenic	0.05	mg/l	Acenaphthylene	ND	ug/L	Alkalinity as CO3	0	ppm	
Barium	0.1	mg/l	1-Methylnaphthalene	10.5	ug/L	Alkalinity as HCO3	780	ppm	
Boron	0.4	mg/l	2-Methylnaphthalene	6J	ug/L	Calcium as Ca	13	ppm	
Cadmium	ND	mg/l	Acenaphthene	ND	ug/L	Magnesium and Mg	4	ppm	
Chromium	ND	mg/l	Fluorene	3.6	ug/L	Total Hardness as CaCO3	49	ppm	
Cobalt	ND	mg/l	Phenanthrene	ND	ug/L	Chloride as Cl	158	ppm	
Copper	ND	mg/l	Anthracene	ND	ug/L	Sulfate as SO4	289	ppm	
Iron	2.2	mg/l	Fluoranthene	ND	ug/L	Flouride as F	2.2	ppm	
Lead	ND	mg/l	Pyrene	ND	ug/L	Potassium as K	0.65	ppm	
Manganese	0.25	mg/l	Benzo(a)anthracene	ND	ug/L	Sodium	553	ppm	
Mercury	ND	mg/l	Chrysene	ND	ug/L	Total dissolved Solids	1424	ppm	
Molybdenum	ND	mg/l	Benzo(b)flouranthene	ND	ug/L	Conductivity	2280	umhos	
Nickel	ND	mg/l	Benzo(a)flouranthene	ND	ug/L	Nitrate as NO3-N	<0.1	ppm	
Selenium	ND	mg/l	Benzo(a)pyrene	ND	ug/L	Phosphate as PO4	4.2	ppm	
Silver	ND	mg/l	Dibenzo(a,h)anthracene	ND	ug/L				
Zinc	0.07	mg/l	Benzo(g,h,i)perylene	ND	ug/L				
BTEX (8020)			Indeno(1,2,3-c,d)pyrene	ND	ug/L				
Benzene	29.5	ppb							
Toluene	<2.5	ppb							
Ethyl Benzene	<2.5	ppb							
Total Xylenes	<7.5	ppb							
ND = Not Detected									
J = Estimate value. Below requested detection limits									



Contour intervals at 5' based on GW levels above sea level

CHACO PLANT MONITORING WELLS

WELL	Water Level
MW # 1	5979.80
MW # 2	5982.10
MW # 3	6000.52
MW # 4	5985.30
MW # 5	5986.45
MW # 6	6009.76
MW # 7	6004.54
MW # 8	5993.24

Cross-section AA

MW # 3	6000.52
MW # 5	5986.45
MW # 7	6004.54

Cross-section BB

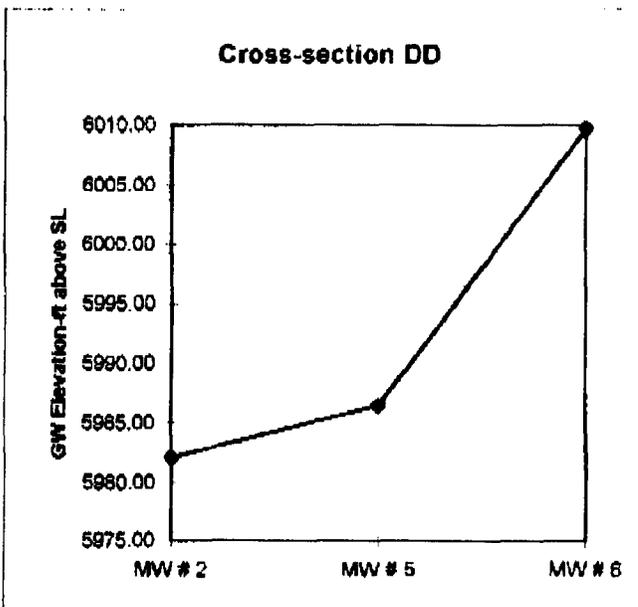
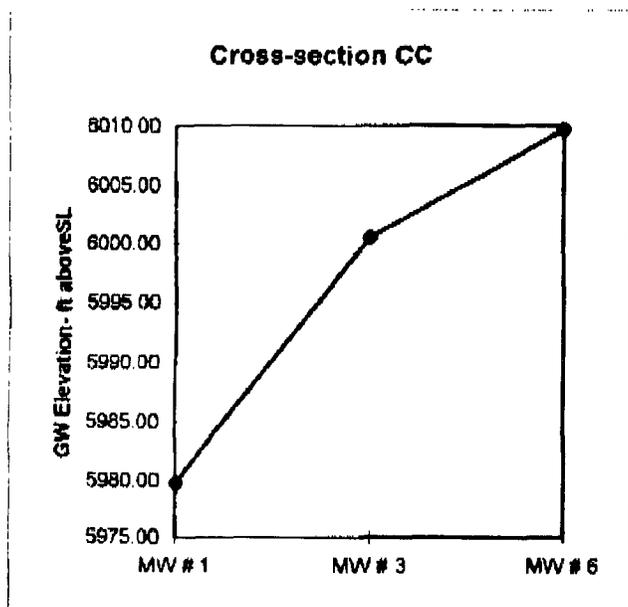
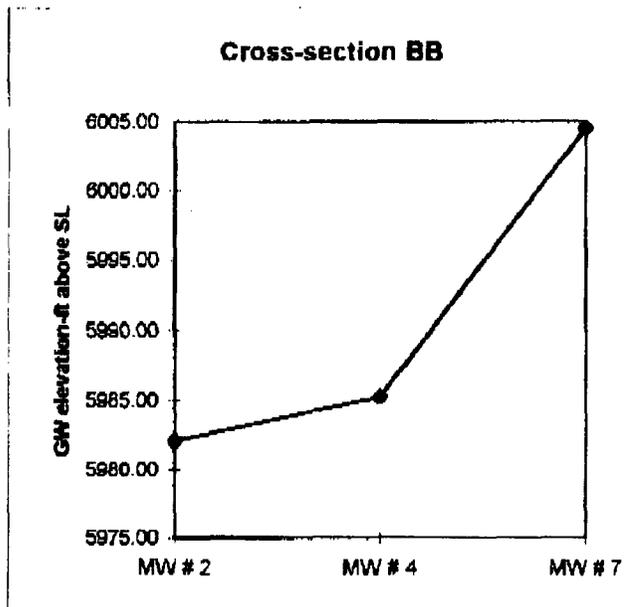
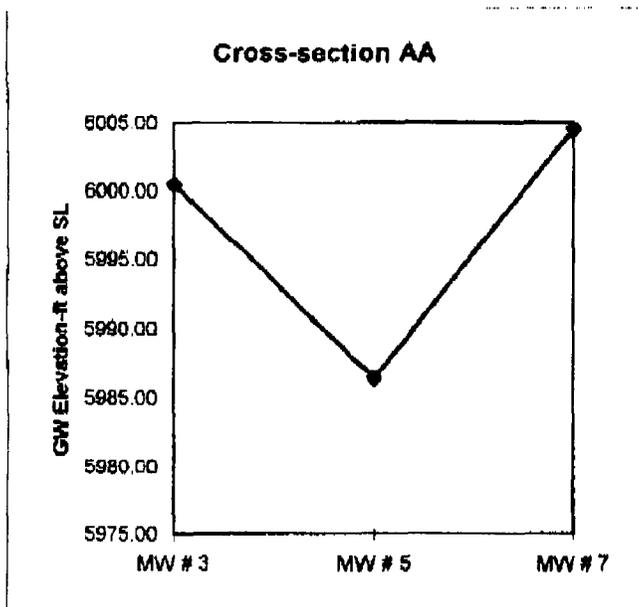
MW # 2	5982.10
MW # 4	5985.30
MW # 7	6004.54

Cross-section CC

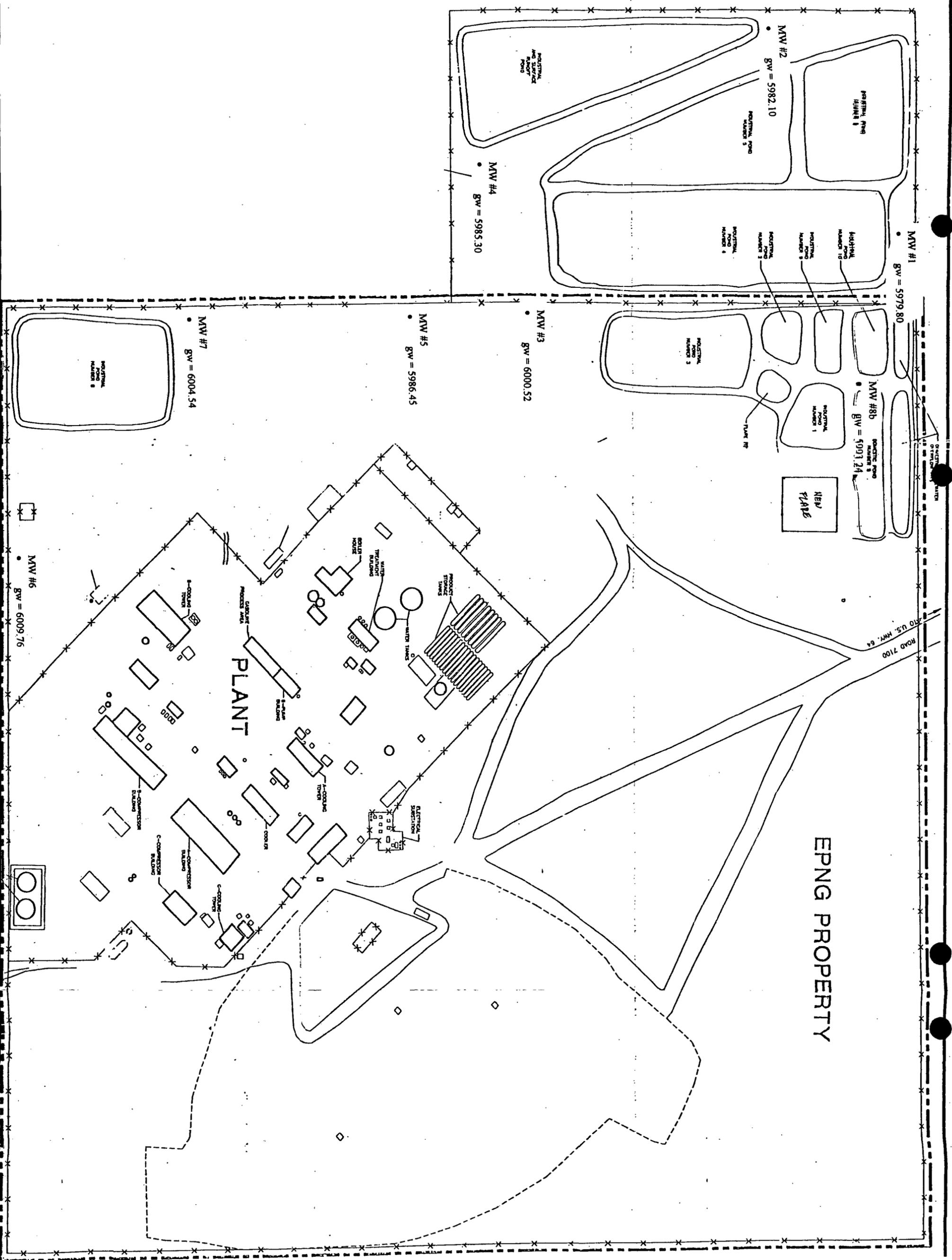
MW # 1	5979.80
MW # 3	6000.52
MW # 6	6009.76

Cross-section DD

MW # 2	5982.10
MW # 5	5986.45
MW # 6	6009.76



EPNG PROPERTY



Record of Subsurface Exploration

RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2368

Borehole # MW - 1
 Well # MW - 1
 Page 1 of 1

Project Name EPNG - Chaco Plant
 Project Number 10942 Phase 2001 / 77
 Project Location San Juan County, NM

Elevation _____
 Borehole Location MW - 1
 GWL Depth 15'
 Logged By Scott Pope
 Drilled By Rodgers Inc.
 Date/Time Started 9-29-93 / 0830
 Date/Time Completed 9-29-93 / 1000

Well Logged By Scott Pope
 Personnel On-Site Scott Pope
 Contractors On-Site Rodgers Inc.
 Client Personnel On-Site Gerry Garibay

Drilling Method HSA 6 1/4" ID
 Air Monitoring Method HNU, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5	SS 24	Brown SAND with Silt, fine-grained Sand, moist, loose.	SM		0	0	0	
10	2	10	SS 24	Brown SAND with Silt, fine-medium grained, trace Clay, moist, loose.			0	0	0	- Noted wet cuttings at 10'.
15	3	15	SS 24	Brown SAND, medium-coarse grained, trace Clay, trace Silt, moist, medium dense.		13.0	0	0	0	- Water estimated at 15'.
20	4	20	SS 9	Brown SAND, med.-coarse Sand, trace Silt, sporadic cementation. Noted coal fragments, moist, very dense, possibly cemented.	SW		0	0	0	- Sample refusal at 9'. - Noted saturated cuttings at 20.5'. Noted clay in cuttings.
25	5	25	SS 6	Brown cemented SAND, med.-coarse grained Sand, trace fine Gravel, some oxidants, moist, very dense.			0	0	0	- Sample refusal at 6'. *
				TOB - 23.8'						
30										
35										
40										

Comments: * Let sit to see if water would accumulate. Had 8" of water in augers. Discussed with Gerry Garibay. Will set well at 23'.

Geologist Signature

Scott T. Pope

RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 328-2282 FAX (505) 328-2388

Borehole # MW - 2
 Well # MW - 2
 Page 1 of 1

Project Name EPNG - Chaco Plant
 Project Number 10942 Phase 2001 / 77
 Project Location San Juan County, NM

Elevation _____
 Borehole Location MW - 2
 GWL Depth 15'
 Logged By Scott Pope
 Drilled By Rodgers Inc.
 Date/Time Started 9-30-93/1415
 Date/Time Completed 9-30-93/1545

Well Logged By Scott Pope
 Personnel On-Site Scott Pope
 Contractors On-Site Rodgers Inc.
 Client Personnel On-Site Kris Sinclair

Drilling Method HSA 6 1/4" ID
 Air Monitoring Method HNU, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: MDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5	SS 24	Brown-Gray CLAY with Silt and fine Sand, evaporate filling of voids, roots, Organic Matter, oxidizing, moist, very stiff.	CL	8.0	0	0	0	- Tight drilling.
10	2	10	SS 18	Lt. Brown Silty SAND, fine-medium grained, trace Clay, oxidizing, moist, dense.	SM	13.0	0	0	0	- Sample refusal at 18". Tight drilling continues.
15	3	15	SS 6	Brown-Lt. Brown SAND, coarse grained, trace Silt, trace coarse gravel, moist, very dense, cemented fragments.			0	0	0	- Tight drilling continues. - Sample Refusal at 6".
20	4	20	SS 6	Same as above. Saturated.	SW		0	0	0	- Sample Refusal at 6".
25	5	25	SS 6	Same as above. Sample was moist at bottom.			0	0	0	- Sample Refusal at 6". Seemed to be getting out of saturated zone. Will set well at 25'.
				TOB - 25'						
30										
35										
40										

Comments: _____

Geologist Signature _____

Scott T. Pope

RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2366

Borehole # MW - 3
 Well # MW - 3
 Page 1 of 1

Project Name EPNG - Chaco Plant
 Project Number 10942 Phase 2001 / 77
 Project Location San Juan County, NM

Elevation _____
 Borehole Location MW - 3
 GWL Depth 8'
 Logged By Scott Pope
 Drilled By Rodgers Inc.
 Date/Time Started 9-29-93 / 1230
 Date/Time Completed 9-29-93 / 1345

Well Logged By Scott Pope
 Personnel On-Site Scott Pope
 Contractors On-Site Rodgers Inc.
 Client Personnel On-Site Kris Sinclair
 Drilling Method HSA 6 1/4" ID
 Air Monitoring Method HNU, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5	SS 24	Brown SAND with Silt, fine grained Sand, trace organic matter, moist, loose.	SW	8.0	0	0	0	- Noted wet cuttings starting at 6'. - Water at 8'.
10	2	10	SS 24	Dark Gray-Black SAND, fine-medium grained, with Silt, saturated, loose.	SW	9.7				- Noted dark gray-black staining at 8-10' w/sewage odor. No PID readings.
				Grayish-Green Silty CLAY, with evaporate filling of voids, oxidizes, low plasticity, moist, very stiff.	CL	13.0				
15	3	15	SS 24	Grayish-Green Silty CLAY, w/Sand, fine-med. Sand, low plasticity, moist, stiff.		16.5	0	0	0	- Noted grey-dark grey discoloration throughout, slight sewage odor.
20	4	20	SS 3	Brown-Gray SAND, coarse grained, moist, very dense, possibly cemented.	SP		0	0	0	- Sample refusal at 3". No odors.
				TOB - 20'						
25										
30										
35										
40										

Comments: Will set well at 20'.

Geologist Signature Scott T. Pope

RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 328-2282 FAX (505) 328-2388

Borehole # MW - 4
 Well # MW - 4
 Page 1 of 1

Project Name EPNG - Chaco Plant
 Project Number 10942 Phase 2001 / 77
 Project Location San Juan County, NM

Elevation _____
 Borehole Location MW - 4
 GWL Depth 20'
 Logged By Scott Pope
 Drilled By Rodgers Inc.
 Date/Time Started 9-30-93 / 0945
 Date/Time Completed 9-30-93 / 1210

Well Logged By Scott Pope
 Personnel On-Site Scott Pope
 Contractors On-Site Rodgers Inc.
 Client Personnel On-Site Kris Sinclair

Drilling Method HSA 6 1/4" ID
 Air Monitoring Method HNU, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5	SS 18	Brown Silty Sandy CLAY, fine-medium Sand, trace moisture, very stiff, trace fine Gravel, evaporate filling of voids.	CL	8.0	0	0	0	
10	2	10	SS 16	Brown-Lt. Brown Silty SAND w/Clay, fine-med. Sand, some oxidizing, moist, very dense.	SM	11.0	0	0	0	- Sample Refusal at 16".
				Lt. Brown-Yellow CLAY w/Sand, trace moisture, very stiff (cuttings).	CL	13.0				- Very tight drilling. Had to add water (5 gal) to get cuttings to exit hole.
15	3	15	SS 6	Lt. Brown-Yellow SAND with Silt, trace Clay, medium-coarse Sand, moist, very dense, probably cemented.	SW	18.0	0	0	0	- Very hard drilling. - Driller felt like he got through tight layer at 17".
20	4	20	SS 6	Lt. Brown coarse SAND, trace Gravel, trace Silt, moist, very dense, possibly cemented.	SP	23.0	0	0	0	- Refusal at 6". - Had 4" water in hole. - Noted gravel in cuttings, some as large as 2". - Refusal at 12".
25	5	25	S 12	4" of Gray CLAY surrounding coarse, moist Sand and coarse Gravel, very stiff, changing to Yellow Sandy Gravelly CLAY with coarse to very coarse Sand and coarse Gravel. Noted some wet zones within sand and gravel.	CL	28.0	0	0	0	- Had approximately 2" of water enter hole after sitting 10 min. - Noted abundant saturated cuttings. - Driller noted changes at 27".
30	6	30	SS 24	Gray Silty CLAY w/periodic fine Sand lenses, oxidizing, trace coal, low plasticity, moist, very stiff. Appeared laminated in some areas.	CL					
				TOB - 30'						
35										
40										

Comments: Will set well at 28'.

Geologist Signature Scott T. Pope

RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Borehole # MW - 05
 Well # MW - 05
 Page 1 of 1

Project Name EPNG - Chaco Plant
 Project Number 12588 Phase 2001 / 77
 Project Location San Juan County, NM

Elevation _____
 Borehole Location MW - 05
 GWL Depth 23'
 Logged By Scott Pope
 Drilled By Rodgers Inc.
 Date/Time Started 6-27-94 / 1100
 Date/Time Completed 6-27-94 / 1345

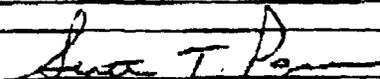
Well Logged By Scott Pope
 Personnel On-Site Scott Pope
 Contractors On-Site Rodgers Inc.
 Client Personnel On-Site Gerry Garibay

Drilling Method HSA 6 1/4" ID
 Air Monitoring Method HNU, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	3.5 - 5.5	SS 20"	Brown Sandy CLAY, trace Silt, Sand fine-medium grained, some evaporite filling of voids and oxi-stains, medium plasticity, medium stiff, moist.	CL	7.5	0	0	0	Driller noted change in conditions @ 7.5'.
10	2	8.5 - 10.5	SS 24"	Brown SAND, fine-medium grained, loose, moist to wet.	SW	10.5	0	0	0	
15	3	13.5 - 15.5	SS 6"	Brown-gray CLAY, trace fine Sand and Silt, stiff, moist, some evaporite filling of voids. Lt. Brown-Tan SAND, medium-coarse grained, very hard possibly cemented, moist.	CL	13.5	0	0	0	Refusal @ 6".
20	4	18.5 - 20.5	SS 8"	Tan-Buff SAND, same as above.	SW		0	0	0	Refusal @ 8".
25	5	23.5 - 25.5	SS 8"	Lt. Brown-Buff SAND, fine grained, very hard, trace moisture, probably cemented. Lt. Brown-Buff SAND, coarse grained, trace fine Gravel, trace Clay, moist-wet.	SP	24	0	0	0	Refusal @ 8". Noted 1" water in bottom of hole on driller's taps.
30	6	28.5 - 30.5	SS 10"	Lt. Brown-Buff silty SAND, fine grained, very hard, moist, probably cemented. TOB 29.2'	SW	28.5	0	0	0	Refusal @ 10". - Hole open to 28'. - Pulled auger up 2' to let water accumulate in borehole. Water came up to 25'. - Discussed well completion with Gerry Garibay, will set @ 28' with 20' of screen.
35										
40										

Comments:

Geologist Signature



RECORD OF SUBSURFACE EXPLORATION

Burlington Environmental Inc.
 4000 Marvée Road
 Farmington, New Mexico 87401
 (506) 326-2262 FAX (506) 328-2388

Borehole # MW - 06
 Well # MW - 06
 Page 1 of 1

Project Name EPNG - Chaco Plant
 Project Number 12588 Phase 2001 / 77
 Project Location San Juan County, NM

Elevation _____
 Borehole Location MW - 06
 GWL Depth 11.5'
 Logged By Scott Pope
 Drilled By Rodgers Inc.
 Date/Time Started 6-28-94 / 0745
 Date/Time Completed 6-28-94 / 0910

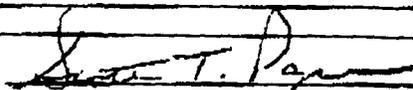
Well Logged By Scott Pope
 Personnel On-Site Scott Pope
 Contractors On-Site Rodgers Inc.
 Client Personnel On-Site None

Drilling Method HSA 6 1/4" ID
 Air Monitoring Method HNU, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: MDU			Drilling Conditions & Blow Counts
							BZ	SH	S	
0										
5	1	3.5 - 5.5	SS 12"	Brown-Lt. Brown SAND, fine grained, trace Silt, some evaporite filling of voids, very hard, moist.	SP		0	0	0	Refusal @ 12".
10	2	8.5 - 10.5	SS 24"	Brown SAND, fine grained, trace Silt, medium dense, moist to wet.			0	0	0	
15	3	13.5 - 15.5	SS 24"	Brown CLAY, with Silt and fine Sand, stiff, moist, evaporite filling of voids.	CL	13.5	0	0	0	
25				TOB - 22.0'						Pull augers up 1' to let water accumulate. Water came up 11.5' in borehole. Will set well @ 22.0'. - Driller felt like lithology changed to sandstone @ 19', but no cuttings to show change. - No additional samples taken past 15.5'.
30										
35										
40										

Comments:

Geologist Signature



RECORD OF SUBSURFACE EXPLORATION

Bartington Environmental Inc.
 4000 Merros Road
 Farmington, New Mexico 87401
 (505) 326-2252 FAX (505) 326-2388

Borehole # MW - 07
 Well # MW - 07
 Page 1 of 1

Project Name EPNG - Chaco Plant
 Project Number 12588 Phase 2001 / 77
 Project Location San Juan County, NM

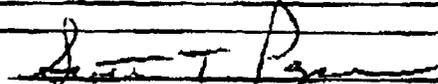
Elevation _____
 Borehole Location MW - 07
 GWL Depth 5'
 Logged By Scott Pope
 Drilled By Rodgers Inc.
 Date/Time Started 6-27-94 / 1525
 Date/Time Completed 6-27-94 / 1615

Well Logged By Scott Pope
 Personnel On-Site Scott Pope
 Contractors On-Site Rodgers Inc.
 Client Personnel On-Site Gerry Garibay
 Drilling Method HSA 6 1/4" ID
 Air Monitoring Method HNU, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	SH	S	
0										
5	1	3.5 - 5.5	SS 20"	Brown SAND, fine grained, trace Silt, loose saturated at bottom.	SP		0	0	0	- Very easy drilling.
10	2	8.5 - 10.5	SS 24"	Same as above with SAND fine to medium grained.			0	0	0	- Will drill to 17' and set well. - No samples taken after 10.5'.
				TOB 17.5'						
15										
20										
25										
30										
35										
40										

Comments:

Geologist Signature



RECORD OF SUBSURFACE EXPLORATION

Borehole # BH#1
 Well # _____
 Page 1 of 1

PHILIP ENVIRONMENTAL
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Project Name EPNG Pits
 Project Number 14509 Phase _____
 Project Location Flare Pit

Elevation Bottom of pit ~ 10' deep (Below Berm)
 Borehole Location Chaco Plant
 GWL Depth Estimated @ 11'
 Logged By CM Chance
 Drilled By K. Padilla
 Date/Time Started 10/11/95 - 1015
 Date/Time Completed 10/11/95 - 1200

Well Logged By CM Chance
 Personnel On-Site F. Rivera, D. Charlie
 Contractors On-Site _____
 Client Personnel On-Site P. Marquez
 Drilling Method 4 1/4" I.D. HSA
 Air Monitoring Method P10, C6T

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: ppm			Drilling Conditions & Blow Counts
							BZ	BH	SWS	
0				Fill to ~ 3'						
5	1	5-7	5"	Gry silty SAND, vF sand, loose, saturated, moist	SM		0	20	48/138	1016m
10	2	10-12	10	Blk silty SAND, vF sand, loose, saturated.		12'	0	30	12/NA	1021 Sample saturated. No Headspace GW est. @ 11'
15	3	15-17	8	lt Br silty CLAY, med stiff, low plastic, saturated			0	18	2/NA	1027 Sample sat. No HS
20	4	20-22	24	lt Br silty CLAY, stiff, non plastic, dry	CL		0	0	0/0	1039
25	5	25-27	23	lt Br silty CLAY, tr vF sand, v. stiff, non plastic, dry			0	0	0/0	1102
30	6	30-32	12	Br silty CLAY, tr vF sand, v. stiff, non plastic, tr evaporite filling			0	0	0/0	1113
35				TDB 32'						
40										

Comments: CMC 142 (5-7') + CM (14) (30-32') sent to lab (BTEX, TPH). After talking with P. Marquez, will drill to 30' to ensure below GW - BH grouted to surface by tremie. Note: GW collected on all split spoon samples below -11'

Geologist Signature CM Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL

4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Borehole # BH#2
 Well # _____
 Page 1 of 1

Project Name EPNG PITS
 Project Number 14509 Phase 6010.77
 Project Location Chase Plant BH-2

Elevation ~5' below berm
 Borehole Location Chase Plant
 GWL Depth _____
 Logged By CM Chance
 Drilled By K. Padilla
 Date/Time Started 10/11/95 - 1255
 Date/Time Completed 10/11/95 - 1500

Well Logged By CM Chance
 Personnel On-Site F. Rivera, D. Charlie
 Contractors On-Site _____
 Client Personnel On-Site P. Marquez
 Drilling Method 4 1/4" I.D. HSA
 Air Monitoring Method PIR, CGT

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0				Fill to ~5'						
5	1	5-7	0	No Recovery			0	8	NA	1302h -ctngs wet
10	2	10-12	6"	BIK SAND, vF sand, med dense moist	SM	12'	0	6	0/345	1307 -GW @ ~12' -ctngs sat. @ 13'
15	3	15-17	18"	lt Br silty CLAY, stiff, med plastic, tr evaporite fillings dry	CL		0	4	0/108	1318
20	4	20-22	14"	lt Br sandy CLAY, vF sand, stiff, non plastic, sl moist			0	8	0/0	1327
25	5	25-27	12"	lt Br SAND, vF-F sand, dense, dry	SM	23'	0	6	0/0	1338
30	6	30-32	12"	lt Br/yellow/dk Br mottled CLAY, dense, dry	CL	27'	0	3	0/0	1353
				TDB 32'						
35										
40										

Comments: Note: W From above is collecting on split spoon. CMC 144 (10-12') sent to lab for TPTI.
CMC 145 (30-32') sent to lab for BTEX, TPH. BH growth. D to surface by
Tremie

Geologist Signature CM Chance

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH # 3
 Well # _____
 Page 1 of 1

PHILIP ENVIRONMENTAL
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Project Name EPNG PITS
 Project Number 14509 Phase 6010.77
 Project Location Chaco Plant BH-3

Elevation On Berm
 Borehole Location Chaco Plant
 GWL Depth 10.5'
 Logged By CM Chance
 Drilled By K. Padilla
 Date/Time Started 10/12/95 - 0735
 Date/Time Completed 10/12/95 - 0930

Well Logged By CM Chance
 Personnel On-Site F. Rivera, D. Charlie
 Contractors On-Site _____
 Client Personnel On-Site P. Marquez
 Drilling Method 4 1/2 I.D. HSA
 Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: TDU			Drilling Conditions & Blow Counts
							BZ	BH	9/11	
0										
5	1	5-7	14	Blk sandy CLAY, vf sand, med stiff, low plastic, dry	CL	8	0	0	1/25	-0740 hr
10	2	10-12	8	Gray SAND, vf-f sand, med dense, moist	SM		0	3	1/4	-0746 -GW @ 10.5' Black
15	3	15-17	24	Blk silty SAND, vf-f sand, med dense, wet			0	1	0/NA	-0756 -Sample saturated No Headspace
20	4	20-22	24	AA Lt Br sandy CLAY, vf sand, med stiff, low plastic, sl moist	CL	20	0	3	0/0	-0807
25	5	25-27	20	AA		26	0	3	0/0	-0818
30	6	30-32	18	Lt Br clayey SAND, vf-f sand, dense, dry; tr evaporite fillings Dk Br CLAY, v. stiff, low plastic, dry	SC CL	31.5	0	0	0/0	-0826
35				TDB 321						
40										

Comments: Note: all samples below Gw had Gw collecting on split open. CMC 146 (5-7) sent to lab for TPH. CMC 147 (30-32) sent to lab for BTEX, TPH. BH grouted to surface by tremie

Geologist Signature CM Chance

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH #4
 Well # _____
 Page 1 of 1

PHILIP ENVIRONMENTAL

4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Project Name EPNG PMS
 Project Number 14509 Phase 6010.77
 Project Location Chaco Plant Industrial Pond #2

Elevation ^{inc Barm} Surface Level inside Pit
 Borehole Location Chaco Plant
 GWL Depth _____
 Logged By CM Chance
 Drilled By K. Padilla
 Date/Time Started 10/11/95 - 0755
 Date/Time Completed 10/11/95 - 1000

Well Logged By CM Chance
 Personnel On-Site F. Rivera, P. Charita
 Contractors On-Site _____
 Client Personnel On-Site P. Marquez
 Drilling Method 4 1/4 I.D.HSA
 Air Monitoring Method PIO, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: <u>NDU</u>			Drilling Conditions & Blow Counts
							BZ	BH	S	
0				Fill to ~10'						
13-15	1	24"		Br SAND, v-f sand, well sorted, loose, saturated	SM		0	8	$\frac{0}{NA}$	-0810hr -sample saturated -BW est. @ 14'
20-22	2	12"		Br CLAY, tr v-f sand, med stiff, non plastic, dry	CL	20.5'	0	72	$\frac{0}{0}$	-0904
				TOB 22'						

Comments: CMC 140 (13-15) sent to lab (BTEX, TPH). CMC 141 (20-22) TPH, BTEX, MAC 142 (-)
BTEX, TPH. BH grouted to surface by tremie
Note: GW was collecting on split screen below ~14'

Geologist Signature CM Chance

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-5
 Well # _____
 Page 1 of 1

PHILIP ENVIRONMENTAL
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Project Name EPNG PITS
 Project Number 14509 Phase 6000.60
 Project Location Industrial Pond #1 BH-5
 Well Logged By C.M. Chance
 Personnel On-Site F. Rivera, D. Charlie
 Contractors On-Site _____
 Client Personnel On-Site P. Marquez
 Drilling Method 4 1/4 I.D. HSA
 Air Monitoring Method PID, CGT

Elevation On berm
 Borehole Location Chaco Plain
 GWL Depth 12.7'
 Logged By C.M. Chance
 Drilled By R. Padilla
 Date/Time Started 10/12/95-0940
 Date/Time Completed 10/12/95-1115

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: <u>ppm</u>			Drilling Conditions & Blow Counts
							BZ	BH	S/M	
0				Fill to ~ 8'						
10	1	10-12	4	Blk SAND, vF-F sand, med dense, sl moist			0	0	4/209	-0945 hrs -GW@12.7' Black
15	2	15-17	24	Gr. SAND, vF-F sand, dense, wet, Blk silty SAND, vF sand, dense, moist			0	0	0/2	-0954
20	3	20-22	10	lt Br sandy CLAY, vF sand, dense, dry, tr evaporite filling			0	0	0/0	-1001
25	4	25-27	18	AA DR Br CLAY, v. stiff, low plastic, dry lt Br clayey SAND, vF-F sand, dense, dry, organic fragments.			0	0	0/0	-1010
30	5	30-32	8	Br sandy CLAY, v. stiff, non plastic, dry, tr evaporite filling TABJ2'			0	0	0/2	-1017
35										
40										

Comments: CMC 148 (10-12) sent to lab (BTEX, TPH). Sample had highest HS also CMC 149 (30-32) sent to lab (BTEX, TPH). BH generated to surface by tremie
PID checked against cal gas & is accurate

Geologist Signature C.M. Chance

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-6
 Well # _____
 Page 1 of 1

PHILIP ENVIRONMENTAL
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Project Name EPNG PITS
 Project Number 14509 Phase 6000-60
 Project Location Chaco Plant BH-6

Elevation On beam
 Borehole Location Chaco Plant
 GWL Depth 13.6'
 Logged By CM Chance
 Drilled By R. Padilla
 Date/Time Started 10/12/95-1335
 Date/Time Completed 10/12/95-1515

Well Logged By CM Chance
 Personnel On-Site F. Rivera, D. Charlie
 Contractors On-Site _____
 Client Personnel On-Site P. Marquez
 Drilling Method 4 1/2" I.D. HSA
 Air Monitoring Method PID, CGT

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: ^{PPM} NO2			Drilling Conditions & Blow Counts
							BZ	BH	S/H	
0										
5	1	5-7	1D	Lt grey SAND, vF sand, v. loose, sl moist	SM		0	0	0/16	-1342
				Br SAND, vF sand, v. loose, sl moist						
10	2	10-12	8	Lt Grey SAND, vF sand, loose, sl moist	SM		0	0	2/131	-1347
				Br clayey SAND, vF sand, loose, sl moist						-GW@13.6'
15	3	15-17	1D	DK grey-gry SAND, vF sand, med dense, wet	SM	17	0	1	0/NA	-1352 -No HS. Sample Saturated
20	4	20-22	1D	Lt Br/Gry mottled CLAY, tr vF sand, stiff, med plastic, dry			0	0	0/0	-1406
25	5	25-27	6	Lt Br sandy CLAY, v. stiff, non plastic, dry	CL		0	0	0/0	-1415
30	6	30-32	12	Br/DKBr mottled sand CLAY, vF sand, v. stiff, dry, tr vF sand Partings, tr evaporite fillings			0	0	0/0	-1423
				TDB 32'						
35										
40										

Comments: CMC 152 (10-12') sent to lab (TPH) CMC 153 (30-32) sent to lab (BTEX, TPH)
BH grouted to surface w/ tremie

Geologist Signature Corey Chance

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH-7
 Well # _____
 Page 1 of 1

PHILIP ENVIRONMENTAL
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Project Name EPNG PITS
 Project Number 14509 Phase 6000.60
 Project Location Chaco Plant BH-7

Elevation On berm
 Borehole Location Chaco Plant
 GWL Depth 20.3'
 Logged By C.M. Chance
 Drilled By R. Padilla
 Date/Time Started 10/12/95-1125
 Date/Time Completed 10/12/95-1315

Well Logged By C.M. Chance
 Personnel On-Site F. Rivera, D. Charlie
 Contractors On-Site _____
 Client Personnel On-Site P. Marquez
 Drilling Method 4 1/4 I.D. HSA
 Air Monitoring Method PID, CGT

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: ppm			Drilling Conditions & Blow Counts
							BZ	BH	S/H	
0										
5	1	5-7	5	DK gry SAND, vF sand, med dense, sl moist			0	0	5/27	-1129 m
10	2	10-12	18	lt gry SAND, vF sand, med dense, sl moist			0	0	4/32	-1133
15	3	15-17	16	BIK SAND, vF sand, med dense, moist			0	0	0/0	-1139
20	4	20-22	18	Alt Br silty CLAY, stiff, nonplastic, dry			0	0	0/0	-1144 -GWL @ 20.5' after setting 10 min -CTNGS SATURATED
25	5	25-27	8	BIK clay SAND, vF sand, dense, wet lt Br - Redish Br SAND, vF sand, v. dense, dry			0	0	0/0	-1202
30	6	30-32	10	lt Br silty SAND, vF sand, v. dense, dry, to evaporite fillings			0	0	0/0	-1219
				TOB 32'						
35										
40										

Comments: CMC150 (10-12) sent to lab (TPH). CMC151 (30-32) sent to lab (BTEX, TPH)
BH grouted to surface w/ tremie

Geologist Signature C.M. Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL

4000 Monroe Road
 Farmington, New Mexico 87401
 (606) 326-2262 FAX (606) 326-2388

Borehole # BHT BH 8a
 Well # _____
 Page 1 of 2

Project Name EPNG PITS
 Project Number 14509 Phase 6000 77-60
 Project Location Chaco Plant BH-8a

Elevation On berm
 Borehole Location Q - S - T - R
 GWL Depth _____
 Logged By CM CHANCE
 Drilled By K Padilla
 Date/Time Started 10/12/95-0820
 Date/Time Completed 10/12/95-1200

Well Logged By CM Chance
 Personnel On-Site K Padilla, F. Rivera, D. Charlie
 Contractors On-Site _____
 Client Personnel On-Site _____
 Drilling Method 4 1/4" ID HSA 8 1/4" D
 Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring			Drilling Conditions & Blow Counts
							Unite: PPM	S	HS	
							BZ	BH	HS	
0				Fill to ~10'						
10	1	10-12	4	Br SILT, loose, dry			0	0	0	-0830h
15	2	15-17	5	Br/gry mottled CLAY, tr vf sand, med stiff, low plastic, dry			0	0	0	-0844
20	3	20-22	4	A/A			0	0	0	-0904
25	4	25-27	5	lt Br SAND, vf-f sand, v. dense, sl cemented, dry			0	0	0	-v. hard drag -1015 -Refusal @ 23' w 8 1/4.
30	5	30-32	4	lt Br SAND, F-med sand, v. dense, dry			0	0	0	-1026
35	6	35-37	4	A/A			0	0	0	-1039
40	7	40-42	4	Br/off wh SAND, vf-f, tr med sand, occ. cementation dr o			0	0	0	-1040

Comments: Refusal w/ 8 1/4 I.D. augers @ 23'. Will pull & drill pilot hole w/ 4 1/4
CMC 154 (40-42) sent to lab (BTEX+PH). Refusal @ 45' w/ 4 1/4 augers. Grout
BH to surface. Discussed w/ P. Marquez & will move S. to install MW

Geologist Signature Ray Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL

4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Borehole # BH-1 BH 8a
 Well # _____
 Page 2 of 2

Project Name EPNG PITS
 Project Number 14509 Phase 6000 77
 Project Location Chase Plant BH-8a

Elevation _____
 Borehole Location Q - S - T - R
 GWL Depth _____
 Logged By CM CHANCE
 Drilled By K Padilla
 Date/Time Started 10/12/95-0820
 Date/Time Completed 10/12/95-1200

Well Logged By CM Chance
 Personnel On-Site K Padilla, F. Rivera, D. Charles
 Contractors On-Site _____
 Client Personnel On-Site _____
 Drilling Method 4 1/4" ID HSA
 Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	HS	
40										
45	8	45-45.5	0	No recovery TDB 45.5'			0	0	NA - Refusal	
50										
55										
60										
65										
70										
75										
80										

Comments: _____

Geologist Signature _____

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Borehole # BHT-BH-86
 Well # MW-8
 Page 1 of 1

Project Name EPNG PITS
 Project Number 14509 Phase 6000 7760
 Project Location Chaco Plant MW-8

Elevation On berm
 Borehole Location Q - S - T - R Chaco Plant
 GWL Depth 16.2'
 Logged By CM CHANCE
 Drilled By K Padilla
 Date/Time Started 10/12/95 - 1335
 Date/Time Completed 10/12/95 - 1525

Well Logged By CM Chance
 Personnel On-Site K Padilla, F. Rivera & Charlie
 Contractors On-Site _____
 Client Personnel On-Site _____
 Drilling Method 4 1/4" ID HSA
 Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring			Drilling Conditions & Blow Counts
							Units: PPM	BZ	BH	
0										
5	1	5-10	10	Br SILT, v. soft, dry, r clay			0	0	0	1338
10	2	10-12	8	lt Gray SILT, v. soft, dry, r clay			0	0	0	1343
15	3	15-17	6	lt Gray silty SAND, v. F sand, loose, moist			0	0	0	1349 - Split Spoon has moisture air
20	4	20-22	12	lt gray/Br mottled CLAY, soft, med plastic, moist			0	0	0	Water dripping from SS 1355
25				Gray saturated CTNGS						
30				TDB 26'						
35										
40										

Comments: GWL @ 16.2' after setting 15 min. CMC 155 (15-17') sent to lab (BT EX TPH)
Will set well at 26' BGS

Geologist Signature CM Chance

MONITORING WELL INSTALLATION DIAGRAMS

MONITORING WELL INSTALLATION RECORD

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2282 FAX (505) 326-2388

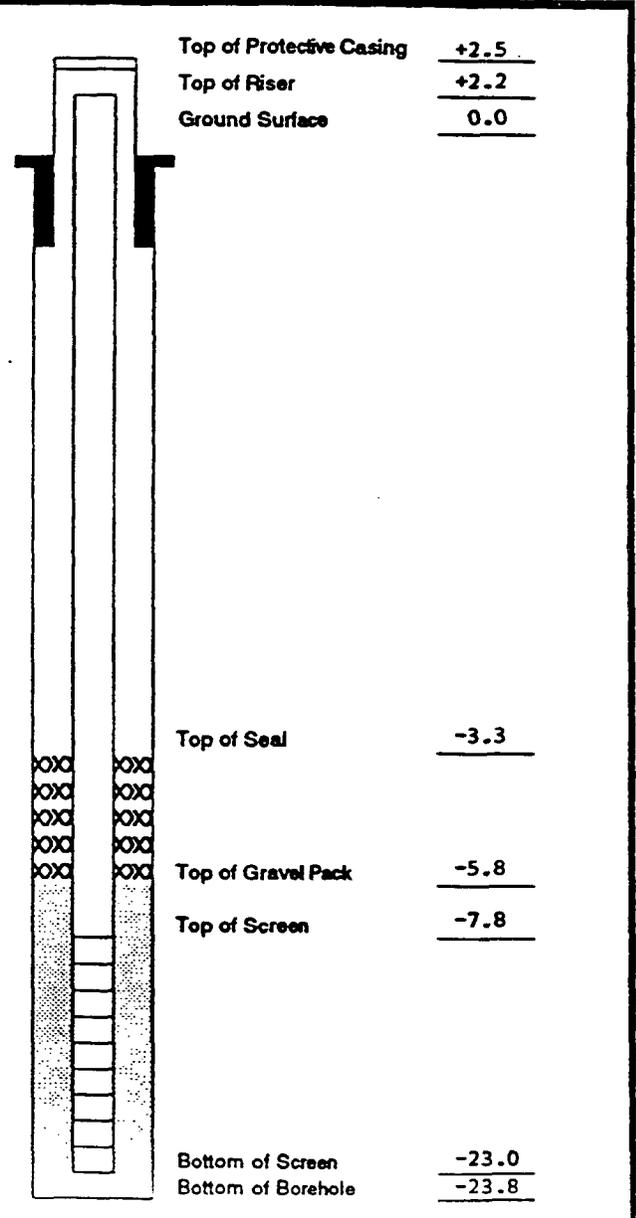
Borehole # MW-1
 Well # MW-1
 Page 1 of 1

Project Name EPNG CHACO
 Project Number 10942 Phase 2001
 Project Location CHACO PLANT

Elevation _____
 Well Location MW-1
 GWL Depth 15.0
 Installed By RODGERS, INC.
 Date/Time Started 9/29/93 1000
 Date/Time Completed 9/29/93 1100

On-Site Geologist S. POPE
 Personnel On-Site S. POPE
 Contractors On-Site RODGERS, INC.
 Client Personnel On-Site GERRY GARIBAY
KRIS SINCLAIR

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing	8" STEEL	+2.5
Bottom of Protective Casing		-1.5
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete	PREMIX	+ .3
Bottom of Concrete		0.0
Top of Grout	5% BENTONITE	0.0
Bottom of Grout		-3.3
Top of Well Fiser	4" SCH 40 PVC	+2.2
Bottom of Well Fiser		-7.8
Top of Well Screen	4" SCH 40 PVC	-7.8
Bottom of Well Screen	.010 SLOT	-23.0
Top of Peltonite Seal	1/4" BENTONITE PELLETS	-3.3
Bottom of Peltonite Seal		-5.8
Top of Gravel Pack	10-20 SILICA	-5.8
Bottom of Gravel Pack		-23.8
Top of Natural Cave-In		N/A
Bottom of Natural Cave-In		N/A
Top of Groundwater		-15.0
Total Depth of Borehole		-23.8



Comments: 8 BAGS OF SAND, 1 BUCKET OF PELLETS

Geologist Signature

S. T. Pope

MONITORING WELL INSTALLATION RECORD

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Borehole # MW-2
 Well # MW-2
 Page 1 of 1

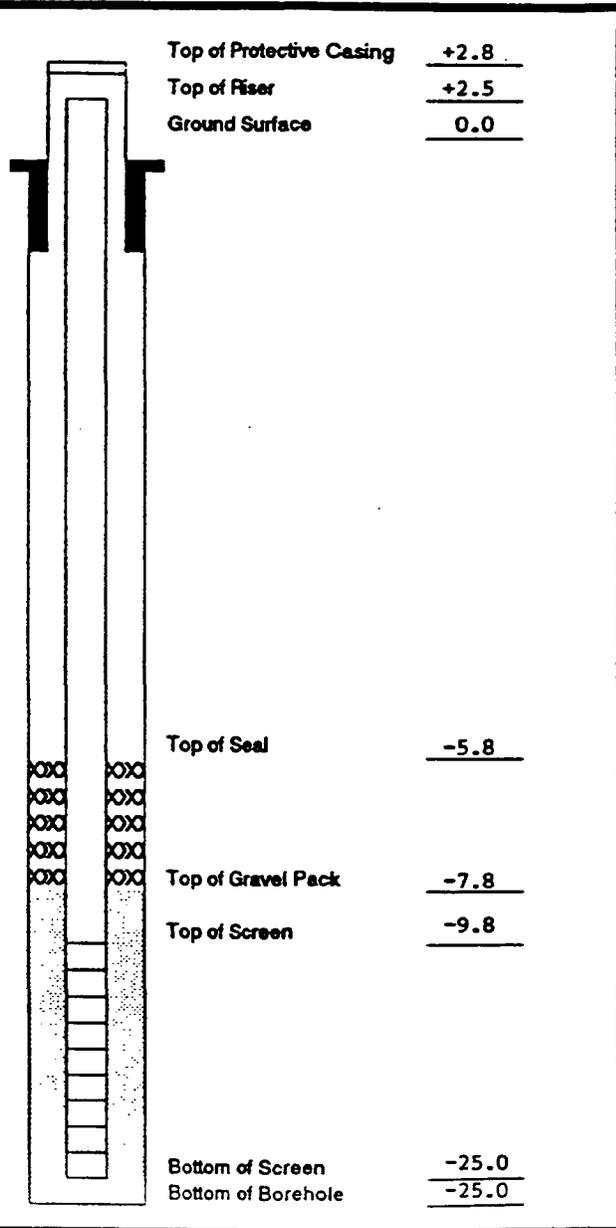
Project Name EPNG CHACO
 Project Number 10942 Phase 2001
 Project Location CHACO PLANT

Elevation _____
 Well Location MW-2
 GWL Depth 15'
 Installed By RODGERS, INC.

On-Site Geologist S. POPE
 Personnel On-Site S. POPE
 Contractors On-Site RODGERS, INC.
 Client Personnel On-Site KRIS SINCLAIR

Date/Time Started 9/30/93 1545
 Date/Time Completed 9/30/93 1700

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing	8" STEEL	-2.8
Bottom of Protective Casing		-1.2
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete	PREMIX	+ .3
Bottom of Concrete		0.0
Top of Grout	5% BENTONITE	0.0
Bottom of Grout		-5.8
Top of Well Fiser	4" SCH 40 PVC	+2.5
Bottom of Well Fiser		-9.8
Top of Well Screen	4" SCH 40 PVC	-9.8
Bottom of Well Screen	.010 SLOT	-25.0
Top of Peltonite Seal	1/4" BENTONITE PELLETS	-5.8
Bottom of Peltonite Seal		-7.8
Top of Gravel Pack	10-20 SILICA	-7.8
Bottom of Gravel Pack		-25.0
Top of Natural Cave-In		N/A
Bottom of Natural Cave-In		N/A
Top of Groundwater		-15.0
Total Depth of Borehole		-25.0



Comments: 16.3 WATER LEVEL AFTER INSTALLATION, 7.0 BAGS OF SAND, 1 BUCKET OF PELLETS

Geologist Signature

S. Pope

MONITORING WELL INSTALLATION RECORD

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 328-2282 FAX (505) 326-2388

Borehole # MW-3
 Well # MW-3
 Page 1 of 1

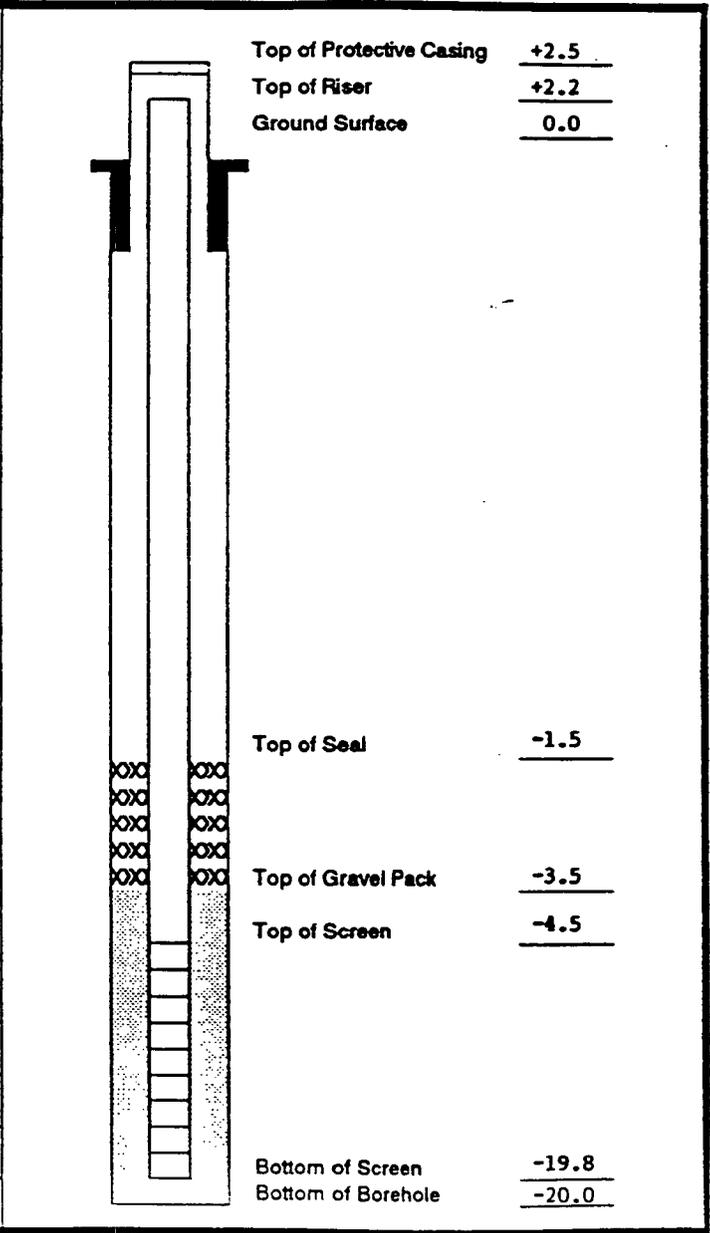
Project Name EPNG CHACO PLANT
 Project Number 10942 Phase 2001
 Project Location CHACO PLANT

Elevation _____
 Well Location MW-3
 GWL Depth 8'
 Installed By RODGERS, INC.

On-Site Geologist S. POPE
 Personnel On-Site S. POPE
 Contractors On-Site RODGERS, INC.
 Client Personnel On-Site KRIS SINCLAIR

Date/Time Started 9/29/93 1345
 Date/Time Completed 9/29/93 1500

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing	8" STEEL	+2.5
Bottom of Protective Casing		-1.5
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete	PREMIX	+3
Bottom of Concrete		0.0
Top of Grout	5% BENTONITE	0.0
Bottom of Grout		-1.5
Top of Well Riser	4" SCH 40 PVC	+2.2
Bottom of Well Riser		-4.5
Top of Well Screen	4" SCH 40 PVC	-4.5
Bottom of Well Screen	.010 SLOT	-19.8
Top of Peltonite Seal	1/4" BENTONITE PELLETS	-1.5
Bottom of Peltonite Seal		-3.5
Top of Gravel Pack	10-20 SILICA	-3.5
Bottom of Gravel Pack		-20.0
Top of Natural Cave-In		N/A
Bottom of Natural Cave-In		N/A
Top of Groundwater		-8.0
Total Depth of Borehole		-20.0



Comments: 6 BAGS OF SAND, 1 1/2 BUCKET OF PELLETS
WELL WAS PULLED UP 3" DUE TO BRIDGING SAND. WATER LEVEL AFTER INSTALLATION 11.3' BGS.

Geologist Signature *S. T. Pope*

MONITORING WELL INSTALLATION RECORD

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

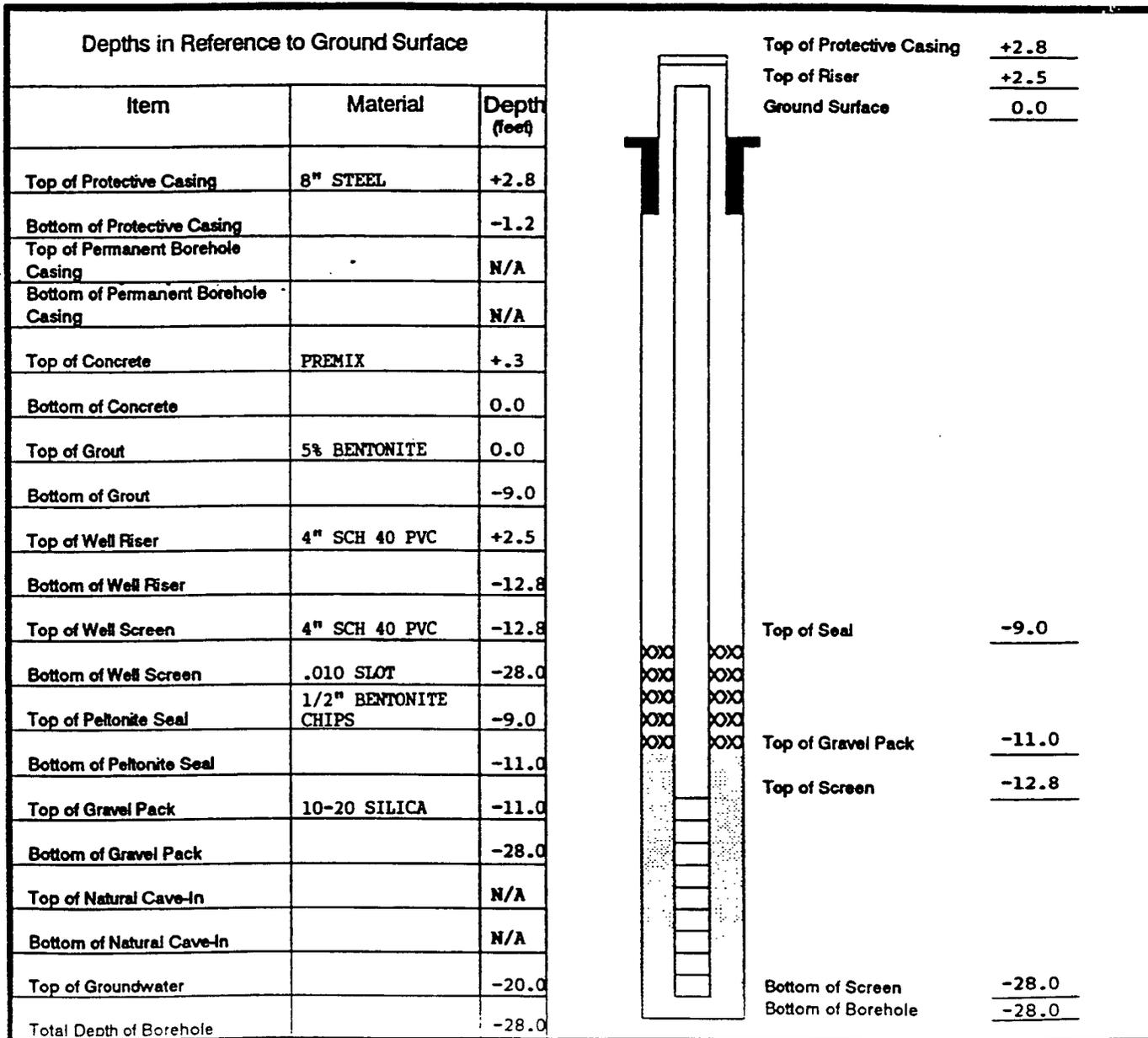
Borehole # MW-4
 Well # MW-4
 Page 1 of 1

Project Name EPNG CHACO
 Project Number 10942 Phase 2001
 Project Location EPNG CHACO PLANT

Elevation _____
 Well Location MW-4
 GWL Depth 20'
 Installed By RODGERS, INC.

On-Site Geologist S. POPE
 Personnel On-Site S. POPE
 Contractors On-Site RODGERS, INC.
 Client Personnel On-Site KRIS SINCLAIR

Date/Time Started 9/30/93 1210
 Date/Time Completed 9/30/93 1330



Comments: WATER LEVEL AT 17.5 AFTER INSTALLATION. 7.5 BAGS OF SAND, 1 1/2 BUCKETS OF SAND

Geologist Signature *Steve T. Pope*

MONITORING WELL INSTALLATION RECORD

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 328-2282 FAX (505) 328-2388

Borehole # MW-05
 Well # MW-05
 Page 1 of 1

Project Name EPNG CHACO
 Project Number 12588 Phase 2001
 Project Location SAN JUAN COUNTY, NEW MEXICO

Elevation _____
 Well Location MW-05
 GWL Depth 23.0
 Installed By RODGERS, INC.

On-Site Geologist S. POPE
 Personnel On-Site G. GARIBAY
 Contractors On-Site RODGERS, INC.
 Client Personnel On-Site P. MARQUEZ

Date/Time Started 1345 6/27/94
 Date/Time Completed 1445 6/27/94

Depths in Reference to Ground Surface				
Item	Material	Depth (feet)		
Top of Protective Casing	8" STEEL LOCKING	+2.5		Top of Protective Casing <u>2.5</u>
Bottom of Protective Casing		-1.5		Top of Riser <u>2.0</u>
Top of Permanent Borehole Casing		N/A		Ground Surface <u>0.0</u>
Bottom of Permanent Borehole Casing		N/A		
Top of Concrete	PREMIX	+2.25		
Bottom of Concrete		-1.5		
Top of Grout		N/A		
Bottom of Grout		N/A		
Top of Well Riser	4" SCH 40 PVC	+2.0		
Bottom of Well Riser		-8.0		
Top of Well Screen	4" SCH 40 PVC	-8.0		
Bottom of Well Screen	.010 SLOT	-28.1		Top of Seal <u>1.5</u>
Top of Peltonite Seal	1/4" BENTONITE PELLETS	-1.5		
Bottom of Peltonite Seal		-5.7		Top of Gravel Pack <u>5.7</u>
Top of Gravel Pack	10-20 SILICA	-5.7		Top of Screen <u>8.0</u>
Bottom of Gravel Pack		-28.1		
Top of Natural Cave-In		-28.1		
Bottom of Natural Cave-In		-29.2		
Top of Groundwater		-23.0		Bottom of Screen <u>28.1</u>
Total Depth of Borehole		-29.2		Bottom of Borehole <u>29.2</u>

Comments: 10 - 100 LB. BAGS OF SAND, 2 BUCKETS PELLETS, HYDRATED WITH 4 GALLONS OF WATER.

Geologist Signature *S. T. Pope*

MONITORING WELL INSTALLATION RECORD

Burlington Environmental Inc.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2308

Borehole # MW-06
 Well # MW-06
 Page 1 of 1

Project Name EPNG CHACO
 Project Number 12588 Phase 2001
 Project Location SAN JUAN COUNTY, NEW MEXICO

Elevation _____
 Well Location MW-06
 GWL Depth 11.5
 Installed By RODGERS, INC.

On-Site Geologist S. POPE
 Personnel On-Site G. CARIBAY
 Contractors On-Site RODGERS, INC.
 Client Personnel On-Site P. MARQUEZ

Date/Time Started 0910 6/28/94
 Date/Time Completed 1100 6/28/94

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing	8" STEEL LOCKING	+2.5
Bottom of Protective Casing		-1.5
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete	PREMIX	+ .25
Bottom of Concrete		-1.5
Top of Grout		N/A
Bottom of Grout		N/A
Top of Well Riser	4" SCH 40 PVC	+2.3
Bottom of Well Riser		-6.9
Top of Well Screen	4" SCH 40 PVC	-6.9
Bottom of Well Screen	.010 SLOT	-22.0
Top of Bentonite Seal	1/4" BENTONITE PELLETS	-1.5
Bottom of Bentonite Seal		-5.0
Top of Gravel Pack	10-20 SILICA	-5.0
Bottom of Gravel Pack		-22.0
Top of Natural Cave-in		N/A
Bottom of Natural Cave-in		N/A
Top of Groundwater		-11.5
Total Depth of Borehole		-22.0

Top of Protective Casing	<u>2.5</u>
Top of Riser	<u>2.3</u>
Ground Surface	<u>0.0</u>
Top of Seal	<u>1.5</u>
Top of Gravel Pack	<u>5.0</u>
Top of Screen	<u>6.9</u>
Bottom of Screen	<u>22.0</u>
Bottom of Borehole	<u>22.0</u>

Comments: HAD PROBLEMS WITH CLAY RING IN LEAD AUGER. HAD TO PULL WELL AND CLEAN AUGER. HOLE STAYED OPEN AND WELL WENT TO 22.0'. 9 - 100 LB. BAGS OF SAND, 2 BUCKETS PELLETS, HYDRATED WITH 4 GALLONS OF WATER.

Geologist Signature

[Handwritten Signature]

MONITORING WELL INSTALLATION RECORD

Burlington Environmental Inc.
 4000 Marrow Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Borehole # MW-07
 Well # MW-07
 Page 1 of 1

Project Name EPNG CHACO
 Project Number 12588 Phase 2001
 Project Location SAN JUAN COUNTY, NEW MEXICO

Elevation _____
 Well Location MW-07
 GWL Depth 4.0
 Installed By RODGERS, INC.

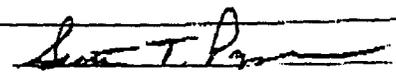
On-Site Geologist S. POPE
 Personnel On-Site S. POPE
 Contractors On-Site RODGERS, INC.
 Client Personnel On-Site G. GARIBAY

Date/Time Started 1615 6/27/94
 Date/Time Completed 1715 6/27/94

Depths in Reference to Ground Surface			
Item	Material	Depth (feet)	
Top of Protective Casing	8" STEEL LOCKING	+2.5	Top of Protective Casing <u>2.5</u>
Bottom of Protective Casing		-1.5	Top of Riser <u>2.3</u>
Top of Permanent Borehole Casing		N/A	Ground Surface <u>0.0</u>
Bottom of Permanent Borehole Casing		N/A	
Top of Concrete	PREMIX	+ .3	
Bottom of Concrete		0.0	
Top of Grout		N/A	
Bottom of Grout		N/A	
Top of Well Riser	4" SCH 40 PVC	+2.3	
Bottom of Well Riser		-1.9	
Top of Well Screen	4" SCH 40 PVC	-1.9	Top of Seal <u>0.0</u>
Bottom of Well Screen	.010 SLOT	-17.0	
Top of Peltonite Seal	1/4" BENTONITE PELLETS	0.0	Top of Gravel Pack <u>1.5</u>
Bottom of Peltonite Seal		-1.5	Top of Screen <u>1.9</u>
Top of Gravel Pack	10-20 SILICA	-1.5	
Bottom of Gravel Pack		-17.7	
Top of Natural Cave-in		N/A	
Bottom of Natural Cave-in		N/A	
Top of Groundwater		-4.0	Bottom of Screen <u>17.0</u>
Total Depth of Borehole		-17.7	Bottom of Borehole <u>17.7</u>

Comments: 5 - 100 LB. BAGS OF SAND, 1 BUCKET PELLETS, HYDRATED WITH 4 GALLONS OF WATER. WL AFTER INSTALLATION 5.0 BGS.

Geologist Signature



MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
 4000 Monroe Road
 Farmington, New Mexico 87401
 (505) 326-2262 FAX (505) 326-2388

Borehole # BH-8b
 Well # MW-8
 Page 1 of 1

Project Name EPNG PITS

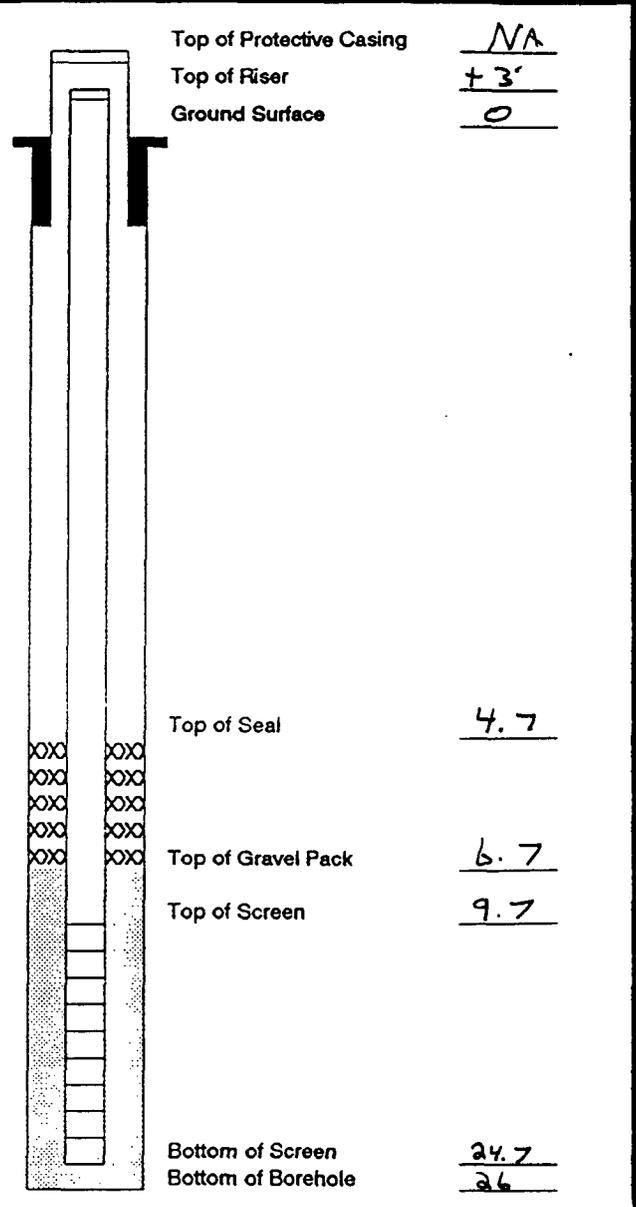
Project Number 14509 Phase 6001.7761
 Project Location Chaco Plant MW-8

Elevation _____
 Well Location Q - S - T - R
 GWL Depth 16.2'
 Installed By R. Padilla

On-Site Geologist CM Chance
 Personnel On-Site F. Rivera, D. Charles
 Contractors On-Site _____
 Client Personnel On-Site _____

Date/Time Started 10/12/95 - 1540
 Date/Time Completed 10/12/95 - 1700

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing		NA
Bottom of Protective Casing		NA
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		NA
Bottom of Concrete		NA
Top of Grout	- 94# Type I-II	0'
Bottom of Grout	- 50# Portland Powdered Bentonite	4.7
Top of Well Riser	1/4" dia SCH40	+3
Bottom of Well Riser	Flush Thread PVC	9.7
Top of Well Screen	1/4" dia SCH40 Flush Thread	9.7
Bottom of Well Screen	0.01 slot PVC	24.7
Top of Peltonite Seal	- 50# Enviro plug	4.7
Bottom of Peltonite Seal	Bentonite	6.7
Top of Gravel Pack	- 50# 10-20	6.7
Bottom of Gravel Pack	Silica Sand	24.7
Top of Natural Cave-In		24.7'
Bottom of Natural Cave-In		26'
Top of Groundwater		
Total Depth of Borehole		26'



Comments: Bentonite hydrated w/ 5gal potable water. GW had no odor or visible contamination

Geologist Signature Comy Chance

Well Development Data Sheets

DATE 10, 1, 93

WELL NO. MW-9

DEVELOPMENT TECHNIQUES

DATE	DEVELOPMENT METHOD	MATERIAL OR SERIAL NO.	DEVELOPMENT TECHNICIAN	VOLUMES REMOVED/TYPE
10-1-93	TEFLON BARREL		EVAN SMITH	.

WATER QUALITY/WATER REMOVAL

WATER QUALITY READINGS

WATER REMOVAL DATA

DATE	TIME	TOTAL INCREMENT GALLONS REMOVED	TOTAL WELL INCREMENT VOLUMES REMOVED	TEMP (°C)	PH	CONDUCTIVITY (umhos/cm)	APPEARANCE/ COMMENTS	DEVELOPMENT START TIME	DEVELOPMENT STOP TIME	REMOVAL RATE (GPM)	PUMP INTAKE LEVEL	WATER LEVEL BEFORE DEVELOPMENT	WATER LEVEL AFTER DEVELOPMENT
10-1-93	11:50	5	5	67	7.0	6,590	LIGHT BROWN	1130				20.04	
	12:02	10	5	67.5	6.69	6,860	LIGHT BROWN						
	12:06	15	5	68.0	6.63	6,730	LIGHT BROWN						
	12:14	20	5	68.2	6.65	6,950	LIGHT BROWN						
	12:21	25	5	68.5	6.71	7,100	LIGHT BROWN						
	12:28	30	5	62.5	7.83	7,030	CLOUDY						
	12:35	35	5	62.3	6.94	6,730	CLOUDY		1240				23.09

COMMENTS _____

NOTES:

1. COMMENTS SHOULD DELINEATE FINAL SAMPLE AND REPLICATE MEASUREMENTS.
2. ANY INSTRUMENTATION CALIBRATION OR USE ANOMALIES SHOULD BE NOTED.
3. APPEARANCE SHOULD BE NOTED BEFORE, DURING, AND AFTER DEVELOPMENT.



**BURLINGTON
ENVIRONMENTAL**

**WELL DEVELOPMENT & PURGING
GENERAL DATA**

SERIAL NO. WD _____
PAGE _____ OF _____

PROJECT NAME CHACO WELL NO. MW-4
 PROJECT NO. 10942 MAJOR TASK 2002 SUB TASK 77
 DATE 10/1/93 FORM COMPLETED BY WILL SMITH

WELL CONSTRUCTION

TOTAL DEPTH (FT) 30.70 BOREHOLE DIAMETER (IN) 10"
 GRAVEL PACK INTERVAL (FT) 17' WELL DIAMETER INSIDE (IN) 4"
 WELL PROTECTOR: YES NO PADLOCK NO. 2532
 QUANTITY OF FLUID INJECTED DURING DRILLING (GALLONS) _____

WATER VOLUME CALCULATION

DATE OF MEASUREMENT 10-1-93
 MEASURING POINT TOP ELEV. _____
 WATER LEVEL INSTRUMENT USED SOLINST
 INITIAL WATER LEVEL (FT) 20.04
 LINEAR FEET OF WATER 10.66
 LINEAR FEET SATURATED GRAVEL PACK 10.66

ITEM	WATER VOLUME	
	FT ³	GAL
WELL CASING		<u>6.95</u>
GRAVEL PACK		<u>—</u>
DRILLING FLUIDS		<u>—</u>
TOTAL		<u>6.95</u>

NOTE: QUANTITIES ARE TO BE CALCULATED PRIOR TO DEVELOPMENT.

DEVELOPMENT CRITERIA

METHOD OF DEVELOPMENT TEFLON BAUER
 WATER QUALITY MEASUREMENTS YES NO
 WELL VOLUME (ANNULUS) (GAL) _____ WELL CASING VOLUME (PIPE) (GAL) 6.95
 WATER VOLUME TO BE REMOVED (GAL) MINIMUM 34.75 MAXIMUM _____

NOTE: DEVELOPMENT IS TO BE PERFORMED IN ACCORDANCE WITH PROJECT-SPECIFIC WELL DEVELOPMENT PLAN.

WATER QUALITY INSTRUMENTS

DATE	INSTRUMENT	SERIAL NO.	CALIBRATION PERFORMED (✓)	TECH	COMMENTS
<u>10-1-93</u>	<u>HYDAC</u>		<u>✓</u>	<u>W.S.</u>	

COMMENTS _____

DATE 9, 30, 93

WELL NO. MW-3

DEVELOPMENT TECHNIQUES

DATE	DEVELOPMENT METHOD	MATERIAL OR SERIAL NO.	DEVELOPMENT TECHNICIAN	VOLUMES REMOVED/TYPE
9.30.93	REFLOW BLOWER		R.T.	

WATER QUALITY/WATER REMOVAL

WATER QUALITY READINGS

WATER REMOVAL DATA

DATE	TIME	TOTAL INCREMENT GALLONS REMOVED	TOTAL WELL INCREMENT VOLUMES REMOVED	TEMP (°C)	PH	CONDUCTIVITY (umhos/cm)	APPEARANCE/ COMMENTS	DEVELOPMENT START TIME	DEVELOPMENT STOP TIME	REMOVAL RATE (GPM)	PUMP INTAKE LEVEL	WATER LEVEL BEFORE DEVELOPMENT	WATER LEVEL AFTER DEVELOPMENT
9.30.93	1009	5	5	62.2	7.98	2420	DARK BROWN	9.55			22.21	11.98	
	1017	10	5	60.2	7.03	1.980	LIGHT BROWN						
	1030	15	5	58.7	7.21	2000	LIGHT BROWN						
9.30.93	1038	20	5	59.2	7.12	2040	CLOUDY		1040				20.50

*
**

COMMENTS * Failed dry after 10 gallons 1017. ** Failed dry after 5 additional gallons removed. *** Failed dry after 20 total gallons removed

NOTES:

1. COMMENTS SHOULD DELINEATE FINAL SAMPLE AND REPLICATE MEASUREMENTS.
2. ANY INSTRUMENTATION CALIBRATION OR USE ANOMALIES SHOULD BE NOTED.
3. APPEARANCE SHOULD BE NOTED BEFORE, DURING, AND AFTER DEVELOPMENT.

WELL DEVELOPMENT & PURGING GENERAL DATA



**BURLINGTON
ENVIRONMENTAL**

SERIAL NO. WD _____
PAGE <u>1</u> OF <u>1</u>

PROJECT NAME CHACO WELL NO. MW-3
 PROJECT NO. 10942 MAJOR TASK 2002 SUB TASK 77
 DATE 9.30.93 FORM COMPLETED BY ROBERT THOMPSON

WELL CONSTRUCTION

TOTAL DEPTH (FT) 22.27 BOREHOLE DIAMETER (IN) 10"
 GRAVEL PACK INTERVAL (FT) 17' WELL DIAMETER INSIDE (IN) 4"
 WELL PROTECTOR: YES NO PADLOCK NO. 25.32
 QUANTITY OF FLUID INJECTED DURING DRILLING (GALLONS) N/A

WATER VOLUME CALCULATION

DATE OF MEASUREMENT 9.30.93
 MEASURING POINT TOR ELEV. _____
 WATER LEVEL INSTRUMENT USED SDUNST
 INITIAL WATER LEVEL (FT) 16.90
 LINEAR FEET OF WATER 5.37
 LINEAR FEET SATURATED GRAVEL PACK 5.37

ITEM	WATER VOLUME	
	FT ³	GAL
WELL CASING		3.5
GRAVEL PACK		
DRILLING FLUIDS		
TOTAL		3.5

NOTE: QUANTITIES ARE TO BE CALCULATED PRIOR TO DEVELOPMENT.

DEVELOPMENT CRITERIA

METHOD OF DEVELOPMENT TEFLON BAILER
 WATER QUALITY MEASUREMENTS YES NO
 WELL VOLUME (ANNULUS) (GAL) N/A WELL CASING VOLUME (PIPE) (GAL) 3.5
 WATER VOLUME TO BE REMOVED (GAL) MINIMUM 12.5 MAXIMUM 35.0

NOTE: DEVELOPMENT IS TO BE PERFORMED IN ACCORDANCE WITH PROJECT-SPECIFIC WELL DEVELOPMENT PLAN.

WATER QUALITY INSTRUMENTS

DATE	INSTRUMENT	SERIAL NO.	CALIBRATION PERFORMED (Y)	TECH	COMMENTS
9.30.93	HYDRA (CONDUCTIVITY, TEMP., PH., TESTER)		✓	R.T.	

COMMENTS _____

DATE 10, 1, 93

WELL NO. MW-2

DEVELOPMENT TECHNIQUES

DATE	DEVELOPMENT METHOD	MATERIAL OR SERIAL NO.	DEVELOPMENT TECHNICIAN	VOLUMES REMOVED/TYPE
10-1-93	TEFLON BALLER		WILL SMITH	

WATER QUALITY/WATER REMOVAL

WATER QUALITY READINGS

WATER REMOVAL DATA

DATE	TIME	TOTAL INCREMENT GALLONS REMOVED	TOTAL WELL INCREMENT VOLUMES REMOVED	TEMP (°C)	PH	CONDUCTIVITY (umhos/cm)	APPEARANCE/ COMMENTS	DEVELOPMENT START TIME	DEVELOPMENT STOP TIME	REMOVAL RATE (GPM)	PUMP INTAKE LEVEL	WATER LEVEL BEFORE DEVELOPMENT	WATER LEVEL AFTER DEVELOPMENT
10-1-93	1015	5	5	64.2	7.20	2090	LIGHT BROWN	1009				17.74	
	1036	10	5	64.2	7.59	2040	LIGHT BROWN						
	1043	15	5	63.1	7.60	2050	LIGHT BROWN						
	1051	20	5	62.9	7.62	2140	LIGHT BROWN						
	1056	25	5	62.0	7.67	2100	LIGHT BROWN						
	1104	30	5	62.5	7.74	2180	CLOUDY						
	1112	35	5	63.7	7.67	2260	CLOUDY		1112				24.90

COMMENTS _____

- NOTES:
1. COMMENTS SHOULD DELINEATE FINAL SAMPLE AND REPLICATE MEASUREMENTS.
 2. ANY INSTRUMENTATION CALIBRATION OR USE ANOMALIES SHOULD BE NOTED.
 3. APPEARANCE SHOULD BE NOTED BEFORE, DURING, AND AFTER DEVELOPMENT.

WELL DEVELOPMENT & PURGING GENERAL DATA



**BURLINGTON
ENVIRONMENTAL**

SERIAL NO. WD _____
PAGE ____ OF ____

PROJECT NAME CHACO WELL NO. MW-2
 PROJECT NO. _____ MAJOR TASK 2002 SUB TASK 77
 DATE 10/1/93 FORM COMPLETED BY WILL SMITH

WELL CONSTRUCTION

TOTAL DEPTH (FT) 27.47 BOREHOLE DIAMETER (IN) 10"
 GRAVEL PACK INTERVAL (FT) 17' WELL DIAMETER INSIDE (IN) 4"
 WELL PROTECTOR: YES NO PADLOCK NO. 2532
 QUANTITY OF FLUID INJECTED DURING DRILLING (GALLONS) N/A

WATER VOLUME CALCULATION

DATE OF MEASUREMENT 10-1-93
 MEASURING POINT TOR ELEV. _____
 WATER LEVEL INSTRUMENT USED SOLINST
 INITIAL WATER LEVEL (FT) 17.74
 LINEAR FEET OF WATER 9.73
 LINEAR FEET SATURATED GRAVEL PACK 9.73

ITEM	WATER VOLUME	
	FT ³	GAL
WELL CASING		<u>6.35</u>
GRAVEL PACK		<u>—</u>
DRILLING FLUIDS		<u>—</u>
TOTAL		<u>6.35</u>

NOTE: QUANTITIES ARE TO BE CALCULATED PRIOR TO DEVELOPMENT.

DEVELOPMENT CRITERIA

METHOD OF DEVELOPMENT TEFLON BAUER
 WATER QUALITY MEASUREMENTS YES NO
 WELL VOLUME (ANNULUS) (GAL) N/A WELL CASING VOLUME (PIPE) (GAL) 6.35
 WATER VOLUME TO BE REMOVED (GAL) MINIMUM 31.75 MAXIMUM 63.5

NOTE: DEVELOPMENT IS TO BE PERFORMED IN ACCORDANCE WITH PROJECT-SPECIFIC WELL DEVELOPMENT PLAN.

WATER QUALITY INSTRUMENTS

DATE	INSTRUMENT	SERIAL NO.	CALIBRATION PERFORMED (Y)	TECH	COMMENTS
<u>10-1-93</u>	<u>HYDRO CONDUCTIVITY TEMP</u>		<u>✓</u>	<u>W.S.</u>	

COMMENTS _____

DATE 9.30.93

WELL NO. MW-1

DEVELOPMENT TECHNIQUES

DATE	DEVELOPMENT METHOD	MATERIAL OR SERIAL NO.	DEVELOPMENT TECHNICIAN	VOLUMES REMOVED/TYPE
9.30.93	TEFLON BAILER		R.T.	

WATER QUALITY/WATER REMOVAL

WATER QUALITY READINGS

WATER REMOVAL DATA

DATE	TIME	WATER QUALITY READINGS		TEMP (°C)	PH	CONDUCTIVITY (umhos/cm)	APPEARANCE/ COMMENTS	WATER REMOVAL DATA				
		TOTAL INCREMENT GALLONS REMOVED	TOTAL WELL INCREMENT VOLUMES REMOVED					DEVELOPMENT START TIME	DEVELOPMENT STOP TIME	REMOVAL RATE (GPM)	PUMP INTAKE LEVEL	WATER LEVEL BEFORE DEVELOPMENT
9.30.93	1100	5	5	58.9	7.29	1,940	CLOUDY	1050			25.24	13.20
	1104	10	5	58.8	7.20	1,870	CLOUDY					
	1109	15	5	58.4	7.12	1,880	CLOUDY					
	1124	20	5	58.9	7.15	1,980	CLOUDY					
	1213	25	5	59.7	7.54	1,990	CLOUDY					
9.30.93	1303	30	5	60.1	7.55	2,170	CLEAR	1305				21.00

COMMENTS _____

NOTES:

1. COMMENTS SHOULD DELINEATE FINAL SAMPLE AND REPLICATE MEASUREMENTS.
2. ANY INSTRUMENTATION CALIBRATION OR USE ANOMALIES SHOULD BE NOTED.
3. APPEARANCE SHOULD BE NOTED BEFORE, DURING, AND AFTER DEVELOPMENT.



**BURLINGTON
ENVIRONMENTAL**

**WELL DEVELOPMENT & PURGING
GENERAL DATA**

SERIAL NO. WD _____
PAGE 1 OF 1

PROJECT NAME CHACO WELL NO. MW-1
PROJECT NO. 10942 MAJOR TASK 2002 SUB TASK 77
DATE 9/30/93 FORM COMPLETED BY ROBERT THOMPSON

WELL CONSTRUCTION

TOTAL DEPTH (FT) 25.24 BOREHOLE DIAMETER (IN) 10"
GRAVEL PACK INTERVAL (FT) 17' WELL DIAMETER INSIDE (IN) 4"
WELL PROTECTOR: YES NO PADLOCK NO. 2532
QUANTITY OF FLUID INJECTED DURING DRILLING (GALLONS) N/A

WATER VOLUME CALCULATION

DATE OF MEASUREMENT 9.30.93
MEASURING POINT TDR ELEV. _____
WATER LEVEL INSTRUMENT USED SOLINST
INITIAL WATER LEVEL (FT) 13.70
LINEAR FEET OF WATER 11.54
LINEAR FEET SATURATED GRAVEL PACK 11.54

ITEM	WATER VOLUME	
	FT ³	GAL
WELL CASING		7.53
GRAVEL PACK		—
DRILLING FLUIDS		—
TOTAL		7.53

NOTE: QUANTITIES ARE TO BE CALCULATED PRIOR TO DEVELOPMENT.

DEVELOPMENT CRITERIA

METHOD OF DEVELOPMENT TEFLON BAILER
WATER QUALITY MEASUREMENTS YES NO
WELL VOLUME (ANNULUS) (GAL) N/A WELL CASING VOLUME (PIPE) (GAL) 7.53
WATER VOLUME TO BE REMOVED (GAL) MINIMUM 37.65 MAXIMUM 75.3

NOTE: DEVELOPMENT IS TO BE PERFORMED IN ACCORDANCE WITH PROJECT-SPECIFIC WELL DEVELOPMENT PLAN.

WATER QUALITY INSTRUMENTS

DATE	INSTRUMENT	SERIAL NO.	CALIBRATION PERFORMED (✓)	TECH	COMMENTS
9/30/93	HYDAC CONDUCTIVITY TEMP. PH. TESTER		✓	R.T.	

COMMENTS _____



Well Development and Purging Data

BURLINGTON ENVIRONMENTAL

Serial No. WDPO-

Project Name CHACO

Project Manager SCOTT POPE

Development Purging

Well Number MW-5

Page 1 of 1

Project No. 12568

Phase/Task No. 2001-77

Client Company BURLINGTON ENVIRONMENTAL

Site Name CHACO PLANT

Site Address _____

Development Criteria

- 3 to 5 Casing Volumes of Water Removal
- Stabilization of Indicator Parameters
- Other _____

Methods of Development

- Pump
- Centrifugal
- Submersible
- Peristaltic
- Other _____
- Bailor
- Bottom Valve
- Double Check Valve
- Stainless-steel Kemmerer
- Other _____

Water Volume Calculation

Initial Depth of Well (feet) 30.46
 Initial Depth to Water (feet) 25.05
 Height of Water Column in Well (feet) 5.41
 Diameter (inches): Well 4 Gravel Pack 10

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>3.53</u>	<u>17.65</u>
Gravel Pack			
Drilling Fluids			
Total			<u>17.65</u>

Instruments

- pH Meter
- DO Monitor
- Conductivity Meter
- Temperature Meter
- Other _____

Serial No. (if applicable) _____

Water Disposal _____

Water Removal Data

Date	Time	Developer Method	Pump/Bailer	Removal Rate (gpm/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Comments
							Increment	Cumulative					
<u>6-29-94</u>	<u>12:58</u>	<u>X</u>			<u>30.46</u>		<u>.25</u>	<u>.25</u>	<u>66.7</u>	<u>7.40</u>	<u>7490</u>		<u>TAN WATER</u>
	<u>13:06</u>	<u>X</u>					<u>4.0</u>	<u>4.0</u>	<u>62.9</u>	<u>7.43</u>	<u>7420</u>		<u>TAN</u>
	<u>13:15</u>	<u>X</u>					<u>8.0</u>	<u>8.0</u>	<u>61.7</u>	<u>7.53</u>	<u>7910</u>		<u>TAN</u>
	<u>13:31</u>	<u>X</u>					<u>12.0</u>	<u>12.0</u>	<u>63.2</u>	<u>7.62</u>	<u>8310</u>		<u>LIGHT TAN</u>
	<u>14:50</u>	<u>X</u>					<u>14.0</u>	<u>14.0</u>	<u>63.3</u>	<u>7.60</u>	<u>8390</u>		<u>CLOUDY</u>
<u>V</u>	<u>15:03</u>	<u>X</u>				<u>27.01</u>	<u>19.0</u>	<u>19.0</u>	<u>63.1</u>	<u>7.59</u>	<u>8360</u>		<u>LIGHT CLOUDINESS</u>

Circle the date and time that the development criteria are met.

Comments BAILED WELL DOWN AT 2.0 GAL. LEFT IT TO RECOVER. MOVED TO MW-6. COMPLETED DEVELOPING WELL AT 15:15. WELL STARTED TO BAIL DOWN AGAIN BEFORE I FINISHED. SLOW RECOVER

Developer's Signature(s) Robert Thompson

Date 6-29-94

Reviewer STP Date 7/7/94



Well Development and Purging Data

BURLINGTON ENVIRONMENTAL Serial No. WDPD-_____

Development Purging

Well Number MW-6

Page 1 of 1

Project Name CHACO

Project Manager SCOTT POPE

Project No. 12588

Client Company BURLINGTON ENVIRONMENTAL

Phase, Task No. 2001 77

Site Name CHACO PLANT

Site Address _____

Development Criteria

- 3 to 5 Casing Volumes of Water Removal
- Stabilization of Indicator Parameters
- Other _____

Water Volume Calculation

Initial Depth of Well (feet) 24.53
 Initial Depth to Water (feet) 11.59
 Height of Water Column in Well (feet) 12.94
 Diameter (inches): Well 4 Gravel Pack 20

Methods of Development

- Pump
 - Centrifugal
 - Submersible
 - Peristaltic
 - Other _____
- Ballot
 - Bottom Valve
 - Double Check Valve
 - Stainless-steel Kemmerer
 - Other _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>8.45</u>	<u>42.25</u>
Gravel Pack			
Drilling Fluids			
Total			<u>42.25</u>

Instruments

- pH Meter
- DO Monitor
- Conductivity Meter
- Temperature Meter
- Other _____

Water Disposal

Water Removal Data

Date	Time	Divulvement Method	Start Depth (feet)	Ending water Depth (feet)	Water Volume Removed (Gallons)		Temperature (°C)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
					Increment	Cumulative					
6-29-94	13:55	X	24.53		.25	.25	67.5	8.01	5470		TAN
	14:04	X			.25	5.0	66.4	8.21	4980		LIGHT TAN
	14:14	X			.25	10.0	65.3	8.30	4790		LIGHT TAN
	14:23	X			.25	15.0	65.7	8.36	5040		CLOUDY
	14:30	X			.25	20.0	64.2	8.40	5300		CLOUDY
	14:39	X			.25	25.0	64.1	8.41	6120		CLOUDY
	15:01	X			.25	30.0	65.7	8.11	5260		CLOUDY MILKY
V	15:40	X		21.40	.25	35.0	62.9	8.21	4710		LIGHT CLOUDINESS

Circle the date and time that the development criteria are met.

Comments BAILED WELL DOWN AFTER 25 GAL LEFT WELL TO RECOVER. MOVED BACK TO MW-5.

BAILED WELL DOWN AGAIN AT 350 GAL. COMPLETED DEVELOPMENT AT 1548. SLOW RECOVERY.

Developer's Signature(s) Robert Thompson Date 6-29-94 Reviewer STP Date 7/1/94

Well Development and Purging Data

BURLINGTON ENVIRONMENTAL SERIAL NO. WDPD- Well Number MW-7 Page 1 of 1

Project Name CHACO Project Manager SCOTT POPE Project No. 2001.77

Client Company BURLINGTON ENVIRONMENTAL Site Address CHACO PLANT Phase Task No. 2001.77

Development Criteria
 3 to 5 Casing Volumes of Water Removal
 Stabilization of Indicator Parameters
 Other

Water Volume Calculation
 Initial Depth of Well (feet) 19.60
 Initial Depth to Water (feet) 7.55
 Height of Water Column in Well (feet) 12.05
 Diameter (inches): Well 4 Gravel Pack 10

Methods of Development

Pump Bailor Other

Centrifugal Bottom Valve
 Submersible Double Check Valve
 Peristaltic Stainless-steel Kemmerer

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		7.87	
Gravel Pack			39.35
Drilling Fluids			
Total			39.35

Instruments
 pH Meter
 DO Monitor
 Conductivity Meter
 Temperature Meter
 Other

Water Disposal

Date	Time	Development Method	Removal Rate (gal/min)	Injection Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)	Injection	Cumulative	Injection Volume (gallons)	Temperature (°C)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
6-30-94	0907	X		19.60		.25	.25			64.4	7.76	3,220		TAN WATER
	0916	X				.25	5.0			63.0	7.91	2,880		TAN
	0920	X				.25	10.0			62.4	7.86	3,010		LIGHT TAN
	0924	X				.25	15.0			62.4	7.85	3,060		LIGHT TAN
	0931	X				.25	20.0			62.4	7.93	3,080		LIGHT TAN
	0938	X				.25	25.0			62.8	7.87	3,110		CLOUDY
	0945	X				.25	30.0			63.3	7.89	3,110		CLOUDY
	0952	X			8.90	.25	35.0			63.6	7.90	3,150		SLIGHTLY CLOUDY
	0959	X				.25	40.0			63.7	7.93	3,190		SLIGHTLY CLOUDY

Water Removal Data

as the date and time that the development criteria are met.

ments BAILED 5 CU'S OUT OF WELL. WELL PRODUCES GOOP AND RECOVERS FAST. INDICATOR PARAMETERS STABILIZED AND WATER WAS FAIRLY CLEAR. COMPLETED DEVELOPMENT AT 10:09

Operator's Signature: Robert Thompson Date 6-30-94 Reviewer _____ Date _____



Water Sampling Data

Location No. mw-8Serial No. WSD-

Group List Number _____

Sample Type: Groundwater Surface Water Other _____ Date 10-16-95Project Name BRNG PITS Project No. 14509Project Manager Cory Chance Phase/Task No. 6003 . 61Site Name Chesa Plant mw-8

Sampling Specifications

Requested Sampling
Depth Interval (feet) TOP 3'
Requested Wait Following
Development/Purging (hours) —

Initial Measurements

Time Elapsed From Final Development/Purging (^{min}hours) 15
Initial Water Depth (feet) 17.39
Nonaqueous Liquids Present (Describe) none

Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

Date	Time	Sampler Initials	Water Quality Readings				Water Collection Data				Notes (Explain in Comments Below)	
			Temp. (°C)	pH	DO (mg/L)	Cond. (umhos/cm)	Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (feet)	Bail		Final Water Depth (feet)
<u>see</u>	<u>well</u>	<u>DEVELOPMENT & PURGING</u>				<u>DATA FORM</u>						

Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify)
Preservatives: H = HCl; N = HNO₃; S = H₂SO₄; A = NaOH; O = Other (Specify); - = None

Sample Containers

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
<u>BTEX</u>	<u>2</u>	<u>G</u>	<u>40</u>		<u>X</u>	<u>H</u>	<u>X</u>		<u>JAL 23</u>
<u>TDS</u>	<u>1</u>	<u>P</u>	<u>250</u>		<u>X</u>	<u>NONE</u>	<u>X</u>		<u>JAL 23</u>

Filter Type _____ Chain-of-Custody Form Number _____

Comments _____

Signature James [Signature] Date 10-16-95 Reviewer _____ Date _____

DEEP WELL GEOLOGICAL DATA

September 1, 1992

COMPANY El Paso Natural Gas CompanyCOUNTY San Juan STATE N.M.CONTRACT NO. 5848UNIT NO. CPS 296-6LOCATION Chaco Sta. - 20 miles S. of Farmington, N.M.GROUNDBED: Depth 500 Ft., Dia. 7 7/8 In., Anodes (25) 2 x 60CASING: Size 8 5/8 In., Depth 100 Ft. Anotec SHA-2

DEPTH FT.	DRILLER'S LOG	RESISTIVITY		ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
		OHMS	AMPS				
5	Top Soil						
10	"						
15	Sand						
20	"						
25	"						
30	Blue Shale						
35	"						
40	"						
45	"						
50	"						
55	"						
60	"						
65	"						
70	"						
75	"						
80	"						
85	"						
90	"						
95	"						
100	"						
105	Sandstone		1.1				
110	"		0.9				
115	"		0.9				
120	"		0.9				
125	Water		0.8				
130	"		1.0				
135	Sandstone		1.7				
140	"		1.4				
145	Blue Clay & Shale		1.7				
150	"		1.7				
155	"		2.0				
160	"		1.8				
165	"		1.8				
170	"		1.8				
175	"		1.8				
180	"		1.8				
185	"		1.7				
190	"		1.7	25		2.5	7.9
195	"		1.8				
200	"		1.6	24		1.7	7.8
205	"		1.5				
210	"		1.5	23		2.4	7.8
215	"		1.3				
220	"		1.4	22		1.8	6.6
225	"		1.6				
230	"		1.8	21		2.4	6.3
235	"		1.7				
240	Blue Clay & Shale		1.7	20		2.3	6.3

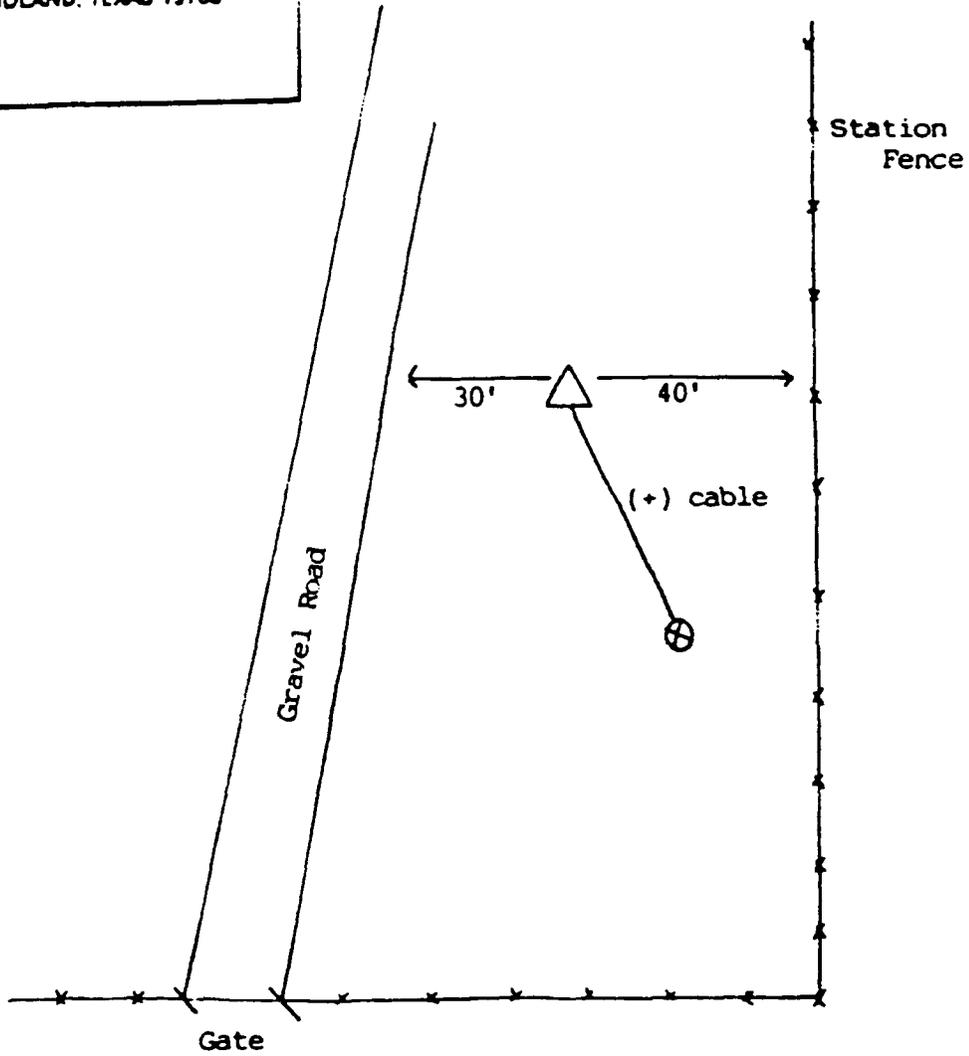
DEPTH -T.	DRILLER'S LOG	RESISTIVITY		ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
		OHMS	AMPS				
245	Blue Clay & Shale		1.6				
250	"		1.6	19		1.9	6.9
255	"		1.5				
260	"		1.5	18		1.9	5.9
265	"		1.6				
270	"		1.6	17		2.0	6.3
275	"		1.5				
280	"		1.5	16		1.9	6.5
285	"		1.6				
290	"		1.5	15		1.7	5.7
295	"		1.0				
300	"		1.6				
305	Sandstone & Blue Shale		1.5	14		1.9	5.6
310	"		1.0				
315	"		0.9				
320	"		1.0				
325	"		1.0				
330	"		0.9				
335	"		0.9				
340	"		1.6				
345	"		1.5	13		1.7	5.8
350	"		0.9				
355	Sandstone		1.6	12		1.8	6.0
360	"		1.3				
365	Blue Clay & Shale		1.6	11		2.1	5.8
370	"		1.9				
375	"		1.5	10		1.8	5.9
380	"		1.6				
385	"		1.6	9		1.9	6.5
390	"		1.8				
395	"		1.7	8		2.0	6.5
400	"		1.5				
405	"		1.4	7		1.7	6.3
410	"		1.5				
415	"		1.5	6		1.8	5.9
420	"		1.4				
425	"		1.3	5		1.6	5.1
430	"		1.1				
435	"		0.9				
440	"		1.2				
445	"		1.7				
450	"		1.4	4		1.7	5.4
455	"		1.0				
460	"		0.8				
465	"		1.4				
470	"		1.5	3		1.8	5.8
475	"		1.7				
480	"		1.6	2		1.8	5.9
485	"		1.6				
490	"		1.6	1		2.0	6.0
495	"		1.7				
500	Blue Clay & Shale		1.7				
505							
510							



THE LOFT COMPANY

P O BOX 7847
MIDLAND, TEXAS 79708

AS-BUILT



LEGEND

-  Groundbed
-  Rectifier
-  Negative
-  Junction Box
-  Marker/Vent
-  Old Groundbed

LOCATION: CPS 296-6, Chaco Station
San Juan County, N.M.
20 mi. S. of Farmington, N.M.

CLIENT: El Paso Natural Gas Company

PROJECT: Cathodic Protection System
Contract #5848

DATE COMPLETED: 09/10/92

NOT TO SCALE

DATE DRILLED: 09/01/92

DRAWN BY: JM/MI

APPROVED BY: MFL

DRAWING NO.:

1

DEEP WELL GROUND DATA

DATE 9-3-92

COMPANY E.P.N.G

COUNTY S.I STATE N.M

CONTRACT NO. J 3242

UNIT NO. 296-7

LOCATION chaco PLANT

GROUND BED: Depth 500 Ft., Dia. 7 7/8 In., Anodes 25

CASING: Size 2 5/8 In., Depth 100 Ft. 100

DEPTH FT.	DRILLER'S LOG	RESISTIVITY		ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE	
		OHMS	AMPS					
5	SAND							
10								
15								
20								
25								
30								
35								
40								
45								
50		blue shale						
55								
60								
65								
70								
75								
80								
85								
90								
95								
100	sandstone							
105			2.4					
110			1.7					
115			1.7					
120			1.4					
125			1.1					
130			1.0					
135		Blue shale & sandstone		1.5				
140				1.5				
145				1.2				
150			1.4					
155			1.5					
160			2.1		25		3.2	5.8
165			2.1		24		3.1	5.7
170			2.6					
175			2.7					
180			2.8					
185		2.8						
190		2.7						
195		2.6						
200		2.4		23		3.1	6.4	
205		2.6		22		3.4	6.5	
210		2.9						
215		2.3		21		3.7	6.4	
220		2.1		20		2.8	6.1	
225		2.6						
230		2.2		19		3.1	6.6	
235		2.5		18		3.6	7.0	
240		2.6						

DATE _____

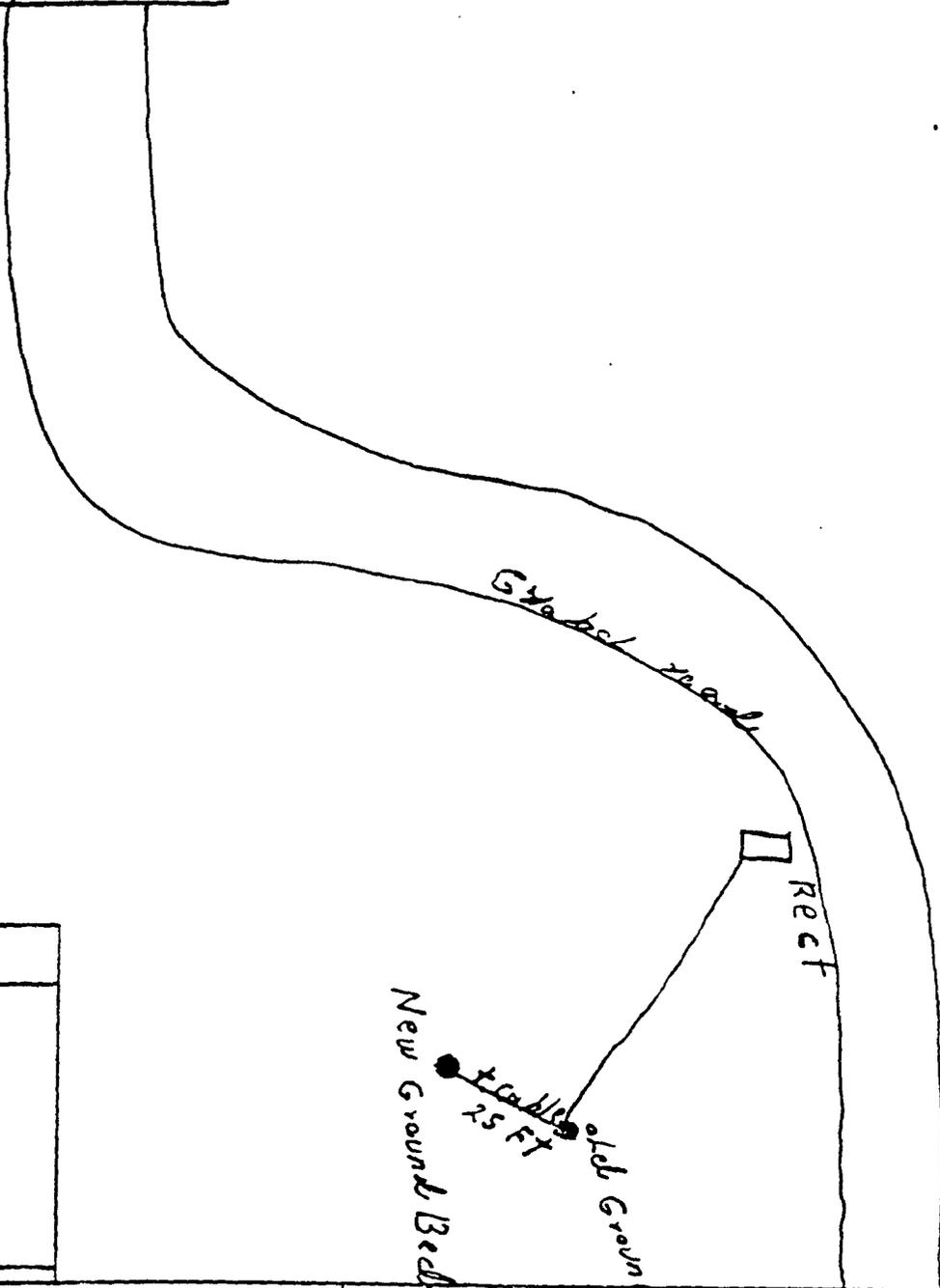
UNIT NUMBER _____

LOCATION _____

DEPTH T.	DRILLER'S LOG	RESISTIVITY		ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
		OHMS	AMPS				
245	<i>Blue Shale & sandstone</i>		2.5	17		3.8	6.8
250			2.4	16		3.5	6.6
255			1.9	15		2.9	5.8
260			1.2				
265			1.0				
270			1.1				
275			1.5				
280			1.7				
285			1.5	14		2.4	4.7
290			1.5				
295			1.8				
300			2.4	13		3.3	6.1
305			2.4	12		3.4	6.0
310			1.9				
315			1.4				
320			1.3				
325			1.4				
330			1.3				
335			2.1	11		2.8	4.7
340			1.7				
345		1.3					
350		1.7					
355		2.8					
360		2.2	10		2.1	5.3	
365		1.6					
370		2.0	9		2.5	5.1	
375		2.5	8		3.3	5.4	
380		1.6					
385		1.3					
390		1.4	8				
395		2.4	7		3.0	5.2	
400		2.6					
405		2.4	6		3.2	5.6	
410		2.1	5		2.7	5.2	
415		1.6					
420		1.5					
425		1.6					
430		1.7					
435		2.0					
440		2.1	4		2.5	5.4	
445		2.5	3		3.2	5.7	
450		1.7					
455		1.3					
460		1.5					
465		1.6					
470		1.6					
475		1.6					
480		2.2	2		2.8	5.6	
485		2.4	1		3.0	5.5	
490		2.2					
495		2.2					
500		2.2					
505							
510							

THE LOFTIS COMPANY

P. O. BOX 7847
MIDLAND, TEXAS 79708



LEGEND

LOCATION:		CLIENT:	
<i>chaca PLANT</i>		<i>E.P.N.E</i>	
DATE COMPLETED:		PROJECT:	
<i>9-2-92</i>	NOT TO SCALE		
DATE DRILLED:	DRAWN BY:	APPROVED BY:	DRAWING NO.:

DEEP WELL GROUND BED DATA

September 9, 1992

COMPANY El Paso Natural Gas Company

COUNTY Juan STATE N.M.

CONTRACT NO. 5848

UNIT NO. CPS 296-8

LOCATION Chaco Station - 20 miles S. of Farmington, N.M.

GROUNDBED: Depth 500 Ft., Dia. 7 7/8 In., Anodes (25) 2 x 60

CASING: Size 8 5/8 in., Depth 100 Ft. Anotec SHA-2

DEPTH FT.	DRILLER'S LOG	RESISTIVITY		ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
		OHMS	AMPS				
5	Sand						
10	"						
15	"						
20	"						
25	"						
30	"						
35	"						
40	"						
45	"						
50	Sandstone & Shale						
55	"						
60	"						
65	"						
70	"						
75	"						
80	"						
85	"						
90	"						
95	"						
100	Sandstone						
105	"		1.5				
110	"		1.0				
115	"		0.9				
120	Water Sand		0.9				
125	"		0.9				
130	"		1.1				
135	Sandstone & Shale		1.4				
140	"		1.4				
145	"		1.6				
150	"		1.5				
155	"		1.3				
160	"		1.3				
165	"		1.4				
170	"		1.5				
175	"		1.5				
180	"		1.5	25		1.8	2.4
185	"		1.5				
190	"		1.5	24		1.7	2.4
195	"		1.5				
200	"		1.4	23		1.6	2.4
205	"		1.2				
210	"		1.3	22		1.5	2.3
215	"		1.4				
220	"		1.4	21		1.6	2.3
225	"		1.4				
230	"		1.3	20		1.4	2.3
235	"		1.4				
240	Sandstone & Shale		1.3	19		1.5	2.2

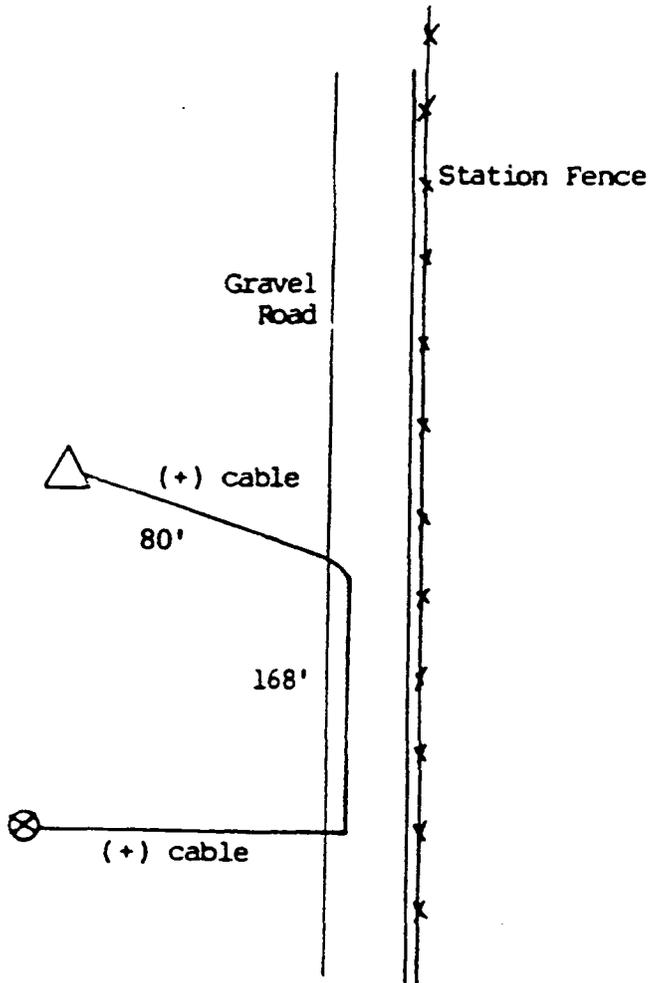
DEPTH FT.	DRILLER'S LOG	RESISTIVITY		ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
		OHMS	AMPS				
245	Sandstone & Shale		1.2				
250	"		1.2	18		1.3	2.0
255	"		1.2				
260	Rock		0.9				
265	"		0.7				
270	"		0.8				
275	Shale		1.2				
280	"		1.0				
285	"		0.9				
290	Rock		0.9				
295	"		1.1				
300	"		1.4	17		1.7	2.3
305	Sandstone & Shale		1.5				
310	"		1.3	16		1.5	2.2
315	"		1.0				
320	"		0.9				
325	"		0.9				
330	"		1.2				
335	"		1.3	15		1.5	2.2
340	"		1.4				
345	"		1.4	14		1.6	2.3
350	"		1.5				
355	"		1.3	13		1.4	2.2
360	"		1.4				
365	"		1.2	12		1.2	1.8
370	"		1.1				
375	"		1.3				
380	"		1.4	11		1.5	2.2
385	"		1.4				
390	"		1.5	10		1.6	2.1
395	"		1.5				
400	"		1.5	9		1.6	2.2
405	"		1.5				
410	"		1.4	8		1.4	2.1
415	"		1.3				
420	"		1.3	7		1.3	2.1
425	"		1.2				
430	"		1.2	6		1.2	2.1
435	"		1.1				
440	"		1.1				
445	"		1.3				
450	"		1.4	5		1.3	2.2
455	"		1.3				
460	"		1.2	4		1.3	2.1
465	"		1.1				
470	"		1.4	3		1.5	2.1
475	"		1.5				
480	"		1.4	2		1.4	2.1
485	"		1.4				
490	"		1.3	1		1.3	1.9
495	"		1.3				
500	Sandstone & Shale		1.3				
505							
510							



THE LOFTIS COMPANY

P.O. BOX 7847
MIDLAND, TEXAS 79708

AS-BUILT



LEGEND

- Groundbed
- Rectifier
- Negative
- Junction Box
- Marker/Vent
- Old Groundbed

LOCATION: CPS 296-8, Chaco Station
San Juan County, N.M.
20 mi. S. of Farmington, N.M.

CLIENT: El Paso Natural Gas Company

PROJECT: Cathodic Protection System
Contract #5848

DATE COMPLETED: 09/09/92 NOT TO SCALE

DATE DRILLED: 09/09/92	DRAWN BY: JM/MI	APPROVED BY: MFL	DRAWING NO.:	3
------------------------	-----------------	------------------	--------------	---



Analytical **Technologies**, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 510369

November 1, 1995

951046 to 951051

El Paso Natural Gas
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: PIT CLOSURE/CHACO PLANT 24324

Attention: John Lambdin

On **10/18/95**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

All analyses were performed by Analytical Technologies, Inc., 225 Commerce Drive, Fort Collins, CO.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure





Analytical Technologies, Inc.

CLIENT : EL PASO NATURAL GAS DATE RECEIVED : 10/18/95
 PROJECT # : 24324
 PROJECT NAME : PIT CLOSURE/CHACO PLANT REPORT DATE : 11/01/95

ATI ID: 510369

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	951046	NON-AQ	10/11/95
02	951047	NON-AQ	10/11/95
03	951048	NON-AQ	10/11/95
04	951049	NON-AQ	10/11/95
05	951050	NON-AQ	10/11/95
06	951051	NON-AQ	10/11/95
07	951052	NON-AQ	10/12/95
08	951053	NON-AQ	10/12/95
09	951060	NON-AQ	10/12/95
10	951061	NON-AQ	10/12/95
11	951062	NON-AQ	10/12/95
12	951063	NON-AQ	10/12/95
13	951064	NON-AQ	10/12/95
14	951065	NON-AQ	10/12/95
15	951066	NON-AQ	10/12/95
16	951067	NON-AQ	10/12/95



---TOTALS---

MATRIX #SAMPLES
 NON-AQ 16

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

BH #4

951046

13-15 Feet

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/11/95

Lab Sample ID: 95-10-162-01

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	3	1
Barium	6010	10	10
Cadmium	6010	ND	0.5
Chromium	6010	1	1
Lead	6010	2.0	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected

X20 Limits

AS - 100 mg/kg
 BA - 2000
 Cd - 20
 Cr - 100
 Pb - 100
 Hg - 4
 Se - 20
 Ag - 100 mg/kg



Analytical **Technologies, Inc.**

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951047

BH #4

20-22 Foot

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/11/95

Lab Sample ID: 95-10-162-02

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	3	1
Barium	6010	50	10
Cadmium	6010	ND	0.5
Chromium	6010	3	1
Lead	6010	18	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951048

BH #1

S-7foot

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/11/95

Lab Sample ID: 95-10-162-03

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	3	1
Barium	6010	80	10
Cadmium	6010	ND	0.5
Chromium	6010	4	1
Lead	6010	4.6	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951049

BH#1
30-32 Feet

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/11/95

Lab Sample ID: 95-10-162-04

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	2	1
Barium	6010	50	10
Cadmium	6010	ND	0.5
Chromium	6010	9	1
Lead	6010	12	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951050

BA #2

10-12 Foot

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/11/95

Lab Sample ID: 95-10-162-05

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	ND	1
Barium	6010	20	10
Cadmium	6010	ND	0.5
Chromium	6010	1	1
Lead	6010	2.3	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical Technologies, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951051

BH#2

30-32 Foot

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/11/95

Lab Sample ID: 95-10-162-06

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	61	1
Barium	6010	40	10
Cadmium	6010	ND	0.5
Chromium	6010	3	1
Lead	6010	4.5	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical Technologies, Inc.

TOTAL METALS

Sample ID

Reagent Blank

Lab Name: Analytical Technologies, Inc.

Client Name: ATI-NM

Date Collected: N/A

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Prep Date: 10/20, 24/95

Lab Sample ID: RB 95-10-162

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	ND	1
Barium	6010	ND	10
Cadmium	6010	ND	0.5
Chromium	6010	ND	1
Lead	6010	ND	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected

Detected
Blank



Analytical Technologies, Inc.

**TOTAL METALS
MATRIX SPIKE**

Sample ID

Lab Name: Analytical Technologies, Inc.

951046

Client Name: ATI-NM

Lab Sample ID: 95-10-162-01

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Spike Added mg/kg	Sample Conc. mg/kg	MS Conc. mg/kg	% Rec (limits 80-120%)	Flags
Arsenic	200	3	200	99	
Barium	200	10	210	100	
Cadmium	5.0	< 0.5	4.9	98	
Chromium	20	1	22	105	
Lead	50	2.0	51	98	
Mercury	2.5	< 0.2	2.2	88	
Selenium	200	< 0.5	190	95	
Silver	20	< 1	21	105	

Handwritten signature and date 10/25/95

Analyte	MSD Conc. mg/kg	MSD % Rec (limits 80-120%)	Relative % Difference (limits 0-20%)	Flags
Arsenic	200	99	0	
Barium	220	105	5	
Cadmium	5.0	100	2	
Chromium	22	105	0	
Lead	52	100	2	
Mercury	2.2	88	0	
Selenium	190	95	0	
Silver	21	105	0	

NETWORK PROJECT MANAGER: **KIM McNEILL**
 COMPANY: **Analytical Technologies, Inc.**
 ADDRESS: **2709-D Pan American Freeway, NE Albuquerque, NM 87107**

CLIENT PROJECT MANAGER: **Kim McNeill**

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
510369-01	10/11	0810	Soil	01
-02	10/11	0901		02
-03	10/11	1016		03
-04	10/11	1113		04
-05	10/11	1307		05
-06	10/11	1353		06
-07	10/12	0711		07
-08	10/12	0828		08
-09	10/12	0915		09

ANALYSIS REQUEST

XXXXXXXXXX RCR Metals by Total Dioxin

8240 TOLP 1841 ZFE
 Diesel/Gasoline/BTEX/MTBE/ (MOD 8015/8020)
 Voice Organics GC/MS 1624/8240
 NAME ASBESTOS
 BOD TOTAL COLIFORM
 FECAI COLIFORM
 GROSS ALPHA/BETA
 RADIUM 226/228
 AIR - O2, CO2, METHANE
 AIR/Diesel/Gasoline/BTEX/ (MOD 8015/8020)
 NUMBER OF CONTAINERS

SAMPLES SENT TO:
 SAN DIEGO
 FT COLLINS
 DENVER
 PENSACOLA
 PORTLAND
 PHOENIX
 RICHMOND

RELINQUISHED BY: 1. Signature: *[Signature]* Time: 5:15 Date: 10/18/01
 Printed Name: **JANNA EDGAR**
 Company: **Analytical Technologies, Inc. Albuquerque**

RECEIVED BY: (LAB) 1. Signature: *[Signature]* Time: 9:00 Date: 10/18/01
 Printed Name: **P. Hill**
 Company: **ATI**

RELINQUISHED BY: 2. Signature: *[Signature]* Time: 9:00 Date: 10/18/01
 Printed Name: **P. Hill**
 Company: **ATI**

PROJECT INFORMATION
 PROJECT NUMBER: **510369**
 PROJECT NAME: **PFClosure C1A0PLT**
 QC LEVEL: **STD IV**
 QC REQUIRED: **MS MSD BLANK**
 TAT: **STANDARD RUSH**

SAMPLE RECEIPT
 TOTAL NUMBER OF CONTAINERS
 CHAIN OF CUSTODY SEALS INTACT?
 RECEIVED GOOD/CORRECT
 LAB NUMBER

DUE DATE: **11/1**
 RUSH SURCHARGE: **NO**
 CLIENT DISCOUNT: **15** %
1W0H-KM1021

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4100 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777 DISTRIBUTION: White, Canary - ATI • Pink - ORIGINATOR

NETWORK PROJECT MANAGER: LEITHA KHAKOWSKI
 COMPANY: **Analytical Technologies, Inc.**
 ADDRESS: 2709 D Pan American Parkway, NE
 Albuquerque, NM 87107

CLIENT PROJECT MANAGER: Kim McNeill

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
510369-10	10/12	1017	SOIL	10
-11	10/12	1133		11
-12	10/12	1219		12
-13	10/12	1317		13
-14	10/12	1423		14
-15	10/13	1018		15
-16	10/13	1319	↓	16

PROJECT INFORMATION PROJECT NUMBER: <u>510369</u> PROJECT NAME: <u>ENCLOSURE (LUGO PLANT)</u> QC LEVEL: <u>STD IV</u> QC REQUIRED: <u>MS MSD BLANK</u> TAT: <u>STANDARD RUSH!</u>		SAMPLE RECEIPT TOTAL NUMBER OF CONTAINERS: _____ CHAIN OF CUSTODY SEALS: _____ INTACT: _____ RECEIVED GOOD COND: _____ LAB NUMBER: _____	
DUE DATE: <u>11/1</u> RUSH SURCHARGE: <u>NO</u> CLIENT DISCOUNT: <u>15</u> %		IWOH KM 1021	

RELINQUISHED BY: 1. Signature: <u>[Signature]</u> Time: _____ Printed Name: <u>Saman Eslam Pasha</u> Date: _____ Company: <u>Analytical Technologies, Inc.</u> Albuquerque		RELINQUISHED BY: Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: <u>ATI</u>	
RECEIVED BY: (LAB) 1. Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: <u>FedEx</u>		RECEIVED BY: (LAB) 2. Signature: <u>[Signature]</u> Time: <u>9:00</u> Printed Name: <u>DHull</u> Date: <u>10/19/95</u> Company: <u>ATI</u>	

ANALYSIS REQUEST

ANALYSIS REQUEST	NUMBER OF CONTAINERS
TOX	1
TOC	1
ORGANIC LEAD	1
SULFIDE	1
SURFACTANTS (MSAS)	1
632/632 MOD	1
619/619 MOD	1
610/631	1
XXXXXX RCRA Metals by Total Digestion	
8240 (TCP 1311) ZHE	1
Diesel/Gasoline/BTXE/TBE/ (MOD 8C15/8020)	1
Volatile Organics GC/MS (624/824C)	1
NACE	1
ASBESTOS	1
BCD	1
TOTAL COLIFORM	1
FECAL COLIFORM	1
GROSS ALPHA/BETA	1
RADIUM 226/228	1
AIR - O2, CO2, METHANE	1
AIR/Diesel/Gasoline/BTXE/ (MOD 8015/8020)	1



Analytical Technologies, Inc., Albuquerque, NM
 San Diego • Phoenix • Seattle • Pensacola • Ft Collins • Portland • Albuquerque

WHAIR AIR QUALITY STUDY
 DATE: 10/16/95 PAGE 1 OF 2

ATLAB ID. 510367

PROJECT MANAGER: JOHN LAMBIDIN

COMPANY: EL PASO NATURAL GAS
 ADDRESS: P.O. BOX 4990
 FARMINGTON, NM 87499
 PHONE: (505) 599 2144
 FAX: (505) 599 2261
 BILL TO: SAME AS ABOVE
 COMPANY:
 ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
951046	10/11/95	0810	SOIL	-01
951047		0904		-02
951048		1016		-03
951049		1113		-04
951050		1307		-05
951051	10/11/95	1353		-06
951058	10/12/95	0740		-07
951059		0828		-08
951060	10/12/95	0945	SOIL	-09

PROJECT INFORMATION

PROJ NO.: 24324
 PROJ NAME: PIT CLOSURE / LACO Plant
 P.O. NO.: 38822
 SHIPPED VIA: FEDERAL EXPRESS

SAMPLE RECEIPT

NO. CONTAINERS: 9
 CUSTODY SEALS: PIN/NA
 RECEIVED INTACT:
 RECEIVED COLD: 400F

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) 24hr 48hr 72hr 1WEEK (NORMAL) 2WEEK

Com.ents: CHARGE CODE: 50% 108-51570-24-(XX)1-(X)12-31-2010 2210
 50% 108-52452-24-(XX)1-(X)12-31-2010 7210

QA/QC ON PROJECT SAMPLES

ANALYSIS REQUEST

Method	Standard	Request
Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)	BTX/M/BE (8020)	
BTX (8020)	Chlorinated Hydrocarbons (601/8010)	
Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	Pesticides/PCB (608/8020)	
Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	
Volatle Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)	
SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	
SDWA Secondary Standards - Federal	SDWA Primary Standards - Federal	
SDWA Secondary Standards - Federal	SDWA Secondary Standards - Federal	
The 13 Priority Pollutant Metals	RCRA Metals by TCLP (1311)	X
	RCRA Metals by Total Digestion	X

SAMPLED & RELINQUISHED BY:

1. Signature: [Signature] Time: 14:00
 Printed Name: Rhea Bays Date: 10/17/95
 Company: EL PASO NATURAL GAS

2. Signature: [Signature] Time: [Time]
 Printed Name: [Name] Date: [Date]
 Company: [Company]

RECEIVED BY:

1. Signature: [Signature] Time: [Time]
 Printed Name: [Name] Date: [Date]
 Company: [Company]

2. Signature: [Signature] Time: [Time]
 Printed Name: [Name] Date: [Date]
 Company: [Company]

ATTN: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777 DISTRIBUTION: White, Canary - AT • Pink - ORIGINATOR

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.



PROJECT MANAGER: JOHN LAMBIDIN

COMPANY: EL PASO NATURAL GAS
 ADDRESS: P.O. BOX 4990
 FARMINGTON, NM 87499
 PHONE: (505) 599 2144
 FAX: (505) 599 2261

BILL TO: SAME AS ABOVE
 COMPANY:
 ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
951061	10/12/95	1017	soil	-10
951062	1133	1133	↑	-11
951063	1219	1219	↑	-12
951064	1347	1347	↓	-13
951065	10/12/95	1423	↓	-14
951066	10/13/95	1048	↓	-15
951067	10/13/95	1349	soil	-16

PROJECT INFORMATION

PROJ. NO.: 24324
 PROJ. NAME: PIT CLOSURE / chaco / plant
 P.O. NO.: 38X22
 SHIPPED VIA: FEDERAL EXPRESS

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS!

(RUSH) 24hr 48hr 72hr 1 WEEK (NORMAL) 2 WEEK
 Comments: CHARGE CODE: 50% 108-51570-24 (XX)1-(XX)12-31-2010 7210
 50% 108-52452-24 (XX)1-(XX)12-31-2010 7210
 Q/A/QC ON PROJECT SAMPLES

SAMPLE RECEIPT

NO. CONTAINERS: 7
 CUSTODY SEALS: (Y) N / N A
 RECEIVED INTACT: Y
 RECEIVED COLD: 40°F

SAMPLED & RELINQUISHED BY:

1. RELINQUISHED BY:
 Signature: [Signature] Time: 1400
 Printed Name: Phoebe Bays Date: 10/16/95
 Company: EL PASO NATURAL GAS

2. RELINQUISHED BY:
 Signature: [Signature] Time:
 Printed Name: Date:
 Company:

ANALYSIS REQUEST

ANALYSIS REQUEST	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Variable Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)	SDWA Primary Standards - Arizona	SDWA Secondary Standards - Arizona	SDWA Primary Standards - Federal	SDWA Secondary Standards - Federal	The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals by TCLP (1311)
Petroleum Hydrocarbons (418.1)													
(MOD 8015) Gas/Diesel													
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)													
BTXE/MTBE (8020)													
BETX (8020)													
Chlorinated Hydrocarbons (601/8010)													
Aromatic Hydrocarbons (602/8020)													
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.													
Pesticides/PCB (608/8080)													
Herbicides (615/8150)													
Base/Neutral/Acid Compounds GC/MS (625/8270)													
Variable Organics GC/MS (624/8240)													
Polynuclear Aromatics (610/8310)													
SDWA Primary Standards - Arizona													
SDWA Secondary Standards - Arizona													
SDWA Primary Standards - Federal													
SDWA Secondary Standards - Federal													
The 13 Priority Pollutant Metals													
RCRA Metals by Total Digestion													
RCRA Metals by TCLP (1311)													

RECEIVED BY:

1. RECEIVED BY:
 Signature: [Signature] Time:
 Printed Name: Date:
 Company:

2. RECEIVED BY (LAB):
 Signature: [Signature] Time:
 Printed Name: Date:
 Company:

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951046
 MATRIX: Soil
 SAMPLE DATE: 11-Oct-95
 SAMPLE TIME (Hrs.): 810
 SAMPLED BY: Cory Chance, Philips
 PROJECT: Chaco Plant Pond Closure
 FACILITY ID: 5212
 SAMPLE LOCATION: Chaco Plant Bore Hole #4
 SAMPLE POINT: 13 - 15 Foot
 DATE OF ANALYSIS: 12-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		81	
SURROGATE % RECOVERY	98	Allowed Range	80 to 120 %

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: John L. ...

18-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951047
 MATRIX: Soil
 SAMPLE DATE: 11-Oct-95
 SAMPLE TIME (Hrs.): 904
 SAMPLED BY: Cory Chance, Philips
 PROJECT: Chaco Plant Pond Closure
 FACILITY ID: 5212
 SAMPLE LOCATION: Chaco Plant Bore Hole #4
 SAMPLE POINT: 20 - 22 Foot
 DATE OF ANALYSIS: 12-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		80	
SURROGATE % RECOVERY	98	Allowed Range	80 to 120 %

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: _____

John Sardin

18-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951048
 MATRIX: Soil
 SAMPLE DATE: 11-Oct-95
 SAMPLE TIME (Hrs.): 1016
 SAMPLED BY: Cory Chance, Philips
 PROJECT: Chaco Plant Pond Closure
 FACILITY ID: 5212
 SAMPLE LOCATION: Chaco Plant Bore Hole #1
 SAMPLE POINT: 5 - 7 Foot
 DATE OF ANALYSIS: 12-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	1.5	None	None
TOTAL BTEX	1.50	None	50
TPH by EPA 418.1	2,068	None	100
PERCENT SOLIDS		85	
SURROGATE % RECOVERY	98	Allowed Range	80 to 120 %

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: John L. Linder

18-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951049
MATRIX: Soil
SAMPLE DATE: 11-Oct-95
SAMPLE TIME (Hrs.): 1113
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #1
SAMPLE POINT: 30 - 32 Foot
DATE OF ANALYSIS: 12-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		90	
SURROGATE % RECOVERY	97	Allowed Range	80 to 120 %

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: John Fawcett

18-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951050
MATRIX: Soil
SAMPLE DATE: 11-Oct-95
SAMPLE TIME (Hrs.): 1307
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #2
SAMPLE POINT: 10 - 12 Foot
DATE OF ANALYSIS: 12-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		82	
SURROGATE % RECOVERY	98	Allowed Range 80 to 120 %	

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: John L. Fisher

18-Oct-95
 Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951051
MATRIX: Soil
SAMPLE DATE: 11-Oct-95
SAMPLE TIME (Hrs.): 1353
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #2
SAMPLE POINT: 30 - 32 Foot
DATE OF ANALYSIS: 12-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		84	
SURROGATE % RECOVERY	98	Allowed Range	80 to 120 %

NOTES:
Acceptable Quality Control.
The limits shown are based on New Mexico Regulations.

Approved By: John Lamber

18-Oct-95
Date

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 951046 thru 951051

QA/QC for 10/12/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	44.0	88.0	75 - 125 %	X
Toluene	Standard	50.0	45.8	91.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	47.0	94.0	75 - 125 %	X
m & p - Xylene	Standard	100	92.4	92.4	75 - 125 %	X
o - Xylene	Standard	50.0	46.9	93.8	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	29.0	116.0	39 - 150	X
Toluene	Standard	25.0	28.8	115.2	46 - 148	X
Ethyl benzene	Standard	25.0	27.2	108.8	32 - 160	X
m & p - Xylene	Standard	50.0	55.3	110.6	Not Given	X
o - Xylene	Standard	25.0	27.6	110.4	Not Given	X
CCV1 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	41.3	82.6	75 - 125 %	X
Toluene	Standard	50.0	44.5	89.0	75 - 125 %	X
Ethyl benzene	Standard	50.0	45.2	90.4	75 - 125 %	X
m & p - Xylene	Standard	100	88.6	88.6	75 - 125 %	X
o - Xylene	Standard	50.0	45.1	90.2	75 - 125 %	X
CCV2 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	41.8	83.6	75 - 125 %	X
Toluene	Standard	50.0	43.7	87.4	75 - 125 %	X
Ethyl benzene	Standard	50.0	44.3	88.6	75 - 125 %	X
m & p - Xylene	Standard	100	86.3	86.3	75 - 125 %	X
o - Xylene	Standard	50.0	44.2	88.4	75 - 125 %	X
CCV3 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0		0.0	75 - 125 %	NA
Toluene	Standard	50.0		0.0	75 - 125 %	NA
Ethyl benzene	Standard	50.0		0.0	75 - 125 %	NA
m & p - Xylene	Standard	100		0.0	75 - 125 %	NA
o - Xylene	Standard	50.0		0.0	75 - 125 %	NA

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					RANGE	YES NO
951046						
Benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Toluene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	^
Ethyl benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Extraction Dup	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					RANGE	YES NO
NA						
Benzene	Extraction Dup			0	+/- 35 %	NA
Toluene	Extraction Dup			0	+/- 35 %	NA
Ethyl benzene	Extraction Dup			0	+/- 35 %	NA
m & p - Xylene	Extraction Dup			0	+/- 35 %	NA
o - Xylene	Extraction Dup			0	+/- 35 %	NA

Narrative:

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					RANGE	YES NO
951046						
Benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Toluene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Matrix Duplicate	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					RANGE	YES NO
NA						
Benzene	Matrix Duplicate			0	+/- 35 %	NA
Toluene	Matrix Duplicate			0	+/- 35 %	NA
Ethyl benzene	Matrix Duplicate			0	+/- 35 %	NA
m & p - Xylene	Matrix Duplicate			0	+/- 35 %	NA
o - Xylene	Matrix Duplicate			0	+/- 35 %	NA

Narrative:

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					RANGE	YES NO
951046	50.00					
Benzene	50.0	<2.5	42.4	84.8	75 - 125 %	X
Toluene	50.0	<2.5	44.7	89.4	75 - 125 %	X
Ethyl benzene	50.0	<2.5	45.5	91.0	75 - 125 %	X
m & p - Xylene	100.0	<5.0	89.1	89.1	75 - 125 %	X
o - Xylene	50.0	<2.5	45.2	90.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	ZR	RANGE	ACCEPTABLE	
						YES	NO
NA	50.00						
Benzene	50.0			0	75 - 125 %	NA	
Toluene	50.0			0	75 - 125 %	NA	
Ethyl benzene	50.0			0	75 - 125 %	NA	
m & p - Xylene	100.0			0	75 - 125 %	NA	
o - Xylene	50.0			0	75 - 125 %	NA	

Narrative:

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID	SOURCE	PPB	STATUS
AUTO BLANK/BOILED WATER			
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
SOIL VIAL BLANK	Lot # ME 2551		
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
EXTRACTION BLANK	Lot # H18318		
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	NARRATIVE	STATUS
Carryover contamination checks		(Not performed with this set)	
Benzene	Vial + Boiled Water	<2.5	NA
Toluene	Vial + Boiled Water	<2.5	NA
Ethyl benzene	Vial + Boiled Water	<2.5	NA
Total Xylenes	Vial + Boiled Water	<7.5	NA

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
METHANOL CHECK	Lot # H18318	(Not performed with this set)	
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

Approved By: 

Date: 18-Oct-95

QUALITY CONTROL REPORT

Test by Modified 418.1 by Infrared

Date of Analysis: October 12, 1995

6 Chaco Plant Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
INITIAL CALIBRATION VERIF.	HORIBA	100	102	102	X	
"B" Heavy Oil (Lot M3G9616)		300	303	101	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE +/- 35%	
					YES	NO
951048	2nd Extract	2070	2310	10.96	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
951048	1420	2070	3610	108	X	

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE	
					YES	NO
ERA TPH STANDARD #1 LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	2920	2490	1900 - 3360	X	
ERA TPH STANDARD #2 w/int LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	1150	1210	750 - 1320	X	

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	< 10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	< 10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By:

John Fadden

Date: 16-Oct-95

Extracted: 10/12/94

EL PASO NATURAL GAS - FIELD SERVICES LABORATORY

QUALITY CONTROL REPORT
 EPA METHOD 8020 - BTEX
 Samples: 951046 thru 951051

QA/QC for 10/12/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT	ANALYTICAL RESULT	%R	ACCEPTABLE	
					PPB	PPB
ICV LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	44.0	88.0	75 - 125 %	X
Toluene	Standard	50.0	45.8	91.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	47.0	94.0	75 - 125 %	X
m & p - Xylene	Standard	100	92.4	92.4	75 - 125 %	X
o - Xylene	Standard	50.0	46.9	93.8	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	29.0	116.0	39 - 150	X
Toluene	Standard	25.0	28.8	115.2	46 - 148	X
Ethyl benzene	Standard	25.0	27.2	108.8	32 - 160	X
m & p - Xylene	Standard	50.0	55.3	110.6	Not Given	X
o - Xylene	Standard	25.0	27.6	110.4	Not Given	X
CCV1 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	41.3	82.6	75 - 125 %	X
Toluene	Standard	50.0	44.5	89.0	75 - 125 %	X
Ethyl benzene	Standard	50.0	45.2	90.4	75 - 125 %	X
m & p - Xylene	Standard	100	88.6	88.6	75 - 125 %	X
o - Xylene	Standard	50.0	45.1	90.2	75 - 125 %	X
CCV2 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	41.8	83.6	75 - 125 %	X
Toluene	Standard	50.0	43.7	87.4	75 - 125 %	X
Ethyl benzene	Standard	50.0	44.3	88.6	75 - 125 %	X
m & p - Xylene	Standard	100	86.3	86.3	75 - 125 %	X
o - Xylene	Standard	50.0	44.2	88.4	75 - 125 %	X
CCV3 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0		0.0	75 - 125 %	NA
Toluene	Standard	50.0		0.0	75 - 125 %	NA
Ethyl benzene	Standard	50.0		0.0	75 - 125 %	NA
m & p - Xylene	Standard	100		0.0	75 - 125 %	NA
o - Xylene	Standard	50.0		0.0	75 - 125 %	NA

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					RANGE	YES NO
951046						
Benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Toluene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Extraction Dup	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Extraction Dup	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					RANGE	YES NO
NA						
Benzene	Extraction Dup			0	+/- 35 %	NA
Toluene	Extraction Dup			0	+/- 35 %	NA
Ethyl benzene	Extraction Dup			0	+/- 35 %	NA
m & p - Xylene	Extraction Dup			0	+/- 35 %	NA
o - Xylene	Extraction Dup			0	+/- 35 %	NA

Narrative:

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					RANGE	YES NO
951046						
Benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Toluene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
Ethyl benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X
m & p - Xylene	Matrix Duplicate	<5.0	<5.0	0	+/- 35 %	X
o - Xylene	Matrix Duplicate	<2.5	<2.5	0	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					RANGE	YES NO
NA						
Benzene	Matrix Duplicate			0	+/- 35 %	NA
Toluene	Matrix Duplicate			0	+/- 35 %	NA
Ethyl benzene	Matrix Duplicate			0	+/- 35 %	NA
m & p - Xylene	Matrix Duplicate			0	+/- 35 %	NA
o - Xylene	Matrix Duplicate			0	+/- 35 %	NA

Narrative:

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					RANGE	YES NO
951046	50.00					
Benzene	50.0	<2.5	42.4	84.8	75 - 125 %	X
Toluene	50.0	<2.5	44.7	89.4	75 - 125 %	X
Ethyl benzene	50.0	<2.5	45.5	91.0	75 - 125 %	X
m & p - Xylene	100.0	<5.0	89.1	89.1	75 - 125 %	X
o - Xylene	50.0	<2.5	45.2	90.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	ZR	RANGE	ACCEPTABLE	
						YES	NO
NA	50.00						
Benzene	50.0			0	75 - 125 %	NA	
Toluene	50.0			0	75 - 125 %	NA	
Ethyl benzene	50.0			0	75 - 125 %	NA	
m & p - Xylene	100.0			0	75 - 125 %	NA	
o - Xylene	50.0			0	75 - 125 %	NA	

Narrative:

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID	SOURCE	PPB	STATUS
AUTO BLANK/BOILED WATER			
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
SOIL VIAL BLANK	Lot # ME 2551		
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
EXTRACTION BLANK	Lot # H18318		
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	NARRATIVE	STATUS
Carryover contamination checks		(Not performed with this set)	
Benzene	Vial + Boiled Water	<2.5	NA
Toluene	Vial + Boiled Water	<2.5	NA
Ethyl benzene	Vial + Boiled Water	<2.5	NA
Total Xylenes	Vial + Boiled Water	<7.5	NA

Narrative: Acceptable.

SAMPLE ID	SOURCE	PPB	STATUS
METHANOL CHECK	Lot # H18318	(Not performed with this set)	
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

Approved By: *John Larkin*

Date: 13-Oct-95

QUALITY CONTROL REPORT
 TP Method Modified 418.1 by Infrared

Date of Analysis: October 12, 1995

6 Chaco Plant Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot M3G9616)	HORIBA	100	102	102	X	
		300	303	101	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE + / - 35%	
					YES	NO
951048	2nd Extract	2070	2310	10.96	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
951048	1420	2070	3610	108	X	

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE	
					YES	NO
ERA TPH STANDARD #1 LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	2920	2490	1900 - 3360	X	
ERA TPH STANDARD #2 w/int LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	1150	1210	750 - 1320	X	

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	< 10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	< 10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By: John Larkin

Date: 16-Oct-95

Extracted: 10/12/94



Analytical **Technologies, Inc.**

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 510369

November 1, 1995

951058 to 951067

El Paso Natural Gas
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: PIT CLOSURE/CHACO PLANT 24324

Attention: John Lambdin

On 10/18/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

All analyses were performed by Analytical Technologies, Inc., 225 Commerce Drive, Fort Collins, CO.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure





Analytical Technologies, Inc.

CLIENT : EL PASO NATURAL GAS DATE RECEIVED : 10/18/95
PROJECT # : 24324
PROJECT NAME : PIT CLOSURE/CHACO PLANT REPORT DATE : 11/01/95

ATI ID: 510369

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	951046	NON-AQ	10/11/95
02	951047	NON-AQ	10/11/95
03	951048	NON-AQ	10/11/95
04	951049	NON-AQ	10/11/95
05	951050	NON-AQ	10/11/95
06	951051	NON-AQ	10/11/95
07	951058	NON-AQ	10/12/95
08	951059	NON-AQ	10/12/95
09	951060	NON-AQ	10/12/95
10	951061	NON-AQ	10/12/95
11	951062	NON-AQ	10/12/95
12	951063	NON-AQ	10/12/95
13	951064	NON-AQ	10/12/95
14	951065	NON-AQ	10/12/95
15	951066	NON-AQ	10/13/95
16	951067	NON-AQ	10/13/95



---TOTALS---

<u>MATRIX</u>	<u>=SAMPLES</u>
NON-AQ	16

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951058

BH #3
S-7 Foot

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/12/95

Lab Sample ID: 95-10-162-07

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	1	1
Barium	6010	80	10
Cadmium	6010	ND	0.5
Chromium	6010	3	1
Lead	6010	4.3	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected

1.20 Limits +
 As - 100 mg/kg
 Ba - 1000
 Ca - 20
 Cr - 100
 Pb - 100
 Hg - 4
 Se - 20
 Ag - 100



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951059

BH#3

30-3 Z/20T

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/12/95

Lab Sample ID: 95-10-162-08

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	6	1
Barium	6010	10	10
Cadmium	6010	ND	0.5
Chromium	6010	4	1
Lead	6010	5.2	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951060

BH# 5
10-12 FOOT

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/12/95

Lab Sample ID: 95-10-162-09

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	ND	1
Barium	6010	30	10
Cadmium	6010	ND	0.5
Chromium	6010	23	1
Lead	6010	3.3	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951061

BH #5

30-32 FOOT

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/12/95

Lab Sample ID: 95-10-162-10

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	3	1
Barium	6010	20	10
Cadmium	6010	ND	0.5
Chromium	6010	11	1
Lead	6010	14	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951062

BH #7

10-12 FOOT

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/12/95

Lab Sample ID: 95-10-162-11

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	ND	1
Barium	6010	40	10
Cadmium	6010	ND	0.5
Chromium	6010	8	1
Lead	6010	3.1	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951063

BA #7

30-32 Foot

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/12/95

Lab Sample ID: 95-10-162-12

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	8	1
Barium	6010	40	10
Cadmium	6010	ND	0.5
Chromium	6010	7	1
Lead	6010	9.3	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951064

BT # 6

10-12 FOOT

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/12/95

Lab Sample ID: 95-10-162-13

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	1	1
Barium	6010	50	10
Cadmium	6010	ND	0.5
Chromium	6010	6	1
Lead	6010	3.4	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951065

BH# 6

30-32 FOOT

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/12/95

Lab Sample ID: 95-10-162-14

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	6	1
Barium	6010	20	10
Cadmium	6010	ND	0.5
Chromium	6010	8	1
Lead	6010	6.1	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951066

BH#8A

40-42 Feet

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Pit. -- 510369

Date Collected: 10/13/95

Lab Sample ID: 95-10-162-15

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	4	1
Barium	6010	ND	10
Cadmium	6010	ND	0.5
Chromium	6010	2	1
Lead	6010	3.1	0.3
Mercury	7471	ND	0.2
Seienium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Lab Name: Analytical Technologies, Inc.

Sample ID

951067

BH# 8B
15-17 Foot

Client Name: ATI-NM

Client Project ID: Pit Closure/Chaco Plt. -- 510369

Date Collected: 10/13/95

Lab Sample ID: 95-10-162-16

Prep Date: 10/20, 24/95

Sample Matrix: Soil

Date Analyzed: 10/23, 25/95

Analyte	Modified Method	Concentration mg/kg	Detection Limit mg/kg
Arsenic	6010	3	1
Barium	6010	20	10
Cadmium	6010	ND	0.5
Chromium	6010	1	1
Lead	6010	2.9	0.3
Mercury	7471	ND	0.2
Selenium	6010	ND	0.5
Silver	6010	ND	1

ND = Not Detected



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951058
MATRIX: Soil
SAMPLE DATE: 12-Oct-95
SAMPLE TIME (Hrs.): 740
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #3
SAMPLE POINT: 5 - 7 Foot
DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	4,300	None	100
PERCENT SOLIDS		89	
SURROGATE % RECOVERY	103	Allowed Range 80 to 120 %	

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: *Cory Chance*

20-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951059
MATRIX: Soil
SAMPLE DATE: 12-Oct-95
SAMPLE TIME (Hrs.): 828
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #3
SAMPLE POINT: 30 - 32 Foot
DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS	86		
SURROGATE % RECOVERY	100	Allowed Range 80 to 120 %	

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: *[Signature]*

20-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

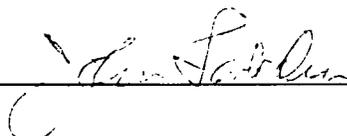
SAMPLE NUMBER: 951061
MATRIX: Soil
SAMPLE DATE: 16-Oct-95
SAMPLE TIME (Hrs.): 1017
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #5
SAMPLE POINT: 30 - 32 Foot
DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		89	
SURROGATE % RECOVERY	101	Allowed Range 80 to 120 %	

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: 

20-Oct-95
 Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951062
MATRIX: Soil
SAMPLE DATE: 16-Oct-95
SAMPLE TIME (Hrs.): 1133
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #7
SAMPLE POINT: 10 - 12 Foot
DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	17,500	None	100
PERCENT SOLIDS		89	
SURROGATE % RECOVERY	97	Allowed Range	80 to 120 %

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: *Cory Chance*

20-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

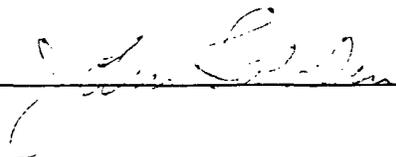
SAMPLE NUMBER: 951063
MATRIX: Soil
SAMPLE DATE: 16-Oct-95
SAMPLE TIME (Hrs.): 1219
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #7
SAMPLE POINT: 30 - 32 Foot
DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		88	
SURROGATE % RECOVERY	99	Allowed Range	80 to 120 %

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: 

20-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951064
MATRIX: Soil
SAMPLE DATE: 16-Oct-95
SAMPLE TIME (Hrs.): 1347
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #6
SAMPLE POINT: 10 - 12 Foot
DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	28,100	None	100
PERCENT SOLIDS		89	
SURROGATE % RECOVERY	96	Allowed Range 80 to 120 %	

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: *John L. ...*

20-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

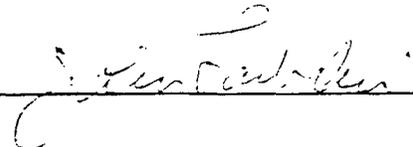
SAMPLE NUMBER: 951065
MATRIX: Soil
SAMPLE DATE: 16-Oct-95
SAMPLE TIME (Hrs.): 1423
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #6
SAMPLE POINT: 30 - 32 Foot
DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	16	None	100
PERCENT SOLIDS		90	
SURROGATE % RECOVERY	97	Allowed Range 80 to 120 %	

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: 

20-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951066
MATRIX: Soil
SAMPLE DATE: 16-Oct-95
SAMPLE TIME (Hrs.): 1048
SAMPLED BY: Cory Chance, Philips
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant Bore Hole #8A
SAMPLE POINT: 40 - 42 Foot
DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		91	
SURROGATE % RECOVERY	97	Allowed Range	80 to 120 %

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: *[Signature]*

20-Oct-95
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951067
 MATRIX: Soil
 SAMPLE DATE: 16-Oct-95
 SAMPLE TIME (Hrs.): 1349
 SAMPLED BY: Cory Chance, Philips
 PROJECT: Chaco Plant Pond Closure
 FACILITY ID: 5212
 SAMPLE LOCATION: Chaco Plant Bore Hole #8B
 SAMPLE POINT: 15 - 17 Foot
 DATE OF ANALYSIS: 18-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.5	None	10
TOLUENE	<0.5	None	None
ETHYL BENZENE	<0.5	None	None
TOTAL XYLENES	<1.5	None	None
TOTAL BTEX	<3.0	None	50
TPH by EPA 418.1	<10	None	100
PERCENT SOLIDS		83	
SURROGATE % RECOVERY	97	Allowed Range	80 to 120 %

NOTES:
 Acceptable Quality Control.
 The limits shown are based on New Mexico Regulations.

Approved By: *[Signature]*

20-Oct-95
Date

Date of Analysis: October 16, 1995

10 Chaco Plant Samples

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot M3G9616)	HORIBA	300	297	99		X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE +/- 35%	
					YES	NO
951067	2nd Extract	< 10	< 10	0.00		X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
951067	2940	< 10	3590	122		X

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE	
					YES	NO
ERA TPH STANDARD #1 LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	2920	3090	1900 - 3360		X
ERA TPH STANDARD #2 w/int LOT # 91030	ENVIRONMENTAL RESOURCE ASS.	1150	1150	750 - 1320		X

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	< 10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	< 10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By: *[Signature]*

Date: 18-Oct-95

Extracted: 10/16/95

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT
 EPA METHOD 8020 - BTEX
 Samples: 951058 thru 951067

QA/QC for 10/18/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT	ANALYTICAL RESULT	%R	ACCEPTABLE	
					PPB	PPB
ICV LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	49.7	99.4	75 - 125 %	X
Toluene	Standard	50.0	48.2	96.4	75 - 125 %	X
Ethyl benzene	Standard	50.0	49.0	98.0	75 - 125 %	X
m & p - Xylene	Standard	100	98.2	98.2	75 - 125 %	X
o - Xylene	Standard	50.0	49.0	98.0	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	24.9	99.6	39 - 150	X
Toluene	Standard	25.0	24.7	98.8	46 - 148	X
Ethyl benzene	Standard	25.0	24.1	96.4	32 - 160	X
m & p - Xylene	Standard	50.0	49.4	98.8	Not Given	X
o - Xylene	Standard	25.0	24.2	96.8	Not Given	X
CCV1 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	48.4	96.8	75 - 125 %	X
Toluene	Standard	50.0	47.7	95.4	75 - 125 %	X
Ethyl benzene	Standard	50.0	48.2	96.4	75 - 125 %	X
m & p - Xylene	Standard	100	95.0	95.0	75 - 125 %	X
o - Xylene	Standard	50.0	48.1	96.2	75 - 125 %	X
CCV2 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	46.7	93.4	75 - 125 %	X
Toluene	Standard	50.0	44.6	89.2	75 - 125 %	X
Ethyl benzene	Standard	50.0	45.4	90.8	75 - 125 %	X
m & p - Xylene	Standard	100	90.3	90.3	75 - 125 %	X
o - Xylene	Standard	50.0	45.5	91.0	75 - 125 %	X
CCV3 LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	44.0	88.0	75 - 125 %	X
Toluene	Standard	50.0	43.4	86.8	75 - 125 %	X
Ethyl benzene	Standard	50.0	44.0	88.0	75 - 125 %	X
m & p - Xylene	Standard	100	87.2	87.2	75 - 125 %	X
o - Xylene	Standard	50.0	44.1	88.2	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
951060					RANGE	
Benzene	Extraction Dup	12.10	13.40	10	+/- 35 %	X
Toluene	Extraction Dup	5.16	6.01	15	+/- 35 %	X
Ethyl benzene	Extraction Dup	3.58	4.17	15	+/- 35 %	X
m & p - Xylene	Extraction Dup	18.20	20.40	11	+/- 35 %	X
o - Xylene	Extraction Dup	5.0	5.8	14	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
NA					RANGE	
Benzene	Extraction Dup			0	+/- 35 %	NA
Toluene	Extraction Dup			0	+/- 35 %	NA
Ethyl benzene	Extraction Dup			0	+/- 35 %	NA
m & p - Xylene	Extraction Dup			0	+/- 35 %	NA
o - Xylene	Extraction Dup			0	+/- 35 %	NA

Narrative:

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
951060					RANGE	
Benzene	Matrix Duplicate	12.10	11.50	5	+/- 35 %	X
Toluene	Matrix Duplicate	5.16	5.24	2	+/- 35 %	X
Ethyl benzene	Matrix Duplicate	3.58	3.52	2	+/- 35 %	X
m & p - Xylene	Matrix Duplicate	18.20	18.20	0	+/- 35 %	X
o - Xylene	Matrix Duplicate	4.99	5.23	5	+/- 35 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPM ug/L	DUPLICATE RESULT PPM ug/L	RPD	ACCEPTABLE	
					YES	NO
NA					RANGE	
Benzene	Matrix Duplicate			0	+/- 35 %	NA
Toluene	Matrix Duplicate			0	+/- 35 %	NA
Ethyl benzene	Matrix Duplicate			0	+/- 35 %	NA
m & p - Xylene	Matrix Duplicate			0	+/- 35 %	NA
o - Xylene	Matrix Duplicate			0	+/- 35 %	NA

Narrative:

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
951060	50.00				RANGE	
Benzene	50.0	12.1	57.0	89.8	75 - 125 %	X
Toluene	50.0	5.2	50.5	90.7	75 - 125 %	X
Ethyl benzene	50.0	3.6	50.1	93.0	75 - 125 %	X
m & p - Xylene	100.0	18.2	108.8	90.6	75 - 125 %	X
o - Xylene	50.0	5.0	51.7	93.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER NA	SPIKE ADDED PPB 50.00	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	ZR	RANGE	ACCEPTABLE	
						YES	NO
Benzene	50.0			0	75 - 125 %	NA	
Toluene	50.0			0	75 - 125 %	NA	
Ethyl benzene	50.0			0	75 - 125 %	NA	
m & p - Xylene	100.0			0	75 - 125 %	NA	
o - Xylene	50.0			0	75 - 125 %	NA	

Narrative:

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID AUTO BLANK/BOILED WATER	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID SOIL VIAL BLANK	SOURCE Lot # ME-2551	PPB	STATUS
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID EXTRACTION BLANK	SOURCE Lot # H18318	PPB	STATUS
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID Carryover contamination checks	SOURCE	NARRATIVE (6 blanks were analyzed with this batch)	STATUS
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID METHANOL CHECK	SOURCE Lot # H18318	PPB (Not performed with this set)	STATUS
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

Approved By: *John Jarden*

Date: 19-Oct-95

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project		CONTRACT LABORATORY P. O. NUMBER					
DATE 10/12/95		FIELD ID		SEQUENCE #					
LAB ID	DATE	TIME	MATRIX	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID	REQUESTED ANALYSIS	REMARKS
951058	10/12/95	0740	SOIL	V6	✓	✓	25	130	Chase P/ant BH#3
947643	10/12/95	0828		V6	✓	✓	0	131	BH#3
951059	10/12/95	0945		V6	✓	✓	209	132	BH#5
947645	10/12/95	1017		V6	✓	✓	0	133	BH#5
951061	10/12/95	1133		V6	✓	✓	32	134	BH#27
947647	10/12/95	1219		V6	✓	✓	0	135	BH#27
951062	10/12/95	1347		V6	✓	✓	131	136	BH#6
947648	10/12/95	1423		V6	✓	✓	0	137	BH#6
951065	10/12/95								
947650	10/12/95								

RELINQUISHED BY: (Signature) <i>Greg Chary</i>	DATE/TIME 10/12/95 1630	RECEIVED BY: (Signature) <i>Kelly G. Sullivan</i>	DATE/TIME 10/12/95 15:00
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME

RECEIVED BY: (Signature) <i>John Stella</i>	DATE/TIME 10/12/95	RECEIVED BY: (Signature) <i>John Stella</i>	DATE/TIME 10/12/95
--	-----------------------	--	-----------------------

REQUESTED TURNAROUND TIME: <input type="checkbox"/> ROUTINE <input type="checkbox"/> RUSH	RESULTS & INVOICES TO: FIELD SERVICES LABORATORY EL PASO NATURAL GAS COMPANY P.O. BOX 4990 FARMINGTON, NEW MEXICO 87499
CARRIER CO.	505-593-2144
BILL NO.:	505-599-2261



CHAIN OF CUSTODY RECORD

Chaw 117

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project				DATE 10/13/95		FIELD ID				
SAMPLES: (Signature) Cory Chaw		DATE	TIME	MATRIX	TOTAL NUMBERS OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS					
LAB ID	DATE	TIME	MATRIX				EPA 418.1 TPH	EPA 8020 BTEX	LAB PID	PID HS APM	SEQUENCE #	REMARKS
951066	10/13/95	1048	Soil		1	V6	✓	✓		0	138	BH# 8a
951067	↓	1349	↓		1	V6	✓	✓		0	139	BH# 8b
... (crossed out) ...												
RELINQUISHED BY: (Signature) Cory Chaw		DATE/TIME 2/2/95 1700		RELINQUISHED BY: (Signature) Julie Didd		DATE/TIME 10/10/95 9:20		RELINQUISHED BY: (Signature) Julie Didd		RECEIVED BY: (Signature) [Signature]		
RELINQUISHED BY: (Signature) Cory Chaw		DATE/TIME 10/13/95 1700		RELINQUISHED BY: (Signature) Julie Didd		DATE/TIME 10/10/95 9:20		RELINQUISHED BY: (Signature) Julie Didd		RECEIVED BY: (Signature) [Signature]		
REQUESTED TURNAROUND TIME: <input type="checkbox"/> ROUTINE <input type="checkbox"/> RUSH				SAMPLE RECEIPT REMARKS				RESULTS & INVOICES TO:				
CARRIER CO.				CHARGE CODE				FIELD SERVICES LABORATORY EL PASO NATURAL GAS COMPANY P. O. BOX 4990 FARMINGTON, NEW MEXICO 87499				
BILL NO.:				505-599-2144				FAX: 505-599-2261				



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951068
MATRIX: Water
SAMPLE DATE: 16-Oct-95
SAMPLE TIME (Hrs.): 1335
SAMPLED BY: Dennis Bird
PROJECT: Chaco Plant Pond Closure
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant
SAMPLE POINT: Monitor Well #8
DATE OF ANALYSIS: 17-Oct-95

REMARKS: None.

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	29.5	None	10
TOLUENE	<2.5	None	740
ETHYL BENZENE	<2.5	None	750
TOTAL XYLENES	<7.5	None	620
SURROGATE % RECOVERY	96	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control. *The TRIP BLANK was clean.*

Approved By: *John Faiden*

15-Nov-95
Date

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX
Samples: 951068, 947664 and 947665

QA/QC for 10/17/95 Sample Set

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE	
					YES	NO
ICV LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	52.2	104.4	75 - 125 %	X
Toluene	Standard	50.0	52.2	104.4	75 - 125 %	X
Ethyl benzene	Standard	50.0	52.4	104.8	75 - 125 %	X
m & p - Xylene	Standard	100	106	106.1	75 - 125 %	X
o - Xylene	Standard	50.0	52.4	104.8	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	26.1	104.4	39 - 150	X
Toluene	Standard	25.0	26.4	105.6	46 - 148	X
Ethyl benzene	Standard	25.0	26.4	105.6	32 - 160	X
m & p - Xylene	Standard	50	53.3	106.6	Not Given	X
o - Xylene	Standard	25.0	26.3	105.2	Not Given	X
CCV LA-45473 50 PPB					RANGE	
Benzene	Standard	50.0	54.4	108.8	75 - 125 %	X
Toluene	Standard	50.0	51.8	103.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	51.5	103.0	75 - 125 %	X
m & p - Xylene	Standard	100	104	104.4	75 - 125 %	X
o - Xylene	Standard	50.0	51.7	103.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
951068					RANGE	
Benzene	Matrix Duplicate	29.5	29.5	0	+/- 20 %	X
Toluene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X
Ethyl benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<5.0	<5.0	0	+/- 20 %	X
o - Xylene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X

Narrative: Acceptable.

EL PASO NATURAL GAS - FIELD SERVICES L

QUALITY CONTROL REPORT
 EPA METHOD 8020 - BTEX
 Samples: 951068, 947664 and 947665

LABORATORY SPIKES:

SAMPLE NUMBER 2nd Analysis 951068	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	ZR	RANGE	ACCEPTABLE	
						YES	NO
Benzene	50	29.5	88.1	117.2	75 - 125 %	X	
Toluene	50	<2.5	53.8	107.6	75 - 125 %	X	
Ethyl benzene	50	<2.5	56.9	113.8	75 - 125 %	X	
m & p - Xylene	100	<5.0	110.8	110.8	75 - 125 %	X	
o - Xylene	50	<2.5	54.8	109.6	75 - 125 %	X	

Narrative: Acceptable.

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID AUTO BLANK	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID SOIL VIAL BLANK	SOURCE	PPB	STATUS
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID CARRYOVER CHECK	SOURCE	PPB (None performed with this set)	STATUS
Benzene	Vial + Boiled Water	<2.5	NA
Toluene	Vial + Boiled Water	<2.5	NA
Ethyl benzene	Vial + Boiled Water	<2.5	NA
Total Xylenes	Vial + Boiled Water	<7.5	NA

Narrative: Acceptable.

Approved By: 

Date: 18-Oct-95



Analytical **Technologies, Inc.**

2709-D Pan American Freeway, I.E. Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 510366

November 9, 1995

El Paso Natural Gas
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: CHACO PLT MW8 X53986

Attention: John Lambdin

On 10/18/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

All analyses were performed by Analytical Technologies, Inc., 225 Commerce Drive, Fort Collins, CO.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure





Analytical **Technologies**, Inc.

CLIENT : EL PASO NATURAL GAS DATE RECEIVED : 10/18/95
 PROJECT # : X53986
 PROJECT NAME : CHACO PLT MW8 REPORT DATE : 11/09/95

ATI ID: 510366

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	951068 Chaco Plant MW #8	AQUEOUS	10/16/95



---TOTALS---

<u>MATRIX</u>	<u>#SAMPLES</u>
AQUEOUS	1

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

TOTAL METALS

Sample ID

951068

Lab Name: Analytical Technologies, Inc.

Client Name: ATI-NM

Client Project ID: Chaco Plt MW-8/EPN -- 510366

Date Collected: 10/16/95

Lab Sample ID: 95-10-154-01

Prep Date: 10/20, 24/95

Sample Matrix: Water

Date Analyzed: 10/23, 24/95

Analyte	Modified Method	Concentration mg/L	Detection Limit mg/L	WQCC Limits
Aluminum	6010	2.8	0.2	5.0 mg/L
Arsenic	6010	0.05	0.01	0.10 mg/L
Barium	6010	0.1	0.1	1.00 mg/L
Boron	6010	0.4	0.1	0.75 mg/L
Cadmium	6010	ND	0.005	
Chromium	6010	ND	0.01	
Cobalt	6010	ND	0.01	
Copper	6010	ND	0.01	
Iron	6010	2.2	0.1	1.0 mg/L
Lead	6010	ND	0.003	
Manganese	6010	0.25	0.01	0.2 mg/L
Mercury	7470	ND	0.0002	
Molybdenum	6010	ND	0.01	
Nickel	6010	ND	0.02	
Selenium	6010	ND	0.005	
Silver	6010	ND	0.01	
Zinc	6010	0.07	0.02	10.0 mg/L

ND = Not Detected



Analytical **Technologies**, Inc.

TOTAL METALS

Sample ID

Reagent Blank

Lab Name: Analytical Technologies, Inc.

Client Name: ATI-NM

Date Collected: N/A

Client Project ID: Chaco Plt MW-8/EPN -- 510366

Prep Date: 10/20, 24/95

Lab Sample ID: RB 95-10-164

Date Analyzed: 10/23, 24/95

Analyte	Modified Method	Concentration mg/L	Detection Limit mg/L
Aluminum	6010	ND	0.2
Arsenic	6010	ND	0.01
Barium	6010	ND	0.1
Boron	6010	ND	0.1
Cadmium	6010	ND	0.005
Chromium	6010	ND	0.01
Cobalt	6010	ND	0.01
Copper	6010	ND	0.01
Iron	6010	ND	0.1
Lead	6010	ND	0.003
Manganese	6010	ND	0.01
Mercury	7470	ND	0.0002
Molybdenum	6010	ND	0.01
Nickel	6010	ND	0.02
Selenium	6010	ND	0.005
Silver	6010	ND	0.01
Zinc	6010	ND	0.02

ND = Not Detected

Handwritten signature and date:
10/23/95



Analytical Technologies, Inc.

TOTAL METALS MATRIX SPIKE

Sample ID

Lab Name: Analytical Technologies, Inc.

In House

Client Name: ATI-NM

Lab Sample ID: 95-10-163-01

Prep Date: 10/20, 24/95

Sample Matrix: Water

Date Analyzed: 10/23, 24/95

Analyte	Spike Added mg/L	Sample Conc. mg/L	MS Conc. mg/L	% Rec (limits 80-120%)	Flags
Aluminum	2.0	< 0.2	2.1	105	
Arsenic	2.0	< 0.01	2.0	100	
Barium	2.0	< 0.1	2.0	100	
Boron	1.0	0.2	1.2	100	
Cadmium	0.050	< 0.005	0.049	98	
Chromium	0.20	0.01	0.21	100	
Cobalt	0.50	< 0.01	0.48	96	
Copper	0.25	< 0.01	0.25	100	
Iron	1.0	0.2	1.2	100	
Lead	0.50	< 0.003	0.49	98	
Manganese	0.50	< 0.01	0.48	96	
Mercury	0.0020	< 0.0002	0.0020	100	
Molybdenum	1.0	< 0.01	0.98	98	
Nickel	0.50	< 0.02	0.49	98	
Selenium	2.0	< 0.005	2.0	100	
Silver	0.20	< 0.01	0.21	105	
Zinc	0.50	0.11	0.59	96	

J. 10/23/95



Analytical Technologies, Inc.

TOTAL METALS MATRIX SPIKE DUPLICATE

Sample ID

In House

Lab Name: Analytical Technologies, Inc.

Client Name: ATI-NM

Lab Sample ID: 95-10-163-01

Prep Date: 10/20, 24/95

Sample Matrix: Water

Date Analyzed: 10/23, 24/95

Analyte	MSD Conc. mg/L	MSD % Rec (limits 80-120%)	Relative % Difference (limits 0-20%)	Flags
Aluminum	2.1	105	0	
Arsenic	2.0	100	0	
Barium	2.1	105	5	
Boron	1.2	100	0	
Cadmium	0.050	100	2	
Chromium	0.21	100	0	
Cobalt	0.48	96	0	
Copper	0.25	100	0	
Iron	1.2	100	0	
Lead	0.48	96	2	
Manganese	0.49	98	2	
Mercury	0.0021	105	5	
Molybdenum	0.99	99	1	
Nickel	0.50	100	2	
Selenium	2.0	100	0	
Silver	0.21	105	0	
Zinc	0.60	98	2	

Handwritten signature
10/23/95

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310



Analytical Technologies, Inc.

Lab Name: Analytical Technologies Inc.
 Client Name: ATI-NM
 Client Project ID: Chaco Plt MW-8/EPN -- 510366
 Lab Sample ID: 95-10-164-01

Sample ID

951068

Date Collected: 10/16/95
 Date Extracted: 10/23/95
 Date Analyzed: 11/2/95

Sample Matrix: Water
 Cleanup: N/A

Sample Volume: 1000 mL
 Final Volume: 10 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	5.0
Acenaphthylene	ND	10
1-Methylnaphthalene	10.50	10
2-Methylnaphthalene	6 J	10
Acenaphthene	ND	10
Fluorene	3.6	1.0
Phenanthrene	ND	0.50
Anthracene	ND	1.0
Fluoranthene	ND	1.0
Pyrene	ND	0.50
Benzo(a)anthracene	ND	0.50
Chrysene	ND	0.50
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	0.50
Benzo(a)pyrene	ND	0.50
Dibenzo(a,h)anthracene	ND	1.0
Benzo(g,h,i)perylene	ND	1.0
Indeno(1,2,3-c,d)pyrene	ND	1.0

WQCC Limits

TOTAL
30.0 ug/L

0.7 ug/L

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	81	15 - 117

ND = Not Detected at or above client requested detection limit.

J = Estimated value. Below requested detection limits.

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310



Analytical **Technologies, Inc.**

Lab Name: Analytical Technologies Inc.
 Client Name: ATI-NM
 Client Project ID: Chaco Plt MW-8/EPN -- 510366
 Lab Sample ID: WRB1 10/23/95

Sample Matrix: Water
 Cleanup: N/A

Sample ID

Reagent Blank

Date Collected: N/A
 Date Extracted: 10/23/95
 Date Analyzed: 11/2/95

Sample Volume: 1000 mL
 Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	ND	0.050
Anthracene	ND	0.10
Fluoranthene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthene	ND	0.10
Benzo(k)fluoranthene	ND	0.050
Benzo(a)pyrene	ND	0.050
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c.d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	92	15 - 117

ND = Not Detected at or above client requested detection limit.

Handwritten: 11/5/95



Analytical Technologies, Inc.

POLYNUCLEAR AROMATIC HYDROCARBONS BLANK SPIKE

Method 8310

Lab Name: Analytical Technologies Inc.

Lab Sample ID: WBS1,2 10/23/95

Client Name: ATI-NM

Date Extracted: 10/23/95

Client Project ID: Chaco Plt MW-8/EPN -- 510366

Date Analyzed: 11/2/95

Sample Matrix: Water

Sample Volume: 1000 mL

Final Volume: 1 mL

Analyte	Spike Added (ug/L)	BS Concentration (ug/L)	BS Percent Recovery	QC Limits % Rec
Acenaphthylene	10	7.83	78	23 - 122
Phenanthrene	1.0	0.922	92	34 - 112
Pyrene	1.0	0.949	95	35 - 116
Dibenzo(a,h)anthracene	1.0	0.858	86	33 - 123
Benzo(k)fluoranthene	0.25	0.261	104	39 - 119

Analyte	Spike Added (ug/L)	BSD Concentration (ug/L)	BSD Percent Recovery	RPD	QC Limits RPD
Acenaphthylene	10	7.39	74	6	20
Phenanthrene	1.0	0.891	89	3	20
Pyrene	1.0	0.981	98	3	20
Dibenzo(a,h)anthracene	1.0	0.842	84	2	20
Benzo(k)fluoranthene	0.25	0.252	101	3	20

SURROGATE RECOVERY BS/BSD

Analyte	% Recovery(BS)	% Recovery(BSD)	% Rec Limits
2-Chloroanthracene	96	94	15 - 117

Handwritten signature and date: 11/5/95

November 14, 1995

Mr. John Merrick
H. C. Price Company
5353 Alpha Rd.
Dallas, TX 75240

Re: Use of Noncontact Wastewater for Use in Oil and Gas Exploration

Dear Mr. Merrick:

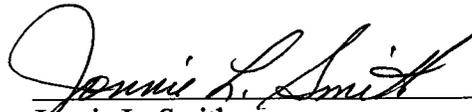
You asked to use the uncontact wastewater generated and discharged at the El Paso Natural Gas Company ("El Paso") Chaco Plant pursuant to an approved New Mexico Oil Conservation Division Discharge plan. El Paso will allow H. C. Price Company to use the noncontact wastewater provided you agree in advance to the following:

1. Prior to obtaining the wastewater from the Chaco Plant ponds, H.C. Price Company will notify the Chaco Plant Superintendent;
2. Use of the wastewater is limited to H.C. Price Company for its oil and natural gas exploration and production activities and will never be used in a way that allows the water to be discharged to any water of the U.S. as defined in the U.S. Clean Water Act (33 U.S.C. §§ 1251 to 1387) and the New Mexico Water Quality Act (N.M. Stat. Ann. §§ 74-6-1 to 74-6B-14);
3. The wastewater will never be discharged less than one hundred feet (100') from the nearest natural boundary of any wash or arroyo; and,
4. H.C. Price Company releases El Paso from liability, claims, or causes of action which may arise from the procurement, use, and discharge of the wastewater by H.C. Price Company, its agents, or its contractors

Mr. John Merrick
H. C. Price Company
November 14, 1995
Page 2

If H. C. Price Company agrees to abide by the above terms and conditions, please indicate its approved by signing in the space below and return this letter to me.

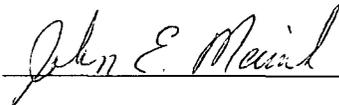
Very truly yours,



Jonnie L. Smith

AGREED TO AND ACCEPTED
this 14 day November 1995.

H. C. Price Company

by 

its _____



John Merrick
ASST. SUPERINTENDENT

H.C. PRICE
CONSTRUCTION CO.
FAX (214) 991-6059

5353 ALPHA ROAD
DALLAS, TEXAS 75240
(214) 458-1865

LOCAL OFFICE 632-3141
320-7111 #1661

April 10, 1995

Mr. Walter Bump
FESCO Contracting Co.
5500 U.S. Highway 64
Farmington, NM 87401

Re: Use of Noncontact Wastewater for Use in Oil and Gas Exploration

Dear Mr. Bump:

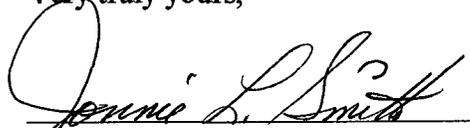
You asked to use the uncontact wastewater generated and discharged at the El Paso Natural Gas Company ("El Paso") Chaco Plant pursuant to an approved New Mexico Oil Conservation Division Discharge plan. El Paso will allow FESCO Contracting Company to use the noncontact wastewater provided you agree in advance to the following:

1. Prior to obtaining the wastewater from the Chaco Plant ponds, FESCO Contracting Co. will notify the Chaco Plant Superintendent;
2. Use of the wastewater is limited to FESCO Contracting Co. for its oil and natural gas exploration and production activities and will never be used in a way that allows the water to be discharged to any water of the U.S. as defined in the U.S. Clean Water Act (33 U.S.C. §§ 1251 to 1387) and the New Mexico Water Quality Act (N.M. Stat. Ann. §§ 74-6-1 to 74-6B-14);
3. The wastewater will never be discharged less than one hundred feet (100') from the nearest natural boundary of any wash or arroyo; and,
4. FESCO Contracting Co. releases El Paso from liability, claims, or causes of action which may arise from the procurement, use, and discharge of the wastewater by FESCO Contracting Co., its agents, or its contractors

Mr. Walter Bump
FESCO Contracting Company
April 10, 1995
Page 2

If FESCO Contracting Co. agrees to abide by the above terms and conditions, please indicate its approved by signing in the space below and return this letter to me.

Very truly yours,



Jonnie L. Smith

AGREED TO AND ACCEPTED
this 10 day April 1995.

FESCO Contracting Company

by Walter Bump

its _____

The Santa Fe New Mexican

Since 1849. We Read You.

05 NO 4 AM 8 52

E.M.N.R.D.: OIL CONSERVATION DIV.
ATTN: SALLY MARTINEZ
P.O. BOX 6429
SANTA FE, N.M. 87505

AD NUMBER: 435840

ACCOUNT: 56689

LEGAL NO: 58512

P.O. #: 96199082997

164	LINES	once	at	\$	65.60
Affidavits:					5.25
Tax:					4.43
Total:					\$ 75.28

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

other accidental discharges to the surface will be managed.
 Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan applications may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday thru Friday. Prior to any proposed discharge plans or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him and public hearing may be requested by any interested person. Request for public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the director determines that there is significant public interest. If no hearing is held, the Director will approve or disapprove the plans based on the information available. If a public hearing is held, the Director will approve the plans based on the information presented at the hearing.
 GIVEN under the Seal of the New Mexico Conservation Commission at Santa Fe, New Mexico, on this 31st day of October, 1995.
 STATE OF NEW MEXICO
 OIL CONSERVATION DIVISION
 WILLIAM J. LEMAY, Director
 Pub. November 7, 1995

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, BETSY PERNER being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily news paper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a Newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 58512 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 7th day of NOVEMBER 1995 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 7th day of NOVEMBER A.D., 1995.

OK
CS



OFFICIAL SEAL
 LAURA E. HARDING
 My Commission Expires 11/23/95

The Santa Fe New Mexican

Since 1849. We Read You.

95 NO 4 11 8 52

E.M.N.R.D.: OIL CONSERVATION DIV.
ATTN: SALLY MARTINEZ
P.O. BOX 6429
SANTA FE, N.M. 87505

AD NUMBER: 435840

ACCOUNT: 56689

LEGAL NO: 58512

P.O. #: 96199082997

164 LINES once at \$ 65.60
Affidavits: 5.25
Tax: 4.43
Total: \$ 75.28

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

other accidental discharges to the surface will be managed.
Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The discharge plan applications may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday thru Friday. Prior to ruling on any proposed discharge plans 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. Request for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the director determines that there is significant public interest. If no hearing is held, the Director will approve or disapprove the plans based on the information available. If a public hearing is held, the Director will approve the plans based on the information presented at the hearing.
GIVEN under the Seal of New Mexico Conservation Commission at Santa Fe, New Mexico, on this 31st day of October, 1995.
STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
WILLIAM J. LEMAY, Director
Legal #58512
Pub. November 7, 1995

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, BETSY PERNER being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily news paper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a Newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 58512 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 7th day of NOVEMBER 1995 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 7th day of NOVEMBER A.D., 1995.

OK
CS



OFFICIAL SEAL

LAURA E. HARDING

LAURA E. HARDING 11/23/95
MY COMMISSION EXPIRES

AFFIDAVIT OF PUBLICATION

No. 35506

COPY OF PUBLICATION

STATE OF NEW MEXICO
County of San Juan:

ROBERT LOVETT being duly sworn says: That he is the Classified Manager of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s):

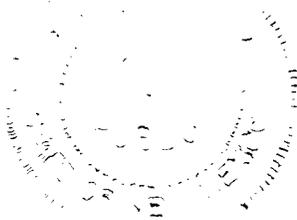
Thursday, November 9, 1995

and the cost of publication is: \$64.84



Oct 1-9-95 **ROBERT LOVETT** appeared before me, whom I know personally to be the person who signed the above document.


My Commission Expires March 21, 1998



Legals



NOTICE OF PUBLICATION

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

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

(GW-71) - El Paso Natural Gas Company, Patrick J. Marquez, Compliance Engineer, PO Box 4990, Farmington, New Mexico, 87499, has submitted a request to modify their existing discharge plan for their Chaco Gas Processing Plant located in Section 16, Township 26 North, Range 12 West, NMPM, San Juan County, New Mexico. The modification consists of adding a cryogenic unit to compliment/replace the existing lean oil liquids extraction facilities. Approximately 2405 gallons per day of produced water with total dissolved solids concentration of 1,000 mg/l will be stored in an above ground double lined evaporation pond equipped with leak detection. Groundwater most likely to be affected in the event of an accidental discharge is at a depth ranging from 220 feet to 810 feet with a total dissolved solids concentration of approximately 560 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

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

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

GIVEN under the Seal of New Mexico Conservation Commission at Santa Fe, New Mexico, on this 31st of October, 1995.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
/s/ William J. Lemay
WILLIAM J. LEMAY, Director

SEAL

Legal No. 35506 published in The Daily Times, Farmington, New Mexico on Thursday, November 9, 1995.

AFFIDAVIT OF PUBLICATION

No. 35506

STATE OF NEW MEXICO

County of San Juan:

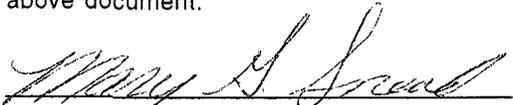
ROBERT LOVETT being duly sworn says: That he is the Classified Manager of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s):

Thursday, November 9, 1995

and the cost of publication is: \$64.84



On 11-9-95 ROBERT LOVETT appeared before me, whom I know personally to be the person who signed the above document.



My Commission Expires March 21, 1998

COPY OF PUBLICATION

Legals



NOTICE OF PUBLICATION

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

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

(GW-71) - El Paso Natural Gas Company, Patrick J. Marquez, Compliance Engineer, PO Box 4990, Farmington, New Mexico, 87499, has submitted a request to modify their existing discharge plan for their Chaco Gas Processing Plant located in Section 16, Township 26 North, Range 12 West, NMPM, San Juan County, New Mexico. The modification consists of adding a cryogenic unit to comply/replace the existing lean oil liquids extraction facilities. Approximately 2405 gallons per day of produced water with total dissolved solids concentration of 1,000 mg/l will be stored in an above ground double lined evaporation pond equipped with leak detection. Groundwater most likely to be affected in the event of an accidental discharge is at a depth ranging from 220 feet to 810 feet with a total dissolved solids concentration of approximately 560 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

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

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

GIVEN under the Seal of New Mexico Conservation Commission at Santa Fe, New Mexico, on this 31st of October, 1995:

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION
/s/ William J. Lemay
WILLIAM J. LEMAY, Director

SEAL

Legal No. 35506 published in The Daily Times, Farmington, New Mexico on Thursday, November 9, 1995.

NOTICE OF PUBLICATION

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

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

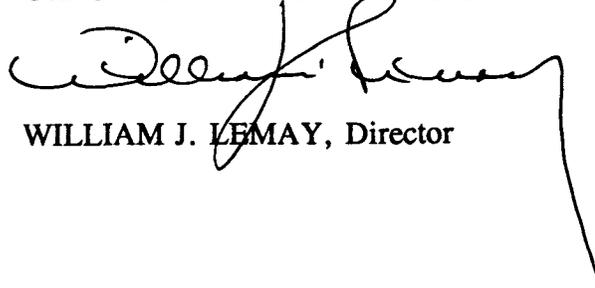
(GW-71) - El Paso Natural Gas Company, Patrick J. Marquez, Compliance Engineer, PO Box 4990, Farmington, New Mexico, 87499, has submitted a request to modify their existing discharge plan for their Chaco Gas Processing Plant located in Section 16, Township 26 North, Range 12 West, NMPM, San Juan County, New Mexico. The modification consists of adding a cryogenic unit to compliment/replace the existing lean oil liquids extraction facilities. Approximately 2405 gallons per day of produced water with total dissolved solids concentration of 1,000 mg/l will be stored in an above ground double lined evaporation pond equipped with leak detection. Groundwater most likely to be affected in the event of an accidental discharge is at a depth ranging from 220 feet to 810 feet with a total dissolved solids concentration of approximately 560 mg/l. The discharge plan addresses how spills, leaks, and other accidental discharges to the surface will be managed.

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

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

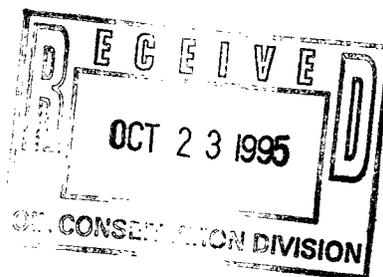
GIVEN under the Seal of New Mexico Conservation Commission at Santa Fe, New Mexico, on this 31st of October, 1995.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY, Director

SEAL



P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

Mr. Chris Eustice
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

October 19, 1995

Subject: Request Major Modification to Discharge Plan GW-071 - Chaco Processing Plant

Dear Mr. Eustice:

El Paso Natural Gas Company requests approval for Major Modification to the current discharges from Chaco Plant. The discharges as outlined below are scheduled to begin in mid-January of 1996.

Major Modification to Discharge Plan GW-071

Cryo Plant

EPNG is currently building a Cryogenic Plant to compliment/replace the existing lean oil liquids extraction facilities at Chaco Plant. The first phase of the Cryo Plant is expected to be on-line in January of 1996 and will replace the existing "A" Gasoline Plant. The operation of a 400 MMSCFD plant will be the result of the first phase of construction with an additional 200 MMSCFD in operation shortly thereafter (Phase II - May 1996). A plot plan is provided under Tab A showing the location of the Cryo in relation to Chaco Plant.

The operation of the new facility is expected to increase the contact water¹ discharge due to gas dehydration from 0.96 gpm to 2.50 gpm as described in Table 1.

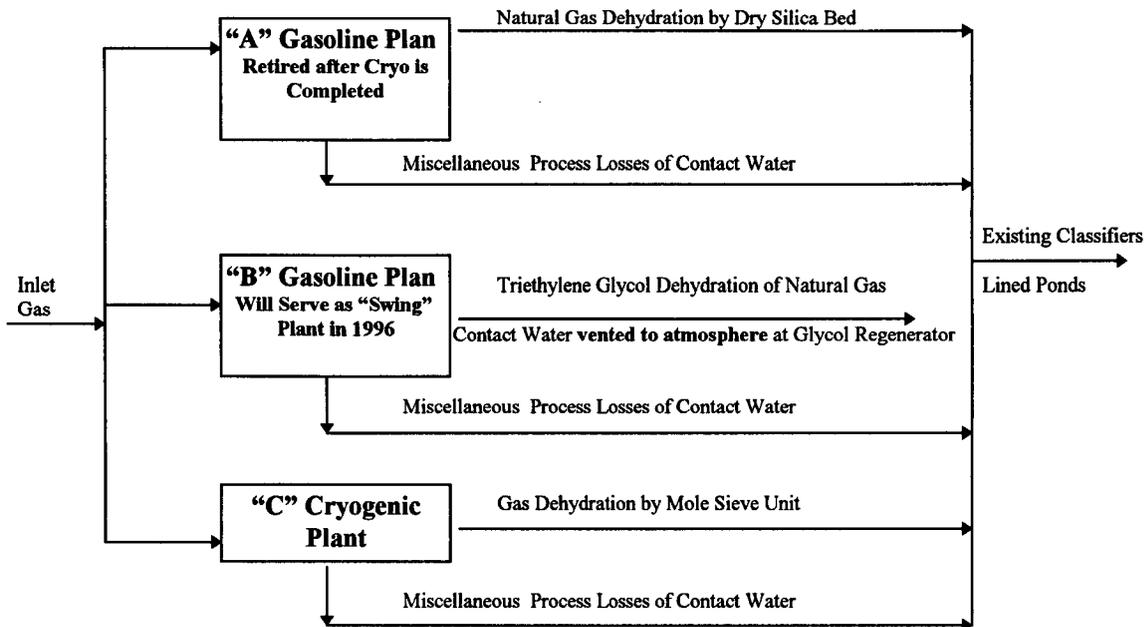
Table 1 Contact Water by Gas Dehydration

	<u>Current Operation</u>	<u>Future Operation Phase I</u>	<u>Future Operation Phase II</u>	<u>Units</u>	<u>Destination</u>
A Plant	11500	Retired	Retired	lbs H2O/Day	Lined Ponds
B Plant	10500	8400	4200	lbs H2O/Day	Vented to Atm.
C Plant	0	20000	30000	lbs H2O/Day	Lined Ponds
H2O in GPM	0.96	1.67	2.50	gpm	

All contact water¹ from the Cryo Plant will be discharged to the existing drain line, separated from the oil phase at the classifiers and then pumped to the lined ponds. The existing drain and classifier system operates well below its design limit, consequently, its capacity will not be jeopardized by the operation of the Cryo Plant. Figure 1 depicts contact water origins and destinations.

1. For the sake of this document, Contact Water is: a) produced water entrained in the natural gas which is removed by dehydration and b) water co-mingled with any petroleum product such as lubricating oil - this volume (b) is difficult to estimate for the new facility, therefore it is not reflected in the Table 1 volumes.

Figure 1



Drain Lines

Several drain systems will be employed to service the Cryo Plant; 1) Open Drain, 2) Closed Drain, 3) the Low Temperature Drain and 4) the Methyl Diethanolamine (MDEA) System. All drain systems are steel and will be integrity tested upon completion.

The *Open Drain System* will collect those drains which are open to the atmosphere and may receive lubricating oil, wash water, detergents and/or rain water. A below grade, 20 bbl, double walled tank will receive and then pump these liquids to the Closed Drain System. Double walls will provide a means for detecting leaks from this tank. A schematic of the tank and the equipment it services is provided under Tab B (DWG. 2CH-8-P423).

The *Closed Drain System* will service those process vessels which vent at pressures above atmosphere. This system will de-pressure at an above ground expansion vessel and then enter Chaco's existing drain system. A schematic of this expansion vessel and the equipment it services is provided under Tab B (DWG. 2CH-8-P434).

The *Low Temperature Drain System* will service those process vessels which vent volatile, low temperature liquids. This system will be stainless steel and will collect in an above ground vessel where the liquids will be heated, vaporized and flared. A schematic of this vessel and the equipment it services is provided under Tab B (DWG. 2CH-8-P433).

The *MDEA Drain System* will serve in the MDEA product treating system of the Plant. MDEA will be collected in a below grade, 20 bbl, double walled tank and then returned to the process. A schematic of this system is provided under Tab B (DWG. 2CH-8-P427).

Non-Contact Discharge

The Cryo Plant will utilize some cooling capacity from the existing cooling towers at Chaco. The required capacity will be less than that necessary for the operation of "A" Gasoline Plant (retired in 1996). All non-contact water will be discharged to the existing unlined, non-contact evaporation ponds.

Storage Vessels

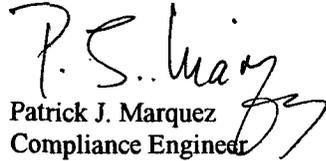
One 500 bbl Amine storage tank and one 100 bbl Lubricating Oil storage tank will service the Cryo Plant equipment. Both tanks will be above ground, bermed and labeled appropriately. Tank locations within the Cryo Plant boundaries is provided under Tab C (DWG.2CH-8-P444).

Design Specifications

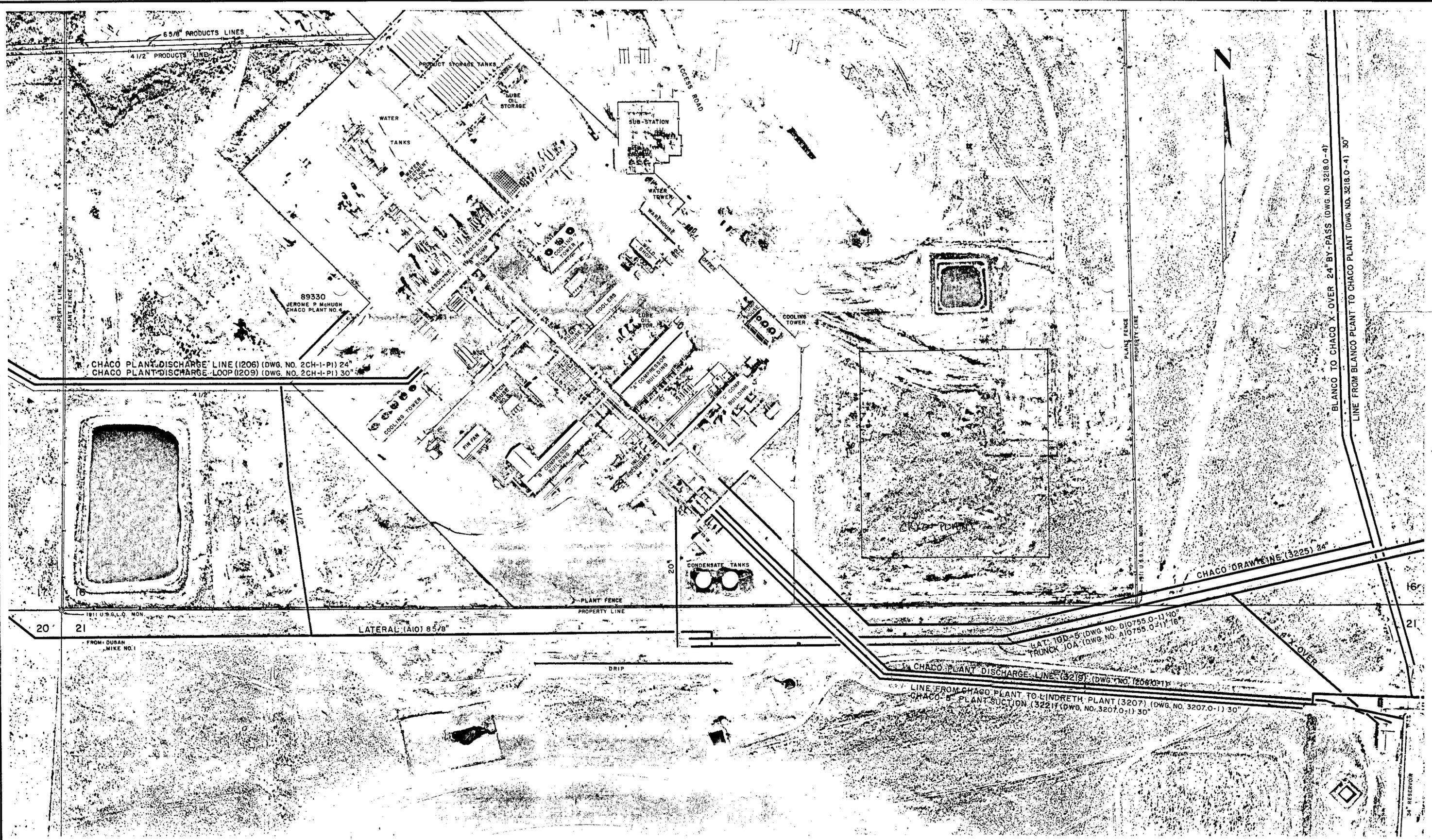
This information is provided according to the design specifications available at this time. Should the "as build" specifications regarding vessel sizes, discharge volumes or discharge destinations change, EPNG shall inform the NMOCD and request approval.

EPNG respectfully requests approval to discharge as described above. A check in the amount of \$1717.50 for modification processing will be prepared upon approval. If you require further information, please do not hesitate to call at 505-599-2175.

Thank you,


Patrick J. Marquez
Compliance Engineer

xc: w/o attachments
Denny Foust - NMOCD Aztec
Sandra Miller/David Bays/File: 5212 Regulatory



CHACO PLANT DISCHARGE LINE (I206) (DWG. NO. 2CH-1-PI) 24"
 CHACO PLANT DISCHARGE LOOP (I209) (DWG. NO. 2CH-1-PI) 30"

89330
 JEROME P. McHUGH
 CHACO PLANT NO. 4

LATERAL (A10) 8 5/8"

CHACO DRAWLINE (3225) 84"

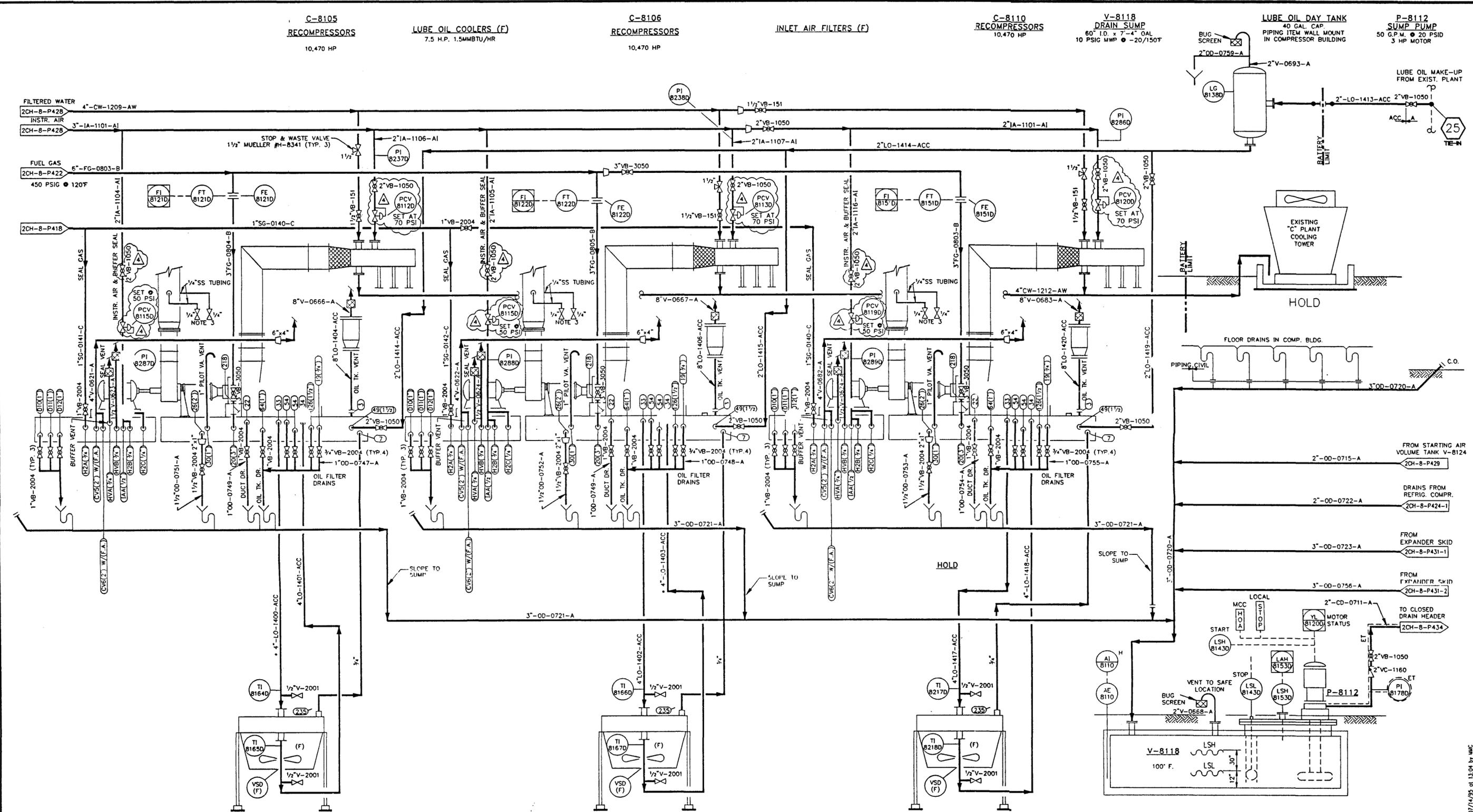
CHACO PLANT DISCHARGE LINE (3219) (DWG. NO. 12060-1)
 LINE FROM CHACO PLANT TO LINDRETH PLANT (3207) (DWG. NO. 3207.0-1) 30"
 CHACO B PLANT SUCTION (3221) (DWG. NO. 3207.0-1) 30"

CLASS LOCATION DATA														REVISIONS				ENGINEERING RECORD	
LINE NO.	O.D.	LINE DESIGNATION	BEGIN	END	CL. LOC.	METER NO.	LINE NO.	O.D.	LINE DESIGNATION	BEGIN	END	CL. LOC.	METER NO.	NO.	DATE	BY	DESCRIPTION	DRAWN BY	DATE
														A	2-21-79	L.D.	Added Notes & Detailing Units	Aero-Graphics	7-14-78
														B	8-3-81	L.O.	Photo Revisions Per 1981 Photography	Aero-Graphics	4-21-90
														C	2-8-85	T.G.B.	Misc. Revisions		
														D	8-28-87	G.G.	Change Chaco Plant Cl. 2 To Non-Jurisdictional		
														E	1-15-91	A.G.	Redrawn Per 1990 Photography & Misc. Revisions		
														F	1-21-92	A.G.	Redrawn Per 1990 Photography & Misc. Revisions		

EIPaso
 Natural Gas Company
 ENGINEERING, DRAFTING DIVISION

D. O. T. CLASS LOCATION
S1/2 CHACO COMPRESSOR STATION

TWS 26-N, RANGE 12-W
 SAN JUAN COUNTY, NEW MEXICO



- NOTES:
- (F) DENOTES FURNISHED W/TURBINE/COMPRESSOR PACKAGE.
 - * L.O. PIPING TO BE STAINLESS STEEL.
 - VALVES TO BE ACCESSIBLE FROM GRADE.

NO.	DATE	BY	DESCRIPTION	W.O.	APP.	PRT.	SEP.	DATE	TO	W.O.
4	7/17/95	MA	REVISED AS NOTED							
3	6/08/95	MA	REVISED AS NOTED							
2	4/18/95	MA	ISSUED FOR CONSTRUCTION							
1	3/10/95	MA	REVISED PER HAZOP REVIEW							
0	2/2/95	DH	ISSUED FOR DESIGN							
E	12/13/94	DH	REISSUED FOR APPROVAL FOR 600MM CASE							
D	11/21/94	DH	REISSUED FOR 600MM ESTIMATE							
C	11/23/94	DH	ISSUED FOR APPROVAL							
B	10/8/94	L.S.	ISSUED FOR REVIEW							
A	7/16	DH	ISSUED FOR PROPOSAL							

ABB Randall Corporation
 AN ABB LUMMUS CREST COMPANY
 Houston, Texas
 ABBR JOB # 80152

EI Paso
 NATURAL GAS COMPANY

CHACO CRYOGENIC PLANT
 RECOMPRESSOR UTILITY
 PROCESS AND INSTRUMENTATION DIAGRAM

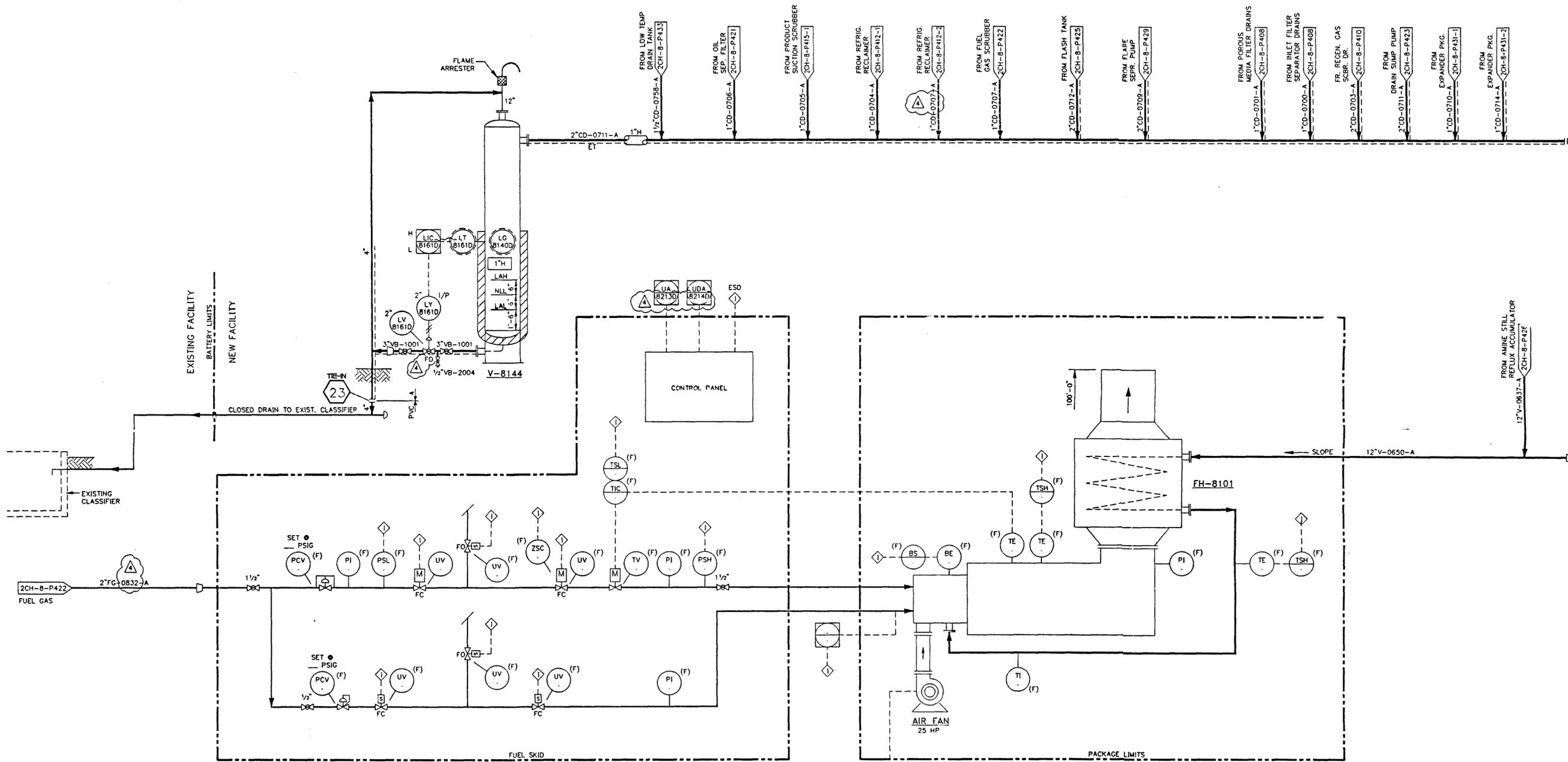
ENG. RECORD	DATE
DRAFTING	GHR 6-7-94
CAD DRAFTING	GHR 6-7-94
CHECKED	
PROJECT APPROVAL	
SURVEY DATE	
R/W NUMBER	
COMPUTER SAVE NAME	2CH8P423

SCALE: NONE
 DWG. NO.: 2CH-8-P423
 REV. 4

RECEIVED JUL 20 1995

V-8144
CLOSED DRAIN
K.O. DRUM
24" DIA. X 8'-0" S/S
150 PSIG MAMP @ -20/150F

FH-8101
FIRED HEATER
THERMAL INCINERATOR



YL RT AUTO STATUS
YL RT MOTOR STATUS
HS RT START/STOP

ABB Randall Corporation

AN ABB LUMMUS CREST COMPANY
Houston, Texas
ABBR JOB # 80152

EI Paso
NATURAL GAS COMPANY

CHACO CRYOGENIC PLANT
VENT SYSTEM / VENT & CLOSED DRAIN SYSTEMS
PROCESS AND INSTRUMENTATION DIAGRAM

NO.	DATE	BY	DESCRIPTION	W.O.	APP.	PRT.	SER.	DATE	TO	W.O.
4	7/27/95	MM	REVISED AS NOTED							
3	6/08/95	MA	REVISED AS NOTED							
2	04/18/95	MA	ISSUED FOR CONSTRUCTION							
1	03/10/95	MA	REVISED PER HAZOP REVIEW							
0	02/02/95	DH	ISSUED FOR DESIGN							
C	12/13/94	DH	ISSUED FOR APPROVAL FOR 600MM CASE							
B	11/23/94	L.S.	RE-ISSUED FOR 600MM ESTIMATE							
A	11/10/94	L.S.	ISSUED FOR APPROVAL							

ENG. RECORD	DATE	COMPUTER SAVE NAME
DRAFTING DESIGN	R.D.J. 11/1/1994	2CH8P434
CAD DRAFTING	R.D.J. 11/1/1994	
CHECKED		
PROJECT APPROVAL		
SURVEY DATE		
R/W NUMBER		
PRINT RECORD		

SCALE: NONE	DWG. NO. 2CH-8-P434	REV. 4
-------------	---------------------	--------

FMB (Rev. 11/93)

LEGEND

DWG. NO.

REFERENCE DRAWINGS

PERMISSIONS

PRINT RECORD

SCALE: NONE

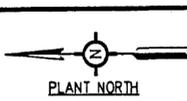
DWG. NO.

2CH-8-P434

REV. 4

RECEIVED JUL 20 1995

07/17/95 at 07:41 by MMC



FOR EQUIPMENT

- COMPRESSOR BUILDING
- CONTROL ROOM/M.C.C.
- REGENERATION GAS COMPRESSOR
- EXPANDER/COMPRESSOR
- DEETHANIZER PRODUCT/REFRIG. COMP.
- DEETHANIZER PRODUCT/REFRIG. COMP.
- RECOMPRESSOR
- RECOMPRESSOR
- INSTRUMENT AIR PACKAGE

- EE-8101 REGENERATION GAS COOLER
- EE-8102 NGL PRODUCT SUBCOOLER
- EE-8103 PROPANE PRODUCT COOLER
- EE-8104 DEETHANIZER PRODUCT COOLER
- EE-8105 DEETHANIZER PRODUCT CONDENSER
- EE-8106 PIPELINE PRODUCT COOLER
- EE-8107 RECOMPRESSOR DISCHARGE COOLERS
- EE-8108 REFRIGERANT CONDENSERS
- EE-8109 LEAN AMINE COOLER
- EE-8110 AMINE STILL REFLUX CONDENSER
- EE-8111 GAS/GAS EXCHANGER
- EE-8112 COLD SIDE REBOILER
- EE-8113 SIDE REBOILER
- EE-8114 INLET GAS CHILLER
- EE-8115 BOTTOMS REBOILER
- EE-8116 REFRIGERANT RECLAIMER
- EE-8117 REFRIGERANT SUB COOLER
- EE-8118 DEETHANIZER REBOILER
- EE-8119 WINGATE PRODUCT COOLER (OUTSIDE BATTERY LIMITS)
- EE-8120 LEAN/RICH EXCHANGER
- EE-8121 AMINE STILL REBOILER
- EE-8122 AMINE STILL REBOILER
- EE-8123 DRAIN SEPARATOR ELECTRIC HEATER
- EE-8124 REGENERATION GAS HEATER
- EE-8125 REGENERATION GAS HEATER
- EE-8126 HOT OIL HEATER

- FT-8101 INLET FILTER SEPARATOR
- FT-8102 POROUS MEDIA FILTER
- FT-8103 DUST FILTER
- FT-8104 AMINE COALESCER
- FT-8105 AMINE FILTER
- FT-8106 AMINE CHARCOAL FILTER
- FT-8107 OIL SEPARATOR FILTER

- FL-8101 FLARE STACK (OUTSIDE BATTERY LIMITS)
- FL-8102 VENT STACK

- P-8101/8102/8103 PRODUCT BOOSTER PUMPS
- P-8104/8105/8106 PRODUCT PH-LINE PUMPS
- P-8107/8108/8109 AMINE CIRCULATION PUMPS
- P-8110/8111 HOT OIL CIRCULATION PUMPS
- P-8112 DRAIN SUMP PUMP
- P-8113/8114 AMINE BOOSTER PUMPS
- P-8115 ANTIFOAM PUMP
- P-8116/8117 AMINE STILL REFLUX PUMPS
- P-8118 AMINE MAKE-UP PUMP
- P-8119 ENGINE OIL TRANSFER PUMP
- P-8120 FLARE SEPARATOR PUMP

- V-8101/8102/8103 DEHYDRATORS
- V-8104 REGEN. GAS SCRUBBER
- V-8105 HIGH PRESSURE COLD SEPARATOR
- V-8106 REFRIGERATION K.O. DRUM
- V-8107 DEMETHANIZER
- V-8108 PRODUCT SURGE TANK
- V-8109 DEETHANIZER
- V-8110/8111 PRODUCT AMINE CONTACTORS
- V-8112/8113 PRODUCT TREATERS
- V-8114 HOT OIL SURGE TANK
- V-8115 REFRIGERANT ECONOMIZER
- V-8116 REFRIGERANT SURGE TANK
- V-8117 FUEL GAS SCRUBBER
- V-8118 DRAIN SUMP
- V-8119 FLASH TANK
- V-8120 AMINE STILL
- V-8121 AMINE STILL REFLUX ACCUMULATOR
- V-8122 AMINE DRAIN SUMP
- V-8123 AMINE STORAGE TANK
- V-8124 STARTING AIR VOLUME TANK
- V-8125 FLARE SEPARATOR
- V-8126 ENGINE/COMPR. OIL STORAGE TANK
- V-8128 LOW TEMPERATURE DRAIN SEPARATOR
- V-8129 PRODUCT SUCTION SCRUBBER
- V-8131 REFRIGERANT SUCTION SCRUBBER

- PKG-XXXX PURCHASED METER PACKAGE

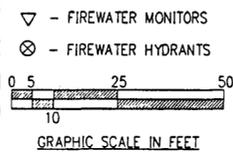
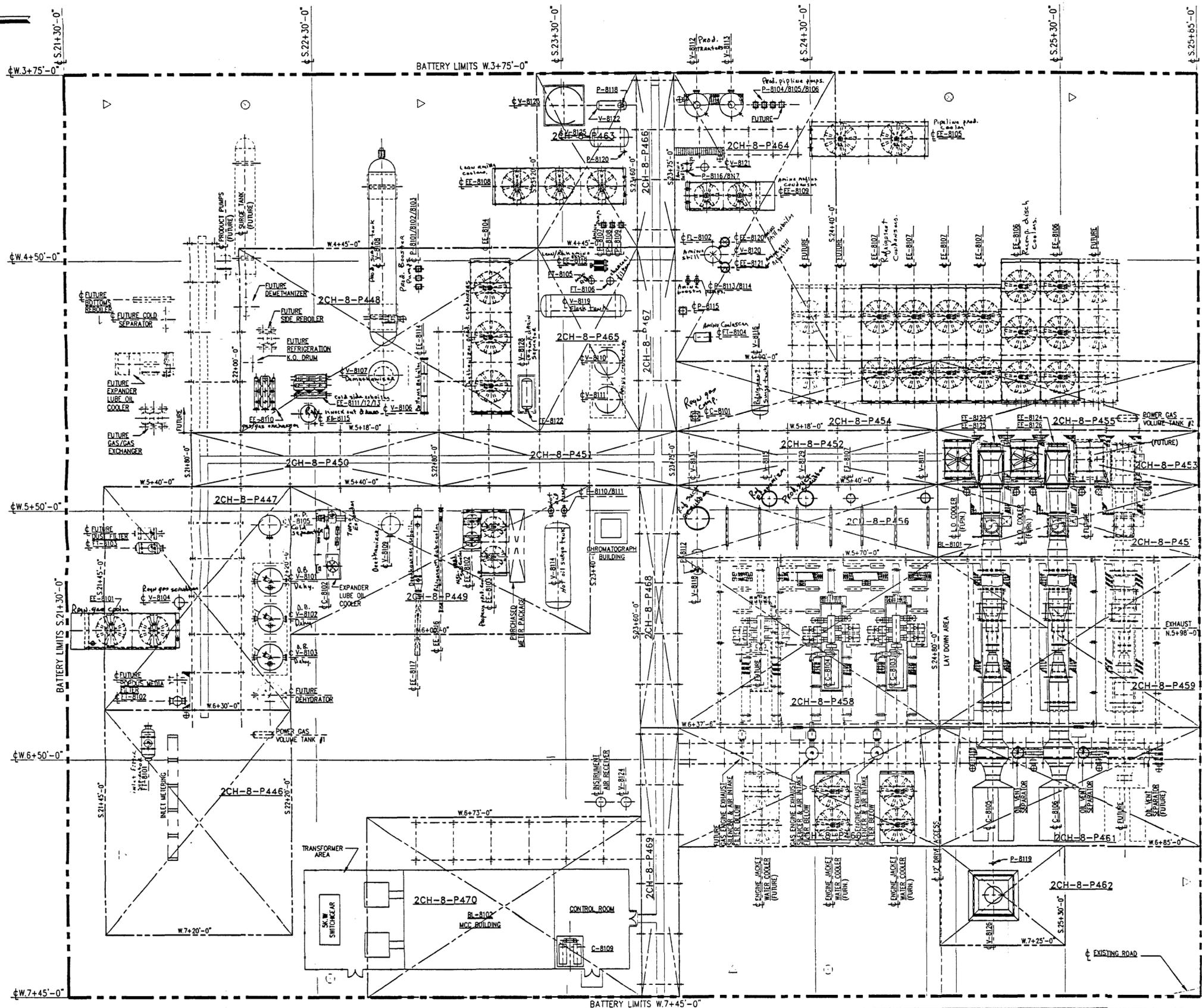


ABB Randall Corporation
 AN ABB LUMMUS CREST COMPANY
 Houston, Texas
 ABBR JOB # 80152



CHACO CRYOGENIC PLANT
 PIPING DRAWING INDEX
 INSIDE BATTERY LIMITS

SCALE: 1"=20'-0"
 DWG. NO. 2CH-8-P444
 REV. A

NO.	DATE	BY	DESCRIPTION	W.O.	APP.	PRJ.	SEP.	DATE	TO	W.O.
A	1-26-95	LD	ISSUED FOR APPROVAL							
DWG. NO. TITLE REFERENCE DRAWINGS NO. DATE BY DESCRIPTION W.O. APP. PRJ. SEP. DATE TO W.O.										
R/W NUMBER COMPUTER SAVE NAME 2CH8P444										

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505

October 13, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-962-424

Mr. Patrick Marquez
Compliance Engineer
El Paso Natural Gas Company
P.O. Box 4990
Farmington, New Mexico 87499

**RE: WATER QUALITY MONITORING AND PIT CLOSURE PLAN
CHACO GAS PLANT, GW-71
SAN JUAN COUNTY, NEW MEXICO**

Dear Mr. Marquez:

The New Mexico Oil Conservation Division (OCD) has reviewed El Paso Natural Gas Company's (EPNG) October 10, 1995 "ANNUAL REPORT OF MONITOR WELL ANALYSES, REQUEST APPROVAL OF WORK PLAN FOR CHACO INDUSTRIAL PONDS AND FLARE PIT". This document contains EPNG's request to decrease the frequency of monitoring the discharge and ground water quality at the Chaco Gas Plant. The document also contains EPNG's plan for investigation of the extent of contamination related to the former use of the unlined flare pit and industrial ponds #1 and #2.

Below is the OCD's review of this document:

- A. The OCD approves of the above referenced request to decrease the frequency of monitoring the discharge quality and ground water quality at the Chaco Gas Plant.

Please be advised that OCD approval does not relieve EPNG of liability should their operation result in actual pollution of surface water, ground water or the environment. In addition, OCD approval does not relieve EPNG of responsibility for compliance with any other federal, state and local laws and/or regulations.

Mr. Patrick Marquez
October 13, 1995
Page 2

- B. The OCD approves of the above referenced investigation work plan for determining the extent of contamination related to the former use of the unlined flare pit and industrial ponds #1 and #2 with the following conditions.
1. In addition to the sampling proposed, the soils in each pit/pond will be sampled for heavy metals.
 2. All wastes generated during the investigation will be disposed of at an OCD approved facility.
 3. EPNG will submit the remediation/closure report to the OCD by December 15, 1995. The report will contain:
 - a. A description of all activities which occurred during the investigation, conclusions and recommendations.
 - b. A summary of laboratory analytic results of all soil and water quality sampling of the borings and monitor wells.
 - c. A water table elevation map using the water table elevation of the ground water in all monitor wells at the facility.
 - d. A geologic log for each boring and monitor well and an as built well completion diagram for each monitor well.
 4. EPNG will notify the OCD at least one week in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples.
 5. All documents submitted for approval will be submitted to the OCD Santa Fe Office with copies provided to the OCD Aztec District Office.

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

If you have any questions, please contact me at (505) 827-7154.

Sincerely,


William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec District Office

Z 765 962 424



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, March 1993

Sent to	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

Fold at line over top of envelope to the right of the return address

**FAX
TRANSMITTAL**



EL PASO NATURAL GAS COMPANY

is a major open-access transporter of natural gas serving West Texas, New Mexico, Arizona, southern Nevada and California. California receives more than half of its gas from El Paso's 17,500-mile pipeline system, which is connected to every major producing basin in the Southwest. El Paso's customer-friendly electronic bulletin board, *Passport*, offers state-of-the-art programs beneficial to producers, buyers, marketers, end-users and other pipelines.

TO	NAME OF RECIPIENT <i>Bill Olson</i>	PAGE(S) TRANSMITTED <i>2 Cover</i>	DATE
	NAME OF COMPANY <i>HMCO</i>	CITY/STATE	
	ADDRESS	TELEPHONE NUMBER	
	FAX NUMBER (REQUIRED) <i>505 827 8177</i>		
FROM	NAME OF SENDER <i>Patrick Marquez</i>	NAME OF COMPANY <input checked="" type="checkbox"/> EL PASO NATURAL GAS <input type="checkbox"/> OTHER	CITY/STATE
	ADDRESS		
REMARKS	<input type="checkbox"/> RETURN <input type="checkbox"/> NO RETURN		FAX NUMBER: () _____
	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> Complete report in report sections <i>W. Olson</i> </div>		REPLY VERIFY NUMBER: () _____

FM-SS-0162 (Rev. 10-92)

Bill - I hope that I've captured your requests from our meeting last week. If there is something else you would like to see in the work plan - please call @ your earliest convenience. Work will probably begin on or about Thursday, Oct 12th.

Thanks Patrick Marquez

505 5992175

- Hard Copy to follow -

El Paso
Natural Gas Company

P. O. BOX 333
FARMINGTON, NEW MEXICO 87499

Mr. Bill Olson
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

October 10, 1995

**Subjects: Annual Report of Monitor Well Analyses
Request Approval of Work Plan for Chaco Industrial Ponds and Flare Pit**

Dear Mr. Olson:

El Paso Natural Gas Company submits The Annual Monitor Well Analyses Report and request approval for: 1) Reduced analyte and sampling frequency and 2) Approval of EPNG's Work Plan for closing Industrial Ponds 1 & 2 and The Earthen Flare Pit.

Analyses Report

1.0 Monitor Wells and Discharges

Analyses for the monitor wells, the non-contact discharge line and the contact water at Chaco Plant are presented under Tab A. This report is required as a condition of the Discharge Plan approval dated September 13, 1994. The discharges were sampled and analyzed as follows:

<u>Discharge</u>	<u>Frequency</u>	<u>Constituents</u>
Monitor Wells	Quarterly	WQCC metals, major anions/cations and TDS
Non-Contact	Initially	BTEX, WQCC metals, organics, major anions/cations and TDS
	Quarterly	WQCC metals, major anions/cations and TDS
Contact	Annually	WQCC 3-103A constituents save the radioactive species

Based on the information provided, EPNG request that the sampling frequency and analyses be reduced as follows:

<u>Discharge</u>	<u>Frequency</u>	<u>Constituents</u>
Monitor Wells	Annually	WQCC metals, major anions/cations and TDS
Non-Contact	Annually	WQCC metals, major anions/cations and TDS
Contact	None	N/A

Work Plan

2.0 Chaco Flare Pit and Industrial Ponds 1 & 2

As a condition for approval of Chaco's Discharge Plan (William Lemay to Kris Sinclair - September 13, 1994) EPNG is required to submit a closure plan for industrial ponds 1 & 2 and the earthen flare pit. The Closure Plan will be submitted with the results of this Work Plan. A map of the pits is provided under Tab B.

2.1 Current Monitoring

EPNG has installed and continues to sample seven monitor wells at key locations within the Plant boundaries. EPNG has also installed two lined ponds which receive all contact water generated at the Plant and maintains unlined ponds 3, 4, 5, 6 and 8 for non-contact water consistent with NMOCD's directive.

2.2 Area Assessment/Sampling

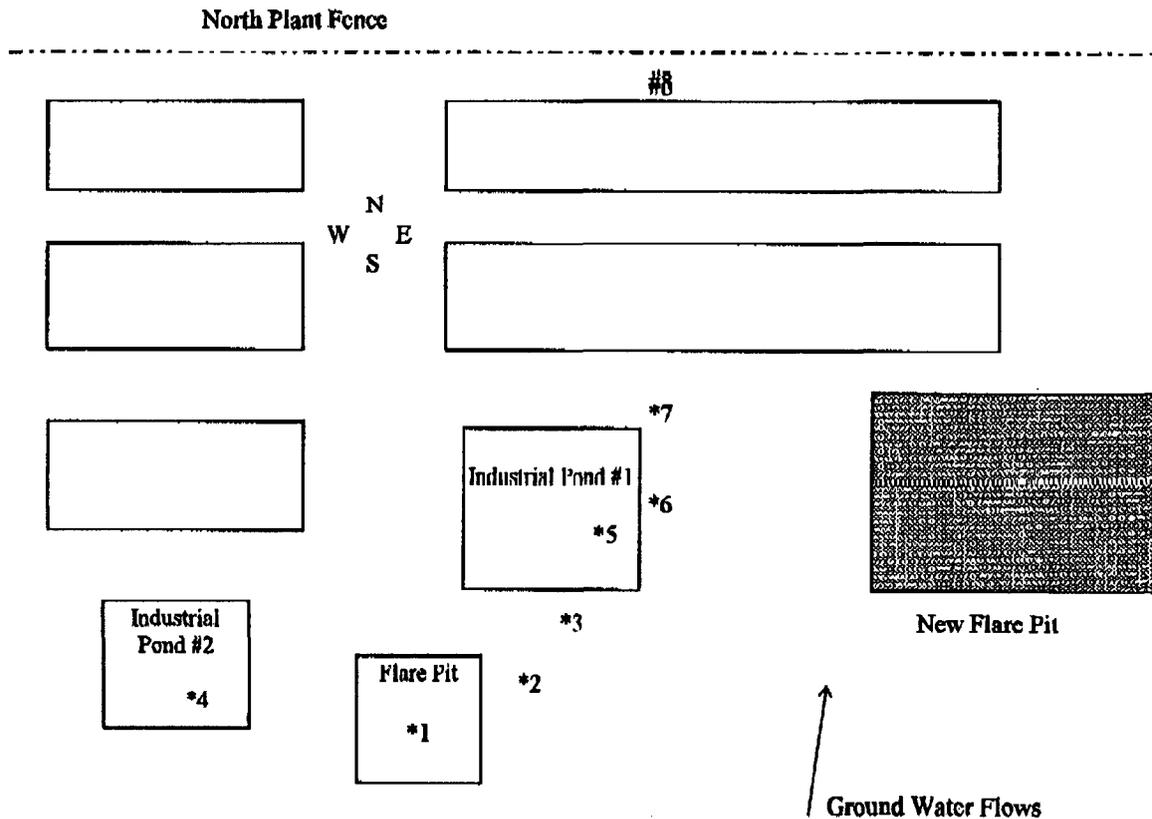
Seven locations are proposed to determine the vertical extent of contamination in the area of the pits. Three locations will be within the pit boundaries while the remaining locations will be down gradient of the pits (Refer to Figure 1). Sampling will take place as follows:

- One soil sample within the pit boundaries at approximately 3-5 feet beneath the surface. This sample will serve as "source" sample and will be analyzed for BTEX and TPH (EPA methods 8020 and modified 8015 and/or 418.1). One flare pit and two waste water pits give six analyses.
- Locations 1-7 will be drilled to the depth of contamination (PID < 100ppm) with PID readings taken at 5 foot increments. A TPH analysis will be run on the sample that shows the highest PID reading per location. Seven locations give seven TPH analyses at highest PID reading.
- One soil sample will be taken at the depth of contamination and analyzed for BTEX and TPH. Seven locations give fourteen analyses.
- Once the samples are retrieved, each location will be filled with cement-bentonite grout to prevent cross contamination.

In addition, EPNG proposed to drill one monitor well north (down gradient) of the ponds to further establish that no hydrocarbon constituents are moving off-site. Details for the installation and sampling are as follows:

- The well will be completed to first ground water, anticipated depth - less than 30'.
- An installation diagram and specifications are provided under Tab B.
- The monitor well will be sampled initially for BTEX by EPA Method 8020, WQCC Metals by EPA Method 6010, Cations/Anions and Polynuclear Aromatics.

Figure 1



Sample (Bore) Locations (*#)

Indicates those locations which will be sampled to the depth of contamination (PID @ 5 foot increments).

Monitor Well Location - #8

Monitor well installation to perched aquifer

2.3 Pit/Pond Closure

Upon receipt of the analyses outlined above, EPNG will submit a plan for remediation/closure to your office.

EPNG respectfully request approval of the Work Plan and the reduced sampling frequency and analytes for the existing monitor wells. Please do not hesitate to call if you need more information at 505-599-2175.

Thank you,

Patrick J. Marquez
Compliance Engineer

xc: w/o attachments

Denny Foust - NMOCD Aztec
Sandra Miller/ David Bays/File 5212 Regulatory

FAX
TRANSMITTAL



EL PASO NATURAL GAS COMPANY

is a major open-access transporter of natural gas serving West Texas, New Mexico, Arizona, southern Nevada and California. California receives more than half of its gas from El Paso's 17,500-mile pipeline system, which is connected to every major producing basin in the Southwest. El Paso's customer-friendly electronic bulletin board, Passport, offers state-of-the-art programs beneficial to producers, buyers marketers, end-users and other pipelines.

TO	NAME OF RECIPIENT <i>Bill Olson</i>		PAGE(S) TRANSMITTED <i>3 + Cover</i>	DATE <i>10/13/95</i>
	NAME OF COMPANY			CITY/STATE
	ADDRESS			TELEPHONE NUMBER
	FAX NUMBER (REQUIRED) <i>505 827 8177</i>			
FROM	NAME OF SENDER <i>Patrick M. ...</i>		NAME OF COMPANY <input checked="" type="checkbox"/> EL PASO NATURAL GAS <input type="checkbox"/> OTHER	
	ADDRESS			CITY/STATE
REMARKS	<input type="checkbox"/> RETURN <input type="checkbox"/> DO NOT RETURN		REPLY	FAX NUMBER: () _____
				VERIFY NUMBER: () _____

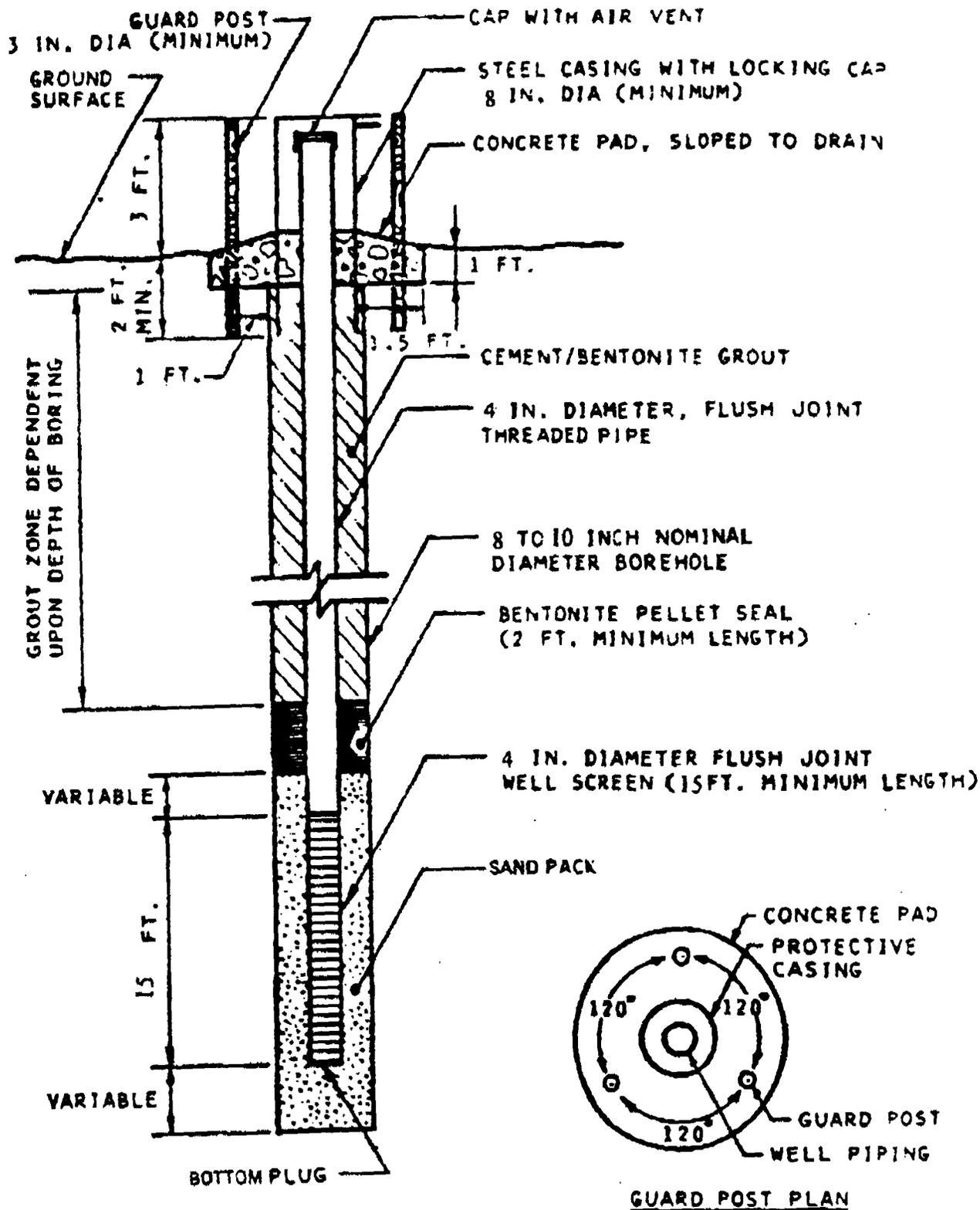
Bill -

1. Cams are using a minimum of 5% Bentonite grout
2. My Fax is 599 ~~2119~~ 2119
3. Specifications for Manufacture well are attached.

MONITORING WELL INSTALLATION SPECIFICATIONS

1. The well is to be completed to first ground water, anticipated depth less than 30'.
2. Well casing will be constructed of 4" schedule 40 PVC piping.
3. The well will be screened using .010" slotted PVC piping. The screen will be placed with at least 5' of screen above and 10' below the water level using a minimum of 15' of screen.
4. A gravel pack consisting of silica sand consistent with screen and site lithologies, a 2' bentonite seal, and cement-bentonite grout to surface.
5. Monitor well top will extend above ground surface, but not less than 2'. The well is to have a concrete pad , equipped with a locking cover and bumper posts.

TYPICAL MONITORING WELL INSTALLATION



NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505

September 22, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. P-176-012-192

Mr. Patrick Marquez
El Paso Natural Gas Company
P.O. Box 4990
Farmington, New Mexico 87499

**Re: Spent Sand Blast Material Disposal
Chaco Gas Plant
San Juan County, New Mexico**

Dear Mr. Marquez:

The New Mexico Oil Conservation Division (OCD) has received El Paso Natural Gas Company's (EPNG) request dated September 21, 1995 to dispose of 24,000 pounds of sand blast media along with the analytical results characterizing the waste.

Based upon the information provided the request is hereby approved subject to the following conditions:

1. The sand blast waste will be spread onto the gravel roads within the facility proper only.
2. The sand blast waste will not be allowed to enter any water course.

Please be advised this approval does not relieve EPNG of liability should their operation result in pollution of surface water, ground water or the environment. In addition, OCD approval does not relieve EPNG of responsibility for compliance with other federal, state and/or local regulations.

If you have any questions call me at (505) 827-7153.

Sincerely,



Chris Eustice
Geologist

El Paso
Natural Gas Company

NEW MEXICO OIL CONSERVATION DIVISION
RECEIVED

SEP 21 1995 8 52

P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

September 21, 1995

Mr. Chris Eustice
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

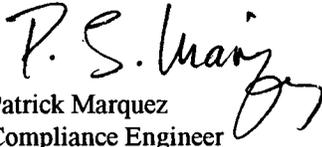
Subject: Paint Chip Disposal - Chaco Plant

Mr. Eustice,

EPNG's Chaco Plant has generated approximately 60 bbls (24000± lbs) of sand blast media while re-coating plant piping during the month of July. The waste was sampled and analyzed for lead and chrome - analysis is attached for your review. EPNG request permission to use the blast media as road base within the Plant boundaries. No blast media will leave the Chaco Plant boundaries.

Should you require further information, please call at 505 599 2175.

Thank you,


Patrick Marquez
Compliance Engineer

cc: w/o attachments

Denny Foust (NMOCD)
Lendel Smith (EPNG)
Bob Yungert (EPNG)
Greg Hale (EPNG)
Sandra Miller/David Bays/File: 5212 Regulatory



Analytical **Technologies**, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. **507419**

August 15, 1995

El Paso Natural Gas Co.
P.O. Box 4990
Farmington, NM 87499

Project Name/Number: (NONE)

Attention: John Lambdin

On **07/31/95**, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

All analyses were performed by Analytical Technologies, Inc., 11 East Olive Road, Pensacola, FL.

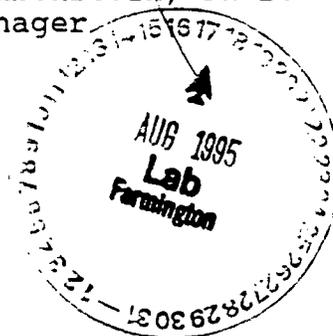
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Kimberly D. McNeill
Project Manager

MR:jt

Enclosure

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager





Analytical **Technologies**, Inc.

CLIENT : EL PASO NATURAL GAS CO. DATE RECEIVED : 07/31/95
 PROJECT # : (NONE)
 PROJECT NAME : (NONE) REPORT DATE : 08/15/95

ATI ID: 507419

	ATI PENSACOLA ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	507419-01	950805	NON-AQ	07/26/95



---TOTALS---

<u>MATRIX</u>	<u>#SAMPLES</u>
NON-AQ	1

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

"Method Report Summary"

Accession Number: 508059
Client: ANALYTICAL TECHNOLOGIES, INC.
Project Number: 507419
Project Name: EL PASO NATURAL GAS
Project Location: N/S
Test: Group of Single Metals

Client Sample Id:	Parameter:	Unit:	Result:
507419-01	CHROMIUM, TCLP (6010)	MG/L	0.17
	LEAD, TCLP (5010)	MG/L	0.53

950805

Chaco Plant

'C' Turbine Spent

Abrasive blast Media



Analytical Technologies, Inc.

"Metals Quality Control Report"

Parameter:	CHROMIUM	LEAD
Batch Id:	H6T070	P6T070
Blank Result:	<0.01	<0.05
Anal. Method:	6010	6010
Prep. Method:	3010	3010
Analysis Date:	09-AUG-95	09-AUG-95
Prep. Date:	09-AUG-95	09-AUG-95

Sample Duplication

Sample Dup:	508059-1	508059-1
Rept Limit:	<0.01	<0.05
Sample Result:	2.2	2.5
Dup Result:	2.2	2.5
Sample RPD:	0	0
Max RPD:	20	20
Dry Weight%	N/A	N/A

Matrix Spike

Sample Spiked:	508059-1	508059-1
Rept Limit:	<0.01	<0.05
Sample Result:	0.17	0.53
Spiked Result:	2.2	2.5
Spike Added:	2.0	2.0
% Recovery:	102	99
% Rec Limits:	75-125	75-125
Dry Weight%	N/A	N/A

ICV

ICV Result:	5.0	5.0
True Result:	5.0	5.0
% Recovery:	100	100
% Rec Limits:	90-110	90-110

LCS

LCS Result:	2.2	2.1
True Result:	2.0	2.0
% Recovery:	110	105
% Rec Limits:	90-120	90-120

Handwritten signature/initials



Batch Id: Comments:

H6T070	ANALYST: JR
H6T070	The results reported under "Sample Duplication" are the MS/MSD.
P6T070	ANALYST: JR
P6T070	The results reported under "Sample Duplication" are the MS/MSD.



N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW ATI REPORTING LIMIT;
THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
N/D = NOT DETECTED.
DISS. OR D = DISSOLVED
T & D = TOTAL AND DISSOLVED
R = REACTIVE
T = TOTAL
G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT AND
THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
OR BELOW ATI REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".
Q = THE ANALYTICAL (POST-DIGESTION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY
BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DIGESTION) SPIKE.
= ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.
+ = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE. (DILUTION PRIOR
TO ANALYSIS
@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX. (DILUTION PRIOR TO
DIGESTION)
P = ANALYTICAL (POST DIGESTION) SPIKE.
I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
N/C* = NOT CALCULABLE; SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT AND THE
ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE ATI REPORTING
LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER,
THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= SAMPLE AND OR DUPLICATE RESULT IS BELOW 5 X ATI REPORTING LIMIT
AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE ATI
REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
SAMPLE IS NON-HOMOGENEOUS.
J = (FLORIDA DEP 'J' FLAG) - MATRIX SPIKE AND POST SPIKE RECOVERY IS OUT OF
THE ACCEPTABLE RANGE. SEE OUT OF CONTROL EVENTS FORM.
S = METHOD OF STANDARD ADDITIONS (MSA) WAS PERFORMED ON THIS SAMPLE.

FROM ANALYSIS REPORT:
RL= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.
Q= QUALIFIER (FOOTNOTE)

FROM QUALITY CONTROL REPORT:
RPD= RELATIVE PERCENT DEVIATION.
RPT LIMIT= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.

NOTE: THE UNITS REPORTED ON THE QUALITY CONTROL REPORT ARE REPORTED ON AN AS
RUN BASIS.

SW-846, 3rd Edition, September 1986 and Revision 1, July 1992.
EPA 600/4-79-020, Revised March 1983.
NIOSH Manual of Analytical Methods, 3rd Edition.

GJ = GARY JACCES
JLH = JAMES L. HERED

JR = JOHN REED
JMP = JACQUELINE M. PRICE

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
8-23-95	San Juan County	4500 gal	Water Road #760	Put on Road's	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden
" "	" "	" "	" "	" "	Sally Hadden

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
8-24-95	SAN JUAN COUNTY	4500	FOR WATERING ROADS	PUT ON ROAD	Bobby Haddon
"	"	"	"	"	Bobby Haddon
"	"	"	"	"	Bobby Haddon
"	"	"	"	"	Bobby Haddon
"	"	"	"	"	Bobby Haddon
"	"	"	"	"	Bobby Haddon
"	"	"	"	"	Bobby Haddon
"	"	"	"	"	Bobby Haddon
"	"	"	"	"	Bobby Haddon

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
Sept. 13 1995	San Juan County Road Dept.	3500 Gallons	Intended to use it on County Road, (CR) To Put it on Road.	Water Road CR 7100	<i>Damon Wellits</i>
"	"	"	"	"	<i>Damon Wellits</i>
"	"	"	"	"	<i>Damon Wellits</i>
Sept. 13 1995	San Juan County Road Dept.	3500 Gallons	To Put on Road, County Road.	Water County Road 7100	<i>Damon Wellits</i>
"	"	"	"	"	<i>Damon Wellits</i>
"	"	"	"	"	<i>Damon Wellits</i>
"	"	"	"	"	<i>Damon Wellits</i>
Sept. 13 1995	San Juan County Road Dept.	3500 Gallon	To Put on Road, County Road.	Water Road CR 7100	<i>Damon Wellits</i>
"	"	"	"	"	<i>Damon Wellits</i>
"	"	"	"	"	<i>Damon Wellits</i>

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
9-13-95	SAN JUAN CO. Road Dept	4500 (GAL)	For watering roads	FOR Rd 700	Bobby Hudson
"	"	"	"	"	Bobby Hudson
"	"	"	"	"	Bobby Hudson
"	"	"	"	"	Bobby Hudson
"	"	"	"	"	Bobby Hudson
"	"	"	"	"	Bobby Hudson
"	"	"	"	"	Bobby Hudson
"	"	"	"	"	Bobby Hudson
"	"	"	"	"	Bobby Hudson
"	"	"	"	"	Bobby Hudson

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
9-14-95	SAN JUAN COUNTY Road Dept	4500 GAL	For watering roads	part of Rd 7100	Bobby Hadden
"	"	"	"	"	Bobby Hadden
"	"	"	"	"	Bobby Hadden
"	"	"	"	"	Bobby Hadden
"	"	"	"	"	Bobby Hadden
"	"	"	"	"	Bobby Hadden
"	"	"	"	"	Bobby Hadden
"	"	"	"	"	Bobby Hadden

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
9-18-95	SAN JUAN COUNTY Road Dept.	4500 BAH	For Watering Roads	Put on Rd 700	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	Sobby Haddon
"	"	"	"	"	"

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
Sept. 18 1995	San Juan County Road Dept.	3500 Gallons	To Put it on County Road.	Water County Road 7100	<i>Deon White</i>
"	"	"	"	"	<i>Deon White</i>
"	"	"	"	"	<i>Deon White</i>
"	"	"	"	"	<i>Deon White</i>
"	"	"	"	"	<i>Deon White</i>
Sept. 18 1995	San Juan County Road Dept.	3500 Gallons	To Put it on County Road	Water County Road 7100	<i>Deon White</i>

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
Sept. 19 1995	San Juan County Public Works Dept	3500 Gallons	To put it on County Road.	water County Road 7100	<i>Daron White</i>
"	"	"	"	"	<i>Daron White</i>

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
9-19-95	SAN JUAN COUNTY ROAD DEPT	4500 GAL	FOR WATERING ROADS	PUT ON RD 7100	Sobby Hadden
"	"	"	"	"	Sobby Hadden
"	"	"	"	"	Sobby Hadden
"	"	"	"	"	Sobby Hadden
"	"	"	"	"	Sobby Hadden
"	"	"	"	"	Sobby Hadden
"	"	"	"	"	Sobby Hadden
"	"	"	"	"	Sobby Hadden
"	"	"	"	"	Sobby Hadden

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
9-20-75	Sipco	100	Washing	AP 7100	<i>[Signature]</i>
					<i>[Signature]</i>
11	"	"	"	"	<i>[Signature]</i>
1	"	"	"	"	<i>[Signature]</i>
11	"	"	"	"	<i>[Signature]</i>
11	"	"	"	"	<i>[Signature]</i>
11	"	"	"	"	<i>[Signature]</i>
					<i>[Signature]</i>

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
12-4-95	SAN JUAN COUNTY	4500 GAL	FOR WATERING RD 7100	RD 7100	Schlyf
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
12-5-95	SAN JUAN COUNTY	4500	FOR WATERING ROADS	PUT ON RD 760	Sally Hadden
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
12-6-95	SAN JUAN COUNTY	4500	FOR WATERING ROADS	P47 and Rd 7ce	Sally Haddon
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
1-25-96	San Juan County	5000 gal	For watering Road 7100	7100 on Road	Terry Hill
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
1-25-96	San Juan County	4,500 GAL	For Watering Road 7100	put on Rd 7100	Sally Haddock
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Chaco Plant Non-Contact Waste Water Acceptance Log

San Juan County

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
11-2-95	San Juan County	5000 gals	Watering dirt road	C.R. 7100	<i>Jack Moore</i>
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Chaco Plant Non-Contact Waste Water Acceptance Log

*Sue
Gardner*

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
11-2-95	SAN JUAN COUNTY	4500 GAL	FOR WATERING ROADS	Put on Rd 700	<i>Sally Haddon</i>
11	11	11	11	11 11	<i>Sally Haddon</i>
11	11	11	11	11 11	<i>Sally Haddon</i>
11	11	11	11	11 11	<i>Sally Haddon</i>
11	11	11	11	11 11	<i>Sally Haddon</i>
11	11	11	11	11 11	<i>Sally Haddon</i>
11	11	11	11	11 11	<i>Sally Haddon</i>
11	11	11	11	11 11	<i>Sally Haddon</i>

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
Sept 20 1995	San Juan County Road Dept.	3500 Gallons	To put it on County Road 7100	Water County Road 7100	<i>Doray Wellits</i>
"	"	"	"	"	<i>Doray Wellits</i>
"	"	"	"	"	<i>Doray Wellits</i>
"	"	"	"	"	<i>Doray Wellits</i>
Sept. 20 1995	San Juan County Road Dept.	3500 Gallons	To use it on County Road 7140	Water County Road 7140	<i>Doray Wellits</i>
"	"	"	"	"	<i>Doray Wellits</i>
"	"	"	"	"	<i>Doray Wellits</i>
"	"	"	"	"	<i>Doray Wellits</i>
"	"	"	"	"	<i>Doray Wellits</i>

Frank Cleary - 3/12/96
 44 384 6170

Chaco Plant Non-Contact Waste Water Acceptance Log

Received
 Verbal Approval
 on 3/12/96 for San Juan Company's use for wk of 3/12/96.

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
3-13-96	San Juan Co.	641	FOR WATERING ROADS	Ditch Rd 7th St. S. S. H. H. H.	S. S. H. H. H.
11	"	11	11	11	11
11	"	11	11	11	11
11	"	11	11	11	11
11	"	11	11	11	11
11	"	11	11	11	11
11	"	11	11	11	11

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
4-2-96	SAN JUAN COUNTY	4500 GAL	FOR WATERING ROADS	PUT ON RD 7100	<i>Sally Hadlock</i>
" "	" "	" "	" "	" "	" "
" "	" "	" "	" "	" "	" "
" "	" "	" "	" "	" "	" "
" "	" "	" "	" "	" "	" "
" "	" "	" "	" "	" "	" "

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
4-3-96	SAN JUAN COUNTY	5000 gal	WATER OR 7000	WATER OR 7100	Kinney A. Anderson
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

1150
 1150
 1150
 1150
 1150

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
4-8-96	SAN JUAN COUNTY	4500	FOR WATERING ROAD	PUT ON ROAD	Sally Hackler
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"
"	"	"	"	"	"

Chaco Plant Non-Contact Waste Water Acceptance Log

Date	Company	Amount (Barrels)	Intended Use	Final Disposition of Water	Signature
4-9-96	SAN JUAN COUNTY	4500 GAL	FOR WATERING ROADS	PUT ON RD 7100	Sally Hadden
" "	"	"	"	"	"
" "	"	"	"	"	"
" "	"	"	"	"	"
" "	"	"	"	"	"
" "	"	"	"	"	"
" "	"	"	"	"	"
" "	"	"	"	"	"

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505

August 10, 1995

CERTIFIED MAIL

RETURN RECEIPT NO. Z-765-962-389

Mr. Patrick Marquez
Compliance Engineer
El Paso Natural Gas Company
P.O. Box 4990
Farmington, New Mexico 87499

**RE: SOLID WASTE PIT CLOSURES
ANGEL PEAK COMPRESSOR STATION AND CHACO GAS PLANT
SAN JUAN COUNTY, NEW MEXICO**

Dear Mr. Marquez:

The New Mexico Oil Conservation Division (OCD) has reviewed El Paso Natural Gas Company's (EPNG) June 5, 1995 "ANGEL PEAK AND CHACO PLANT SOLID WASTE PIT CLOSURE SAMPLING" and April 10, 1995 "SOLID WASTE PIT CLOSURES AT EPNG'S ANGEL PEAK AND CHACO FACILITIES". These documents contain the results of EPNG's waste characterization of soils in the former solid waste pits at EPNG's Angel Peak Compressor Station and Chaco Gas Plant. The documents also request permission to close the pits pursuant to EPNG's September 12, 1995 closure plan.

The OCD approves of EPNG's request to close the pits pursuant to EPNG's September 12, 1995 closure plan.

Please be advised that OCD approval does not relieve EPNG of liability if, the pits pose a future threat to ground water, surface water, public health or the environment. In addition, OCD approval does not relieve EPNG of responsibility for compliance with any other federal, state and local laws and/or regulations.

If you have any questions, please contact me at (505) 827-7154.

Sincerely,



William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec District Office

El Paso
Natural Gas Company

NEW MEXICO OIL CONSERVATION DIVISION
RECEIVED
APR 11 2 17 52

P O BOX 4990
FARMINGTON, NEW MEXICO 87499

April 10, 1995

Mr. Bill Olson
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Re: Solid Waste Pit Closures at EPNG's Angel Peak and Chaco facilities

Dear Mr. Olson:

Enclosed are the analyses for the subject solid waste pits. As per the November 22, 1995 NMOCD approval letter for closure, EPNG is required to submit the analytical results prior to the actual closure of the pits and will notify OCD of all activities 72 hours in advance such that OCD has the opportunity to witness the events.

Please review the enclosed analyses and respond to me at 505-599-2175 at your earliest convenience.

Thank you,

P. Marquez
Patrick Marquez
Compliance Engineer

cc:

Denny Foust (NMOCD)

w/o enclosures

Ron Jones (EPNG)
David Hall (EPNG) *DM*
Sandra Miller (EPNG) *EDB/ZDC*
Lyndell Smith (EPNG)
File: 5212 Regulatory

Bill,
Method 8010 as requested.
This is in addition to the
analysis sent to you on
April 10th.

Please call when you
receive.

Thank you.

Patrick Marquez
599 2175

MEMORANDUM

To: John Lambdin

Date: June 05, 1995

From: Norman R. Norvelle

Place: Field Services Engineering Lab

Subject: Angel Peak and Chaco Plant Solid Waste Pit Closure Sampling

On June 01, 1995 I re-sampled Angel Peak and Chaco Plant solid waste pits for final closure. I sampled two points at the bottom of each pit at a depth of one foot and then composite the two samples from each pit at the time of sampling. These were put into a 8 Oz. jar. The following analysis was requested: EPA method 8010 for TCLP organics. This was additional sampling requested by NMOCD.

The sample was iced in a cooler until received in the lab and then stored in the sample refrigerator. Today, the sample was packed in bubble wrap, iced and ship in a cooler to the BEI labs in Seattle. A temperature blank was included. The ancillary paper work is attached.

<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>TIME</u>	<u>LOCATION</u>
950654	6-1-95	1:15 PM	Chaco Plant Dump
950655	6-1-95	2:20 PM	Angel Peak Dump

Should you have any questions or comments, please give me a call.


Norman R. Norvelle, Senior Division Chemist

attachments

cc: David Hall

Patrick Marquez

Results Attached 7/13/95 J. Parker

SOUND ANALYTICAL SERVICES, INC.

*Chaco Plant
Dump Pit*

Client Name	Philip Environmental Laboratory
Client ID:	950654 95-A9715
Lab ID:	49276-01
Date Received:	6/7/95
Date Prepared:	6/20/95
Date Analyzed:	6/21/95
% Solids	

TCLP Halogenated Hydrocarbons by USEPA Method 8010

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromochloromethane	107		50	150
2-Bromo-1-chloropropane	64		50	150
1,4-Dichlorobutane	81		50	150

Analyte	Result (mg/L)	PQL	Flags
Vinyl Chloride	ND	0.001	
1,1-Dichloroethene	ND	0.001	
Methylene Chloride	0.081	0.001	
trans-1,2-Dichloroethene	ND	0.001	
1,1-Dichloroethane	ND	0.001	
Chloroform	ND	0.001	
1,1,1-Trichloroethane	ND	0.001	
Carbon Tetrachloride	ND	0.001	
1,2-Dichloroethane	ND	0.001	
Trichloroethene	ND	0.001	
1,2-Dichloropropane	ND	0.001	
Bromodichloromethane	ND	0.001	
cis-1,3-Dichloropropene	ND	0.001	
trans-1,3-dichloropropene	ND	0.001	
1,1,2-Trichloroethane	ND	0.001	
Tetrachloroethene	ND	0.001	
Chlorodibromomethane	ND	0.001	
Chlorobenzene	ND	0.001	
Bromoform	ND	0.001	
1,1,2,2-Tetrachloroethane	ND	0.001	
1,3-Dichlorobenzene	ND	0.001	
1,4-Dichlorobenzene	ND	0.001	
1,2-Dichlorobenzene	ND	0.001	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Philip Environmental Laboratory
Client ID:	950855 95-A9718
Lab ID:	49276-02
Date Received:	6/7/95
Date Prepared:	6/20/95
Date Analyzed:	6/21/95
% Solids	

Angel Peak
Plant Dump
Pit

TCLP Halogenated Hydrocarbons by USEPA Method 8010

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromochloromethane	103		50	150
2-Bromo-1-chloropropane	70		50	150
1,4-Dichlorobutane	73		50	150

Analyte	Result (mg/L)	PQL	Flags
Vinyl Chloride	ND	0.001	
1,1-Dichloroethene	ND	0.001	
Methylene Chloride	0.068	0.001	
trans-1,2-Dichloroethene	ND	0.001	
1,1-Dichloroethane	ND	0.001	
Chloroform	ND	0.001	
1,1,1-Trichloroethane	ND	0.001	
Carbon Tetrachloride	ND	0.001	
1,2-Dichloroethane	ND	0.001	
Trichloroethane	ND	0.001	
1,2-Dichloropropane	ND	0.001	
Bromodichloromethane	ND	0.001	
cis-1,3-Dichloropropene	ND	0.001	
trans-1,3-dichloropropene	ND	0.001	
1,1,2-Trichloroethane	ND	0.001	
Tetrachloroethene	ND	0.001	
Chlorodibromomethane	ND	0.001	
Chlorobenzene	ND	0.001	
Bromoform	ND	0.001	
1,1,2,2-Tetrachloroethane	ND	0.001	
1,3-Dichlorobenzene	ND	0.001	
1,4-Dichlorobenzene	ND	0.001	
1,2-Dichlorobenzene	ND	0.001	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:
 Date Received:
 Date Prepared:
 Date Analyzed:
 % Solids

Method Blank - B162095

6/20/95
 6/21/95

Acceptable SA/OC
JR
7/13/95

Halogenated Hydrocarbons by USEPA Method 8010

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromochloromethane	78		50	150
2-Bromo-1-chloropropane	59		50	150
1,4-Dichlorobutane	50		50	150

Analyte	Result (mg/L)	POL	Flags
Vinyl Chloride	ND	0.001	
1,1-Dichloroethene	ND	0.001	
Methylene Chloride	ND	0.001	
trans-1,2-Dichloroethene	ND	0.001	
1,1-Dichloroethane	ND	0.001	
Chloroform	ND	0.001	
1,1,1-Trichloroethane	ND	0.001	
Carbon Tetrachloride	ND	0.001	
1,2-Dichloroethane	ND	0.001	
Trichloroethene	ND	0.001	
1,2-Dichloropropane	ND	0.001	
Bromodichloromethane	ND	0.001	
cis-1,3-Dichloropropene	ND	0.001	
trans-1,3-dichloropropene	ND	0.001	
1,1,2-Trichloroethane	ND	0.001	
Tetrachloroethene	ND	0.001	
Chlorodibromomethane	ND	0.001	
Chlorobenzene	ND	0.001	
Bromoform	ND	0.001	
1,1,2,2-Tetrachloroethane	ND	0.001	
1,3-Dichlorobenzene	ND	0.001	
1,4-Dichlorobenzene	ND	0.001	
1,2-Dichlorobenzene	ND	0.001	



MEMORANDUM

RECEIVED

JUL 13 1995

To: John Lambdin

Date: June 05, 1995

Environmental Bureau
Oil Conservation Division

From: Norman R. Norvelle

Place: Field Services Engineering Lab

Subject: Angel Peak and Chaco Plant Solid Waste Pit Closure Sampling

On June 01, 1995 I re-sampled Angel Peak and Chaco Plant solid waste pits for final closure. I sampled two points at the bottom of each pit at a depth of one foot and then composite the two samples from each pit at the time of sampling. These were put into a 8 Oz. jar. The following analysis was requested: EPA method 8010 for TCLP organics. This was additional sampling requested by NMOCD.

The sample was iced in a cooler until received in the lab and then stored in the sample refrigerator. Today, the sample was packed in bubble wrap, iced and ship in a cooler to the BEI labs in Seattle. A temperature blank was included. The ancillary paper work is attached.

<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>TIME</u>	<u>LOCATION</u>
950654	6-1-95	1:15 PM	Chaco Plant Dump
950655	6-1-95	2:20 PM	Angel Peak Dump

Should you have any questions or comments, please give me a call.

Norman R. Norvelle
Norman R. Norvelle, Senior Division Chemist

attachments
cc: David Hall
Patrick Marquez

Results Attached 7/13/95 J. Lambdin

SOUND ANALYTICAL SERVICES INC.

Client Name

Philip Environmental Laboratory

Client ID:

950654 95-A0715

Lab ID:

49276-01

Date Received:

8/7/95

Date Prepared:

8/20/95

Date Analyzed:

8/21/95

% Solids

Chaco Plant
Dump Pit

TCLP Halogenated Hydrocarbons by USEPA Method 8010

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromochloromethane	107		50	150
2-Bromo-1-chloropropane	64		50	150
1,4-Dichlorobutane	81		50	150

Analyte	Result (mg/L)	PQL	Flags
Vinyl Chloride	ND	0.001	
1,1-Dichloroethene	ND	0.001	
Methylene Chloride	0.081	0.001	
trans-1,2-Dichloroethene	ND	0.001	
1,1-Dichloroethane	ND	0.001	
Chloroform	ND	0.001	
1,1,1-Trichloroethane	ND	0.001	
Carbon Tetrachloride	ND	0.001	
1,2-Dichloroethane	ND	0.001	
Trichloroethene	ND	0.001	
1,2-Dichloropropane	ND	0.001	
Bromodichloromethane	ND	0.001	
cis-1,3-Dichloropropene	ND	0.001	
trans-1,3-dichloropropene	ND	0.001	
1,1,2-Trichloroethane	ND	0.001	
Tetrachloroethene	ND	0.001	
Chlorodibromomethane	ND	0.001	
Chlorobenzene	ND	0.001	
Bromoform	ND	0.001	
1,1,2,2-Tetrachloroethane	ND	0.001	
1,3-Dichlorobenzene	ND	0.001	
1,4-Dichlorobenzene	ND	0.001	
1,2-Dichlorobenzene	ND	0.001	

SOUND ANALYTICAL SERVICES INC.

Client Name	Philip Environmental Laboratory
Client ID:	950655 95-A9718
Lab ID:	49278-02
Date Received:	6/7/95
Date Prepared:	6/20/95
Date Analyzed:	6/21/95
% Solids	

Angel Peak
Plant Dump
Pit

TCLP Halogenated Hydrocarbons by USEPA Method 8010

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromochloromethane	103		50	150
2-Bromo-1-chloropropane	70		50	150
1,4-Dichlorobutane	73		50	150

Analyte	Result (mg/L)	PQL	Flags
Vinyl Chloride	ND	0.001	
1,1-Dichloroethene	ND	0.001	
Methylene Chloride	0.088	0.001	
trans-1,2-Dichloroethene	ND	0.001	
1,1-Dichloroethane	ND	0.001	
Chloroform	ND	0.001	
1,1,1-Trichloroethane	ND	0.001	
Carbon Tetrachloride	ND	0.001	
1,2-Dichloroethane	ND	0.001	
Trichloromethane	ND	0.001	
1,2-Dichloropropane	ND	0.001	
Bromodichloromethane	ND	0.001	
cis-1,2-Dichloropropene	ND	0.001	
trans-1,3-dichloropropene	ND	0.001	
1,1,2-Trichloroethane	ND	0.001	
Tetrachloroethene	ND	0.001	
Chlorodibromomethane	ND	0.001	
Chlorobenzene	ND	0.001	
Bromoform	ND	0.001	
1,1,2,2-Tetrachloroethane	ND	0.001	
1,3-Dichlorobenzene	ND	0.001	
1,4-Dichlorobenzene	ND	0.001	
1,2-Dichlorobenzene	ND	0.001	

SOUND ANALYTICAL SERVICES INC.

Lab ID: Method Blank - B162095
 Date Received:
 Date Prepared: 6/20/95
 Date Analyzed: 6/21/95
 % Solids

Acceptable SA/OC
JR
7/13/95

Halogenated Hydrocarbons by USEPA Method 8010

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromochloromethane	78		50	150
2-Bromo-1-chloropropane	59		50	150
1,4-Dichlorobutane	50		50	150

Analyte	Result (mg/L)	PQL	Flags
Vinyl Chloride	ND	0.001	
1,1-Dichloroethene	ND	0.001	
Methylene Chloride	ND	0.001	
trans-1,2-Dichloroethene	ND	0.001	
1,1-Dichloroethane	ND	0.001	
Chloroform	ND	0.001	
1,1,1-Trichloroethane	ND	0.001	
Carbon Tetrachloride	ND	0.001	
1,2-Dichloroethane	ND	0.001	
Trichloroethene	ND	0.001	
1,2-Dichloropropane	ND	0.001	
Bromodichloromethane	ND	0.001	
cis-1,3-Dichloropropene	ND	0.001	
trans-1,3-dichloropropene	ND	0.001	
1,1,2-Trichloroethane	ND	0.001	
Tetrachloroethene	ND	0.001	
Chlorodibromomethane	ND	0.001	
Chlorobenzene	ND	0.001	
Bromoform	ND	0.001	
1,1,2,2-Tetrachloroethane	ND	0.001	
1,3-Dichlorobenzene	ND	0.001	
1,4-Dichlorobenzene	ND	0.001	
1,2-Dichlorobenzene	ND	0.001	

BIRMINGHAM ENVIRONMENTAL
2200 Airport Way South, Suite 400
Birmingham, WA 98043
206-229-9900 • FAX: 229-7791

Chain of Custody/ Laboratory Analysis Request

DATE 6-5-95 PAGE 1 OF 1

OBJECT				ANALYSIS REQUESTED							OTHER (Specify)			
CLIENT: <u>EL PASO NATURAL GAS COMPANY</u> CONTACT: <u>EL PASO NATURAL GAS COMPANY</u> ADDRESS: <u>505 S 599 - 7153</u> PHONE: <u>505-599-7153</u> ANALYST: <u>NORMAN KIRKELLEN</u> SIGNATURE: <u>[Signature]</u>				BASE/NEU/AC ORGANICS GC/MS 625/620 VOLATILE ORGANICS GC/MS 824/820 PCB's 608/6060 TPH (circle method) 418.1 or 8015 BTEX (circle method) 8240 or 6020 P-LISTED SOLVENTS 8240 TCLP FLUORIDED SOLVENTS 1311/8240 TCLP METALS 6004-1 METALS (TOTAL) As, Ba, Cd, Cr, Cu, Pb, Ni, Hg, Ag, Se, Tl, Zn, Zn TCLP ORGANICS (Specify methods): - VOA's 8240 - BNA's 8270 - Pesticides 6008 - Herbicides 6150							DISCHARGE TESTING <u>YES</u>		NUMBER OF CONTAINERS <u>1</u>	
RECEIVED BY: <u>[Signature]</u> SIGNATURE: <u>[Signature]</u> PRINTED NAME: <u>[Name]</u> DATE/TIME: <u>6-1-95 2:20pm</u>				RECEIVED BY: <u>[Signature]</u> SIGNATURE: <u>[Signature]</u> PRINTED NAME: <u>[Name]</u> DATE/TIME: <u>6-5-95 1:15pm</u>							RECEIVED BY: <u>[Signature]</u> SIGNATURE: <u>[Signature]</u> PRINTED NAME: <u>[Name]</u> DATE/TIME: <u>6-5-95 15:00</u>			
SPECIAL INSTRUCTIONS/COMMENTS: <u>950654 - CHACO PLANT DUMP SAMPLE</u> <u>950655 - AUG-1 PEAK DUMP SAMPLE</u>											<u>3890</u>			

DISTRIBUTE: ONE WHITE - return to originator; YELLOW - tank FIRM - (retained by generator).

**FAX
TRANSMITTAL**



EL PASO NATURAL GAS COMPANY

is a major open-access transporter of natural gas serving West Texas, New Mexico, Arizona, southern Nevada and California. California receives more than half of its gas from El Paso's 17,500-mile pipeline system, which is connected to every major producing basin in the Southwest. El Paso's customer-friendly electronic bulletin board, Passport, offers state-of-the-art programs beneficial to producers, buyers marketers, end-users and other pipelines.

TO	NAME OF RECIPIENT <i>MR. BILL OLSON</i>		PAGE(S) TRANSMITTED <i>6 + Cover</i>	DATE <i>7/13/95</i>
	NAME OF COMPANY <i>NMOC</i>			CITY/STATE
	ADDRESS			TELEPHONE NUMBER
	FAX NUMBER (REQUIRED) <i>1 505 827 8177</i>			
FROM	NAME OF SENDER <i>Patrick Marzquez</i>		NAME OF COMPANY <input type="checkbox"/> EL PASO NATURAL GAS <input type="checkbox"/> OTHER	
	ADDRESS <i>505 599 2175</i>			CITY/STATE
REMARKS	<input type="checkbox"/> RETURN <input type="checkbox"/> DO NOT RETURN <i>As required - TCLP 8010 Organics</i> <i>analysis for Chaco Plant & Angel Peak</i> <i>Solid Waste Dumps. Please call when</i> <i>you receive this fax - Hard copy</i> <i>to follow via mail. Thank you Patrick Marzquez.</i>		REPLY	FAX NUMBER: () _____
				VERIFY NUMBER: () _____



State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
 Santa Fe, New Mexico 87505

STATE OF
 NEW MEXICO
 OIL
 CONSERVATION
 DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

<input checked="" type="checkbox"/> Telephone	<input type="checkbox"/> Personal	Time 0830	Date 5/31/95
---	-----------------------------------	-----------	--------------

<u>Originating Party</u>	<u>Other Parties</u>
Bill Olson - Envir. Bureau	Patrick Marquez - EPN6

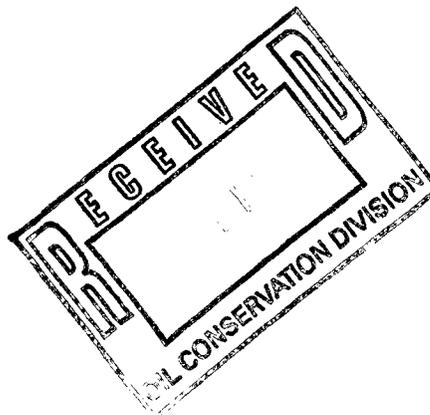
Subject
 4/10/95 Angel Peak/Chaco Solid Waste Pit Closures

Discussion
 Told him not all haz characteristics analyzed
 Need chlorinated organics, pesticides, herbicides
 If didn't use pesticides, herbicides, can provide statement
 of process knowledge

Conclusions or Agreements
 He will get analyses

<u>Distribution</u> f.l.e Denny Foust - OCD Aztec	<u>Signed</u>
---	-------------------

May 3, 1995



Mr. Roger Anderson
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Re: Contact Water Ponds at El Paso Natural Gas Company's Chaco Plant

Dear Mr. Anderson:

Enclosed are the "As Builts" for the contact water ponds at Chaco Plant. As per the August 16, 1994 letter to NMOCD requesting approval for construction, EPNG agreed to submit the drawings to NMOCD upon completion.

Should you have questions or need further information, please do not hesitate to call at (505) 599-2175.

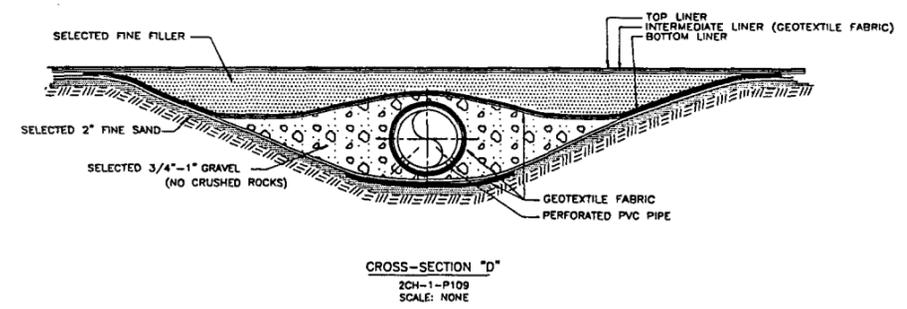
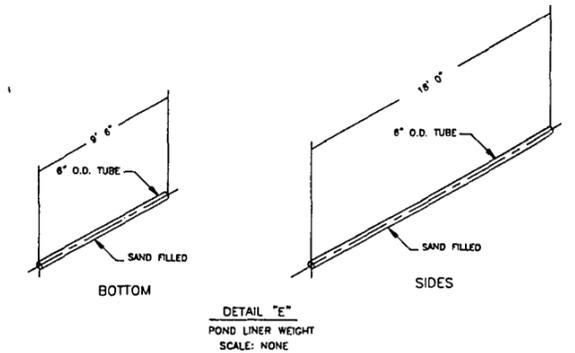
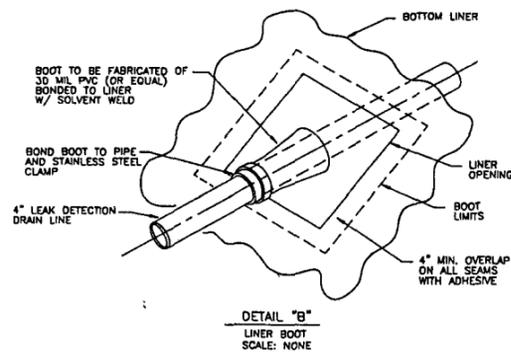
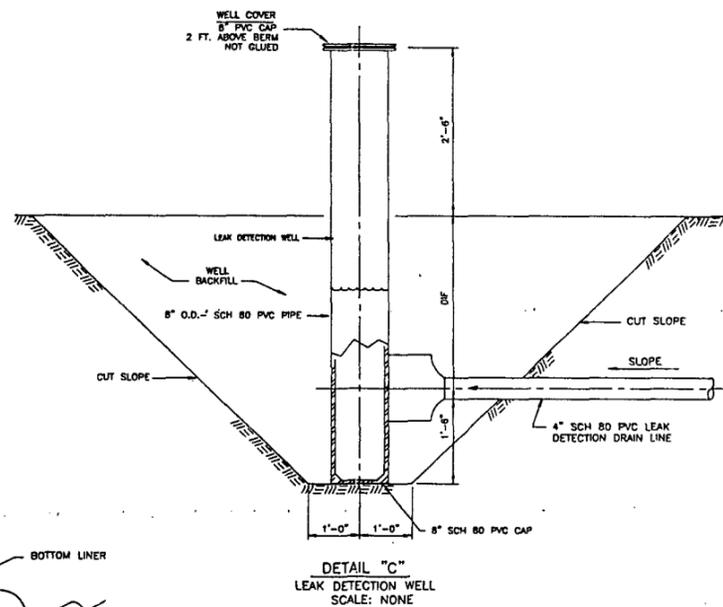
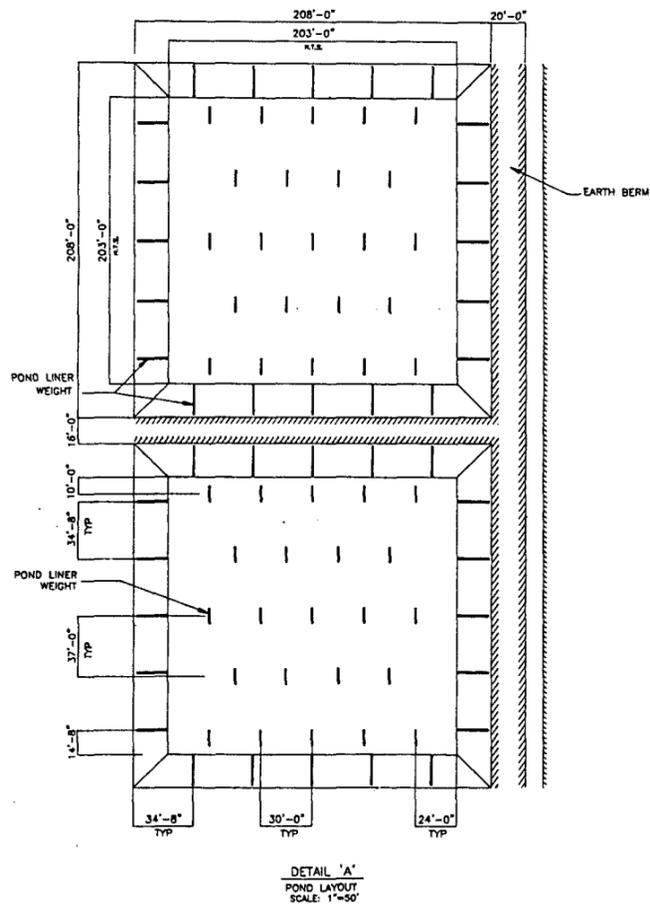
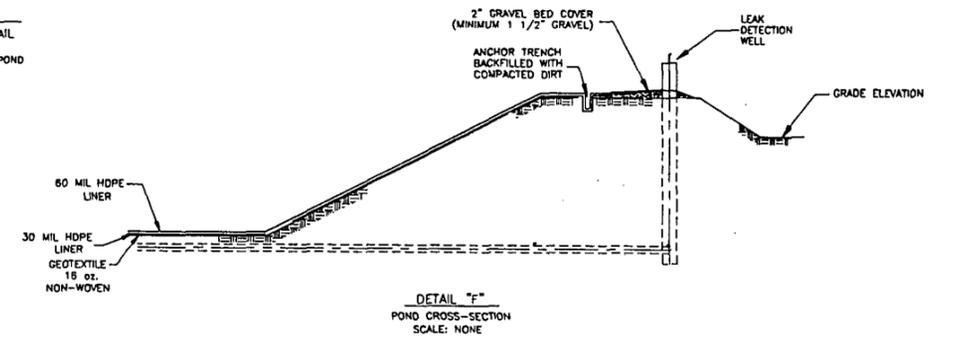
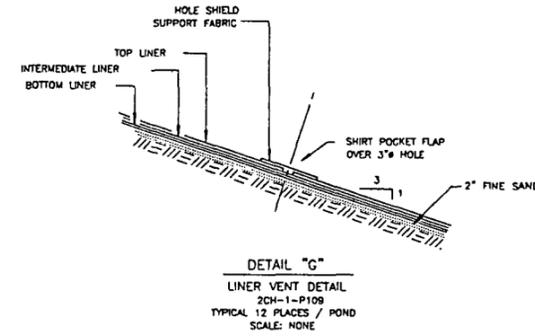
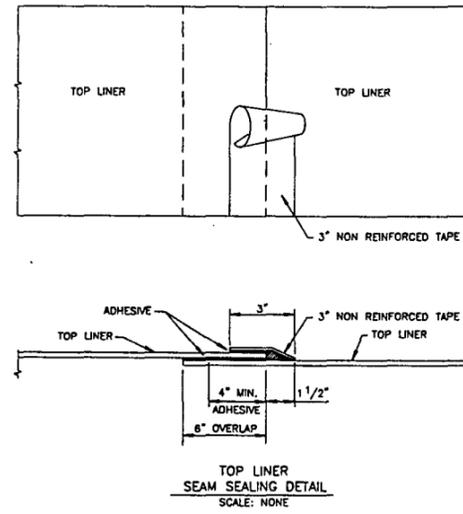
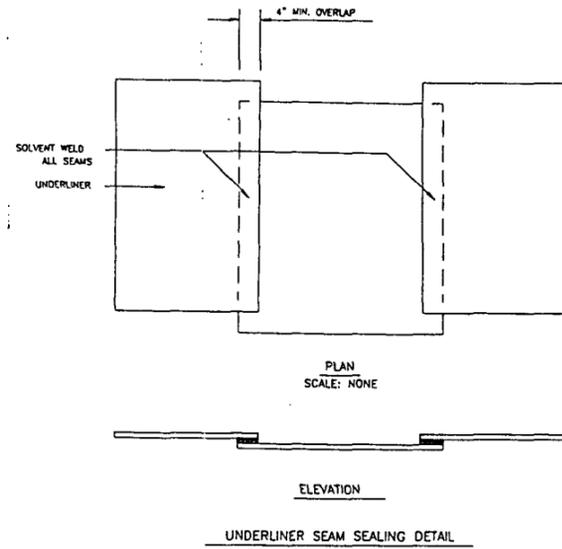
Thank you,

Patrick Marquez
Compliance Engineer

cc:

w/attachment
Denny Foust (NMOCD)
John Lambdin (EPNG)
Lyndell Smith (EPNG)
Vince Medrano (EPNG)

w/o attachments (EPNG)
Richard Carr
David Hall
Bob Yungert
Sandra Miller/David Bays/ File:5212 Regulatory



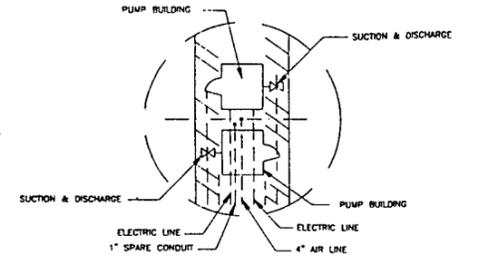
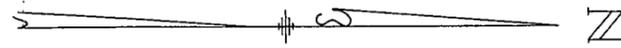
<p>PHS (Rev. 3/12/81)</p>										<p>LEGEND</p>		<p>2CH-1-P108 CHACO PLANT - EVAP. PONDS - AS BUILT</p>										<p>ENG. RECORD DATE</p>		<p>DRAFTING</p>		<p>DESIGN</p>		<p>COMPUTER AIDED DRAFTING</p>		<p>CHECKED</p>		<p>PROJECT APPROVAL</p>		<p>DESIGN APPROVAL</p>		<p>COMPUTER SAVE NAME</p>		<p>SCALE: SHOWN DWG. NO. 2CH-1-P108</p>		<p>REV.</p>															
<p>2CH-1-P108 CHACO PLANT - EVAP. PONDS - AS BUILT</p>										<p>SCALE: SHOWN DWG. NO. 2CH-1-P108</p>		<p>REV.</p>		<p>DATE</p>		<p>BY</p>		<p>DESCRIPTION</p>		<p>W.O.</p>		<p>APP.</p>		<p>PRT.</p>		<p>SEP.</p>		<p>DATE</p>		<p>TO</p>		<p>W.O.</p>		<p>PRINT RECORD</p>		<p>DATE</p>		<p>BY</p>		<p>DESCRIPTION</p>		<p>W.O.</p>		<p>APP.</p>		<p>PRT.</p>		<p>SEP.</p>		<p>DATE</p>		<p>TO</p>		<p>W.O.</p>	
<p>2CH-1-P108 CHACO PLANT - EVAP. PONDS - AS BUILT</p>										<p>SCALE: SHOWN DWG. NO. 2CH-1-P108</p>		<p>REV.</p>		<p>DATE</p>		<p>BY</p>		<p>DESCRIPTION</p>		<p>W.O.</p>		<p>APP.</p>		<p>PRT.</p>		<p>SEP.</p>		<p>DATE</p>		<p>TO</p>		<p>W.O.</p>		<p>PRINT RECORD</p>		<p>DATE</p>		<p>BY</p>		<p>DESCRIPTION</p>		<p>W.O.</p>		<p>APP.</p>		<p>PRT.</p>		<p>SEP.</p>		<p>DATE</p>		<p>TO</p>		<p>W.O.</p>	

El Paso
NATURAL GAS COMPANY

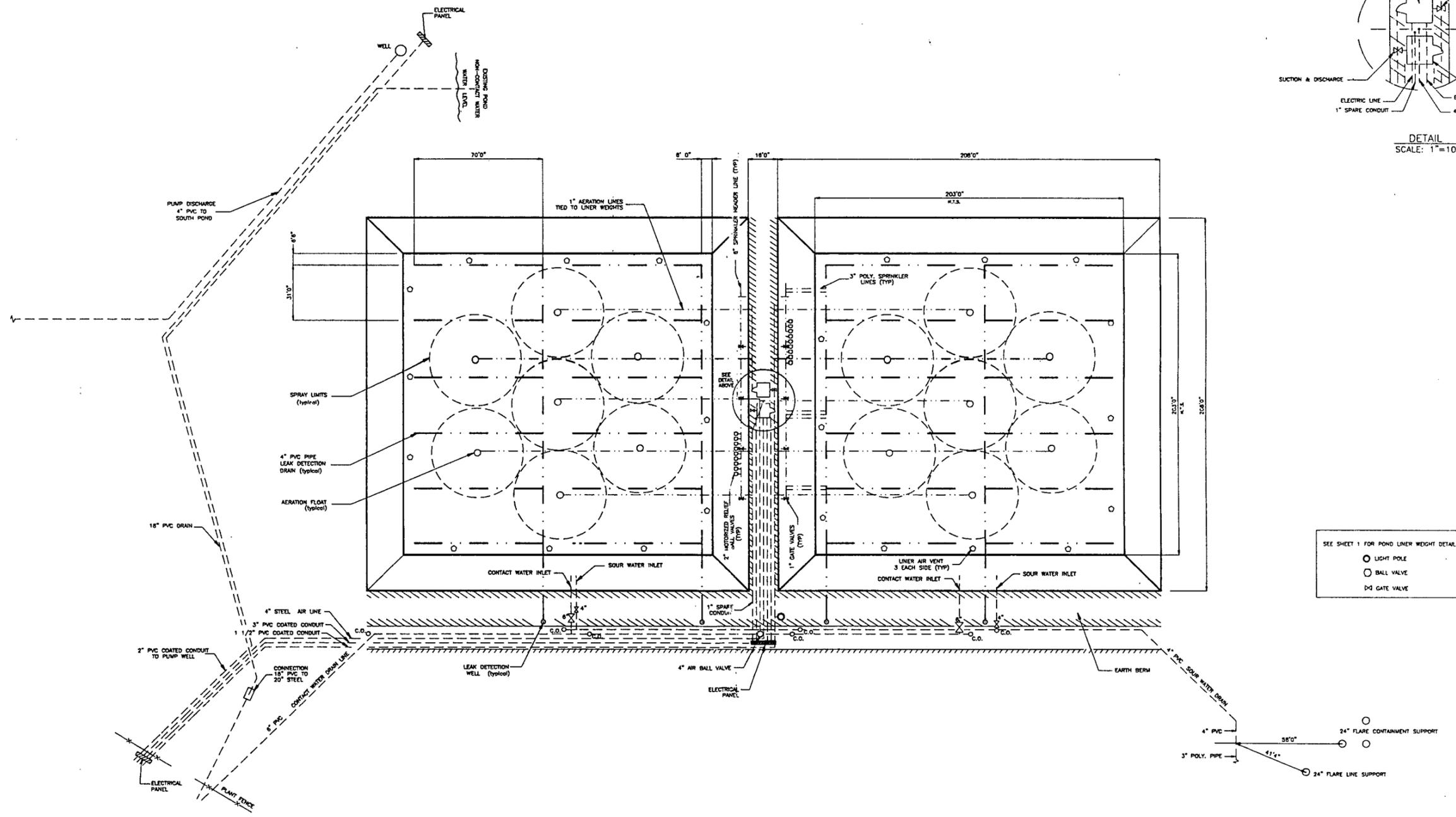
CHACO PLANT
EVAPORATION PONDS
AS-BUILT DETAILS

SCALE: SHOWN DWG. NO. 2CH-1-P108

REV.



DETAIL
SCALE: 1"=10'



SEE SHEET 1 FOR POND LINER WEIGHT DETAIL

- LIGHT POLE
- BALL VALVE
- ⊠ GATE VALVE

<table border="1"> <tr> <td>ENG. RECORD</td> <td>DATE</td> <td colspan="2"> </td> <td colspan="2"> CHACO PLANT EVAPORATION PONDS AS-BUILT </td> <td colspan="2"> SCALE: 1"=30' W.O.: L5635 </td> <td colspan="2"> DWG. NO. 2CH-1-P109 </td> </tr> <tr> <td>DRAFTING DESIGN</td> <td></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td>COMPUTER AIDED DRAFTING</td> <td>BL</td> <td colspan="2">03/17/95</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td>CHECKED</td> <td></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td>PROJECT APPROVAL</td> <td></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td>DESIGN APPROVAL</td> <td>REC</td> <td colspan="2">5/3/95</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td>COMPUTER SAVE NAME</td> <td>2CH1P109</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table>										ENG. RECORD	DATE			CHACO PLANT EVAPORATION PONDS AS-BUILT		SCALE: 1"=30' W.O.: L5635		DWG. NO. 2CH-1-P109		DRAFTING DESIGN										COMPUTER AIDED DRAFTING	BL	03/17/95								CHECKED										PROJECT APPROVAL										DESIGN APPROVAL	REC	5/3/95								COMPUTER SAVE NAME	2CH1P109								
ENG. RECORD	DATE			CHACO PLANT EVAPORATION PONDS AS-BUILT		SCALE: 1"=30' W.O.: L5635		DWG. NO. 2CH-1-P109																																																																							
DRAFTING DESIGN																																																																															
COMPUTER AIDED DRAFTING	BL	03/17/95																																																																													
CHECKED																																																																															
PROJECT APPROVAL																																																																															
DESIGN APPROVAL	REC	5/3/95																																																																													
COMPUTER SAVE NAME	2CH1P109																																																																														
<table border="1"> <tr> <th>DWG. NO.</th> <th>TITLE</th> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> <th>W.O.</th> <th>APP.</th> <th>PRT</th> <th>SEP</th> <th>DATE</th> <th>TO</th> <th>W.O.</th> </tr> <tr> <td>2CH-1-P108</td> <td>CHACO PLANT - EVAP. PONDS AS-BUILT DETAILS</td> <td></td> </tr> <tr> <td colspan="10">REFERENCE DRAWINGS</td> <td colspan="3">PRINT RECORD</td> </tr> </table>										DWG. NO.	TITLE	NO.	DATE	BY	DESCRIPTION	W.O.	APP.	PRT	SEP	DATE	TO	W.O.	2CH-1-P108	CHACO PLANT - EVAP. PONDS AS-BUILT DETAILS												REFERENCE DRAWINGS										PRINT RECORD																																	
DWG. NO.	TITLE	NO.	DATE	BY	DESCRIPTION	W.O.	APP.	PRT	SEP	DATE	TO	W.O.																																																																			
2CH-1-P108	CHACO PLANT - EVAP. PONDS AS-BUILT DETAILS																																																																														
REFERENCE DRAWINGS										PRINT RECORD																																																																					
<table border="1"> <tr> <td colspan="10">LEGEND</td> </tr> </table>										LEGEND																																																																					
LEGEND																																																																															
<p>FIG 9 (Rev. 3/12/91)</p>																																																																															

El Paso
Natural Gas Company

CONSERVATION DIVISION
RECEIVED

APR 10 1995 8 52 PM

P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

April 10, 1995

Mr. Bill Olson
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Re: Solid Waste Pit Closures at EPNG's Angel Peak and Chaco facilities

Dear Mr. Olson:

Enclosed are the analyses for the subject solid waste pits. As per the November 22, 1995 NMOCD approval letter for closure, EPNG is required to submit the analytical results prior to the actual closure of the pits and will notify OCD of all activities 72 hours in advance such that OCD has the opportunity to witness the events.

Please review the enclosed analyses and respond to me at 505-599-2175 at your earliest convenience.

Thank you,

P. S. Marquez
Patrick Marquez
Compliance Engineer

cc:

Denny Foust (NMOCD)

w/o enclosures

Ron Jones (EPNG)
David Hall (EPNG)
Sandra Miller (EPNG)
Lyndell Smith (EPNG)
File: 5212 Regulatory

SDM

fm

FILE: 24470

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

November 22, 1994

CERTIFIED MAIL

RETURN RECEIPT NO. P-667-242-177

Mr. Patrick Marquez
Compliance Engineer
El Paso Natural Gas Company
P.O. Box 4990
Farmington, New Mexico 87499

**RE: SOLID WASTE PIT CLOSURES
ANGEL PEAK COMPRESSOR STATION AND CHACO GAS PLANT
SAN JUAN COUNTY, NEW MEXICO**

Dear Ms. Miller:

The New Mexico Oil Conservation Division (OCD) has reviewed El Paso Natural Gas Company's (EPNG) September 12, 1994 "SOLID WASTE PIT CLOSURES AT EPNG'S ANGEL PEAK AND CHACO FACILITIES". This document contains EPNG's proposed closure plan for closure of former solid waste pits at EPNG's Angel Peak Compressor Station and Chaco Gas Plant.

The proposed closure plan as contained in the above referenced document is approved with the following conditions:

1. In addition to the soil sampling proposed, EPNG will analyze samples from the pits for hazardous waste characteristics.
2. All sample analyses will be conducted using EPA approved laboratory methods.
3. The results of the analytical sampling will be submitted to the OCD for approval prior to actual closure of the pits.
4. EPNG will notify the OCD at least 72 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples.
5. All original documents will be submitted to the OCD Santa Fe Office with copies provided to the OCD Aztec Office.

Mr. Patrick Marquez
November 22, 1994
Page 2

Please be advised that OCD approval does not limit EPNG to the work proposed should contaminants be found to be migrating from the site or if contamination exists which is beyond the scope of the work plan. In addition, OCD approval does not relieve EPNG of responsibility for compliance with any other federal, state and local laws and/or regulations.

If you have any questions, please contact me at (505) 827-5885.

Sincerely,

A handwritten signature in cursive script, appearing to read "Will C. Olson".

William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec District Office

To: (Distribution)

Date: March 1, 1995

From: John Lambdin

J.L.

Place: Field Services Laboratory

Subject: Angel Peak Solid Waste Pit Closure Results

On January 11, 1995 the Field Services Laboratory collected one (1) soil sample from the solid waste pond at Angel Peak Plant. The sample was assigned Field Services laboratory number 950053.

The sample was collected and analyzed in accordance with New Mexico OCD guidelines for pit closure. The sample passed all the required tests. Enclosed you will find copies of all field and analytical laboratory results/data.

Please let me know, if you have any questions.

Distribution:

David Hall - w/o attachments
Sandra Miller
Results Log Book
File

Attachments



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 950053
MATRIX: Soil
SAMPLE DATE: 11-Jan-95
SAMPLE TIME (Hrs.): 1030
SAMPLED BY: Norman Norvelle
PROJECT: Pit Closure
FACILITY ID: 5203
SAMPLE LOCATION: Angel Peak
SAMPLE POINT: Solid Waste Pit
DATE OF ANALYSIS: Extracted for BTEX on 1/23/1995 and analyzed for BTEX on 1/23/1995.
Extracted for TPH on 1/17/1995 and analyzed for TPH on 1/17/1995.

REMARKS: None

EPA Method 8020 (BTEX) and Method 418.1 (TPH) RESULTS

PARAMETER	RESULT MG/KG	QUALIFIER	LIMIT MG/KG
BENZENE	<0.005	None	10
TOLUENE	<0.005	None	None
ETHYL BENZENE	<0.005	None	None
TOTAL XYLENES	<0.005	None	None
TOTAL BTEX	<0.020	None	50
TPH by EPA 418.1	36	None	100
PERCENT SOLIDS	90	None	
SURROGATE % RECOVERY	94	Allowed Range 80 to 120 %	

NOTES:

The limits shown are based on New Mexico Regulations.

Approved By: John Fardis

1-Mar-95
Date

11 Pit Samples

3 Ballard Blotter

1 Chaco Blotter #2

LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
INITIAL CALIBRATION VERIF. "B" Heavy Oil (Lot M3G9616)	HORIBA	200	193	97	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE +/- 35%	
					YES	NO
946569	2nd Extract	491	411	17.7	X	
946572	2nd Extract	430	481	11.2	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (S)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
946569	3050	491	3950	113	X	
946572	2780	430	3670	117	X	

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE	
					YES	NO
RA TPH STANDARD #1 DT # 91026	ENVIRONMENTAL RESOURCE ASS.	1340	1540	804 - 1680	X	
RA TPH STANDARD #2 w/int DT # 91026	ENVIRONMENTAL RESOURCE ASS.	2590	3100	1550 - 3240	X	

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	< 10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	< 10.0	ACCEPTABLE

Narrative: Acceptable.

Approved By: John Ladd

Date: 3-Feb-95

Extracted: 01/17/95

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER ICV LA-11426 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	RANGE	ACCEPTABLE	
						YES	NO
Benzene	Standard	25.0	25.7	102.8	75 - 125 %	X	
Toluene	Standard	25.0	28.3	113.2	75 - 125 %	X	
Ethyl Benzene	Standard	25.0	25.9	103.6	75 - 125 %	X	
Total 11426	Standard	75.0	81.3	108.4	75 - 125 %	X	
SAMPLE NUMBER ICV LA-11426 200 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	RANGE	YES	NO
Benzene	Standard	200	221	110.5	75 - 125 %	X	
Toluene	Standard	200	209	104.5	75 - 125 %	X	
Ethyl Benzene	Standard	200	213	106.5	75 - 125 %	X	
m & p Xylene	Standard	400	401	100.3	75 - 125 %	X	
o-Xylene	Standard	200	212	106.0	75 - 125 %	X	
SAMPLE NUMBER LCS DB-11470 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	RANGE	YES	NO
Benzene	Standard	25.0	25.6	102.4	39 - 150	X	
Toluene	Standard	25.0	27.0	108.0	46 - 148	X	
Ethyl Benzene	Standard	25.0	26.2	104.8	32 - 160	X	
Total 11470	Standard	75.0	79.7	106.3	Not Given	X	
SAMPLE NUMBER CCV LA-11426 25 PPB	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	RANGE	YES	NO
Benzene	Standard	25.0	23.4	93.6	75 - 125 %	X	
Toluene	Standard	25.0	24.6	98.4	75 - 125 %	X	
Ethyl Benzene	Standard	25.0	23.0	92.0	75 - 125 %	X	
Total 11426	Standard	75.0	69.3	92.4	75 - 125 %	X	

Initials: Acceptable.

SAMPLE NUMBER	SOURCE	RESULTS		RPD	RANGE	ACCEPTABLE	
		PPM (mg/Kg)	PPM (mg/Kg)			YES	NO
946557	SOIL VIAL - 2nd Portion	<0.005	<0.005	0	+/- 35 %	X	
	Benzene	<0.005	<0.005	0	+/- 35 %	X	
	Toluene	<0.005	<0.005	0	+/- 35 %	X	
	Ethyl benzene	<0.005	<0.005	0	+/- 35 %	X	
	Total Xylenes	<0.015	<0.005	0	+/- 35 %	X	

Narrative: Acceptable.

SAMPLE NUMBER	TYPE (Analysis, Portion, or Sample)	RESULTS		RPD	RANGE	ACCEPTABLE	
		PPM (mg/Kg)	PPM (mg/Kg)			YES	NO
946557	EXTRACT - 2nd Portion	<2.90	<2.87	0	+/- 35 %	X	
	Benzene	132	124	6	+/- 35 %	X	
	Toluene	21.9	19.2	13	+/- 35 %	X	
	Ethyl benzene	186	202	8	+/- 35 %	X	
	Total Xylenes						

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (PPB)	RESULTS		XR	RANGE	ACCEPTABLE	
		SAMPLE RESULT (PPB)	SPIKE SAMPLE RESULT (PPB)			YES	NO
750053 @ 40 PPB	SOIL VIAL - 2nd Portion	<5.00	30.5	76	75 - 125 %	X	
	Benzene	<5.00	33.4	84	75 - 125 %	X	
	Toluene	<5.00	25.4	64	75 - 125 %		X
	Ethyl benzene	<15.0	106	98	75 - 125 %	X	
	Total Xylenes						

Narrative: Acceptable. Reduced XR possibly due to old spike solution.

SAMPLE NUMBER	SPIKE ADDED (PPB)	RESULTS		XR	RANGE	ACCEPTABLE	
		SAMPLE RESULT (PPB)	SPIKE SAMPLE RESULT (PPB)			YES	NO
946559 @ 40 PPB	EXTRACT - 2nd Portion	0.0	31.6	79	75 - 125 %	X	
	Benzene	81	67	-36	75 - 125 %		X
	Toluene	12.2	47	87	75 - 125 %	X	
	Ethyl benzene	94.4	192.0	81	75 - 125 %	X	
	Total Xylenes						

Narrative: Acceptable. Reduced XR possibly due to old spike solution.

ADDITIONAL ANALYTICAL BLANKS:

SAMPLE ID	SOURCE	PPB	STATUS
AUTO BLANK			
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

SAMPLE ID	SOURCE	PPB	STATUS
SOIL VIAL BLANK			
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID EXTRACTION BLANK	SOURCE	PPB (In 200 mL phase)	STATUS
Benzene	Methanol	N/A	ACCEPTABLE
Toluene	Methanol	N/A	ACCEPTABLE
Ethyl benzene	Methanol	N/A	ACCEPTABLE
Total Xylenes	Methanol	N/A	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID Carryover contamination checks	SOURCE	NARRATIVE	STATUS
1/11	Vial + Boiled Water	All analytical compounds <2.5 ppb	ACCEPTABLE
5/11	Vial + Boiled Water	All analytical compounds <2.5 ppb	ACCEPTABLE
9/11	Vial + Boiled Water	All analytical compounds <2.5 ppb	ACCEPTABLE
11/11	Vial + Boiled Water	All analytical compounds <2.5 ppb	ACCEPTABLE

Narrative: Acceptable.

AGENT BLANKS:

SAMPLE ID BOILED WATER CHECK	SOURCE 12/13/94	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

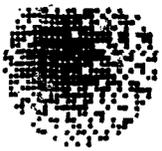
Narrative: Acceptable

SAMPLE ID METHANOL CHECK	SOURCE 12/28/94	PPB	STATUS
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

Approved By: *J. L. Ford*

Date: 27-Jan-95



BURLINGTON ENVIRONMENTAL

A Philip Environmental Company

January 23, 1995
Field Services Lab

Mr. John Lambdin
El Paso Natural Gas Company
Field Services Laboratory
P.O. Box 4990
Farmington, NM 87499

COPY

Dear Mr. Lambdin:

Subject: Project: EPNG
EPNG Laboratory Numbers: 950053
Burlington Environmental Laboratory Numbers: 95A583
LIMS Job Number: 1937
Charge Code: Not Supplied
EPNG Agreement for Professional Environmental Services. Contract 5769
Analytical Services Blanket Contract Supplement Number 5769-92-3

Burlington Environmental Inc., (BEI) hereby submits the enclosed invoice for the work performed on the above-referenced project.

The analyses performed on this project include:

- Polychlorinated Biphenyls (PCBs)
- Ignitability
- Toxicity Characteristic Leaching Procedure (TCLP 1311): Metals (D004-D011)

The project costs are summarized on the attached invoice. If you have any questions or need additional information concerning this invoice, please do not hesitate to contact me at 206-227-6102.

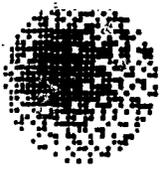
Sincerely yours,

BURLINGTON ENVIRONMENTAL INC.

Della K. Wilson
Project Manager

Enclosure: Invoice





**BURLINGTON
ENVIRONMENTAL**

A Philip Environmental Company

January 23, 1995

John Lambdin
El Paso Natural Gas Co.
Field Services Lab
P.O. Box 4990
Farmington, NM 87499

Project: EL PASO NATURAL GAS CO.
Laboratory Job Number: 1937

On January 13 we received 1 sample(s).
We performed the following analyses:

TCLP Metals

PCB's

Flash Closed Cup

Instrument: Hewlett Packard 5890 GC

All samples were analyzed according to Methods specified in the work plan or Chain of Custody. Any deviations or exceptions to the standard methods are covered in Data Validation Notes.

All samples were extracted and analyzed within required holding times unless so noted.

Analysis and review was complete on January 23.

Sincerely,

Della K. Wilson
Project Manager
(206) 227-6102
Burlington Environmental Corporate Lab
Washington Accreditation #C021

**BURLINGTON ENVIRONMENTAL INC.
CORPORATE LABORATORY
ANALYTICAL REPORT**

Client:
El Paso Natural Gas Co.
Field Services Lab
P.O. Box 4990
Farmington, NM
87499

Project Name: EL PASO NATURAL GAS CO.
Report to: ~~Darrell Campbell~~
JOHN CAMPBELL
Date Received: 1/13/95
Date Sampled: 1/13/95
Date Reported: 1/23/95

Laboratory No.: 95-A583
Sample ID.: 950053

Job Number: 1937

Analyte	Results	Units	Method	Analyst	Date	202A LIMIT
CLP METALS						
TCLP Arsenic	< 0.10	mg/L	6010/200.7	JLB	1/17/95	5.0
TCLP Barium	1.2	mg/L	6010/200.7	JLB	1/17/95	100
TCLP Cadmium	< 0.005	mg/L	6010/200.7	JLB	1/17/95	1.0
TCLP Chromium	< 0.010	mg/L	6010/200.7	JLB	1/17/95	5.0
TCLP Lead	< 0.10	mg/L	6010/200.7	JLB	1/17/95	5.0
TCLP Mercury	< 0.0008	mg/L	7470/3112	RY	1/17/95	0.20
TCLP Selenium	< 0.30	mg/L	6010/200.7	JLB	1/17/95	1.0
TCLP Silver	< 0.010	mg/L	6010/200.7	JLB	1/17/95	5.0

Method 1311 Date Extracted: 1/16/95 Sample Wt.: 100. grams

CBS	Results	Units	Method	Analyst	Date	Limit
Aroclor-1016	< 0.68	MG/KG	8081	DKW	1/13/95	2.0 ppm L
Aroclor-1221	< 0.68	MG/KG	8081	DKW	1/13/95	
Aroclor-1232	< 0.68	MG/KG	8081	DKW	1/13/95	
Aroclor-1242	< 0.68	MG/KG	8081	DKW	1/13/95	
Aroclor-1248	< 0.68	MG/KG	8081	DKW	1/13/95	
Aroclor-1254	< 0.68	MG/KG	8081	DKW	1/13/95	
Aroclor-1260	< 0.68	MG/KG	8081	DKW	1/13/95	
PCB Extraction					1/13/95	

Surrogates	% Recovery	Limits
Tetrachloro-m-xylene	100.0	50.0-150.0
Decachlorobiphenyl	89.0	50.0-150.0

ISCELLANEOUS	Comment	F	Method	Analyst	Date	Limit
Flash Closed Cup	No flash point		1020	LCL	1/13/95	<140°F

NO limit exceeded
1-26-95

Reviewed By : *[Signature]*

1/23/95

Chain of Custody/ Laboratory Analysis Request

DATE 2/11-95 PAGE 1 OF 1

PROJECT EL PASO NATURAL GAS CO #
 CLIENT INFO John Lambdin - Birmingham
 CONTACT John Lambdin - Birmingham
 CHEMPRO DIVISION GENERATOR NAME
 TELEPHONE # 505-572-2144
 SAMPLER'S NAME NORMAN NOBLE PHONE # 579-7152
 SAMPLER'S SIGNATURE Norman R. Noble

SAMPLE ID	DATE	TIME	LAB ID	TYPE
<u>90053</u>	<u>11-95</u>	<u>10:30</u>	<u>95-AS83</u>	<u>SOIL</u>
<u>950053</u>				
3				
4				
5				
6				
7				
8				

ANALYSIS REQUIRED	OTHER (Specify)	NUMBER OF CONTAINERS
BASE NEUACID ORGA GC/MS 825/8270		
VOLATILE ORGANICS GC/MS 824/8240		
PCB 608/808		
TFT (trace methoc 478 / 8018		
BET (trace methoc 824 / 8021		
F-LISTED SOLVENTS 824		
TCL (LISTED SOLVENTS 1311 8245		
TCLP METALS DO04		
METALS TOTAL As, Cd, Cr, Cu, Pb, Ni, Hg, Se, T		
TOTAL ORGANICS (Spec GC/MS 824		
DISCHARGE TESTING		
OTHER (Specify) <u>Ignitibility</u>		

Relinquished By

Signature Norman R. Noble
 Printed Name NORMAN R. NOBLE
 Firm EL PASO NATURAL GAS CO.
 Date/Time 1-12-95 11:45

Relinquished By

Signature [Signature]
 Printed Name PCB
 Firm EL PASO NATURAL GAS CO.
 Date/Time 1/13/95 10:30

SPECIAL INSTRUCTIONS COMMENTS

Chain of custody corrected
 1/13/95 following telephone
 consultation with John
 Lambdin.

106135

Relinquished By

Signature
 Printed Name
 Firm
 Date/Time

Relinquished By

Signature
 Printed Name
 Firm
 Date/Time

MEMORANDUM

To: John Lambdin

Date: January 12, 1995

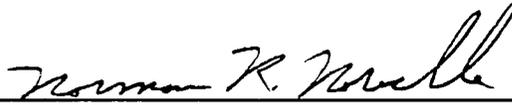
From: Norman R. Norvelle

Place: Field Services Engineering Lab

Subject: Angel Peak Solid Waste Pit Closure Sampling

On January 11, 1995 at 10:00 AM, I met with Denny Foutz of NMOCD to witness my sampling of the Angel Peak Plant solid waste pit for closure. Mr. Foutz had me sample two points at the bottom of the pit at a depth of one foot and then composite the two samples. These were put into a 16 oz. jar, 8 Oz. jar and a 4 Oz. jar. An extra 16 Oz. jar was collected to store in our refrigerator. The actual sample was taken at 13:30 AM. The assigned sample number was 950053. The following analysis was requested: BTEX, PCB, IGN, TCLP metals, and TPH.

The sample was iced in a cooler until received in the lab and then stored in the sample refrigerator. Today, the sample was packed in bubble wrap, iced and ship in a cooler to the BEI labs in Seattle. A temperature blank was included. Below is a picture of the pit. The ancillary paper work is attached.


Norman R. Norvelle, Senior Division Chemist

attachments

cc: David Hall





CHAIN OF CUSTODY RECORD

Project No.	Project Name	Requested Analysis	Contract Laboratory								
	ANGEL PEAK SOLID WASTE PIT CLOSURE	BTEX PH	EPNG								
Samplers: (Signature)	Date	Receiving Temp. (°F)									
<i>[Signature]</i>	1-13-95										
Lab ID	Date	Time	Matrix	Sample Number	Total No. of Containers	Chain of Custody Seals	Intact?	Composite or Grab	Requested Analysis	Contract Laboratory	Remarks
	1-11-95	1030	SOIL	950053	1			X	X	EPNG	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
<i>[Signature]</i>	1-12-95 11:45										
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	Date Results Reported / by: (Signature)						
		<i>[Signature]</i>		1-13-95 08:20							
Results & Invoices to:	Charge Code										



USE THIS AIRBILL FOR SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
USE THE INTERNATIONAL AIR MAILBILL FOR SHIPMENTS TO PUERTO RICO AND ALL NON-U.S. LOCATIONS.
QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE
TRACKING NUMBER

3622533633

3622533633

SENDER'S FEDERAL EXPRESS ACCOUNT NUMBER

167-889509

Date

1-13-75

SENDER'S COPY

From (Your Name) Please Print

JURTS COMPANY

Company

770 BAYVIEW

STREET ADDRESS

770 BAYVIEW

CITY

FRANKFORD

STATE

MD

ZIP REQUIRED

21201

Your Phone Number (Very Important)

(505) 533-2144

Department/Floor No.

345

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes)

555 HOWELL AVE SW

CITY

ALBANY

STATE

GA

ZIP REQUIRED

31705

To (Recipient's Name) Please Print

SAMPLE CONTROL

Company

PUBLICATIONS INTERNATIONAL

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes)

555 HOWELL AVE SW

CITY

ALBANY

STATE

GA

ZIP REQUIRED

31705

Recipient's Phone Number (Very Important)

(206) 227-0111

Department/Floor No.

IF HOLD AT FEDEX LOCATION, PRINT FEDEX ADDRESS HERE

Street Address

City

State

ZIP REQUIRED

Exp. Date

1

Bill 3rd Party FedEx Acct. No.

4

Bill Credit Card

SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning)

11 OTHER PACKAGING

16 FEDEX LETTER

12 FEDEX PAK*

13 FEDEX BOX

14 FEDEX TUBE

Economy Two Day (Delivery by second business day)

30 ECONOMY*

46 GOVT LETTER

41 GOVT PACKAGE

Freight Service (For packages over 150 lbs.)

80 OVERHAIGHT FREIGHT**

80 TWO DAY FREIGHT**

Freight commitment may be made in some states. **Call for delivery restrictions.

DELIVERY AND SPECIAL HANDLING (Check services required)

1 HOLD AT FEDEX LOCATION WEEKDAY (Fill in Section III)

31 DELIVER WEEKDAY (Saturday is not available)

3 HOLD AT FEDEX LOCATION SATURDAY (Fill in Section III)

9 DELIVER SATURDAY (Extra charge for all locations)

3 SATURDAY PICK-UP (Extra charge)

4 DANGEROUS GOODS (Extra charge)

6 DRY ICE (Dangerous Goods Shipper's Declaration not required)

12 HOLIDAY DELIVERY (If called)

YOUR DECLARED VALUE (\$ or rpm)

16

WEIGHT in Pounds (lb)

16

Total

16

SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY

Use of this airbill constitutes your agreement to the service conditions in our current Service Guide, available upon request. See back of sender's copy of this airbill for information. Service conditions may vary for Government Overnight Service. See U.S. Government Service Guide for details.

We will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, or any other cause, and we will not be liable for consequential or special damages. Your declared value must be stated in the appropriate box on this airbill. The maximum declared value for any one package is \$500. The maximum declared value for all packages in one shipment is \$5000.

In the event of ultimate delivery, Federal Express will at the option of the sender, pay the actual value of the loss, up to the declared value, less any amount already received from the carrier. The maximum declared value for any one package is \$500. The maximum declared value for all packages in one shipment is \$5000.

Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.

Release Signature

Federal Express Use

Basic Charges

Declined Value Charge

Other 1

Other 2

Total Charges

REVISION DATE 4/94

FORMAT #15127 XFM 11/94

FORMAT #100

©1993 FEDEX CORPORATION

U.S.A.

J60

U.S.A.

SENDER'S COPY

950053



ENERGY, MINERAL AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
505) 827-7131

ANITA LOCKWOOD
CABINET SECRETARY

November 22, 1994

CERTIFIED MAIL
RETURN RECEIPT NO. P-667-242-177

Mr. Patrick Marquez
Compliance Engineer
El Paso Natural Gas Company
P.O. Box 4990
Farmington, New Mexico 87499

*Sohr, can we make
arrangements for sampling
& Testing?*

*marks
PSh*

**RE: SOLID WASTE PIT CLOSURES
ANGEL PEAK COMPRESSOR STATION AND CHACO GAS PLANT
SAN JUAN COUNTY, NEW MEXICO**

Dear Ms. Miller:

The New Mexico Oil Conservation Division (OCD) has reviewed El Paso Natural Gas Company's (EPNG) September 12, 1994 "SOLID WASTE PIT CLOSURES AT EPNG'S ANGEL PEAK AND CHACO FACILITIES". This document contains EPNG's proposed closure plan for closure of former solid waste pits at EPNG's Angel Peak Compressor Station and Chaco Gas Plant.

The proposed closure plan as contained in the above referenced document is approved with the following conditions:

1. In addition to the soil sampling proposed, EPNG will analyze samples from the pits for hazardous waste characteristics.
2. All sample analyses will be conducted using EPA approved laboratory methods.
3. The results of the analytical sampling will be submitted to the OCD for approval prior to actual closure of the pits.
4. EPNG will notify the OCD at least 72 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples.
5. All original documents will be submitted to the OCD Santa Fe Office with copies provided to the OCD Aztec Office.

Mr. Bill Olson
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

September 12, 1995

Subject: Solid Waste Pit Closures at EPNG's Angel Peak and Chaco facilities

Dear Mr. Olson:

Below are the plans for closure of the subject pits for your review and approval. The Angel Peak and Chaco pits historically received waste generated from the field operations until mid 1992 and March of 1994, respectively. Waste Management of Four Corners currently services both facilities.

Pit Locations and Dimensions

Chaco	SW/4, Section 16, T-26-N, R-12-W	Angel Pk	NE/4, Section 8, T-27-N, R-10-W
	50 x 7 x 2.5 yards		35 x 5 x 3 yards

Facility Operations

- Typical contents would include: office paper products, wood, tin and aluminum cans, glycol and engine oil filters (drained before deposited), oily rags and small pieces of concrete.
- The pits never received liquids or household trash as both the Chaco and Angel Peak camps were retired in 1986.
- The Angel Peak pit has not received field waste for nearly two years and no plant trash since 1990. The pit was burned approximately once a week while in operation.
- The Chaco pit has not received trash since March of 1994 and was burned approximately once a month.

Closure

- A composite soil sample will be taken from the surface of the pit walls and the bottom of the pit approximately one foot deep.
- The representative sample will be analyzed for BTEX, PCBs, Ignitability, RCRA TCLP for metals and Total Petroleum Hydrocarbons.
- Upon submission of the test results, the pits will be filled with the original soil (current berm material), machine compacted and covered with an 18" cap designed to drain storm water.
- The pit locations relative to the plant surroundings are attached.
- Each pit lies on EPNG property.

El Paso Natural Gas respectfully request approval of the pit closure plans. Should you have questions, please call at 505 599 2175.

Thank you.

Patrick Marquez
Compliance Engineer

To: (Distribution)
From: John Lambdin

J-L

Date: March 21, 1995
Place: Field Services Laboratory

Subject: Chaco Plant Solid Waste Pit Closure Results

On February 3, 1995 the Field Services Laboratory collected one (1) soil sample from the solid waste pit at Chaco Plant. The sample was assigned Field Services laboratory number 950081.

The sample was collected and analyzed in accordance with New Mexico OCD guidelines for pit closure. The sample passed all the required tests. Enclosed you will find copies of all field and analytical laboratory results and field data.

Please let me know, if you have any questions.

Distribution:

David Hall - w/o attachments

Sandra Miller *for QB*

Results Log Book

File *5212 Analytical*

Attachments



BURLINGTON ENVIRONMENTAL

A Philip Environmental Company

February 21, 1995
Field Services Lab

Mr. John Lambdin
El Paso Natural Gas Company
Field Services Laboratory
P.O. Box 4990
Farmington, NM 87499

Dear Mr. Lambdin:

Subject: Project: Chaco Plant Trash Pit Soil
EPNG Laboratory Number: 950081
Burlington Environmental Laboratory Number: 95A2061
Burlington Environmental LIMS Job Number: 2331
Charge Code: Not Supplied
EPNG Agreement for Professional Environmental Services. Contract 5769
Analytical Services Blanket Contract Supplement Number 5769-92-3

Burlington Environmental Inc., (BEI) hereby submits the enclosed invoice for the work performed on the above-referenced project.

The analyses performed on this project include:

- Polychlorinated Biphenyls (PCBs)
- Ignitability (Flash Point, Method 1020)
- Toxicity Characteristic Leaching Procedure (TCLP 1311): Metals (D004-D011)

The project costs are summarized on the attached invoice. If you have any questions or need additional information concerning this invoice, please do not hesitate to contact me at 206-227-6100.

Sincerely yours,

BURLINGTON ENVIRONMENTAL INC.

Kathy E. Kreps
Laboratory Manager

Enclosure: Invoice



Chain of Custody/ Laboratory Analysis Request

BURLINGTON ENVIRONMENTAL
2203 Airport Way South, Suite 400
Seattle, WA 98134
206 223 0500 • FAX: 223-7791

DATE 2-8-95 PAGE 1 OF 1

PROJECT CHACO PLANT TRASH PIT SOIL
 CLIENT INFO EL PASO NATURAL GAS CO.
 CONTACT FARMINGTON, NM
 CHEMPRO DIVISION GENERATOR NAME LAB - (505) 599-2140
 TELEPHONE # NORMAN NORVELL PHONE # 599-2157
 SAMPLERS NAME Norman R. Norvell
 SAMPLERS SIGNATURE [Signature]

SAMPLE ID	DATE	TIME	LAB ID	TYPE
1	2-3-95	14:15	95-A200	SOIL
2				
3				
4				
5				
6				
7				
8				

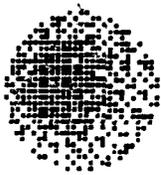
ANALYSIS REQUESTED		OTHER (Specify)	RECEIVED IN GOOD CONDITION?
BASE NEU ACID ORGAN	GC/MS 635 8270		
VOLATILE ORGANICS	GC/MS 624 8240		
PCBs	608/8083		
TPH (pic method)	418 (pic method)		
GETX (pic method)	6240 or 8220		
F- LISTED SOLVENTS	8240		
TCLP F- LISTED SOLVENTS	1311/8240		
TCLP METALS	D004-1		
METALS TOTAL	As, Ba, Ca, Cr, Cu, Pb, Ni, Hg, Ag, Se, Ti, Sb, Zn		
TCLP ORGANICS (Specify methods)	PCB, Dioxin, Furans, PCBs		
DISCHARGE TESTING			
OTHER (Specify)		<u>Ignitability</u>	
			3

Relinquished By Norman R. Norvell
 Signature [Signature]
 Printed Name NORMAN R. NORVELL
 Firm EL PASO NATURAL GAS CO.
 Date/Time 2-8-95 / 12:00
 Received By [Signature]
 Signature [Signature]
 Printed Name BES lab
 Firm [Signature]
 Date/Time 2/10/95

SPECIAL INSTRUCTIONS/COMMENTS:
* Collected 2/10/95
AWAY WORTH PCLOS
2331

Relinquished By
 Signature _____
 Printed Name _____
 Firm _____
 Date/Time _____

Received By
 Signature _____
 Printed Name _____
 Firm _____
 Date/Time _____



BURLINGTON ENVIRONMENTAL

A Philip Environmental Company

February 20, 1995

John Lambdin
El Paso Natural Gas Co.
Field Services Lab
P.O. Box 4990
Farmington, NM 87499

Project: CHACO PLANT TRASH PIT SOIL
Laboratory Job Number: 2331

On February 10 we received 1 sample(s).
We performed the following analyses:

TCLP Metals

PCB's

Flash Closed Cup

Instrument: Hewlett Packard 5890 GC

All samples were analyzed according to Methods specified in the work plan or Chain of Custody. Any deviations or exceptions to the standard methods are covered in Data Validation Notes.

All samples were extracted and analyzed within required holding times unless so noted.

Analysis and review was complete on February 20.

Sincerely,

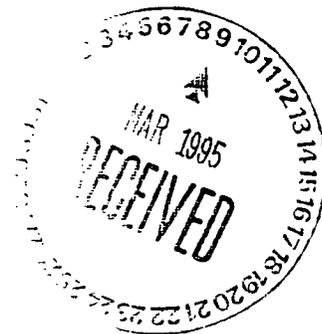
Kathy Kreps

Lab Manager

(206) 227-6100

Burlington Environmental Corporate Lab

Washington Accreditation #C021



**BURLINGTON ENVIRONMENTAL INC.
CORPORATE LABORATORY
ANALYTICAL REPORT**

Client:

El Paso Natural Gas Co.
Field Services Lab
P.O. Box 4990
Farmington, NM
87499

Project Name: CHACO PLANT TRASH PIT SOI
Report to: John Lambdin

Date Received: 2/10/95
Date Sampled: 2/ 3/95
Date Reported: 2/20/95

Laboratory No.: 95-A2061
Sample ID.: 950081

Job Number: 2331

Analyte	Results	Units	Method	Analyst	Date	LIMIT
TCLP METALS						
TCLP Arsenic	< 0.10	mg/L	6010/200.7	EML	2/14/95	5.0
TCLP Barium	0.75	mg/L	6010/200.7	EML	2/14/95	100
TCLP Cadmium	< 0.005	mg/L	6010/200.7	EML	2/14/95	1.0
TCLP Chromium	< 0.010	mg/L	6010/200.7	EML	2/14/95	5.0
TCLP Lead	< 0.10	mg/L	6010/200.7	EML	2/14/95	5.0
TCLP Mercury	< 0.0008	mg/L	7470/3112	HY	2/15/95	0.20
TCLP Selenium	< 0.30	mg/L	6010/200.7	EML	2/14/95	1.0
TCLP Silver	< 0.010	mg/L	6010/200.7	EML	2/14/95	5.0

Method 1311 Date Extracted: 2/13/95 Sample Wt.: 100. grams

PCBs

Aroclor-1016	< 0.91	MG/KG	8081	ME	2/14/95
Aroclor-1221	< 0.91	MG/KG	8081	ME	2/14/95
Aroclor-1232	< 0.91	MG/KG	8081	ME	2/14/95
Aroclor-1242	< 0.91	MG/KG	8081	ME	2/14/95
Aroclor-1248	< 0.91	MG/KG	8081	ME	2/14/95
Aroclor-1254	< 0.91	MG/KG	8081	ME	2/14/95
Aroclor-1260	< 0.91	MG/KG	8081	ME	2/14/95
PCB Extraction					2/10/95

Surrogates	% Recovery	Limits
Tetrachloro-m-xylene	96.0	50.0-150.0
Decachlorobiphenyl	83.0	50.0-150.0

MISCELLANEOUS

Flash Closed Cup	Comment	F	1020	RP	2/13/95
	NO FLASH				

*Reviewed & Approved by
3-21-95*

Reviewed By : Kathy Drep 2/20/95



CRM -
- Norman Norville

**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

~~THE CLOSURE PROJECT - Soil Samples Inside the GW 7 2000~~

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	950087 KDU 2/9/95	950081
MTR CODE SITE NAME:	char. plant Trash Pit	N/A
SAMPLE DATE TIME (Hrs):	2/3/95	1415
SAMPLED BY:	N/A NORMAN NORVILLE	
DATE OF TPH EXT. ANAL.:	2/8/95	2/8/95
DATE OF BTEX EXT. ANAL.:	2/7/95	2/7/95
TYPE DESCRIPTION:		

REMARKS:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	< 1.01	MG/KG	0.20284		493	20
TOLUENE	< 1.01	MG/KG				
ETHYL BENZENE	< 1.01	MG/KG				
TOTAL XYLENES	< 3.03	MG/KG				
TOTAL BTEX	< 6.06	MG/KG				
TPH (418.1)	73.7	MG/KG			1.98	28
HEADSPACE PID	Not Run	PPM				
PERCENT SOLIDS	95.2	%				

- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 -

Surrogate Recovery was at 87.2 % for this sample All QA/QC was acceptable.

Interferent: Acceptable *JR*

DF = Dilution Factor Used

Approved By: John Lard

Date: 3-21-95

Test Method for
Oil and Grease and Petroleum Hydrocarbons
in Water and Soil

Perkin-Elmer Model 1600 FT-IR
Analysis Report

7E/02/02 11.07

Sample Identification
70001

Initial weight of sample, g

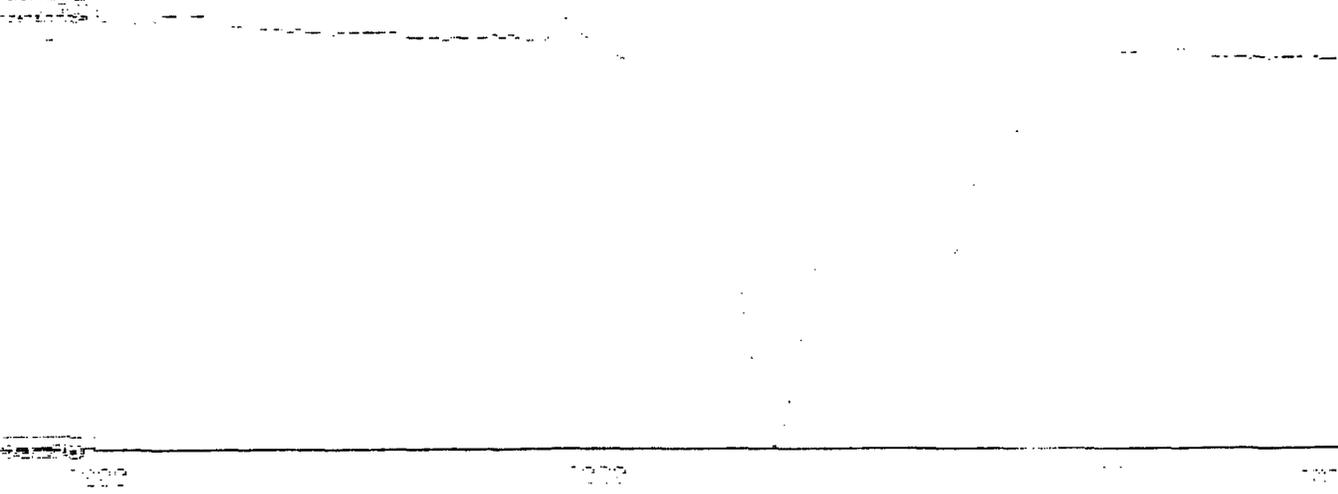
Weight of residue after extraction, g

Initial weight of solvent, g

Final weight of solvent, g

IR Spectrum (transmission vs. wavenumber)

11.07



LABORATORY CONTROL SAMPLES: CALIBRATION CHECKS

SAMPLE ID	SOURCE	TRUE VALUE (PPM)	FOUND (MG/KG)	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
INITIAL CALIBRATION VERIF. 3" Heavy Oil (Lot M3G9616)	HORIBA	100	103	103	X	

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S)MG/KG	DUPLICATE RESULT (D)MG/KG	RPD	ACCEPTABLE RANGE +/- 35%	
					YES	NO
946637	2nd Extract	481	388	21.4	X	
946640	2nd Extract	411	469	13.2	X	

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA)MG/KG	SAMPLE RESULT (S)MG/KG	SPIKE SAMPLE RESULT (SR)MG/KG	%R	ACCEPTABLE RANGE 75-125 %R	
					YES	NO
946637	2830	481	3890	120	X	
946640	3030	411	4040	120	X	

Narrative: Acceptable.

REFERENCE SOIL (Laboratory Control Sample):

SAMPLE ID	SOURCE	KNOWN VALUE (MG/KG)	SAMPLE RESULT FOUND (MG/KG)	MFG SPECIFIED RANGE	ACCEPTABLE	
					YES	NO
TPH STANDARD #1 T # 91026	ENVIRONMENTAL RESOURCE ASS.	1340	1650	804 - 1680	X	
TPH STANDARD #2 w/int T # 91026	ENVIRONMENTAL RESOURCE ASS.	2590	3060	1550 - 3240	X	

Narrative: Acceptable.

LABORATORY REAGENT BLANK:

SAMPLE ID	SOURCE	TPH LEVEL (MG/KG)	STATUS
Freon Solvent	EPNG Lab	< 10.0	ACCEPTABLE
Reagent Blank	EPNG Lab	< 10.0	ACCEPTABLE

Narrative: Acceptable.

Extracted: 02/08/95

Approved By: *John J. [Signature]*

Date: 20-Feb-95

LABORATORY CALIBRATION CHECKS, LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE	
					RANGE	YES NO
ICV LA-41626 25 PPB						
Benzene	Standard	25.0	24.5	98.0	75 - 125 %	X
Toluene	Standard	25.0	29.2	116.8	75 - 125 %	X
Ethyl benzene	Standard	25.0	27.0	108.0	75 - 125 %	X
Total Xylenes	Standard	75.0	83.8	111.7	75 - 125 %	X
ICV LA-41626 200 PPB						
Benzene	Standard	200	215	107.5	75 - 125 %	X
Toluene	Standard	200	225	112.5	75 - 125 %	X
Ethyl benzene	Standard	200	217	108.5	75 - 125 %	X
m & p - Xylene	Standard	400	399	99.8	75 - 125 %	X
o - Xylene	Standard	200	215	107.5	75 - 125 %	X
LCS DB-00050 25 PPB						
Benzene	Standard	25.0	24.4	97.6	39 - 150	X
Toluene	Standard	25.0	29.8	119.2	46 - 148	X
Ethyl benzene	Standard	25.0	27.5	110.0	32 - 160	X
Total Xylenes	Standard	75.0	85.6	114.1	Not Given	X
CCV LA-41626 25 PPB						
Benzene	Standard	25.0	22.2	88.8	75 - 125 %	X
Toluene	Standard	25.0	26.5	106.0	75 - 125 %	X
Ethyl benzene	Standard	25.0	25.2	100.8	75 - 125 %	X
Total Xylenes	Standard	75.0	77.8	103.7	75 - 125 %	X

rrative: Acceptable.

SAMPLE NUMBER 946633 EXTRACT	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM (mg/Kg)	DUPLICATE RESULT PPM (mg/Kg)	RPD	ACCEPTABLE	
					YES	NO
Benzene	2nd Portion	<1.01	<1.01	0	+/- 35 %	X
Toluene	2nd Portion	<1.01	<1.01	0	+/- 35 %	X
Ethyl benzene	2nd Portion	<1.01	<1.01	0	+/- 35 %	X
Total Xylenes	2nd Portion	<3.03	<3.03	0	+/- 35 %	X

errative: Acceptable.

SAMPLE NUMBER 946634 EXTRACT	TYPE (Analysis, Portion, or Sample)	SAMPLE RESULT PPM (mg/Kg)	DUPLICATE RESULT PPM (mg/Kg)	RPD	ACCEPTABLE	
					YES	NO
Benzene	2nd Analysis	<1.00	<1.00	0	+/- 35 %	X
Toluene	2nd Analysis	<1.00	<1.00	0	+/- 35 %	X
Ethyl benzene	2nd Analysis	<1.00	<1.00	0	+/- 35 %	X
Total Xylenes	2nd Analysis	<3.00	<3.00	0	+/- 35 %	X

errative: Acceptable.

LABORATORY SPIKES:

SAMPLE NUMBER 946631 EXTRACT - 2nd Analysis	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	XR	ACCEPTABLE	
					YES	NO
Benzene	40.0	<5.00	38.3	96	75 - 125 %	X
Toluene	40.0	<5.00	42.8	107	75 - 125 %	X
Ethyl benzene	40.0	<5.00	40.0	100	75 - 125 %	X
Total Xylenes	120.0	<15.0	124	103	75 - 125 %	X

errative: Acceptable.

SAMPLE NUMBER 946629 EXTRACT - 2nd Portion	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	XR	ACCEPTABLE	
					YES	NO
Benzene	40.0	<5.00	38.4	96	75 - 125 %	X
Toluene	40.0	<5.00	42.7	107	75 - 125 %	X
Ethyl benzene	40.0	<5.00	41.6	104	75 - 125 %	X
Total Xylenes	120.0	<15.0	124	103	75 - 125 %	X

errative: Acceptable.

DITIONAL ANALYTICAL BLANKS:

SAMPLE ID AUTO BLANK	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

errative: Acceptable

SAMPLE ID SOIL VIAL BLANK	SOURCE	PPB	STATUS
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<5.0	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

errative: Acceptable.

SAMPLE ID EXTRACTION BLANK	SOURCE	PPB (In 200 uL shot)	STATUS
Benzene	Methanol	<2.5	ACCEPTABLE
Toluene	Methanol	<2.5	ACCEPTABLE
Ethyl benzene	Methanol	<2.5	ACCEPTABLE
Total Xylenes	Methanol	<7.5	ACCEPTABLE

Narrative: Acceptable.

SAMPLE ID	SOURCE	NARRATIVE	STATUS
Carryover contamination checks			
1/4	Vial + Boiled Water	All analytical compounds <5.0 ppb	ACCEPTABLE
2/4	Vial + Boiled Water	All analytical compounds <5.0 ppb	ACCEPTABLE
3/4	Vial + Boiled Water	All analytical compounds <5.0 ppb	ACCEPTABLE
4/4	Vial + Boiled Water	All analytical compounds <5.0 ppb	ACCEPTABLE

Narrative: Acceptable.

AGENT BLANKS:

SAMPLE ID BOILED WATER CHECK	SOURCE 1/31/95	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

SAMPLE ID METHANOL CHECK	SOURCE 1/31/95	PPB	STATUS
Benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Toluene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	MeOH/Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	MeOH/Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable

Approved By: *John F. ...*

Date: 8-Feb-95

MEMORANDUM

To: John Lambdin ✓

Date: February 10, 1995

From: Norman R. Norvelle

Place: Field Services Engineering Lab

Subject: Chaco Plant Solid Waste Pit Closure Sampling

On February 3, 1995 at 10:00 AM, I met with Denny Foutz of NMOCD to witness my sampling of the Chaco Plant solid waste trash pit for closure. We were accompanied by Patrick Marquez and Lyndell Smith. Mr. Foutz had me sample two points at the bottom of the pit at a depth of one foot and then composite the two samples. These were put into a 16 oz. jar, 8 Oz. jar and a 4 Oz. jar. An extra 8 Oz. jar was collected as a spare. The actual sample was taken at 2:15 PM. The assigned sample number was 950081. The following analysis was requested from BEI: ignitability, TCLP metals, and PCB. Our lab performed the TPH and BETX analysis.

The sample was iced in a cooler until received in the lab and then stored in the sample refrigerator. On 2-9-95, the sample was packed in bubble wrap, iced and ship in a cooler to the BEI labs in Seattle. A temperature blank was included. The appropriate paper work is attached.

Mr. Foutz then performed an audit and plant tour of Chaco Plant. He was accompanied by Patrick Marquez, Lyndell Smith, and one of the plant leads.


Norman R. Norvelle, Senior Division Chemist

attachments

cc: David Hall

Patrick Marquez



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

ANITA LOCKWOOD
CABINET SECRETARY

November 22, 1994

CERTIFIED MAIL
RETURN RECEIPT NO. P-667-242-177

Mr. Patrick Marquez
Compliance Engineer
El Paso Natural Gas Company
P.O. Box 4990
Farmington, New Mexico 87499

**RE: SOLID WASTE PIT CLOSURES
ANGEL PEAK COMPRESSOR STATION AND CHACO GAS PLANT
SAN JUAN COUNTY, NEW MEXICO**

*Sohr, can we make
arrangements for sampling
& Testing?*

*Thanks
PSh*

Dear Ms. Miller:

The New Mexico Oil Conservation Division (OCD) has reviewed El Paso Natural Gas Company's (EPNG) September 12, 1994 "SOLID WASTE PIT CLOSURES AT EPNG'S ANGEL PEAK AND CHACO FACILITIES". This document contains EPNG's proposed closure plan for closure of former solid waste pits at EPNG's Angel Peak Compressor Station and Chaco Gas1 Plant.

The proposed closure plan as contained in the above referenced document is approved with the following conditions:

1. In addition to the soil sampling proposed, EPNG will analyze samples from the pits for hazardous waste characteristics.
2. All sample analyses will be conducted using EPA approved laboratory methods.
3. The results of the analytical sampling will be submitted to the OCD for approval prior to actual closure of the pits.
4. EPNG will notify the OCD at least 72 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples.
5. All original documents will be submitted to the OCD Santa Fe Office with copies provided to the OCD Aztec Office.



MEMORANDUM OF MEETING OR CONVERSATION

<input checked="" type="checkbox"/> Telephone	<input type="checkbox"/> Personal	Time 1:34 pm	Date 3-13-95
---	-----------------------------------	-----------------	-----------------

<u>Originating Party</u>	<u>Other Parties</u>
Pat Sanchez - called Patrick Marquez	

DISCUSSION

LTT'R rec. from EPNG dated Feb. 22, 1995
"Approval for construction & OP of Add. Septic System"

DISCUSSION

Septic system - will only contain
sewage, No other waste streams,
Told him that it would fall under
NMED Jurisdiction.

CONCLUSIONS OR AGREEMENTS

DISTRIBUTION

Signed



REGISTRATION DIVISION
FEB 22 1995
95 PM 7 11 8 52

P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

Mr. David Tomko
New Mexico Environment Department
724 W. Animas
Farmington, NM 87401

February 22, 1995

Subject: Approval for Construction and Operation of Additional Septic System at EPNG's Chaco Plant.

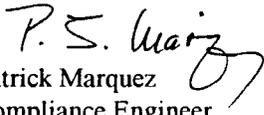
Dear Mr. Tomko:

El Paso Natural Gas Company (EPNG) request approval for the septic system described below. The septic system will be installed to accommodate construction crews during and perhaps beyond the construction of new facilities at Chaco Plant.

- Chaco Plant: SW/4, Section 26, T-26-N & R-12-W
- Potable water will be piped from the existing water system within the plant to two construction trailers. Each trailer will have one toilet and one sink. This waste stream will be isolated from all others.
- One septic tank with 420± gallon/day capacity to service both trailers. The septic tank will discharge to a leach field (See enclosed map for piping layout).
- Taft Construction, licensed in the State of New Mexico, will install the system.
- The system will be in operation until new construction is complete, approximately one year. Upon completion, Chaco Plant personnel will evaluate the future need for the septic system. The decision to remove or keep the system will be forwarded to NMED and NMOCD along with the "as built" drawings.

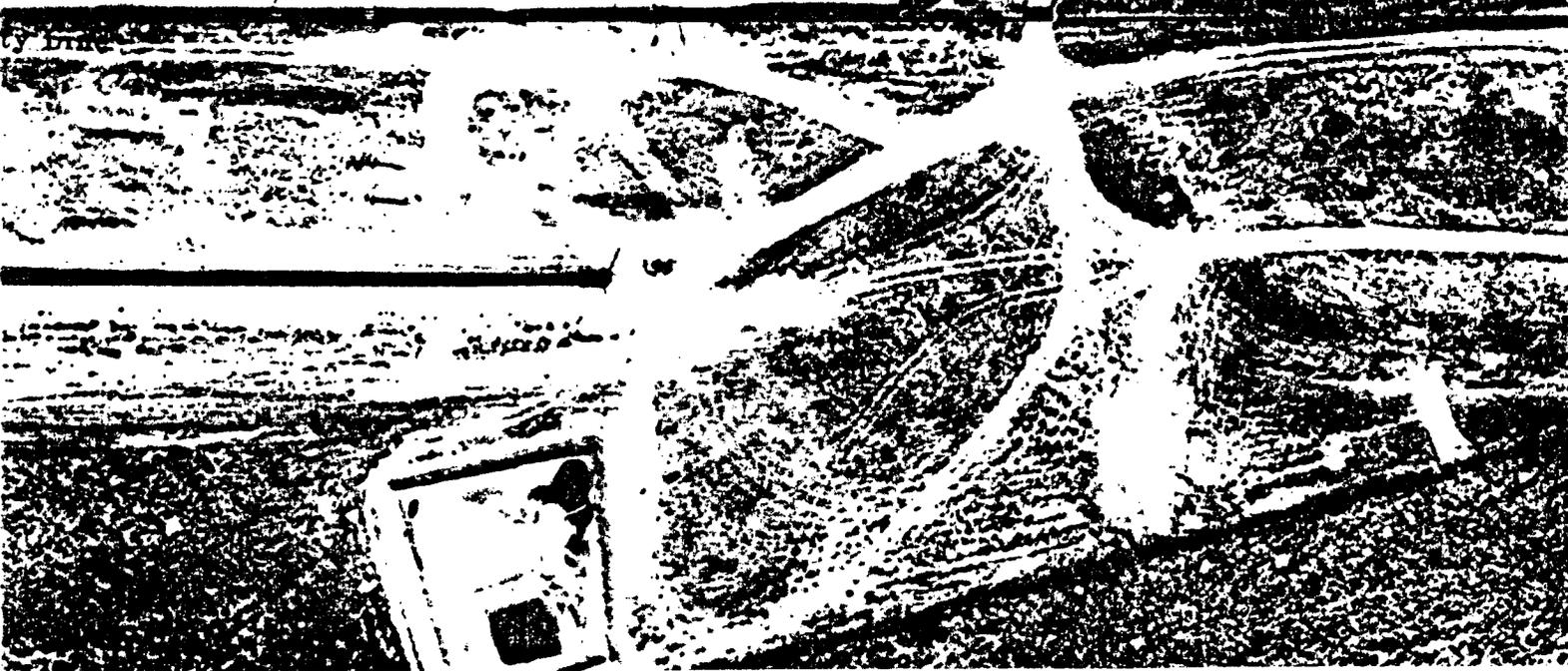
El Paso Natural Gas Company respectfully request approval to construct and operate the temporary septic system at Chaco Plant. Construction of the system will begin immediately after NMED approval, therefor, your earliest response is appreciated. Should you require further information, please do not hesitate to call at 505 599 2175.

Thank you,


Patrick Marquez
Compliance Engineer

cc:

David Hall (EPNG)
Kent Leidy (EPNG)
William Olson (NMOCD)
Lyndell Smith (EPNG)
Bob Yungert (EPNG)
Sandra Miller/David Bays/File: 5212 Chaco (Regulatory)





February 15, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. P-176-012-110

Ms. Sandra Miller
El Paso Natural Gas Company
P.O. Box 4990
Farmington, New Mexico 87499

**Re: Discharge Plan (GW-71)
Chaco Gas Plant
San Juan County, New Mexico**

Dear Ms. Miller:

The Oil Conservation Division (OCD) has received El Paso Natural Gas Company's (EPNG) request, dated February 8, 1995, for approval to provide wastewater to local entities wanting to use the water for: 1) drilling oil and/or natural gas wells, and 2) the San Juan County road departments use in dust suppression on dirt roads. Based upon the information provided, your disposal request is approved under the following conditions:

1. Only noncontact wastewater from the Chaco Plant will be provided to the above requested entities.
2. If water is to be used for road spreading to suppress dust, EPNG must receive approval from the OCD-Aztec Office on a case by case basis.
3. Use of the wastewater in the oil and natural gas industry is limited to exploration and production activities.
4. EPNG will maintain records of those entities that receive the water, the volume of water provided, date provided, intended use of the water and final disposition of the water. EPNG will provide the OCD a copy of the records February 1st of each year with the first report due no later than February 1, 1996.
5. The wastewater may not be discharged into any waters of the United States or within one hundred feet (100') from the nearest natural boundary of any wash or arroyo.

VILLAGRA BUILDING - 408 Galisteo

Forestry and Resources Conservation Division
P.O. Box 1948 87504-1948
827-5830

Park and Recreation Division
P.O. Box 1147 87504-1147
827-7465

2040 South Pacheco

Office of the Secretary
827-5950

Administrative Services
827-5925

Energy Conservation & Management
827-5900

Mining and Minerals
827-5970

Oil Conservation
827-7131

Ms. Sandra Miller
February 14, 1995

Please be advised that this approval does not relieve you of liability should your operation result in actual pollution of surface or groundwater or the environment actionable under other laws and/or regulations. In addition, OCD approval does not relieve you of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please do not hesitate to call me at (505) 827-7153.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chris Eustice".

Chris E. Eustice
Environmental Geologist

xc: OCD - Aztec Office

February 8, 1995

Mr. Chris Eustice
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87504

RECEIVED

FEB 13 1995

Environmental Bureau
Oil Conservation Division

Dear Mr. Eustice:

El Paso Natural Gas Co. (EPNG) is periodically requested to provide water to local entities from our noncontact wastewater pond at Chaco Plant. The requests typically come from two types of companies: 1) drilling companies for use in oil and gas well production, and 2) the county road department for use in dust suppression on dirt roads.

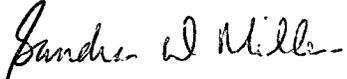
EPNG requests approval of a minor revision to Chaco Plant's discharge plan GW-71 in order to accommodate these type requests. For your information, I have listed below several items which are relevant to this request:

- Chaco Plant noncontact wastewater was sampled in 1991 and 1993 for BETX, heavy metals, and total dissolved solids (TDS). In each case, the BETX levels were nondetectable, the heavy metals were below WQCC standards, and the TDS was 1550 mg/l and 1356 mg/l, respectively.
- The discharge quality to the noncontact wastewater ponds has not changed significantly since the last sampling events took place.
- EPNG will maintain a log of those entities which take water from the pond and will provide NMOCD a copy of the log on an annual basis.
- EPNG will require that any entity using water from the Chaco Plant pond agree, in writing, to the following stipulations as applicable:
 1. Chaco Plant personnel are notified prior to a company obtaining wastewater from the pond.
 2. Use of the wastewater is limited to use in oil and natural gas exploration and production activities. (i.e. not water wells)
 3. The wastewater is not discharged into waters of the U.S.
 4. The wastewater is not discharged within 100' from the nearest natural boundary of any wash or arroyo.
 5. The wastewater is never applied so as to allow ponding or pooling of water along roads.

6. The wastewater is limited to the road surface and never applied, allowing runoff of water beyond the road boundaries.

If you have any questions regarding this modification, you may reach me at 599-2141.

Sincerely,



Sandra D. Miller

Superintendent, Environmental Compliance

xc: Mr. Denny Foust, NMOCD - Aztec
Mr. W.D. Hall, EPNG



REGISTRATION DIVISION
1995
01 8 52

Mr. Bill Olson
New Mexico Oil Conservation Division
2040 South Pacheco Street
Santa Fe, NM 87504

February 1, 1995

Subject: Closure Report - Chaco Plant Industrial Ponds and Flare Pit

Dear Mr. Olson:

El Paso Field Services (EPFS) has completed the closure of the subject ponds. This summary of the closure activities is presented to you as a condition of the Closure Plan approval dated November 17th, 1995.

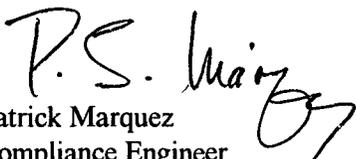
Closure activities began on or about December 2nd and continued for approximately one month. Each pond berm was broken allowing heavy equipment to mix fill earth and manure with the pond contents until the pond area was stabilized. The pond berms were cut and used as fill, leaving the area sloping gently northward to capture any stormwater against the existing plant berm. Clay from a nearby EPFS facility was imported to fashion a six to eight inch clay cap for the entire area. In short, the work followed the closure plan and was successful. NMOCD representative, Mr. Denny Foust, visited the site on two separate occasions to witness these activities.

EPFS has recently sampled monitor wells 1 and 8 (8b in all previous documents) to confirm the data presented to your office in November and to provide some basis for further delineation of the perched aquifer quality. Table 1 shows MW8's initial quality (submitted with the Closure Plan) while Table 2 shows two additional analyses for MW8 and a recent analysis of MW1.

As shown, the water quality from MW1 is consistent with previous analyses while the MW8 quality has improved. EPFS proposes increasing the sampling frequency for monitor wells 1 and 8 to bimonthly (every two months) for BTEX and continuing semi annual analyses for BTEX, PNA's, Cd, Cr and Hg as instructed (NMOCD to EPNG - Nov. 17th, 1995). This should allow EPFS to further establish ground water quality at the site. EPFS shall report these analyses to your office with the Annual Ground Water Quality Report in October, 1996 with a work plan for further delineation of ground water quality if necessary.

Please consider this course of action. You may contact me at 505-599-2175 if you require further information. Your assistance and timely response to EPFS's requests last year are appreciated.

Thank you,


Patrick Marquez
Compliance Engineer

cc:
Denny Foust (NMOCD)
Sandra Miller/David Bays/File: 5212 Regulatory

Monitor Well 8b

Chaco Plant

11/16/95

Monitor Well 8b								
Sample #951068								
Report to NMOCD 11/16/95								
Total Metals	Result	Units	Polynuclear Aromatics	Result	Units	Cations/Anions	Result	Units
Aluminum	2.8	mg/l	Naphthalene	ND	ug/L	pH	8.02	umhos
Arsenic	0.05	mg/l	Acenaphthylene	ND	ug/L	Alkalinity as CO3	0	ppm
Barium	0.1	mg/l	1-Methylnaphthalene	10.5	ug/L	Alkalinity as HCO3	780	ppm
Boron	0.4	mg/l	2-Methylnaphthalene	6J	ug/L	Calcium as Ca	13	ppm
Cadmium	ND	mg/l	Acenaphthene	ND	ug/L	Magnesium and Mg	4	ppm
Chromium	ND	mg/l	Fluorene	3.6	ug/L	Total Hardness as CaCO3	49	ppm
Cobalt	ND	mg/l	Phenanthrene	ND	ug/L	Chloride as Cl	158	ppm
Copper	ND	mg/l	Anthracene	ND	ug/L	Sulfate as SO4	289	ppm
Iron	2.2	mg/l	Fluoranthene	ND	ug/L	Flouride as F	2.2	ppm
Lead	ND	mg/l	Pyrene	ND	ug/L	Potassium as K	0.65	ppm
Manganese	0.25	mg/l	Benzo(a)anthrecene	ND	ug/L	Sodium	553	ppm
Mercury	ND	mg/l	Chrysene	ND	ug/L	Total dissolved Solids	1424	ppm
Molybdenum	ND	mg/l	Benzo(b)flouranthene	ND	ug/L	Conductivity	2280	umhos
Nickel	ND	mg/l	Benzo(a)flouranthene	ND	ug/L	Nitrate as NO3-N	<0.1	ppm
Selenium	ND	mg/l	Benzo(a)pyrene	ND	ug/L	Phosphate as PO4	4.2	ppm
Silver	ND	mg/l	Dibenzo(a,h)anthracene	ND	ug/L			
Zinc	0.07	mg/l	Benzo(g,h,i)perylene	ND	ug/L			
BTEX (8020)			Indeno(1,2,3-c,d)pyrene	ND	ug/L			
Benzene	29.5	ppb						
Toluene	<2.5	ppb						
Ethyl Benzene	<2.5	ppb						
Total Xylenes	<7.5	ppb						
ND = Not Detected								
J = Estimate value. Below requested detection limits								

Table 1

**Monitor Wells 1 and 8
Chaco Plant Pond Closures
Closure Report 02/02/96
BTEX (8020)**

Analyte/Date	MW 8	MW 8	MW 8	Units	MW 1
	Nov. 16, 1995	Nov. 30, 1995	Jan. 30, 1996		Jan. 30, 1996
Benzene	29.5	9.1	5.3	ppb	< 2.5
Toluene	< 2.5	< 2.5	< 2.5	ppb	< 2.5
Ethyl Benzene	< 2.5	< 2.5	< 2.5	ppb	< 2.5
Total Xylenes	< 7.5	< 7.5	< 7.5	ppb	< 7.5

Table 2



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 951295
MATRIX: Water
SAMPLE DATE: 29-Nov-95
SAMPLE TIME (Hrs.): 1452
SAMPLED BY: Dennis Bird
PROJECT: Monitor Well Sampling
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant
SAMPLE POINT: Monitor Well #8
DATE OF ANALYSIS: 30-Nov-95

REMARKS: None.

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	9.1	None	10
TOLUENE	<2.5	None	740
ETHYL BENZENE	<2.5	None	750
TOTAL XYLENES	<7.5	None	620
SURROGATE % RECOVERY	93	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: John Zatche

4-Dec-95
Date

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 951295

QA/QC for 11/30/95 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE	
					YES	NO
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	54.6	109.2	75 - 125 %	X
Toluene	Standard	50.0	55.3	110.6	75 - 125 %	X
Ethyl benzene	Standard	50.0	56.2	112.4	75 - 125 %	X
m & p - Xylene	Standard	100	108.9	108.9	75 - 125 %	X
o - Xylene	Standard	50.0	56.8	113.6	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	30.0	120.0	39 - 150	X
Toluene	Standard	25.0	30.2	120.8	46 - 148	X
Ethyl benzene	Standard	25.0	29.4	117.6	32 - 160	X
m & p - Xylene	Standard	50	57.1	114.2	Not Given	X
o - Xylene	Standard	25.0	29.8	119.2	Not Given	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	51.4	102.8	75 - 125 %	X
Toluene	Standard	50.0	51.9	103.8	75 - 125 %	X
Ethyl benzene	Standard	50.0	52.7	105.4	75 - 125 %	X
m & p - Xylene	Standard	100	101.7	101.7	75 - 125 %	X
o - Xylene	Standard	50.0	53.0	106.0	75 - 125 %	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	49.2	98.4	75 - 125 %	NA
Toluene	Standard	50.0	49.3	98.6	75 - 125 %	NA
Ethyl benzene	Standard	50.0	50.0	100.0	75 - 125 %	NA
m & p - Xylene	Standard	100	95.7	95.7	75 - 125 %	NA
o - Xylene	Standard	50.0	50.5	101.0	75 - 125 %	NA

Narrative: Acceptable.

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 951295

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
967799					RANGE	
Benzene	Matrix Duplicate	9.1	9.0	1	+/- 20 %	X
Toluene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X
Ethyl benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<5.0	<2.5	0	+/- 20 %	X
o - Xylene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPTKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	XR	ACCEPTABLE	
					YES	NO
2nd Analysis 967799					RANGE	
Benzene	50	9.1	57.5	96.8	75 - 125 %	X
Toluene	50	<2.5	50.3	100.6	75 - 125 %	X
Ethyl benzene	50	<2.5	51.9	103.8	75 - 125 %	X
m & p - Xylene	100	<5.0	98.8	98.8	75 - 125 %	X
o - Xylene	50	<2.5	51.6	103.2	75 - 125 %	X

Narrative: Acceptable.

ADDITIONAL ANALYTICAL BLANKS:

AUTO BLANK	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE	PPB	STATUS
	Lot M12151 A5		
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (None analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<2.5	NA
Toluene	Vial + Boiled Water	<2.5	NA
Ethyl benzene	Vial + Boiled Water	<2.5	NA
Total Xylenes	Vial + Boiled Water	<7.5	NA

Narrative:

Approved By: 

Date: 1-Dec-95



EL PASO FIELD SERVICES
FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 960063
MATRIX: Water
SAMPLE DATE: 30-Jan-96
SAMPLE TIME (Hrs.): 1122
SAMPLED BY: Dennis Bird
PROJECT: Monitor Well Sampling
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant
SAMPLE POINT: Monitor Well #8
DATE OF ANALYSIS: 30-Jan-96

REMARKS: None.

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	5.3	None	10
TOLUENE	<2.5	None	740
ETHYL BENZENE	<2.5	None	750
TOTAL XYLENES	<7.5	None	620
SURROGATE % RECOVERY	91	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: John Funder

31-Jan-96
Date



EL PASO FIELD SERVICES
FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 960064
MATRIX: Water
SAMPLE DATE: 30-Jan-96
SAMPLE TIME (Hrs.): 1133
SAMPLED BY: Dennis Bird
PROJECT: Monitor Well Sampling
FACILITY ID: 5212
SAMPLE LOCATION: Chaco Plant
SAMPLE POINT: Monitor Well #1
DATE OF ANALYSIS: 30-Jan-96

REMARKS: None.

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<2.5	None	10
TOLUENE	<2.5	None	740
ETHYL BENZENE	<2.5	None	750
TOTAL XYLENES	<7.5	None	620
SURROGATE % RECOVERY	104	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: _____

31-Jan-96
Date

EL PASO NATURAL GAS - FIELD SERVICES LABORATORY

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 960063 and 960064

QA/QC for 01/30/96 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	XR	ACCEPTABLE	
					YES	NO
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	49.9	99.8	75 - 125 %	X
Toluene	Standard	50.0	50.4	100.8	75 - 125 %	X
Ethyl benzene	Standard	50.0	50.6	101.2	75 - 125 %	X
m & p - Xylene	Standard	100	98.1	98.1	75 - 125 %	X
o - Xylene	Standard	50.0	50.8	101.6	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	26.5	106.0	39 - 150	X
Toluene	Standard	25.0	26.5	106.0	46 - 148	X
Ethyl benzene	Standard	25.0	26.8	107.2	32 - 160	X
m & p - Xylene	Standard	50	51.0	102.0	Not Given	X
o - Xylene	Standard	25.0	27.0	108.0	Not Given	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	50.4	100.8	75 - 125 %	X
Toluene	Standard	50.0	50.7	101.4	75 - 125 %	X
Ethyl benzene	Standard	50.0	51.2	102.4	75 - 125 %	X
m & p - Xylene	Standard	100	98.6	98.6	75 - 125 %	X
o - Xylene	Standard	50.0	51.7	103.4	75 - 125 %	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0		0.0	75 - 125 %	
Toluene	Standard	50.0		0.0	75 - 125 %	
Ethyl benzene	Standard	50.0		0.0	75 - 125 %	
m & p - Xylene	Standard	100		0.0	75 - 125 %	
o - Xylene	Standard	50.0		0.0	75 - 125 %	

Narrative: Acceptable.

EL PASO NATURAL GAS - FIELD SERVICES LAB

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 960063 and 960064

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					RANGE	YES NO
960063						
Benzene	Matrix Duplicate	5.39	5.35	1	+/- 20 %	X
Toluene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X
Ethyl benzene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<5.0	<5.0	0	+/- 20 %	X
o - Xylene	Matrix Duplicate	<2.5	<2.5	0	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	XR	ACCEPTABLE	
					RANGE	YES NO
2nd Analysis 960063						
Benzene	50	5.39	52.3	93.8	75 - 125 %	X
Toluene	50	<2.5	48.5	97.0	75 - 125 %	X
Ethyl benzene	50	<2.5	49.5	99.0	75 - 125 %	X
m & p - Xylene	100	<5.0	95	94.5	75 - 125 %	X
o - Xylene	50	<2.5	48.8	97.6	75 - 125 %	X

Narrative: Acceptable.

ADDITIONAL ANALYTICAL BLANKS:

AUTO BLANK	SOURCE	PPB	STATUS
Benzene	Boiled Water	<2.5	ACCEPTABLE
Toluene	Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot N12151 A9	PPB (Analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Toluene	Vial + Boiled Water	<2.5	ACCEPTABLE
Ethyl benzene	Vial + Boiled Water	<2.5	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<7.5	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (None analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<2.5	NA
Toluene	Vial + Boiled Water	<2.5	NA
Ethyl benzene	Vial + Boiled Water	<2.5	NA
Total Xylenes	Vial + Boiled Water	<7.5	NA

Narrative:

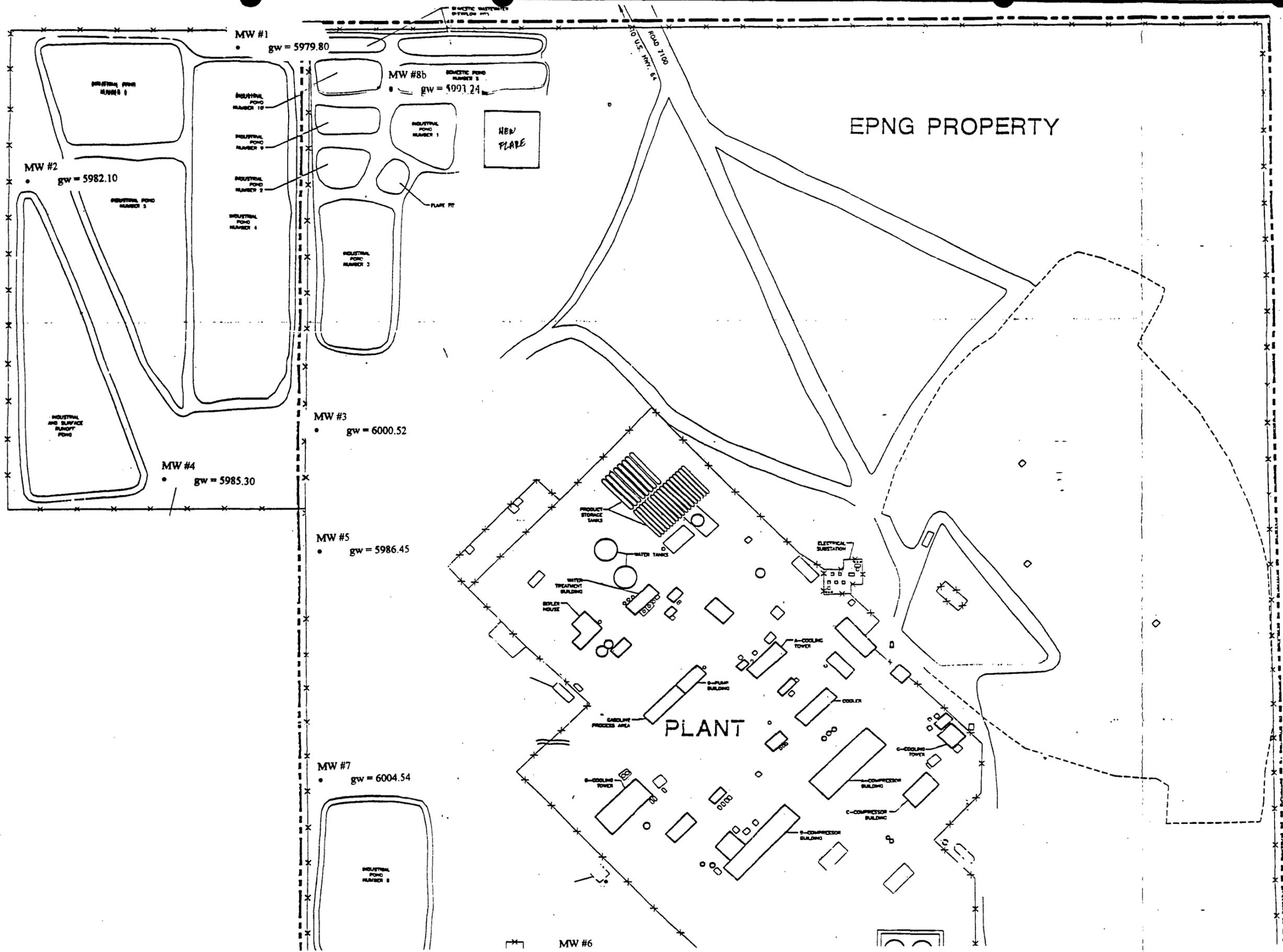
Approved By: John L. Fisher

Date: 31-Jan-96



CHAIN OF CUSTODY RECORD

Project No.	Project Name		Contract Laboratory								
	Samplers: (Signature)	Date	Receiving Temp. (°F)	Requested Analysis							
	<i>Demarcio Bial</i>	1-30-96	34°	EL PASO FIELD SERVICE 770 WEST WINDYBATO FARMINGTON N.M. 87401							
Lab ID	Date	Time	Matrix	Sample Number	Intact?	Chain of Custody Seals	Total No. of Containers	Composite or Grab	See Attached	Requested Analysis	Remarks
	1-30-96	1122	WATER	960063	?		2	G	X		MONITOR WELL MW-8
	1-30-96	1133	WATER	960064	1		1	G	X		MONITOR WELL MW-1
	1-30-96	—	WATER		1		1	G	X		TRIP BLANK
<p>Relinquished by: (Signature) <i>Demarcio Bial</i> Date/Time 1-30-96 1310 Received by: (Signature) _____ Date/Time _____</p> <p>Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____</p> <p>Relinquished by: (Signature) _____ Date/Time _____ Received by: (Signature) _____ Date/Time _____</p>											
<p>Results & Invoices to: _____ Received for Laboratory by: (Signature) <i>Michael E. Hopper</i> Date/Time 1/30/96 1320</p> <p>Charge Code _____ Date Results Reported / by: (Signature) _____</p>											



EPNG PROPERTY

PLANT

MW #1
gw = 5979.80

MW #8b
gw = 5991.24

MW #2
gw = 5982.10

MW #3
gw = 6000.52

MW #4
gw = 5985.30

MW #5
gw = 5986.45

MW #7
gw = 6004.54

MW #6

ROAD 700
U.S. HWY. 64

NEW
PLATE

FLAME PIT

ELECTRICAL
SUBSTATION

A-COOLING
TOWER

C-COOLING
TOWER

C-COMPRESSOR
BUILDING

B-COMPRESSOR
BUILDING

B-PLANT
BUILDING

CHLORINE
PROCESS AREA

BOILER
HOUSE

WATER
TREATMENT
BUILDING

WATER
TANKS

PRODUCT
STORAGE
TANKS

INDUSTRIAL POND
NUMBER 10

INDUSTRIAL POND
NUMBER 9

INDUSTRIAL POND
NUMBER 8

INDUSTRIAL POND
NUMBER 7

INDUSTRIAL POND
NUMBER 6

INDUSTRIAL POND
NUMBER 5

INDUSTRIAL POND
NUMBER 4

INDUSTRIAL POND
NUMBER 3

INDUSTRIAL POND
NUMBER 2

INDUSTRIAL POND
NUMBER 1

INDUSTRIAL POND
NUMBER 1

INDUSTRIAL POND
NUMBER 2

INDUSTRIAL POND
NUMBER 3

INDUSTRIAL POND
NUMBER 4

INDUSTRIAL POND
NUMBER 5

INDUSTRIAL POND
NUMBER 6

INDUSTRIAL POND
NUMBER 7

INDUSTRIAL POND
NUMBER 8

INDUSTRIAL POND
NUMBER 9

INDUSTRIAL POND
NUMBER 10

INDUSTRIAL POND
NUMBER 1

INDUSTRIAL POND
NUMBER 2

INDUSTRIAL POND
NUMBER 3

INDUSTRIAL POND
NUMBER 4

INDUSTRIAL POND
NUMBER 5

INDUSTRIAL POND
NUMBER 6

INDUSTRIAL POND
NUMBER 7

INDUSTRIAL POND
NUMBER 8

Bill Olson

OIL CONSERVATION DIVISION
RECEIVED

'95 JAN 17 AM 8 52

January 11, 1995

ENVIRONMENTAL NOTES: Denny Foust

RE: Sampling for Closure of Solid Waste Pit EPNG Chaco Plant

Norman Norvelle, EPNG and Denny Foust, OCD were to sample solid waste pit at Chaco Plant as proposed by Patrick Marquez EPNG September 12, 1995 and approved by OCD. The pit at Chaco Plant was active with new trash, from construction, operations and personnel in the pit. We could not reach the bottom of the pit to obtain samples plus the pit continues to be active.