

GW - 71-0

**MONITORING
REPORTS**

DATE:

1995-1993

*Fax received
on 10/10/95
Will Olson*

October 10, 1995

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

**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

Monitor Wells and Non-Contact Discharge

Initial - October 6, 1993
1st Quarter - July 6, 1994
2nd Quarter - December 8, 1994
3rd Quarter - March 29, 1995
4th Quarter - June 14, 1995
Contact Discharge - June 14, 1995

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 NMOC's directive.

2.2 Area Assessment/Sampling

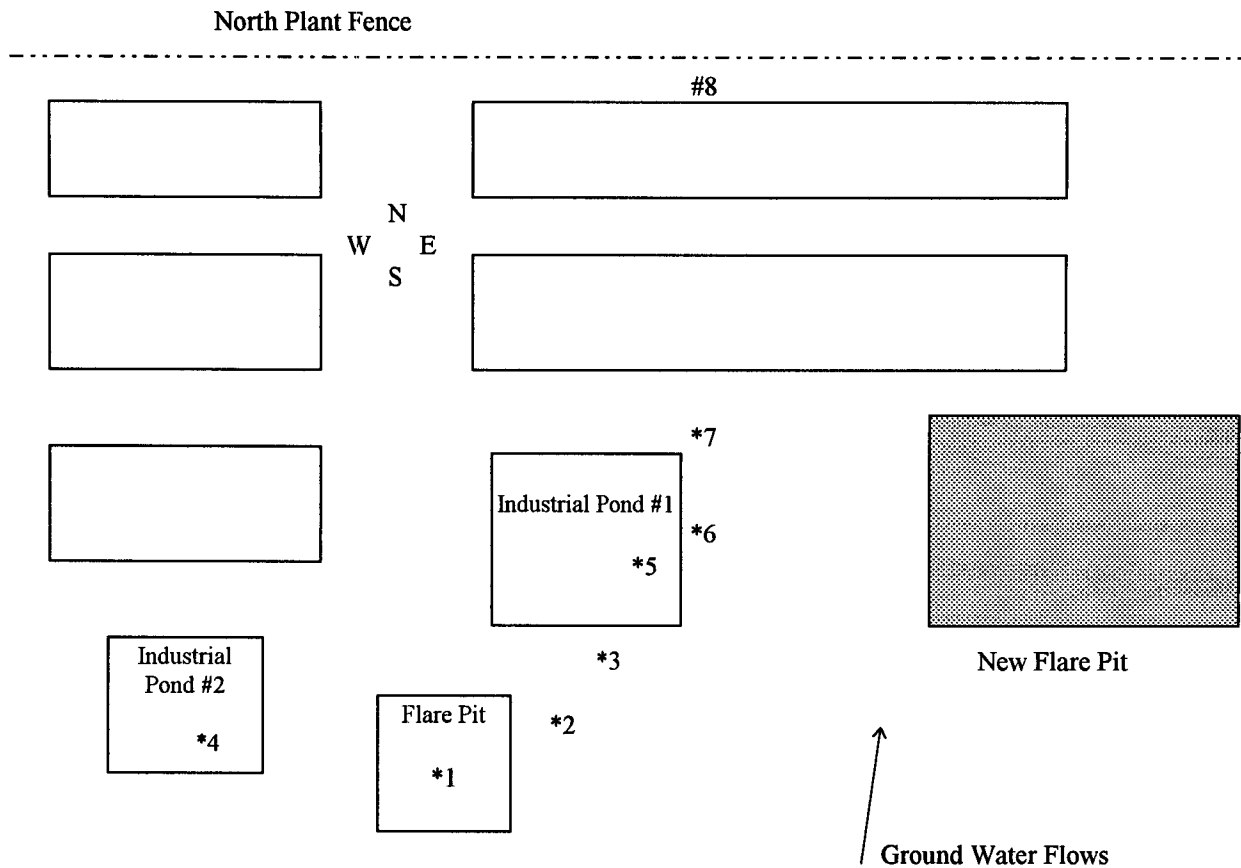
Seven locations are proposed to determine the vertical extent of contamination in the area of the pits. Three locations will be within the pit boundaries while the remaining locations will be down gradient of the pits (Refer to Figure 1). Sampling will take place as follows:

- 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 (*#)

Monitor Well Location - #8

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

P. S. Marquez
Patrick J. Marquez
Compliance Engineer

xc: w/o attachments

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

bc:

Lyndell Smith
Bob Yungert
John Lambdin
Gerry Garibay
David Hall
Martin Fong

PROJECT: M.W.
SAVE FILE: N31072

****All Results Expressed as ppm or umhos****

Approvals:

Lab Super.: John Faldi Date: 10/18/93

Anion/Cation Balance Information and Calculations

Sample Number:	N31072	N31073	N31074	N31075	N31076
SAMPLE	Monitor	Monitor	Monitor	Monitor	Monitor
POINT	Well	Well	Well	Well	Well
	MW-1	MW-2	MW-3	MW-4	MW-4 Dup
Concentration:	meq/l	meq/l	meq/l	meq/l	meq/l
CATIONS:					
CALCIUM AS Ca	13.17	1.70	4.24	23.40	23.40
MAGNESIUM AS Mg	2.96	0.66	1.56	7.08	7.08
POTASSIUM AS K	0.15	0.00	0.00	0.31	0.31
SODIUM (+/- Difference)	8.78	20.74	18.94	56.05	57.38
SODIUM (Actual)	9.52	20.22	18.57	58.39	58.78
CATIONS TOT(w/o Na)	16.29	2.35	5.80	30.79	30.79
CATIONS TOT(w/act. Na)	25.81	22.57	24.37	89.18	89.57
CATIONS TOT(w/cal. Na)	25.07	23.10	24.75	86.84	88.17
ANIONS:					
ALKALINITY AS CO ₃	0.00	0.00	0.00	0.00	0.00
ALKALINITY AS HCO ₃	7.36	10.60	14.08	9.00	9.01
CHLORIDE AS Cl	1.72	6.29	4.80	14.53	14.78
SULFATE AS SO ₄	15.91	6.06	5.79	63.09	64.15
FLUORIDE AS F	0.08	0.14	0.08	0.23	0.23
ANIONS (TOTAL)	25.07	23.10	24.75	86.84	88.17
TDS (ACTUAL)	1728	1384	1462	6136	6128
TDS (CALC. w/cal. Na)	1557	1356	1413	5679	5770
PERCENT DIFF. w/cal. Na	10	2	3	7	6
TDS (CALC. w/act. Na)	1574	1345	1405	5733	5803
PERCENT DIFF. w/act. Na	9	3	4	7	5
SODIUM (CALCULATED)	202	477	435	1289	1319
SODIUM AS Na (ACTUAL)	219	465	427	1343	1352
Relative % Difference RPD	2%	1%	0%	1%	1%
ANION/CATION % Difference	97.12	102.32	101.54	97.38	98.43



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: N31070
MATRIX: Water
SAMPLE DATE: 6-Oct-93
SAMPLE TIME (Hrs.): 1110
SAMPLED BY: Dennis Bird
PROJECT: Chaco Plant Discharge Plan
FACILITY ID: 5212
SAMPLE LOCATION: 20 Inch Total Discharge
SAMPLE POINT: From Pipe
DATE OF ANALYSIS: 12-Oct-93

REMARKS: None

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	190	None	10
TOLUENE	174	None	740
ETHYLBENZENE	5.4	None	750
TOTAL XYLENES	34.5	None	620
SURROGATE % RECOVERY	80	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: John Saldana

14-Oct-93
Date



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: N31071
MATRIX: Water
SAMPLE DATE: 6-Oct-93
SAMPLE TIME (Hrs.): 1153
SAMPLED BY: Dennis Bird
PROJECT: Chaco Plant Discharge Plan
FACILITY ID: 5212
SAMPLE LOCATION: Pond #3 ←
SAMPLE POINT: South West Corner
DATE OF ANALYSIS: 12-Oct-93

REMARKS: None

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<5.0	None	10
TOLUENE	<5.0	None	740
ETHYLBENZENE	<5.0	None	750
TOTAL XYLENES	<5.0	None	620
SURROGATE % RECOVERY	81	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: _____

John Loubser

14-Oct-93

Date



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: N31072
MATRIX: Water
SAMPLE DATE: 6-Oct-93
SAMPLE TIME (Hrs.): 1512
SAMPLED BY: Dennis Bird
PROJECT: Chaco Plant Discharge Plan
FACILITY ID: 5212
SAMPLE LOCATION: Monitor Well', MW-1 ←
SAMPLE POINT: Well Opening
DATE OF ANALYSIS: 12-Oct-93

REMARKS: None

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<5.0	None	10
TOLUENE	<5.0	None	740
ETHYLBENZENE	<5.0	None	750
TOTAL XYLENES	<5.0	None	620
SURROGATE % RECOVERY	80	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: _____

John F. Linder

14-Oct-93

Date



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: N31073
MATRIX: Water
SAMPLE DATE: 6-Oct-93
SAMPLE TIME (Hrs.): 1545
SAMPLED BY: Dennis Bird
PROJECT: Chaco Plant Discharge Plan
FACILITY ID: 5212
SAMPLE LOCATION: Monitor Well , MW-2
SAMPLE POINT: Well Opening
DATE OF ANALYSIS: 12-Oct-93

REMARKS: None

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<5.0	None	10
TOLUENE	<5.0	None	740
ETHYLBENZENE	<5.0	None	750
TOTAL XYLENES	<5.0	None	620
SURROGATE % RECOVERY	80	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: John Saldar

14-Oct-93

Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: N31074
MATRIX: Water
SAMPLE DATE: 6-Oct-93
SAMPLE TIME (Hrs.): 1612
SAMPLED BY: Dennis Bird
PROJECT: Chaco Plant Discharge Plan
FACILITY ID: 5212
SAMPLE LOCATION: Monitor Well , MW-3 ←
SAMPLE POINT: Well Opening
DATE OF ANALYSIS: 12-Oct-93

REMARKS: None

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<5.0	None	10
TOLUENE	<5.0	None	740
ETHYLBENZENE	<5.0	None	750
TOTAL XYLENES	<5.0	None	620
SURROGATE % RECOVERY	80	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: John S. Linder

14-Oct-93
Date



**FIELD SERVICES LABORATORY
ANALYTICAL REPORT**

SAMPLE IDENTIFICATION

SAMPLE NUMBER: N31075
MATRIX: Water
SAMPLE DATE: 6-Oct-93
SAMPLE TIME (Hrs.): 1705
SAMPLED BY: Dennis Bird
PROJECT: Chaco Plant Discharge Plan
FACILITY ID: 5212
SAMPLE LOCATION: Monitor Well , MW-4 ←
SAMPLE POINT: Well Opening
DATE OF ANALYSIS: 12-Oct-93

REMARKS: None

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<5.0	None	10
TOLUENE	<5.0	None	740
ETHYLBENZENE	<5.0	None	750
TOTAL XYLENES	<5.0	None	620
SURROGATE % RECOVERY	80	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: _____

John L. Linder

14-Oct-93

Date



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: N31076
MATRIX: Water
SAMPLE DATE: 6-Oct-93
SAMPLE TIME (Hrs.): 1705
SAMPLED BY: Dennis Bird
PROJECT: Chaco Plant Discharge Plan
FACILITY ID: 5212
SAMPLE LOCATION: Monitor Well , MW-4 Field Duplicate
SAMPLE POINT: Well Opening
DATE OF ANALYSIS: 12-Oct-93

REMARKS: This was a field duplicate for QA/QC purposes.

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT PPB	QUALIFIER	WQCC LIMIT PPB
BENZENE	<5.0	None	10
TOLUENE	<5.0	None	740
ETHYLBENZENE	<5.0	None	750
TOTAL XYLENES	<5.0	None	620
SURROGATE % RECOVERY	81	Allowed Range 80 to 120 %	

NOTES:

Acceptable Quality Control.

Approved By: _____

John L. Linder

14-Oct-93

Date

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: N31070 to N31076

LABORATORY DUPLICATES:

SAMPLE NUMBER	TYPE	SAMPLE RESULT (S) (PPB)	DUPLICATE RESULT (D) (PPB)	RPD	ACCEPTABLE RANGE + / - 25%	
					YES	NO
N31073						
Benzene	2nd Run	<5.0	<5.0	0.0	X	
Toluene	2nd Run	<5.0	<5.0	0.0	X	
Ethylbenzene	2nd Run	<5.0	<5.0	0.0	X	
Total Xylenes	2nd Run	<5.0	<5.0	0.0	X	

Narrative: Acceptable!

LABORATORY CONTROL, CALIBRATION CHECK:

SAMPLE NUMBER	TYPE	KNOWN RESULT (PPB)	FOUND RESULT (PPB)	XR	ACCEPTABLE RANGE 75 - 125 %	
					YES	NO
100 PPB Standard						
Benzene	Standard	100.0	97.5	97.5	X	
Toluene	Standard	100.0	97.8	97.8	X	
Ethylbenzene	Standard	100.0	98.9	98.9	X	
Total Xylenes	Standard	300.0	306	102.0	X	

Narrative: Acceptable!

LABORATORY SPIKES:

SAMPLE NUMBER	SPIKE ADDED (SA) PPB	SAMPLE RESULT (S) (PPB)	SPIKE SAMPLE RESULT (SR) (PPB)	XR	ACCEPTABLE RANGE 75-125 XR	
					YES	NO
N31071						
Benzene	100.0	0.0	96.9	97	X	
Toluene	100.0	0.0	95.5	96	X	
Ethylbenzene	100.0	0.0	96.5	97	X	
Total Xylenes	300.0	0.0	299	100	X	

Narrative: Acceptable.

LABORATORY AND TRIP BLANKS:

SAMPLE ID	SOURCE	Component (PPB)	STATUS
Benzene	EPNG Water	<5.0	ACCEPTABLE
Toluene	EPNG Water	<5.0	ACCEPTABLE
Ethylbenzene	EPNG Water	<5.0	ACCEPTABLE
Total Xylenes	EPNG Water	<5.0	ACCEPTABLE

Narrative: Acceptable!

Approved By: _____

John F. Allen

10/14/93

Date



Analytical **Technologies**, Inc.

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

ATI I.D. 310328

October 26, 1993

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

Project Name/Number: CHACO M.W. K5577

Attention: John Lambdin

On 10/08/93, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **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., 9830 S. 51st Street, Suite B-113, Phoenix, AZ.

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

Adela M. Cantu
Senior Organic Chemist

Letitia Krakowski
Acting Laboratory Manager

LAK:jd

Enclosure





Analytical Technologies, Inc.

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.

DATE RECEIVED : 10/08/93

REPORT DATE : 10/26/93

ATI I.D. : 310328

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	N31070 - 20" TOTAL DISCHARGE	AQUEOUS	10/06/93
02	N31071 - Pond #3	AQUEOUS	10/06/93
03	N31072 - Monitor Well #1	AQUEOUS	10/06/93
04	N31073 - Monitor Well #2	AQUEOUS	10/06/93
05	N31074 - Monitor Well #3	AQUEOUS	10/06/93
06	N31075 - Monitor Well #4	AQUEOUS	10/06/93



----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	6

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.

METALS RESULTS

ATI I.D. : 310328

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.

DATE RECEIVED : 10/08/93

REPORT DATE : 10/26/93

PARAMETER	UNITS	01	02	03	04	05
SILVER (EPA 200.7/6010)	MG/L	<0.010	<0.010	<0.010	<0.010	<0.010
ARSENIC (EPA 206.2/7060)	MG/L	0.007	<0.005	0.006	<0.005	0.022
BARIUM (EPA 200.7/6010)	MG/L	0.334	0.245	0.101	0.028	0.080
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHROMIUM (EPA 200.7/6010)	MG/L	0.025	<0.010	<0.010	<0.010	<0.010
MERCURY (EPA 245.1/7470)	MG/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
LEAD (EPA 239.2/7421)	MG/L	<0.002	<0.002	<0.002	<0.002	<0.002
SELENIUM (EPA 270.2/7740)	MG/L	<0.005	<0.005	<0.005	<0.005	<0.005

20" Total
Discharge

Powd#3

mw#1

mw#2

mw#3



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 310328

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.

DATE RECEIVED : 10/08/93

REPORT DATE : 10/26/93

PARAMETER	UNITS	06
SILVER (EPA 200.7/6010)	MG/L	<0.010
ARSENIC (EPA 206.2/7060)	MG/L	<0.005
BARIUM (EPA 200.7/6010)	MG/L	0.021
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005
CHROMIUM (EPA 200.7/6010)	MG/L	<0.010
MERCURY (EPA 245.1/7470)	MG/L	<0.0002
LEAD (EPA 239.2/7421)	MG/L	<0.002
SELENIUM (EPA 270.2/7740)	MG/L	0.012

mw #4



Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.

ATI I.D. : 310328

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
SILVER	MG/L	31032805	<0.010	<0.010	NA	0.867	1.00	87
ARSENIC	MG/L	31071001	0.011	0.011	0	0.059	0.050	96
BARIUM	MG/L	31032805	0.080	0.078	3	0.981	1.00	90
CADMIUM	MG/L	31070301	<0.0005	<0.0005	NA	0.0049	0.0050	98
CHROMIUM	MG/L	31032805	<0.010	<0.010	NA	0.886	1.00	89
MERCURY	MG/L	31076501	<0.0002	<0.0002	NA	0.0050	0.0050	100
LEAD	MG/L	31076601	<0.002	<0.002	NA	0.048	0.050	96
SELENIUM	MG/L	31032801	<0.005	<0.005	NA	0.043	0.050	86

Acceptable.
JS
10/28/93

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 31032801

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
CLIENT I.D. : N31070 - 20" Total Discharge
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 10/06/93
DATE RECEIVED : 10/08/93
DATE EXTRACTED : 10/09/93
DATE ANALYZED : 10/12/93
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

NAPHTHALENE	<0.50
ACENAPHTHYLENE	<1.0
ACENAPHTHENE	<0.50
FLUORENE	<0.10
PHENANTHRENE	<0.05
ANTHRACENE	<0.05
FLUORANTHENE	<0.10
PYRENE	<0.10
BENZO(A)ANTHRACENE	<0.10
CHRYSENE	<0.10
BENZO(B)FLUORANTHENE	<0.10
BENZO(K)FLUORANTHENE	<0.10
BENZO(A)PYRENE	<0.10
DIBENZO(a,h)ANTHRACENE	<0.20
BENZO(g,h,i)PERYLENE	<0.10
INDENO(1,2,3-CD)PYRENE	<0.10
1-METHYLNAPHTHALENE	<0.30
2-METHYLNAPHTHALENE	<0.30

SURROGATE PERCENT RECOVERIES

2-CHLOROCANTHRACENE (%)

70



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 31032802

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
CLIENT I.D. : N31071 - *POND #3*
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 10/06/93
DATE RECEIVED : 10/08/93
DATE EXTRACTED : 10/09/93
DATE ANALYZED : 10/14/93
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

NAPHTHALENE	<0.50
ACENAPHTHYLENE	<1.0
ACENAPHTHENE	<0.50
FLUORENE	<0.10
PHENANTHRENE	<0.05
ANTHRACENE	<0.05
FLUORANTHENE	<0.10
PYRENE	<0.10
BENZO(A)ANTHRACENE	<0.10
CHRYSENE	<0.10
BENZO(B)FLUORANTHENE	<0.10
BENZO(K)FLUORANTHENE	<0.10
BENZO(A)PYRENE	<0.10
DIBENZO(a,h)ANTHRACENE	<0.20
BENZO(g,h,i)PERYLENE	<0.10
INDENO(1,2,3-CD)PYRENE	<0.10
1-METHYLNAPHTHALENE	<0.30
2-METHYLNAPHTHALENE	<0.30

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%)

66



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 31032803

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
CLIENT I.D. : N31072 - mw #1
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 10/06/93
DATE RECEIVED : 10/08/93
DATE EXTRACTED : 10/09/93
DATE ANALYZED : 10/12/93
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

NAPHTHALENE	<0.50
ACENAPHTHYLENE	<1.0
ACENAPHTHENE	<0.50
FLUORENE	<0.10
PHENANTHRENE	<0.05
ANTHRACENE	<0.05
FLUORANTHENE	<0.10
PYRENE	<0.10
BENZO(A)ANTHRACENE	<0.10
CHRYSENE	<0.10
BENZO(B)FLUORANTHENE	<0.10
BENZO(K)FLUORANTHENE	<0.10
BENZO(A)PYRENE	<0.10
DIBENZO(a,b)ANTHRACENE	<0.20
BENZO(g,h,i)PERYLENE	<0.10
INDENO(1,2,3-CD)PYRENE	<0.10
1-METHYLNAPHTHALENE	<0.30
2-METHYLNAPHTHALENE	<0.30

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%)

84



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 31032804

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
CLIENT I.D. : N31073 - MW #2
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 10/06/93
DATE RECEIVED : 10/08/93
DATE EXTRACTED : 10/09/93
DATE ANALYZED : 10/12/93
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

NAPHTHALENE	<0.50
ACENAPHTHYLENE	<1.0
ACENAPHTHENE	<0.50
FLUORENE	<0.10
PHENANTHRENE	<0.05
ANTHRACENE	<0.05
FLUORANTHENE	<0.10
PYRENE	<0.10
BENZO(A)ANTHRACENE	<0.10
CHRYSENE	<0.10
BENZO(B)FLUORANTHENE	<0.10
BENZO(K)FLUORANTHENE	<0.10
BENZO(A)PYRENE	<0.10
DIBENZO(a,h)ANTHRACENE	<0.20
BENZO(g,h,i)PERYLENE	<0.10
INDENO(1,2,3-CD)PYRENE	<0.10
1-METHYLNAPHTHALENE	<0.30
2-METHYLNAPHTHALENE	<0.30

SUPROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%)

63



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 31032805

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
CLIENT I.D. : N31074 - *MW #3*
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 10/06/93
DATE RECEIVED : 10/08/93
DATE EXTRACTED : 10/09/93
DATE ANALYZED : 10/12/93
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

NAPHTHALENE	<0.50
ACENAPHTHYLENE	<1.0
ACENAPHTHENE	<0.50
FLUORENE	0.53
PHENANTHRENE	<0.05
ANTHRACENE	<0.05
FLUORANTHENE	<0.10
PYRENE	<0.10
BENZO(A)ANTHRACENE	<0.10
CHRYSENE	<0.10
BENZO(B)FLUORANTHENE	<0.10
BENZO(K)FLUORANTHENE	<0.10
BENZO(A)PYRENE	<0.10
DIBENZO(a,h)ANTHRACENE	<0.20
BENZO(g,h,i)PERYLENE	<0.10
INDENO(1,2,3-CD)PYRENE	<0.10
1-METHYLNAPHTHALENE	<0.30
2-METHYLNAPHTHALENE	<0.30

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%)	81
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GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 31032806

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
CLIENT I.D. : N31075 - *mw #4*
SAMPLE MATRIX : AQUEOUS

DATE SAMPLED : 10/06/93
DATE RECEIVED : 10/08/93
DATE EXTRACTED : 10/09/93
DATE ANALYZED : 10/12/93
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
NAPHTHALENE	<0.50
ACENAPHTHYLENE	<1.0
ACENAPHTHENE	<0.50
FLUORENE	<0.10
PHENANTHRENE	<0.05
ANTHRACENE	<0.05
FLUORANTHENE	<0.10
PYRENE	<0.10
BENZO(A)ANTHRACENE	<0.10
CHRYSENE	<0.10
BENZO(B)FLUORANTHENE	<0.10
BENZO(K)FLUORANTHENE	<0.10
BENZO(A)PYRENE	<0.10
DIBENZO(a,h)ANTHRACENE	<0.20
BENZO(g,h,i)PERYLENE	<0.10
INDENO(1,2,3-CD)PYRENE	<0.10
1-METHYLNAPHTHALENE	<0.30
2-METHYLNAPHTHALENE	<0.30

SURROGATE PERCENT RECOVERIES

2-CHLOROANTHRACENE (%) 73

Analytical **Technologies**, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 310328
DATE EXTRACTED : 10/09/93
DATE ANALYZED : 10/12/93
UNITS : UG/L
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
NAPHTHALENE	<0.50
ACENAPHTHYLENE	<1.0
ACENAPHTHENE	<0.50
FLUORENE	<0.10
PHENANTHRENE	<0.05
ANTHRACENE	<0.05
FLUORANTHENE	<0.10
PYRENE	<0.10
BENZO(A)ANTHRACENE	<0.10
CHRYSENE	<0.10
BENZO(B)FLUORANTHENE	<0.10
BENZO(K)FLUORANTHENE	<0.10
BENZO(A)PYRENE	<0.10
DIBENZO(a,h)ANTHRACENE	<0.20
BENZO(g,h,i)PERYLENE	<0.10
INDENO(1,2,3-CD)PYRENE	<0.10
1-METHYLNAPHTHALENE	<0.30
2-METHYLNAPHTHALENE	<0.30

SURROGATE PERCENT RECOVERIES

2-CHLOROCANTHRACENE (%) 78

Acceptable
10/28/97



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 310328

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
REF I.D. : 31049908

DATE ANALYZED : 10/13/93
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

COMPOUNDS	SAMPLE CONC.		SPIKED	% SPIKED	DUP.	DUP.	RPD
	RESULT	SPIKED			SAMPLE REC.	SAMPLE REC.	
ACENAPHTHYLENE	<1.0	20	16	80	16	80	0
PHENANTHRENE	<0.05	2.5	2.1	84	2.1	84	0
PYRENE	<0.10	2.5	2.2	88	2.2	88	0
BENZO(K)FLUORANTHENE	<0.10	2.5	2.3	92	2.2	88	4
DIBENZ(a,h)ANTHRACENE	<0.20	5.0	4.5	90	4.6	92	2

Acceptable.
10/28/93
J.S.

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 310328

TEST : POLYNUCLEAR AROMATICS (EPA METHOD 8310)

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : K5577
PROJECT NAME : CHACO M.W.
REF I.D. : 31032701

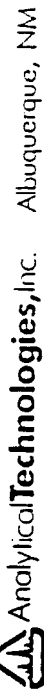
DATE ANALYZED : 10/13/93
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	%	DUP.	DUP.	RPD
	RESULT	SPIKED			SPIKED SAMPLE	% REC.	
ACENAPHTHYLENE	<1.0	20	12	60	13	65	8
PHENANTHRENE	0.39	2.5	2.1	68	2.4	80	13
PYRENE	<0.10	2.5	2.2	88	2.5	100	13
BENZO(K)FLUORANTHENE	<0.10	2.5	1.7	68	1.9	76	11
DIBENZ(a,h)ANTHRACENE	<0.20	5.0	3.9	78	4.2	84	7

Acceptable,
JS
10/28/93

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



DATE 10/3 PAGE 1 OF 1

ANALYSIS REQUEST

COMPANY: Analytical Technologies, Inc.
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
310328-01	10/4	1110	129	1
-02		1153		2
-03		1512		3
-04		1515		4
-05		1610		5
-06		1705		6

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT NUMBER:	310328	TOTAL NUMBER OF CONTAINERS	18
PROJECT NAME:	GP6	CHAIN OF CUSTODY SEALS	N
QC LEVEL:	STD. IV	INTACT?	Y
QC REQUIRED:	M8 MSD BLANK	RECEIVED GOOD COND/COLD	Y
TAT: STANDARD)	RUSHII	LAD NUMBER	310328

86077 1001

DUE DATE: 10/22
RUSH SURCHARGE:
CLIENT DISCOUNT: 10 %

SAMPLES SENT TO	
SAN DIEGO	
FT COLLINS	
HENION	
PENSACOLA	
PHOENIX	
BAHRINGER	
FIBERQUANT	

RELINQUISHED BY:	1.
Signature:	Time:
Printed Name:	Date:
Analytical Technologies, Inc.	
Albuquerque	
RECEIVED BY: (LAB)	1.
Signature:	Time:
Printed Name:	Date:
Company:	

RELINQUISHED BY: 2	Time:
Signature:	
Printed Name:	Date
Company:	
RECEIVED BY: (LAB) 2	Time:
Signature:	
Printed Name:	Date:
Company:	



Analytical **Technologies**, Inc.

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

1st Quarter.

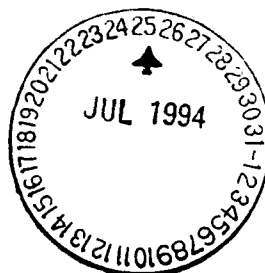
ATI I.D. 407329

July 22, 1994

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

Project Name/Number: CHACO M.W.

Attention: John Lambdin



On 07/08/94, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **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.

EPA method 8010/8020 analyses was performed by ATI, 5550 Morehouse Drive, San Diego, CA 92121.

Metals analyses were performed by Analytical Technologies, Inc., 9830 S. 51st Street, Suite B-113, Phoenix, AZ.

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


Letitia Krakowski, Ph.D.
Project Manager


H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure

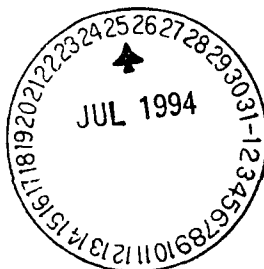


Analytical Technologies, Inc.

CLIENT : EL PASO NATURAL GAS CO. DATE RECEIVED : 07/08/94
PROJECT # : (NONE)
PROJECT NAME : CHACO M.W. REPORT DATE : 07/22/94

ATI ID: 407329

		ATI ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MW-1	407329-01	941048	AQUEOUS	07/06/94
02	MW-2	407329-02	941049	AQUEOUS	07/06/94
03	MW-3	407329-03	941050	AQUEOUS	07/06/94
04	MW-4	407329-04	941051	AQUEOUS	07/06/94
05	MW-5	407329-05	941052	AQUEOUS	07/06/94
06	MW-6	407329-06	941053	AQUEOUS	07/06/94
07	MW-7	407329-07	941054	AQUEOUS	07/06/94
08	MW-7 Dup	407329-08	941055	AQUEOUS	07/06/94
09	20" Discharge	407329-09	941056	AQUEOUS	07/06/94



---TOTALS---

MATRIX #SAMPLES
AQUEOUS 9

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.

METALS RESULTS

ATI I.D. : 407329

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO M.W.

DATE RECEIVED : 07/08/94

REPORT DATE : 07/22/94

PARAMETER	UNITS	01	02	03	04	05
SILVER (EPA 200.7/6010)	MG/L	<0.010	<0.010	<0.010	<0.010	<0.010
ARSENIC (EPA 206.2/7060)	MG/L	<0.005	<0.005	0.005	<0.005	<0.005
BARIUM (EPA 200.7/6010)	MG/L	0.060	0.022	0.065	0.014	0.022
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHROMIUM (EPA 200.7/6010)	MG/L	<0.010	<0.010	<0.010	<0.010	<0.010
MERCURY (EPA 245.1/7470)	MG/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
LEAD (EPA 239.2/7421)	MG/L	<0.002	<0.002	<0.002	<0.002	<0.002
SELENIUM (EPA 270.2/7740)	MG/L	<0.005	<0.005	<0.005	0.014	0.019

MW-1 MW-2 MW-3 MW-4 MW-5



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 407329

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO M.W.

DATE RECEIVED : 07/08/94

REPORT DATE : 07/22/94

PARAMETER	UNITS	06	07	08	09
SILVER (EPA 200.7/6010)	MG/L	<0.010	<0.010	<0.010	<0.010
ARSENIC (EPA 206.2/7060)	MG/L	<0.005	<0.005	<0.005	0.005
BARIUM (EPA 200.7/6010)	MG/L	0.028	0.026	0.026	0.206
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005	<0.0005	<0.0005	<0.0005
CHROMIUM (EPA 200.7/6010)	MG/L	<0.010	<0.010	<0.010	0.049
MERCURY (EPA 245.1/7470)	MG/L	<0.0002	<0.0002	<0.0002	<0.0002
LEAD (EPA 239.2/7421)	MG/L	<0.002	<0.002	<0.002	<0.002
SELENIUM (EPA 270.2/7740)	MG/L	0.058	<0.005	<0.005	<0.005

MW-6

MW-7

MW-7

20'

Field

Discharge

Dup.



Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO M.W.

ATI I.D. : 407329

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
SILVER	MG/L	40732901	<0.010	<0.010	NA	0.946	1.00	95
ARSENIC	MG/L	40732901	<0.005	<0.005	NA	0.050	0.050	100
ARSENIC	MG/L	40732909	0.005	0.006	18	0.051	0.050	92
BARIUM	MG/L	40760101	0.018	0.018	0	1.01	1.00	99
CADMIUM	MG/L	40732901	<0.0005	<0.0005	NA	0.0053	0.0050	106
CHROMIUM	MG/L	40756501	0.013	0.011	17	0.950	1.00	94
MERCURY	MG/L	40757001	<0.0002	<0.0002	NA	0.0050	0.0050	100
LEAD	MG/L	40732901	<0.002	<0.002	NA	0.047	0.050	94
SELENIUM	MG/L	40750901	<0.005	<0.005	NA	0.046	0.050	92

Acceptable.
JS
7/27/94

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Test : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

Client : ANALYTICAL TECHNOLOGIES, INC.

ATI I.D. : 407096

Project # : 407329

Project Name: EL PASO NATURAL GAS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	407329-01	WATER	06-JUL-94	N/A	12-JUL-94	1.00
2	407329-02	WATER	06-JUL-94	N/A	12-JUL-94	1.00
3	407329-03	WATER	06-JUL-94	N/A	12-JUL-94	1.00

Parameter	Units	1 MW-1	2 MW-2	3 MW-3
BENZENE	UG/L	<0.50	<0.50	<0.50
BROMODICHLOROMETHANE	UG/L	<0.20	<0.20	<0.20
BROMOFORM	UG/L	<1.0	<1.0	<1.0
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.20	<0.20	<0.20
CHLORO BENZENE	UG/L	<0.50	<0.50	<0.50
CHLOROETHANE	UG/L	<1.0	<1.0	<1.0
CHLOROFORM	UG/L	<0.20	<0.20	<0.20
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.20	<0.20	<0.20
1,2-DIBROMOETHANE	UG/L	<0.50	<0.50	<0.50
1,2-DICHLORO BENZENE	UG/L	<0.50	<0.50	<0.50
1,3-DICHLORO BENZENE	UG/L	<0.50	<0.50	<0.50
1,4-DICHLORO BENZENE	UG/L	<0.50	<0.50	<0.50
DICHLORODIFLUOROMETHANE	UG/L	<1.0	<1.0	<1.0
1,1-DICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,2-DICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,1-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
CIS-1,2-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TRANS-1,2-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
1,2-DICHLOROPROPANE	UG/L	<0.20	<0.20	<0.20
CIS-1,3-DICHLOROPROPENE	UG/L	<0.20	<0.20	<0.20
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.20	<0.20	<0.20
ETHYLBENZENE	UG/L	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.50	<0.50	<0.50
TETRACHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TOLUENE	UG/L	<0.50	<0.50	<0.50
1,1,1-TRICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,1,2-TRICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
TRICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TRICHLOROFLUOROMETHANE	UG/L	<2.0	<2.0	<2.0
VINYL CHLORIDE	UG/L	<0.20	<0.20	<0.20
XYLENES (TOTAL)	UG/L	<1.0	<1.0	<1.0

SURROGATESBROMOFLUOROBENZENE (ELCD)
BROMOFLUOROBENZENE (PID)

%	95	91	83
%	107	104	92



GAS CHROMATOGRAPHY RESULTS

Test : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

Client : ANALYTICAL TECHNOLOGIES, INC.

ATI I.D. : 407096

Project # : 407329

Project Name: EL PASO NATURAL GAS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	407329-04	WATER	06-JUL-94	N/A	12-JUL-94	1.00
5	407329-05	WATER	06-JUL-94	N/A	12-JUL-94	1.00
6	407329-06	WATER	06-JUL-94	N/A	12-JUL-94	1.00

Parameter	Units	4 MW-4	5 MW-5	6 MW-6
BENZENE	UG/L	<0.50	<0.50	<0.50
BROMODICHLOROMETHANE	UG/L	<0.20	<0.20	<0.20
BROMOFORM	UG/L	<1.0	<1.0	<1.0
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.20	<0.20	<0.20
CHLOROBENZENE	UG/L	<0.50	<0.50	<0.50
CHLOROETHANE	UG/L	<1.0	<1.0	<1.0
CHLOROFORM	UG/L	<0.20	<0.20	0.33
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.20	<0.20	<0.20
1,2-DIBROMOETHANE	UG/L	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	UG/L	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	UG/L	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	UG/L	<0.50	<0.50	<0.50
DICHLORODIFLUOROMETHANE	UG/L	<1.0	<1.0	<1.0
1,1-DICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,2-DICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,1-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
CIS-1,2-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TRANS-1,2-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
1,2-DICHLOROPROPANE	UG/L	<0.20	<0.20	<0.20
CIS-1,3-DICHLOROPROPENE	UG/L	<0.20	<0.20	<0.20
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.20	<0.20	<0.20
ETHYLBENZENE	UG/L	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.50	<0.50	<0.50
TETRACHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TOLUENE	UG/L	<0.50	<0.50	<0.50
1,1,1-TRICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,1,2-TRICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
TRICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TRICHLOROFLUOROMETHANE	UG/L	<2.0	<2.0	<2.0
VINYL CHLORIDE	UG/L	<0.20	<0.20	<0.20
XYLENES (TOTAL)	UG/L	<1.0	<1.0	<1.0

SURROGATES

BROMOFLUOROBENZENE (ELCD)

%

86

99

95

BROMOFLUOROBENZENE (PID)

%

99

109

106



Test : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)

Client : ANALYTICAL TECHNOLOGIES, INC.

ATI I.D. : 407096

Project # : 407329

Project Name: EL PASO NATURAL GAS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
7	407329-07	WATER	06-JUL-94	N/A	12-JUL-94	1.00
8	407329-08	WATER	06-JUL-94	N/A	12-JUL-94	1.00
9	407329-09	WATER	06-JUL-94	N/A	12-JUL-94	1.00

Parameter	Units	7 MW-7	8 MW-7 Dup	9 20" Disch.
BENZENE	UG/L	<0.50	<0.50	<0.50
BROMODICHLOROMETHANE	UG/L	<0.20	<0.20	<0.20
BROMOFORM	UG/L	<1.0	<1.0	<1.0
BROMOMETHANE	UG/L	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	UG/L	<0.20	<0.20	<0.20
CHLOROBENZENE	UG/L	<0.50	<0.50	<0.50
CHLOROETHANE	UG/L	<1.0	<1.0	<1.0
CHLOROFORM	UG/L	<0.20	<0.20	<0.20
CHLOROMETHANE	UG/L	<1.0	<1.0	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.20	<0.20	<0.20
1,2-DIBROMOETHANE	UG/L	<0.50	<0.50	<0.50
1,2-DICHLOROBENZENE	UG/L	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	UG/L	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	UG/L	<0.50	<0.50	<0.50
DICHLORODIFLUOROMETHANE	UG/L	<1.0	<1.0	<1.0
1,1-DICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,2-DICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,1-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
CIS-1,2-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TRANS-1,2-DICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
1,2-DICHLOROPROPANE	UG/L	<0.20	<0.20	<0.20
CIS-1,3-DICHLOROPROPENE	UG/L	<0.20	<0.20	<0.20
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.20	<0.20	<0.20
ETHYLBENZENE	UG/L	<0.50	<0.50	<0.50
METHYLENE CHLORIDE	UG/L	<2.0	<2.0	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.50	<0.50	<0.50
TETRACHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TOLUENE	UG/L	1.7	1.5	<0.50
1,1,1-TRICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
1,1,2-TRICHLOROETHANE	UG/L	<0.20	<0.20	<0.20
TRICHLOROETHENE	UG/L	<0.20	<0.20	<0.20
TRICHLOROFLUOROMETHANE	UG/L	<2.0	<2.0	<2.0
VINYL CHLORIDE	UG/L	<0.20	<0.20	<0.20
XYLENES (TOTAL)	UG/L	<1.0	<1.0	<1.0

SURROGATES

BROMOFLUOROBENZENE (ELCD)

%

99

96

93

BROMOFLUOROBENZENE (PID)

%

102

105

95



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

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Page

Test : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)
Blank I.D. : 31186
Client : ANALYTICAL TECHNOLOGIES, INC.
Project # : 407329
Project Name: EL PASO NATURAL GAS

ATI I.D. : 407096
Date Extracted: N/A
Date Analyzed : 11-JUL-94
Dil. Factor : 1.00

Parameters	Units	Results
BENZENE	UG/L	<0.50
BROMODICHLOROMETHANE	UG/L	<0.20
BROMOFORM	UG/L	<1.0
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.20
CHLOROBENZENE	UG/L	<0.50
CHLOROETHANE	UG/L	<1.0
CHLOROFORM	UG/L	<0.20
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.20
1,2-DIBROMOETHANE	UG/L	<0.50
1,2-DICHLOROBENZENE	UG/L	<0.50
1,3-DICHLOROBENZENE	UG/L	<0.50
1,4-DICHLOROBENZENE	UG/L	<0.50
DICHLORODIFLUOROMETHANE	UG/L	<1.0
1,1-DICHLOROETHANE	UG/L	<0.20
1,2-DICHLOROETHANE	UG/L	<0.20
1,1-DICHLOROETHENE	UG/L	<0.20
CIS-1,2-DICHLOROETHENE	UG/L	<0.20
TRANS-1,2-DICHLOROETHENE	UG/L	<0.20
1,2-DICHLOROPROPANE	UG/L	<0.20
CIS-1,3-DICHLOROPROPENE	UG/L	<0.20
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.20
ETHYLBENZENE	UG/L	<0.50
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.50
TETRACHLOROETHENE	UG/L	<0.20
TOLUENE	UG/L	<0.50
1,1,1-TRICHLOROETHANE	UG/L	<0.20
1,1,2-TRICHLOROETHANE	UG/L	<0.20
TRICHLOROETHENE	UG/L	<0.20
TRICHLOROFLUOROMETHANE	UG/L	<2.0
VINYL CHLORIDE	UG/L	<0.20
XYLENES (TOTAL)	UG/L	<1.0

SURROGATES

BROMOFLUOROBENZENE (ELCD)	%	108
BROMOFLUOROBENZENE (PID)	%	121

Acceptable.
88
7/27/94



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

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Test : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)
Blank I.D. : 31203
Client : ANALYTICAL TECHNOLOGIES, INC.
Project # : 407329
Project Name: EL PASO NATURAL GAS

ATI I.D. : 407096
Date Extracted: N/A
Date Analyzed : 12-JUL-94
Dil. Factor : 1.00

Parameters	Units	Results
BENZENE	UG/L	<0.50
BROMODICHLOROMETHANE	UG/L	<0.20
BROMOFORM	UG/L	<1.0
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.20
CHLOROBENZENE	UG/L	<0.50
CHLOROETHANE	UG/L	<1.0
CHLOROFORM	UG/L	<0.20
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.20
1,2-DIBROMOETHANE	UG/L	<0.50
1,2-DICHLOROBENZENE	UG/L	<0.50
1,3-DICHLOROBENZENE	UG/L	<0.50
1,4-DICHLOROBENZENE	UG/L	<0.50
DICHLORODIFLUOROMETHANE	UG/L	<1.0
1,1-DICHLOROETHANE	UG/L	<0.20
1,2-DICHLOROETHANE	UG/L	<0.20
1,1-DICHLOROETHENE	UG/L	<0.20
CIS-1,2-DICHLOROETHENE	UG/L	<0.20
TRANS-1,2-DICHLOROETHENE	UG/L	<0.20
1,2-DICHLOROPROPANE	UG/L	<0.20
CIS-1,3-DICHLOROPROPENE	UG/L	<0.20
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.20
ETHYLBENZENE	UG/L	<0.50
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.50
TETRACHLOROETHENE	UG/L	<0.20
TOLUENE	UG/L	<0.50
1,1,1-TRICHLOROETHANE	UG/L	<0.20
1,1,2-TRICHLOROETHANE	UG/L	<0.20
TRICHLOROETHENE	UG/L	<0.20
TRICHLOROFLUOROMETHANE	UG/L	<2.0
VINYL CHLORIDE	UG/L	<0.20
XYLENES (TOTAL)	UG/L	<1.0

SURROGATES

BROMOFLUOROBENZENE (ELCD)	%	92
BROMOFLUOROBENZENE (PID)	%	99

Accepted
JF
7/27/94



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Page

Test : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)
MSMSD # : 64672
Client : ANALYTICAL TECHNOLOGIES, INC.

ATI I.D. : 407096
Date Extracted: N/A
Date Analyzed : 11-JUL-94
Sample Matrix : WATER
REF I.D. : 407071-03

Project # : 407329
Project Name: EL PASO NATURAL GAS

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	2.0	2.1	105	2.1	105	0
CHLOROBENZENE	UG/L	<0.50	2.0	2.2	110	2.4	120	9
CHLOROFORM	UG/L	<0.20	2.0	2.3	115	2.4	120	4
1,1-DICHLOROETHENE	UG/L	<0.20	2.0	1.8	90	2.2	110	20
TETRACHLOROETHENE	UG/L	<0.20	2.0	2.3	115	2.4	120	4
TOLUENE	UG/L	<0.50	2.0	2.4	120	2.4	120	0
TRICHLOROETHENE	UG/L	<0.20	2.0	2.3	115	2.3	115	0

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

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R
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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Page 1

Test : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)
Blank Spike #: 48302
Client : ANALYTICAL TECHNOLOGIES, INC.
Project # : 407329
Project Name : EL PASO NATURAL GAS

ATI I.D. : 407096
Date Extracted: N/A
Date Analyzed : 11-JUL-94
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.1	4.0	103
CHLOROBENZENE	UG/L	<0.50	4.1	4.0	103
CHLOROFORM	UG/L	<0.20	2.0	2.0	100
1,1-DICHLOROETHENE	UG/L	<0.20	1.8	2.0	90
TETRACHLOROETHENE	UG/L	<0.20	2.1	2.0	105
TOLUENE	UG/L	<0.50	4.2	4.0	105
TRICHLOROETHENE	UG/L	<0.20	2.0	2.0	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

Acceptable
7/27/94



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Page 10

Test : EPA 8010/8020 (HALOGENATED/AROMATIC VOLATILES)
Blank Spike #: 48340
Client : ANALYTICAL TECHNOLOGIES, INC.
Project # : 407329
Project Name : EL PASO NATURAL GAS

ATI I.D. : 407096
Date Extracted: N/A
Date Analyzed : 12-JUL-94
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	3.7	4.0	93
CHLOROBENZENE	UG/L	<0.50	4.1	4.0	103
CHLOROFORM	UG/L	<0.20	2.0	2.0	100
1,1-DICHLOROETHENE	UG/L	<0.20	2.0	2.0	100
TETRACHLOROETHENE	UG/L	<0.20	2.1	2.0	105
TOLUENE	UG/L	<0.50	3.7	4.0	93
TRICHLOROETHENE	UG/L	<0.20	2.1	2.0	105

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

Accepted
7/27/94



Phoenix, Arizona

DATE 11/8/94 PAGE 1 OF 1

ANALYSIS REQUEST

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SAMPLE ID	DATE	TIME	MATRIX	LAB ID
407329 - 01	7/6	1610	Ag	01
02		1623		02
03		1642		03
04		1701		04
05		1719		05
06		1736		06
07		1755		07
08	✓	1755	✓	08
09	✓	1830	✓	09

[illegible]

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT NUMBER:	407329	TOTAL NUMBER OF CONTAINERS	36
PROJECT NAME:		CHAIN OF CUSTODY SEALS	N/A
QC LEVEL:	STD. IV	INTACT?	N/A
TAT: STANDARD	RUSIII	RECEIVED GOOD COHD/COLD	979
ATI WORKORDER #		LAB NUMBER	407096

DUE DATE: 7/15/94 One week T.A.

TIME:

code #8739 = 3.6c

SAMPLES TO GO		RELINQUISHED BY: 1.		RELINQUISHED BY: 2.	
SAN DIEGO	☒	Signature: <i>Amey Klingner</i>	Time: <i>bp</i>	Signature: _____	Time: _____
FT. COLLINS		Printed Name: <i>Amey Klingner</i>	Date: <i>7/8/94</i>	Printed Name: _____	Date: _____
RENTON		Analytical Technologies, Inc.		Company: _____	_____
PENSACOLA		Phoenix		_____	_____
PORTLAND		Signature: _____	Time: _____	Signature: <i>Amey Klingner</i>	Time: <i>09:50</i>
AQUATIC		Printed Name: _____	Date: _____	Printed Name: <i>Lisa Tucker</i>	Date: <i>7-9-94</i>
		Analytical Technologies, Inc.		Company: <i>ATI-S.D.</i>	_____

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001
DISTRIBUTION: White, Canary - ANALYTICAL TECHNOLOGIES, INC. • Pink - ORIGINATOR

To: John Lambdin
From: Dennis Bird
Date: July 11, 1994
Place: Field Services
Engineering-Lab
Subject: Chaco Plant Monitor Wells

On Wednesday, July 6, 1994, Norman Norvelle, Lupe Rangel and myself traveled to Chaco Plant to perform monitoring well sampling. The following analytical parameters are to be performed on these groundwater samples: General Chemistry, Nitrates as $\text{NO}_3\text{-N}$, RCRA Metals by Total Digestion, Aromatic Hydrocarbons 602 and Chlorinated Hydrocarbons 601. The requested analysis for RCRA Metals by Total Digestion, Aromatic Hydrocarbons 602 and Chlorinated Hydrocarbons 601 was sent to Analytical Technologies in Phoenix Arizona for analysis. The Field Services Laboratory will be performing the General Chemistry and Nitrates as $\text{NO}_3\text{-N}$ in our lab.

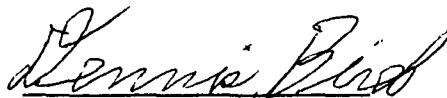
We also collected a sample from the 20 inch total discharge line going to the ponds. The same parameters will be analyzed as the monitor wells. A Field duplicate was collected on monitor well MW-7.

The following information was collected on each well.

Monitor Well #	Pipe ID	Static Level	Total Depth	Gallons Bailed
MW-1	4"	14.85'	25.5'	21.0
MW-2	4"	15.20'	27.6'	26.0
MW-3	4"	9.45'	22.4'	26.0
MW-4	4"	19.15'	30.9'	27.0
MW-5	4"	25.05'	30.6'	10.0
MW-6	4"	11.45'	24.6'	26.0
MW-7	4"	7.70'	19.5'	30.0

All bailing and sampling was done with disposable, one time use equipment and bottles. All samples were preserved and stored on ice immediately after collection. The static level and total depth was measured from the top of the pipe. The metals by total digestion was filtered on location at time of sampling. A nalgene analytical filter unit with polycarbonate membrane filter was used for the filtering.

Should you have any question or comments, please let me know.


Dennis P. Bird

cc: Nancy Prince
Kris Sinclair



Natural Gas Company

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Requested Analysis		Contract Laboratory	
Samplers: (Signature)		Date	Receiving Temp. (°F)	See Attached Composite or Grab		GENERAL ANALYSIS	
Lab ID	Date	Time	Matrix	Sample Number	Total No. of Containers	Chain of Custody Seals	Intact?
	7-6-94	1610	WATER	941048	2		
	7-6-94	1623	WATER	941049	2		
	7-6-94	1642	WATER	941050	2		
	7-6-94	1701	WATER	941051	2		
	7-6-94	1719	WATER	941052	2		
	7-6-94	1736	WATER	941053	2		
	7-6-94	1755	WATER	941054	2		
	7-6-94	1755	WATER	941055	2		
	7-6-94	1830	WATER	941056	2		
Remarks: MONITOR WELL MW-1 MONITOR WELL MW-2 MONITOR WELL MW-3 MONITOR WELL MW-4 MONITOR WELL MW-5 MONITOR WELL MW-6 MONITOR WELL MW-7 20" DISCHARGE LINE							
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 for Laboratory by: (Signature) Date/Time							
Results & Invoices to Charge Code							

PROJECT: M.W.
SAVE FILE: 941048

[illegible]

REMARKS:

Lab Super.: John Lavel Date: 7/19/94

El Paso Natural Gas Company - Field Services Lab Report

Anion/Cation Balance Information and Calculations

Sample Number:	941048	941049	941050	941051	941052
SAMPLE POINT	Monitor Well MW-1	Monitor Well MW-2	Monitor Well MW-3	Monitor Well MW-4	Monitor Well MW-5
Concentration:	meq/l	meq/l	meq/l	meq/l	meq/l
CATIONS:					
CALCIUM AS Ca	9.28	1.90	8.83	24.40	22.60
MAGNESIUM AS Mg	2.39	0.74	3.54	7.16	8.23
POTASSIUM AS K	0.08	0.00	0.00	0.20	0.18
SODIUM (+/- Difference)	7.84	20.24	21.99	57.62	57.36
SODIUM (Actual)	7.04	20.39	21.70	60.65	63.22
CATIONS TOT(w/o Na)	11.74	2.64	12.37	31.76	31.01
CATIONS TOT(w/act. Na)	18.79	23.03	34.07	92.42	94.23
CATIONS TOT(w/cal. Na)	19.58	22.88	34.36	89.38	88.37
ANIONS:					
ALKALINITY AS CO ₃	0.00	0.00	0.00	0.00	0.00
ALKALINITY AS HCO ₃	7.01	10.21	11.96	9.13	7.41
CHLORIDE AS Cl	4.43	4.34	5.13	14.05	9.59
SULFATE AS SO ₄	8.14	8.33	17.26	66.21	71.37
FLUORIDE AS F	0.00	0.00	0.00	0.00	0.00
ANIONS (TOTAL)	19.58	22.88	34.36	89.38	88.37
TDS (ACTUAL)	1194	1428	2132	6040	6170
TDS (CALC. w/cal. Na)	1157	1373	2096	5861	5869
PERCENT DIFF. w/cal. Na	3	4	2	3	5
TDS (CALC. w/act. Na)	1139	1377	2089	5931	6004
PERCENT DIFF. w/act. Na	5	4	2	2	3
SODIUM (CALCULATED)	180	465	505	1325	1319
SODIUM AS Na (ACTUAL)	162	469	499	1395	1454
Relative % Difference RPD	3%	0%	0%	1%	2%
ANION/CATION % Difference	104.23	99.36	100.85	96.72	93.78

El Paso Natural Gas Company - Field Services Lab Report

Anion/Cation Balance Information and Calculations

Sample Number:	941053	941054	941055	941056	0
SAMPLE POINT	Monitor Well	Monitor Well	Monitor Well	20 Inch Discharge	0
	MW-6	MW-7	MW-7 Dup	0	0
Concentration:	meq/l	meq/l	meq/l	meq/l	meq/l
CATIONS:					
CALCIUM AS Ca	1.35	5.14	5.19	10.03	0.00
MAGNESIUM AS Mg	0.41	1.40	1.40	3.79	0.00
POTASSIUM AS K	0.00	0.05	0.05	0.79	0.00
SODIUM (+/- Difference)	35.50	20.91	20.02	6.33	0.00
SODIUM (Actual)	35.22	20.43	20.48	7.78	0.00
CATIONS TOT(w/o Na)	1.76	6.59	6.64	14.61	0.00
CATIONS TOT(w/act. Na)	36.98	27.02	27.12	22.39	0.00
CATIONS TOT(w/cal. Na)	37.26	27.50	26.66	20.93	0.00
ANIONS:					
ALKALINITY AS CO ₃	0.00	0.00	0.00	0.17	0.00
ALKALINITY AS HCO ₃	6.82	8.46	8.44	2.62	0.00
CHLORIDE AS Cl	3.50	4.74	4.54	1.55	0.00
SULFATE AS SO ₄	26.94	14.30	13.68	16.59	0.00
FLUORIDE AS F	0.00	0.00	0.00	0.00	0.00
ANIONS (TOTAL)	37.26	27.50	26.66	20.93	0.00
TDS (ACTUAL)	2400	1696	1680	1530	0
TDS (CALC. w/cal. Na)	2471	1712	1655	1354	0
PERCENT DIFF. w/cal. Na	-3	-1	2	11	#DIV/0!
TDS (CALC. w/act. Na)	2465	1701	1665	1388	0
PERCENT DIFF. w/act. Na	-3	0	1	9	#DIV/0!
SODIUM (CALCULATED)	816	481	460	145	0
SODIUM AS Na (ACTUAL)	810	470	471	179	0
Relative % Difference RPD	0%	1%	1%	5%	#DIV/0!
ANION/CATION % Difference	100.76	101.75	98.31	93.49	#DIV/0!

2nd Quarter

* Duel results shown for Split Sample.



Analytical **Technologies**, Inc.

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

ATI I.D. **412349**

January 5, 1995

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

Project Name/Number: CHACO M.W.

Attention: John Lambdin

On 12/13/94, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **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.

Due to matrix interferences, cadmium analyses of samples 941600 and 941601 were performed at a dilution. The reporting limit has been raised accordingly.

All analyses were performed by Analytical Technologies, Inc., 9830 S. 51st Street, Suite B-113, Phoenix, AZ.

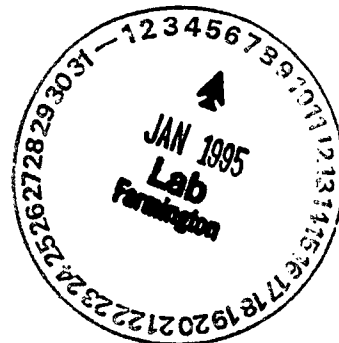
If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure





Analytical **Technologies**, Inc.

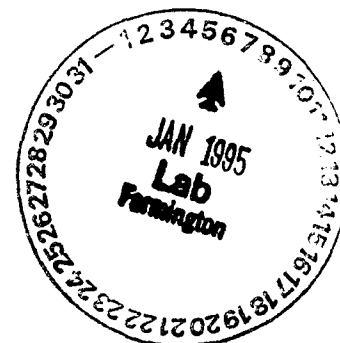
CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO M.W.

DATE RECEIVED : 12/13/94

REPORT DATE : 01/05/95

ATI I.D. : 412349

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	941597- mw-1	AQUEOUS	12/08/94
02	941598- mw-2	AQUEOUS	12/08/94
03	941599- mw-3	AQUEOUS	12/08/94
04	941600- mw-4	AQUEOUS	12/08/94
05	941601- mw-5	AQUEOUS	12/08/94
06	941602- mw-6	AQUEOUS	12/08/94
07	941603- mw-6 Field Dup	AQUEOUS	12/08/94
08	941604- mw-7	AQUEOUS	12/08/94
09	941605- 20" Discharge	AQUEOUS	12/08/94



----- TOTALS -----

MATRIX	# SAMPLES
AQUEOUS	9

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.

METALS RESULTS

ATI I.D. : 412349

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO M.W.

DATE RECEIVED : 12/13/94

REPORT DATE : 01/05/95

PARAMETER	UNITS	01	02	03	04	05
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010
CHROMIUM (EPA 200.7/6010)	MG/L	0.025	<0.010	<0.010	0.017	0.029
MERCURY (EPA 245.1/7470)	MG/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

MW-1 MW-2 MW-3 MW-4 MW-5



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 412349

CLIENT : EL PASO NATURAL GAS CO.

DATE RECEIVED : 12/13/94

PROJECT # : (NONE)

PROJECT NAME : CHACO M.W.

REPORT DATE : 01/05/95

PARAMETER	UNITS	06	07	08	09
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005	<0.0005	<0.0005	<0.0005
CHROMIUM (EPA 200.7/6010)	MG/L	<0.010	<0.010	<0.010	0.034
MERCURY (EPA 245.1/7470)	MG/L	<0.0002	<0.0002	<0.0002	<0.0002

MW-6	MW-6	MW-7	20'
	Field		Discharge
	Dup		



Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO M.W.

ATI I.D. : 412349

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	41267211	<0.0005	<0.0005	NA	0.0043	0.0050	86
CHROMIUM	MG/L	41234905	0.029	0.029	0	0.992	1.00	96
MERCURY	MG/L	41265502	<0.0002	<0.0002	NA	0.0053	0.0050	106

Acceptable
1-6-95

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

CHAIN OF CUSTODY

ATILAB I.D.

2349

DATE: 12-12-94 PAGE 1 OF 1

PROJECT MANAGER:

JOHN WATSON

COMPANY:

EL PASO NATURAL GAS CO.

ADDRESS:

P. 41 Box 4990

PHONE:

FARMINGTON N.M. 87499
505-599-3144

FAX:

505-505-2261

BILL TO:

SAME AS ABOVE

COMPANY:

ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
941597	12-8-94	1310	WATER	01
941598	12-8-94	1325	WATER	02
941599	12-8-94	1353	WATER	03
941600	12-8-94	1428	WATER	04
941601	12-8-94	1542	WATER	05
941602	12-8-94	1655	WATER	06
941603	12-8-94	1655	WATER	07
941604	12-8-94	1715	WATER	08
941605	12-8-94	1735	WATER	09

PROJECT INFORMATION

PROJ. NO.:		NO. CONTAINERS:	9
PROJ. NAME:	CHABCO M. W.	CUSTODY SEALS	(Y) N / NA
P. O. NO.:		RECEIVED INTACT	Y
SHIPPED VIA:	FED-EX	RECEIVED COLD	Y 110C

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECT'S

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK

(NORMAL) ~~2~~ 2 WEEK

Comments: CHANGE TO:

95801/071-0007-01/3

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)	
(MOD 8015) Gas/Diesel	
Diesel/Gasoline/BTEX/MTBE (MOD 8015/8020)	
BTEX/MTBE (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)	
Volatile 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	
TOTAL Hg, Pb, Cr	
CD, (B)	
The 13 Priority Pollutant Metals	
RCRA Metals by Total Digestion	
RCRA Metals by TCLP (1311)	

SAMPLE RECEIPT

RECEIVED BY: 1.		RECEIVED BY: 2.		RECEIVED BY: (LAB) 3.	
Signature:	Time:	Signature:	Time:	Signature:	Time:
<i>Devin Bird</i>	<i>11:55</i>			<i>Devin Bird</i>	<i>09:30</i>
Printed Name:	Date:	Printed Name:	Date:	Printed Name:	Date:
<i>DEVIN BIRD</i>	<i>12.12.99</i>			<i>Devin Bird</i>	<i>12/12/99</i>
Company:	Phone:	Company:		Company:	
<i>EC H&S NATIONAL LABS</i>	<i>707-222-1234</i>				



Chain of Custody

NETWORK PROJECT MANAGER: LETITIA KRAKOWSKI				ANALYSIS REQUEST											
COMPANY: Analytical Technologies, Inc.				TOX											
ADDRESS: 2709-D Pan American Freeway, NE Albuquerque, NM 87107				ORGANIC LEAD											
*Pnt tested				SULFIDE											
				SURFACTANTS (MSAS)											
CLIENT PROJECT MANAGER:				632/632 MOD											
				619/619 MOD											
SAMPLE ID				610/8310											
				TOLUENE											
DATE				8240 (TCLP 1311) ZHE											
				Diesel/Gasoline/BTXE/MTBE (NCC 8015/8020)											
TIME				Volatile Organics GC/MS (624/824c)											
				NAME											
MATRIX				ASBESTOS											
				BOD											
LAB ID				TOTAL COLIFORM											
				FECAL COLIFORM											
1				GROSS ALPHA/BETA											
				RADIUM 226/223											
2				AIR - O2, CO2, METHANE											
				AIR/Diesel/Gasoline/BTXE/ (MOD 8015/8020)											
3				NUMBER OF CONTAINERS											
4															
5															
6															
7															
8															
9															

PROJECT INFORMATION			SAMPLE RECEIPT			RELINQUISHED BY:			
PROJECT NUMBER:	412349	TOTAL NUMBER OF CONTAINERS	7	SIGNATURE	V. J. J. J.	1.	SIGNATURE		
PROJECT NAME:	EPN	CHAIN OF CUSTODY SEALS	NA	PRINTED NAME:	Dr. J. J. J.	2.	PRINTED NAME:		
QC LEVEL:	STD IV	INTACT?	Y	ANALYST:	Analytical Technologies, Inc.		ANALYST:		
QC REQUIRED:	MS MSD BLANK	RECEIVED GOOD COND/GOOD	Y	ALBUQUERQUE	Albuquerque		ALBUQUERQUE		
TAT:	STANDARD	LAB NUMBER	412349	RECEIVED BY: (LAB)			RECEIVED BY: (LAB)		
DUE DATE: 12/28			00# LK 1166			RECEIVED BY: (LAB)			
RUSH SURCHARGE: 0						SIGNATURE:			
CLIENT DISCOUNT: 15 %						PRINTED NAME:			
						DATE:			
						DATE:			
						DATE:			

LOCATION: Chaco Plant **PROJECT:** M.W.
DATE OF REPORT: 12/21/94 **SAVE FILE:** 941602
SAMPLED BY: Dennis Bird, Richard Benson

[illegible]

REMARKS:

Approvals:

Analyst: Vernia Bral Date: 12/21/94

Lab Super.: John Latch Date: 12/28/94

CU, CI and tested separately at ATE



CHAIN OF CUSTODY RECORD

Project No.		Project Name		Chain of Custody Seals		Requested Analysis		Contract Laboratory	
Samplers: (Signature)		Date		Receiving Temp. (°F)		Intact?		See Attached	
Date		Matrix		Sample Number		Composite or Grab		Remarks	
Dennis Bird		12-8-94		36				EL PASO NATURAL GAS CO.	
12-8-94		1310 WATER		941597		X		MONITOR WELL MW-1	
12-8-94		1335 WATER		941598		X		MONITOR WELL MW-2	
12-8-94		1353 WATER		941599		X		MONITOR WELL MW-3	
12-8-94		1438 WATER		941600		X		MONITOR WELL MW-4	
12-8-94		1642 WATER		941601		X		MONITOR WELL MW-5	
12-8-94		1655 WATER		941602		X		MONITOR WELL MW-6	
12-8-94		1655 WATER		941603		X		MONITOR WELL MW-6 FIELD DUP	
12-8-94		1715 WATER		941604		X		MONITOR WELL MW-7	
12-8-94		1735 WATER		941605		X		20 INCH DISCHARGE	
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time	
Dennis Bird		12-8-94 1235							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time	
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Date/Time		Remarks:	
				Richard [Signature]		12/9/94 0730			
Results & Invoices to:				Charge Code		Date Results Reported / by: (Signature)			



Field Services Laboratory
Analytical Report

LOCATION: Chaco Plant
DATE OF REPORT: 5/4/95
SAMPLED BY: Dennis Bird & Richard Benson

PROJECT: M.W.
SAVE FILE: 040595MW

All EPNG Results By Standard Methods (APWA) Or EPA Method 300

SAMPLE POINT	Monitor Well MW-1	Monitor Well MW-2	Monitor Well MW-3	Monitor Well MW-4	Monitor Well MW-5	Monitor Well MW-6	Monitor Well MW-6 Field Dup.	Monitor Well MW-7	20 Inch Discharge
LAB ID #	950352	950353	950354	950355	950356	950357	950358	950359	950360
DATE OF SAMPLE	29-Mar-95	29-Mar-95	29-Mar-95	29-Mar-95	29-Mar-95	29-Mar-95	29-Mar-95	29-Mar-95	29-Mar-95
pH (Units)	7.25	7.46	7.14	6.87	6.91	8.02	8.08	7.35	8.21
ALKALINITY AS CO ₃	0	0	0	0	0	0	0	0	0
ALKALINITY AS HCO ₃	588	493	742	573	439	412	412	486	105
CALCIUM AS Ca	160	64	186	497	460	35	35	130	133
MAGNESIUM AS Mg	25	15	44	87	106	6	6	25	27
TOTAL HARDNESS AS CaCO ₃	502	222	646	1599	1585	112	112	428	443
CHLORIDE AS Cl	124	159	251	457	308	105	102	179	36
SULFATE AS SO ₄	409	509	831	2722	3334	1085	1053	785	420
FLUORIDE AS F	1.7	2.2	1.3	1.8	1.4	2.5	2.4	2.4	1.3
POTASSIUM AS K	3	<2	<2	8	6	<2	<2	2	17
SODIUM AS Na	311	465	648	1317	1456	803	802	537	92
TOTAL DISSOLVED SOLIDS	1344	1496	2452	5750	6250	2368	2316	1972	868
CONDUCTIVITY (umhos)	2020	2320	3470	6860	7220	3430	3390	2840	1153
NITRATE AS NO ₃ -N	<0.1	0.89	<0.1	1.64	2.89	1.70	1.69	<0.1	0.54
CONTRACT LAB DATA									
CADMIUM AS Cd	<0.0005	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005
CHROMIUM AS Cr	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.014
MERCURY AS Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
FIELD DATA									
Static Water Level (Ft)	20.0	16.0	10.3	19.0	24.6	11.4	11.4	6.8	N/A
Total Well Depth (Ft)	25.5	27.6	22.4	30.9	30.6	24.6	24.6	19.5	N/A
Gallons Bailed (Gal)	9.0	15.0	4.0	5.0	10.0	24.0	24.0	30.0	N/A

All Results Expressed as ppm or umhos

REMARKS:

Fluoride results were with the Hach DR/2000 using the spadns fluoride reagents.
Contract Lab data is from Analytical Technologies.

Approvals:

Lab Super.: John Fadden Date: 5/4/95

3rd Quarter



Natural Gas Company
CHAIN OF CUSTODY RECORD

Project No.		Project Name		Contract Laboratory							
Samplers (Signature)		Date	Receiving Temp. (°F)	Requested Analysis							
Dennis Bird		3-29-95	38°	EL PASO NATURAL GAS							
Dennis Bird		3-29-95	38°	770 WEST NAVAJO							
Dennis Bird		3-29-95	38°	FARMINGTON NW 1/4 87401							
Lab ID	Date	Time	Matrix	Sample Number	Intact?	Chain of Custody Seals	Total No. of Containers	Composite or Grab	See Attached	GENERAL ANALYSIS	Remarks
32985	1409		WATER	950352			1	G		✓	MONITOR WELL MW-1
32985	1444		WATER	950353			1	G		✓	MONITOR WELL MW-2
32985	1456		WATER	950354			1	G		✓	MONITOR WELL MW-3
32985	1508		WATER	950355			1	G		✓	MONITOR WELL MW-4
32985	1525		WATER	950356			1	G		✓	MONITOR WELL MW-5
32985	1532		WATER	950357			1	G		✓	MONITOR WELL MW-6
32985	1532		WATER	950358			1	G		✓	MONITOR WELL MW-6 FIELD DUP
32985	1540		WATER	950359			1	G		✓	MONITOR WELL MW-7
32985	1548		WATER	950360			1	G		✓	20 INCH DISCHARGE
Results & Invoices to:											
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time	
Dennis Bird		3-29-95 1650									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time	
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Date/Time		Remarks:		Date Results Reported / by: (Signature)	
				Dennis Bird		3/30/95 0932					



Analytical **Technologies**, Inc.

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

Reviewed & Approved
5/1/95

[Signature]

ATI I.D. 503416

COPY

April 21, 1995

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

Project Name/Number: CHACO PLT. M.W.

Attention: John Lambdin

On 03/31/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **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.

Due to matrix interferences, cadmium analysis of sample "950358" was performed at a dilution. The reporting limit has been raised accordingly.

All analyses were performed by Analytical Technologies, Inc., 9830 S. 51st Street, Suite B-113, Phoenix, AZ.

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

[Signature: Letitia Krakowski]

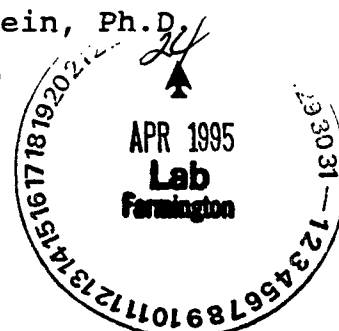
Letitia Krakowski, Ph.D.
Project Manager

MR:jt

Enclosure

[Signature: H. Mitchell Rubenstein]

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager



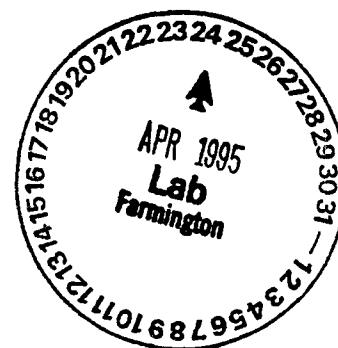


Analytical Technologies, Inc.

CLIENT : EL PASO NATURAL GAS CO DATE RECEIVED : 03/31/95
PROJECT # : (NONE)
PROJECT NAME : CHACO PLT. M.W. REPORT DATE : 04/21/95

ATI ID: 503416

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	950352 - MW-1	AQUEOUS	03/29/95
02	950353 - MW-2	AQUEOUS	03/29/95
03	950354 - MW-3	AQUEOUS	03/29/95
04	950355 - MW-4	AQUEOUS	03/29/95
05	950356 - MW-5	AQUEOUS	03/29/95
06	950357 - MW-6	AQUEOUS	03/29/95
07	950358 - MW-6 Field Dip	AQUEOUS	03/29/95
08	950359 - MW-7	AQUEOUS	03/29/95
09	950360 - 20' Discharge	AQUEOUS	03/29/95



---TOTALS---

<u>MATRIX</u>	<u>#SAMPLES</u>
AQUEOUS	9

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.

METALS RESULTS

ATI I.D. : 503416

CLIENT : EL PASO NATURAL GAS CO.

DATE RECEIVED : 03/31/95

PROJECT # : (NONE)

PROJECT NAME : CHACO PLT. M.W.

REPORT DATE : 04/21/95

PARAMETER	UNITS	01	02	03	04	05
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005	0.0009	<0.0005	<0.0005	<0.0005
CHROMIUM (EPA 200.7/6010)	MG/L	<0.010	<0.010	<0.010	<0.010	<0.010
MERCURY (EPA 245.1/7470)	MG/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

MW-1 MW-2 MW-3 MW-4 MW-5



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 503416

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO PLT. M.W.

DATE RECEIVED : 03/31/95

REPORT DATE : 04/21/95

PARAMETER	UNITS	06	07	08	09
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005	<0.0025	<0.0005	<0.0005
CHROMIUM (EPA 200.7/6010)	MG/L	<0.010	<0.010	<0.010	0.014
MERCURY (EPA 245.1/7470)	MG/L	<0.0002	<0.0002	<0.0002	<0.0002

MW-4 MW-6 MW-7 20' Discharge
FD



Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO PLT. M.W.

ATI I.D. : 503416

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CADMIUM	MG/L	50300301	<0.0005	<0.0005	NA	0.0057	0.0050	114
CHROMIUM	MG/L	50302301	0.266	0.262	2	1.24	1.00	97
CHROMIUM	MG/L	50462501	<0.010	<0.010	NA	0.896	1.00	90
MERCURY	MG/L	50300301	<0.0002	<0.0002	NA	0.0050	0.0050	100

% Recovery = $\frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$

RPD (Relative Percent Difference) = $\frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$



Analytical Technologies, Inc. Albuquerque, NM

Chain of Custody

DATE 3/31/95 PAGE 1 OF 1

NETWORK PROJECT MANAGER: LETITIA KRAKOWSKI				ANALYSIS REQUEST															
COMPANY: Analytical Technologies, Inc.																			
ADDRESS: 2709-D Pan American Freeway, NE Albuquerque, NM 87107																			
CLIENT PROJECT MANAGER: <u>Ph tested</u>																			
SAMPLE ID				DATE	TIME	MATRIX	LAB ID	NUMBER OF CONTAINERS											
503416 -01				3/29	1409	AA	1	AIR - 02, CO2, METHANE											
-02					1444		2	RADIUM 226/228											
-03					1450		3	GROSS ALPHA/BETA											
-04					1508		4	FECAL COLIFORM											
-05					1525		5	TOTAL COLIFORM											
-06					1532		6	BOD											
-07					1532		7	ASBESTOS											
-08					1540		8	NACE											
-09					1548		9	Volatiles Organics GC/MS (624/8240)											
								Diesel/Gasoline/BTXE/MTBE/ (MOD 8015/8020)											
								8240 (TCCLP 1311) ZHE											
								1045 cdcr, hg											
								610/8310											
								619/619 MOD											
								632/632 MOD											
								SURFACTANTS (MBAS)											
								SULFIDE											
								ORGANIC LEAD											
								TOC											
								TOX											

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:		RELINQUISHED BY: 1.		RELINQUISHED BY: 2.	
PROJECT NUMBER:	503416	TOTAL NUMBER OF CONTAINERS	9	SAN DIEGO	SIGNATURE: <u>Blair</u>	Time: <u>1730</u>	SIGNATURE:	Time:	
PROJECT NAME:	EPN	CHAIN OF CUSTODY SEALS	4	FT. COLLINS	Printed Name: <u>Blair</u>	Date: <u>3/31/95</u>	Printed Name:	Date:	
QC LEVEL:	STD IV	INTACT?	4	RENTON	Printed Name: <u>Blair</u>	Date: <u>3/31/95</u>	Printed Name:	Date:	
QC REQUIRED:	MS MSD BLANK	RECEIVED GOOD COND. COLD	4	PENSACOLA	Company: <u>Analytical Technologies, Inc.</u>		Company:		
TAT:	STANDARD	LAB NUMBER	503416	PHOENIX	RECEIVED BY: (LAB)	Time: <u>1730</u>	RECEIVED BY: (LAB)	Time: <u>1730</u>	
				FIBERQUANT	SIGNATURE: <u>Melanie</u> <td></td> <td>SIGNATURE: <u>Melanie</u></td> <td></td>		SIGNATURE: <u>Melanie</u>		
					Printed Name: <u>Melanie</u>		Printed Name: <u>Melanie</u>		
					Company: <u>ATI - Phoenix</u>		Company: <u>ATI - Phoenix</u>		

DUE DATE: 4/14
RUSH SURCHARGE: 15 %
CLIENT DISCOUNT: 15 %
with 1358



LOCATION: Chaco Plant

DATE OF REPORT: 8/11/95

SAMPLED BY: Dennis Bird & Richard Benson

Field Services Laboratory
Analytical Report

M.W.
061495MW

All EPNG Results By Standard Methods (APWA) Or EPA Method 300

SAMPLE POINT	Monitor										20 Inch Discharge	Contract
	Well MW-1	Well MW-2	Well MW-2 Field Dup.	Well MW-3	Well MW-4	Well MW-5	Well MW-6	Well MW-7	Monitor	Monitor		
LAB ID #	950666	950667	950668	950669	950670	950671	950672	950673	950674	950675	950676	950677
DATE OF SAMPLE	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95	14-Jun-95
pH (Units)	7.42	7.64	7.65	7.42	7.08	7.42	8.15	7.44	8.66	8.66	8.66	8.66
ALKALINITY AS CO ₃	0	0	0	0	0	0	0	0	0	0	0	0
ALKALINITY AS HCO ₃	588	448	453	820	574	330	429	526	87	87	87	87
CALCIUM AS Ca	133	109	105	141	479	302	38	192	45	45	45	45
MAGNESIUM AS Mg	19	23	22	35	83	28	6	34	10	10	10	10
TOTAL HARDNESS AS CaCO ₃	410	367	353	496	1538	869	120	619	154	154	154	154
CHLORIDE AS Cl	125	160	160	287	485	27	110	184	6	6	6	6
SULFATE AS SO ₄	409	630	603	897	2792	1093	1120	883	107	107	107	107
FLUORIDE AS F	1.5	2.2	2.3	1.4	1.8	1.3	2.7	2.5	0.5	0.5	0.5	0.5
POTASSIUM AS K	2	<2	<2	<2	8	<2	<2	2	3	3	3	3
SODIUM AS Na	340	450	452	782	1313	357	823	540	35	35	35	35
TOTAL DISSOLVED SOLIDS	1308	1560	1556	2616	5460	2108	2356	2172	258	258	258	258
CONDUCTIVITY (umhos)	2040	2380	2310	3440	6030	2500	3370	2890	480	480	480	480
NITRATE AS NO ₃ -N	0.60	1.09	1.08	0.70	1.79	0.69	1.08	<0.1	0.60	0.60	0.60	0.60
CONTRACT LAB DATA												
CADMIUM AS Cd	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
CHROMIUM AS Cr	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
MERCURY AS Hg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
FIELD DATA												
Static Water Level (ft)	21.7	16.0	16.0	10.8	19.1	24.5	11.3	6.8	N/A	N/A	N/A	N/A
Total Well Depth (ft)	25.5	27.6	27.6	22.4	30.9	30.6	24.6	19.5	N/A	N/A	N/A	N/A
Gallons Befilled (Gal)	5.0	24.0	24.0	8.0	25.0	12.0	25.0	30.0	N/A	N/A	N/A	N/A

All Results Expressed as ppm or umhos

REMARKS:

Fluoride results were with the Hach DR/2000 using the spadns fluoride reagents.

Contract Lab data is from Analytical Technologies.

Results shown with a / are duplicate analyses.

Approvals:

Lab Super.: John F. Elder Date: 8/11/95



CHAIN OF CUSTODY RECORD

WHITE-Testing Laboratory	YELLOW-EPNG Lab	PINK-Field Sampler
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CHAIN OF CUSTODY

DATE: 6-14-95 PAGE 1 OF 1

ATLAB ID

PROJECT MANAGER: JOHN LAMBDAIN

COMPANY: EL PASO NATURAL GAS CO.
 ADDRESS: P.O. BOX 4990
 FARMINGTON N.M. 87499
 PHONE: 505-597-2144
 FAX: 505-597-2261
 BILL TO: SAME AS ABOVE
 COMPANY:
 ADDRESS:

SAMPLE ID DATE TIME MATRIX LAB ID

950675 6-14-95 1630 WATER

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTEX/MTBE (MOD 8015/8020)	BTEX/MTBE (8020)	Chlorinated Hydrocarbons (601/8010)	Aromatic Hydrocarbons (602/8020)	SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.	Pesticides/PCB (608/9080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Volatile 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
--------------------------------	-----------------------	---	------------------	-------------------------------------	----------------------------------	---	---------------------------	-----------------------	--	------------------------------------	----------------------------------	----------------------------------	------------------------------------	----------------------------------	------------------------------------

PROJECT INFORMATION

PROJ. NO.:	NO. CONTAINERS	CUSTODY SEALS	Y/N/NA
PROJ. NAME: CHACO S. CANG. PAK	RECEIVED INTACT	RECEIVED COLD	
P.O. NO.:	SHIPPED VIA: FED-EX		

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments:
 CHARGE TO: 95B011071-0007-0113
 SEND RESULTS TO JOHN LAMBDAIN
 AT THE ABOVE ADDRESS.

SAMPLED & RELINQUISHED BY:

Signature:	Time:	Signature:	Time:
John Lambdain	6-14-95		
Printed Name:	Date:	Printed Name:	Date:
John Lambdain	6-14-95		
Company:	Phone:	Company:	Phone:
EL PASO NATURAL GAS	950-2144		

RECEIVED BY:

Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:		Company:	



Analytical Technologies, Inc.

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

COPY

ATI I.D. 506375

July 6, 1995

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



Project Name/Number: CHACO PLT. M.W.

Attention: John Lambdin

On 06/16/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **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., 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

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure

CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO PLT. M.W.

DATE RECEIVED : 06/16/95

REPORT DATE : 07/06/95

ATI ID: 506375

	ATI PENSACOLA ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	506375-01	950666 - MW-1	AQUEOUS	06/14/95
02	506375-02	950667 - MW-2	AQUEOUS	06/14/95
03	506375-03	950668 - MW-2 FD	AQUEOUS	06/14/95
04	506375-04	950669 - MW-3	AQUEOUS	06/14/95
05	506375-05	950670 - MW-4	AQUEOUS	06/14/95
06	506375-06	950671 - MW-5	AQUEOUS	06/14/95
07	506375-07	950672 - MW-6	AQUEOUS	06/14/95
08	506375-08	950673 - MW-7	AQUEOUS	06/14/95
09	506375-09	950674 - 20 Inch Discharge	AQUEOUS	06/14/95

---TOTALS---

MATRIX
AQUEOUS

#SAMPLES
9

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.

"FINAL REPORT" FORMAT - MULTIPLE*

Accession: 506534
 Client: ANALYTICAL TECHNOLOGIES, INC.
 Project Number: 506375
 Project Name: EL PASO NATURAL GAS
 Project Location: CHACO PLT. M.W.
 Test: Group of Single Metals
 QcLevel: II

Parameter:	Unit:	Result:	R.L:	Batch:	2:
Client ID: 506375-01			Lab ID:001		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	mw-1
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	
Comments:					
Client ID: 506375-02			Lab ID:002		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	mw-2
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	
Comments:					
Client ID: 506375-03			Lab ID:003		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	mw-2 Field Dup
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	
Comments:					
Client ID: 506375-04			Lab ID:004		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	mw-3
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	
Comments:					
Client ID: 506375-05			Lab ID:005		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	mw-4
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	
Comments:					
Client ID: 506375-06			Lab ID:006		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	mw-5
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	
Comments:					

ANALYTICAL TECHNOLOGIES, INC.
 "FINAL REPORT" FORMAT - MULTIPLE

Accession: 506534
 Client: ANALYTICAL TECHNOLOGIES, INC.
 Project Number: 506375
 Project Name: EL PASO NATURAL GAS
 Project Location: CHACO PLT. M.W.
 Test: Group of Single Metals
 QcLevel: II

Parameter:	Unit:	Result:	R.L:	Batch:	Q:
Client ID: 506375-07			Lab ID:007		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	MW-6
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	

Comments:

Client ID: 506375-08			Lab ID:008		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	MW-7
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	

Comments:

Client ID: 506375-09			Lab ID:009		
CADMIUM (200.7)	MG/L	ND	0.005	COW143	20 Inch Discharge
CHROMIUM (200.7)	MG/L	ND	0.01	HOW143	
MERCURY (245.1)	MG/L	ND	0.0002	M2W076	

Comments:



"FINAL REPORT" FORMAT - MULTIPLE"

Accession: 506534
Client: ANALYTICAL TECHNOLOGIES, INC.
Project Number: 506375
Project Name: EL PASO NATURAL GAS
Project Location: CHACO PLT. M.W.
Test: Group of Single Metals

Client Id:	Lab Matrix: Id:	Date/Time Sampled:	Date Received:
506375-01	001 WATER	14-JUN-95 1405	17-JUN-95
506375-02	002 WATER	14-JUN-95 1445	17-JUN-95
506375-03	003 WATER	14-JUN-95 1445	17-JUN-95
506375-04	004 WATER	14-JUN-95 1503	17-JUN-95
506375-05	005 WATER	14-JUN-95 1518	17-JUN-95
506375-06	006 WATER	14-JUN-95 1535	17-JUN-95
506375-07	007 WATER	14-JUN-95 1554	17-JUN-95
506375-08	008 WATER	14-JUN-95 1610	17-JUN-95
506375-09	009 WATER	14-JUN-95 1617	17-JUN-95

**"Metals Quality Control Report"**

Parameter:	CADMIUM	CHROMIUM	MERCURY
Batch Id:	COW143	HOW143	MZW076
Blank Result:	<0.005	<0.01	<0.0002
Anal. Method:	200.7	200.7	245.1
Prep. Method:	EPA 600	EPA 600	245.1
Analysis Date:	23-JUN-95	23-JUN-95	29-JUN-95
Prep. Date:	23-JUN-95	23-JUN-95	29-JUN-95

Sample Duplication

Sample Dup:	506534-9	506534-9	506534-1
Rept Limit:	<0.005	<0.01	<0.0002
Sample Result:	2.0	2.0	0.0048
Dup Result:	2.0	2.0	0.0046
Sample RPD:	0	0	4
Max RPD:	20	20	20
Dry Weight%	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	506534-9	506534-9	506534-1
Rept Limit:	<0.005	<0.01	<0.0002
Sample Result:	<0.005	<0.01	<0.0002
Spiked Result:	2.0	2.0	0.0048
Spike Added:	2.0	2.0	0.0050
% Recovery:	100	100	96
% Rec Limits:	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A

ICV

ICV Result:	4.8	4.7	0.0042
True Result:	5.0	5.0	0.0040
% Recovery:	96	94	105
% Rec Limits:	90-110	90-110	80-120

LCS

LCS Result:	2.0	2.0	0.0048
True Result:	2.0	2.0	0.0050
% Recovery:	100	100	96
% Rec Limits:	80-120	80-120	80-120

Acceptable
SP

7/10/95



Batch Id:

Comments:

COW143	ANALYST: JR
COW143	The results reported under "Sample Duplication" are the MS/MSD.
HOW143	ANALYST: JR
HOW143	The results reported under "Sample Duplication" are the MS/MSD.
M2W076	ANALYST: GJ
M2W076	The results reported under "Sample Duplication" are the MS/MSD.

----- Common Footnotes Metals -----

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.

JP = JAY PEREZ	JRR = JOHN R. ROWE
GJ = GARY JACOBS	JR = JOHN REED
JLH = JAMES L. HERED	SL = STEPHANIE LOWRY
CD = CHRISTY DRAPER	

NETWORK PROJECT MANAGER: TETHIA-KRAKOWSKI	
COMPANY: Analytical Technologies, Inc.	
ADDRESS: 2709-D Pan American Freeway, NE Albuquerque, NM 87107	
CLIENT PROJECT MANAGER: Kim McNeil	
SAMPLE ID	DATE
5016375 - 01	6/14
-02	6/15
-03	6/15
-04	6/15
-05	6/18
-06	6/18
-07	6/18
-08	6/18
-09	6/17

ANALYSIS REQUEST	
TOX	
TOC	
ORGANIC LEAD	
SULFIDE	
SURFACTANTS (MSAS)	
632/632 MOD	
619/619 MOD	
610/8310	
8240 (TCLP 1311) ZHE	
Diesel/Gasoline/BTXE/MTBE/ (MOD 8015/8020)	
Volatile Organics GC/MS (624/8240)	
NACE	
ASBESTOS	
800	
TOTAL COLIFORM	
FECAL COLIFORM	
CROSS ALPHABETA	

PROJECT INFORMATION	
PROJECT NUMBER: 5016375	
PROJECT NAME: EPN	
QC LEVEL: STD IV	
QC REQUIRED: 2MS MSD BLANK	
TAT: STANDARD RUSH	
DUE DATE: 6/30	
RUSH SURCHARGE: 0	
CLIENT DISCOUNT: 15 %	

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS	
INTACT?	
RECEIVED BY: (LAB)	
Signature: [Signature]	
Printed Name: [Name]	
Date: [Date]	
Company: [Company]	

PROJECT MANAGER: *JEHAN BAHY EDDAL*

COMPANY: *EC PROS INDUSTRIAL GROUP CO.*

ADDRESS: *P.O. Box 4990*

PHONE: *FRANKFURT AMN 87499*

FAX: *505-599-2144*
505-599-2267

BILL TO: *Sample A.S. 11/20/85*

COMPANY:

ADDRESS:

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)
(MOD 8015) Gas/Diesel
Diesel/Gasoline/STX/E-MTBE (MOD 8015/8020)
STX/E-MTBE (8020)
Chlorinated Hydrocarbons (601/8010
Aromatic Hydrocarbons (602/8020)
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.
Pesticides/PCB (606 3080)
Herbicides (615/815)
Base/Neutral/Acid Compounds GC/MS (625/8270)
Volatile 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

PROJECT INFORMATION

PROJ. NO.:	NO. CONTAINERS
PROJ. NAME:	CUSTOMY SEAL S
P.O. NO.:	RECEIVED INTACT
SHIPPED VIA:	RECEIVED COLD

PROJ. NO. *CHS-03*
 PROJ. NAME: *DET. M.W.*
 P.O. NO. *ALP BERRY*
 SHIPPED VIA: *ALP BERRY*

AMPLE EFFECT

NO. CONTAINERS	7
CUSTODY SEALS	YCP/NA
RECEIVED IN/ACT	
RECEIVED COLD	

PREVIOUS AUTHORIZATION IS REQUIRED FOR FURTHER PROJECTS

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

Comments: 95B011071-0007-0113
CHARGE TO: SEND RESULTS TO JOHN LAMBORN
AT THE ABOVE ADDRESS.

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 487-2222

44) 474-1001 • Portland (503) 684-0147 • Albuquerque (505) 344-3777

DISTRIBUTION: White. Canary: AM • P



AVAILABLE.

CHAIN OF CUSTODY
DATE: 6-14-95 PAGE 1 OF 1

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

PROJECT MANAGER:	JOHN CAMPBELL
COMPANY:	SCRIPSO NATIONAL GAS CO.
ADDRESS:	P.O. Box 4990 Farmington, N.M. 87499
PHONE:	505-599-2144
FAX:	505-599-2261
BILL TO:	Same AS ABOVE
COMPANY:	
ADDRESS:	

STATE OF TEXAS

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
950666	6/4/95	1406	WATER	01
950667	6/4/95	1445	WATER	02
950668	6/4/95	1445	WATER	03
950669	6/4/95	1503	WATER	04
950670	6/4/95	1518	WATER	05
950671	6/4/95	1535	WATER	06
950672	6/4/95	1634	WATER	07
950673	6/4/95	1810	WATER	08
950674	6/4/95	1817	WATER	09

PROJECT INFORMATION

PROJ. NO.:		SAMPLE RECEIPT
PROJ. NAME:	CHASO RET. M.W.	NO. CONTAINERS 9
P.O. NO.:		CUSTODY SEALS Y D / NA
SHIPPED VIA:	AIR BORNE	RECEIVED INTACT ☒
		RECEIVED COLD ☒

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: CHARGE TO: 95B011071-1007-0113
SEND RESULTS TO JOHN LAMBORN
AT THE ABOVE ADDRESS.

ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 487-2222

ANALYSIS REQUEST

[illegible]

SAMPLED & BELINGLISHED BY: 4 BELINGLISHED BY:

SAMPLED & RELINQUISHED BY:		RELINQUISHED BY:	
Signature: <i>Deanna's Bird</i>	Time: 1745	Signature:	Time:
Printed Name: <i>DEANNA'S BIRD</i>	Date: 6-14-95	Printed Name:	Date:
Company: <i>5511 PAWS</i>	Phone: <i>533-2242</i>	Company:	Phone:

RECEIVED BY: 1. RECEIVED BY:

Signature:	Time:	Signature:	Time:
Printed Name:	Date:	Printed Name:	Date:
Company:		Company:	

Albuquerque (505) 344-3777 • Portland (503) 684-0447 • Albuquerque (505) 344-3777

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

July 17, 1995

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

COPY

Project Name/Number: CHACO S. COND. POND

Attention: John Lambdin

On 06/16/95, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze 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.

EPA method 8310 and 8080 (PCB only) analyses were performed by Analytical Technologies, Inc., 225 Commerce Drive, Fort Collins, CO.

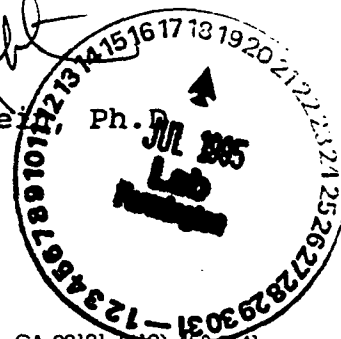
EPA method 601/602, 504.1 and 150.1 (pH) analyses were performed by Analytical Technologies, Inc., Albuquerque, NM.

All other analyses were performed by Analytical Technologies, Inc., 9830 S. 51st Street, Suite B-113, Phoenix, AZ.

WQCC metals analyses were added on 06/16/95 for sample "950675" per John Lambdin.

Priority Pollutant Metals analyses were cancelled on 06/16/95 for sample "950675" per John Lambdin.

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

Kimberly D. McNeill
Project ManagerH. Mitchell Rubenstein
Laboratory Manager

MR:jt

Enclosure

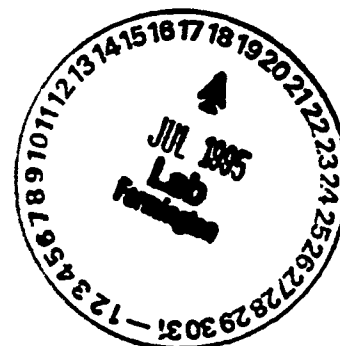
CLIENT : EL PASO NATURAL GAS CO.
PROJECT # : (NONE)
PROJECT NAME : CHACO S. COND. POND

DATE RECEIVED : 06/16/95

REPORT DATE : 07/17/95

ATI ID: 506374

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	950675	AQUEOUS	06/14/95
02	TRIP BLANK	AQUEOUS	06/09/95



---TOTALS---

<u>MATRIX</u>	<u>#SAMPLES</u>
AQUEOUS	2

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.

GENERAL CHEMISTRY RESULTS

CLIENT : EL PASO NATURAL GAS CO. ATI I.D. : 506374
PROJECT # : (NONE) DATE RECEIVED : 06/16/95
PROJECT NAME : CHACO S. COND. POND DATE ANALYZED : 06/16/95

PARAMETER	UNITS	01
PH (150.1)	UNITS	9.20

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : EL PASO NATURAL GAS CO. ATI I.D. : 506374
 PROJECT # : (NONE) SAMPLE MATRIX : AQUEOUS
 PROJECT NAME : CHACO S. COND. POND

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC.	% REC
PH	UNITS	50637401	9.20	9.20	0	NA	NA	NA

OK.
 JF
 7/18/95

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

ATL I.D. : 506834

CLIENT : ANALYTICAL TECHNOLOGIES, INC-NM
PROJECT # : 506374
PROJECT NAME : EPNG

DATE RECEIVED : 06/16/95

REPORT DATE : 07/17/95

PARAMETER	UNITS	01
CHLORIDE (EPA 325.2)	MG/L	77
CYANIDE, TOTAL (EPA 335.3)	MG/L	<0.01
FLUORIDE (EPA 340.2)	MG/L	0.07
NITRATE AS N (EPA 353.2)	MG/L	2.7
PHENOLICS, TOTAL (EPA 420.1)	MG/L	0.27
SULFATE (EPA 375.2)	MG/L	6
T. DISSOLVED SOLIDS (160.1)	MG/L	160

ANALYTICAL TECHNOLOGIES, INC. NM

TEST # : 506374
 SITE NAME : KPNG

ATI I.D. : 506834

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PHOSPHATE	MG/L	50687403	72	72	0	175	100	103
PHOSPHATE, TOTAL	MG/L	50649915	<0.01	<0.01	NA	0.27	0.25	108
PHOSPHATE	MG/L	50683401	0.07	0.07	0	0.24	0.20	85
PHOSPHATE AS NITROGEN	MG/L	50670602	0.58	0.58	0	2.55	2.00	98
PHOSPHATE, TOTAL	MG/L	50749901	<0.005	<0.005	NA	0.025	0.025	100
PHOSPHATE	MG/L	50687403	70	71	1	106	40	90
DISSOLVED SOLIDS	MG/L	50687403	610	600	2	NA	NA	NA

Handwritten:
 7/18/95

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{Relative Percent Difference} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

ATT. I.D. : 506834

CLIENT : ANALYTICAL TECHNOLOGIES, INC-NM
 PROJECT # : 506374
 PROJECT NAME : EPNG

DATE RECEIVED : 06/16/95

REPORT DATE : 07/17/95

PARAMETER	UNITS	01
SILVER (EPA 200.7/6010)	MG/L	<0.010
ALUMINUM (EPA 200.7/6010)	MG/L	0.281
ARSENIC (EPA 206.2/7060)	MG/L	<0.003
BORON (EPA 200.7/6010)	MG/L	0.28
BARIUM (EPA 200.7/6010)	MG/L	0.268
CADMIUM (EPA 213.2/7131)	MG/L	<0.0005
COBALT (EPA 200.7/6010)	MG/L	<0.010
CHROMIUM (EPA 200.7/6010)	MG/L	<0.010
COPPER (EPA 200.7/6010)	MG/L	0.109
IRON (EPA 200.7/6010)	MG/L	5.43
MERCURY (EPA 245.1/7470)	MG/L	0.0046
MANGANESE (EPA 200.7/6010)	MG/L	0.080
MOLYBDENUM (EPA 200.7/6010)	MG/L	<0.02
NICKEL (EPA 200.7/6010)	MG/L	<0.020
LEAD (EPA 239.2/7421)	MG/L	0.005
SELENIUM (EPA 270.2/7740)	MG/L	<0.005
ZINC (EPA 200.7/6010)	MG/L	0.165

CLIENT : ANALYTICAL TECHNOLOGIES, INC.-NM
 PROJECT # : 5068374
 PROJECT NAME : EPNG

ATT I.D. : 506834

PARAMETER	UNITS	ATT I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
SILVER	MG/L	50683401	<0.010	<0.010	NA	0.386	0.400	96
ALUMINUM	MG/L	50683401	0.28	0.28	0	1.24	1.00	96
ARSENIC	MG/L	50681201	<0.003	<0.003	NA	0.052	0.050	104
BORON	MG/L	50690201	0.24	0.23	4	1.21	1.00	97
BARIUM	MG/L	50683401	0.268	0.271	1	1.22	1.00	95
CADMIUM	MG/L	50687403	<0.0005	<0.0005	NA	0.0046	0.0050	92
COBALT	MG/L	50683401	<0.010	<0.010	NA	1.01	1.00	101
CHROMIUM	MG/L	50683401	<0.010	<0.010	NA	0.975	1.00	98
COPPER	MG/L	50683401	0.109	0.107	2	1.08	1.00	97
IRON	MG/L	50683401	5.43	5.50	1	6.55	1.00	112
MERCURY	MG/L	50681401	<0.0002	<0.0002	NA	0.0047	0.0050	94
MANGANESE	MG/L	50683401	0.080	0.080	0	1.06	1.00	98
MOLYBDENUM	MG/L	50683401	<0.02	<0.02	NA	0.97	1.00	97
NICKEL	MG/L	50683401	<0.020	<0.020	NA	0.981	1.00	98
LEAD	MG/L	50687403	<0.002	<0.002	NA	0.044	0.050	88
SELENIUM	MG/L	50681201	<0.005	<0.005	NA	0.045	0.050	90
ZINC	MG/L	50683401	0.165	0.165	0	1.18	1.00	102

Accepted
7/15/95

% Recovery = (Spike Sample Result - Sample Result)
 ----- X 100
 Spike Concentration

RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)
 ----- X 100
 Average Result

GAS CHROMATOGRAPHY RESULTS

TEST : ETHYLENE DIBROMIDE (EPA METHOD 504.1)
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 506374
 PROJECT # : (NONE)
 PROJECT NAME : CHACO S. COND. POND

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	950675	AQUEOUS	06/14/95	06/21/95	06/21/95	1
PARAMETER		UNITS	01			
ETHYLENE DIBROMIDE		UG/L	0.04			

SURROGATE:

1,4-DICHLOROBENZENE (%) 112

GAS CHROMATOGRAPHY RESULTS

REAGENT BLANK

TEST : ETHYLENE DIBROMIDE (EPA METHOD 504.1)
BLANK I.D. : 062195 ATI I.D. : 506374
CLIENT : EL PASO NATURAL GAS CO. MATRIX : AQUEOUS
PROJECT # : (NONE) DATE EXTRACTED : 06/21/95
PROJECT NAME : CHACO S. COND. POND DATE ANALYZED : 06/22/95
DILUTION FACTOR : 1

PARAMETER	UNITS
ETHYLENE DIBROMIDE	UG/L <0.01

SURROGATE:

1,4-DICHLOROBENZENE (%) 105

OK-
2/15/95

MSMSD

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
ETHYLENE DIBROMIDE	<0.01	0.25	0.24	96	0.21	84	13

OK
2/18/95

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

GAS CHROMATOGRAPHY RESULTS

TEST : PURGEABLE HALOCARBONS/AROMATICS (EPA 601/602)
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 506374
 PROJECT # : (NONE)
 PROJECT NAME : CHACO S. COND. POND

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	950675	AQUEOUS	06/14/95	NA	06/20/95	100
02	TRIP BLANK	AQUEOUS	06/09/95	NA	06/20/95	1

PARAMETER	UNITS	01	02
BENZENE	UG/L	2600	<0.5
BROMODICHLOROMETHANE	UG/L	<20	<0.2
BROMOFORM	UG/L	<50	<0.5
BROMOMETHANE	UG/L	<100	<1.0
CARBON TETRACHLORIDE	UG/L	<20	<0.2
CHLOROBENZENE	UG/L	<50	<0.5
CHLOROETHANE	UG/L	<50	<0.5
CHLOROFORM	UG/L	<50	<0.5
CHLOROMETHANE	UG/L	<100	<1.0
DIBROMOCHLOROMETHANE	UG/L	<20	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<20	<0.2
1,2-DICHLOROBENZENE	UG/L	<50	<0.5
1,3-DICHLOROBENZENE	UG/L	<50	<0.5
1,4-DICHLOROBENZENE	UG/L	<50	<0.5
1,1-DICHLOROETHANE	UG/L	<20	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<50	<0.5
1,1-DICHLOROETHENE	UG/L	<20	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<20	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<100	<1.0
1,2-DICHLOROPROPANE	UG/L	<20	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<20	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<20	<0.2
ETHYLBENZENE	UG/L	<50	<0.5
METHYL-t-BUTYL ETHER	UG/L	<250	<2.5
METHYLENE CHLORIDE	UG/L	<200	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<20	<0.2
TETRACHLOROETHENE	UG/L	<50	<0.5
TOLUENE	UG/L	1900	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<100	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<20	<0.2
TRICHLOROETHENE	UG/L	<20	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<20	<0.2
VINYL CHLORIDE	UG/L	<50	<0.5
TOTAL XYLENES	UG/L	390	<0.5

SURROGATES:

BROMOCHLOROMETHANE (%)	98	103
TRIFLUOROTOLUENE (%)	96	100



GAS CHROMATOGRAPHY RESULTS - QUALITY CONTROL

REAGENT BLANK

TEST	: EPA 601/602	ATI I.D.	: 506374
BLANK I.D.	: 062095	MATRIX	: AQUEOUS
CLIENT	: EL PASO NATURAL GAS CO.	DATE EXTRACTED	: NA
PROJECT #	: (NONE)	DATE ANALYZED	: 06/20/95
PROJECT NAME	: CHACO S. COND. POND	DIL. FACTOR	: 1

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
BROMODICHLOROMETHANE	UG/L	<0.2
BROMOFORM	UG/L	<0.5
BROMOMETHANE	UG/L	<1.0
CARBON TETRACHLORIDE	UG/L	<0.2
CHLOROBENZENE	UG/L	<0.5
CHLOROETHANE	UG/L	<0.5
CHLOROFORM	UG/L	<0.5
CHLOROMETHANE	UG/L	<1.0
DIBROMOCHLOROMETHANE	UG/L	<0.2
1,2-DIBROMOETHANE (EDB)	UG/L	<0.2
1,2-DICHLOROBENZENE	UG/L	<0.5
1,3-DICHLOROBENZENE	UG/L	<0.5
1,4-DICHLOROBENZENE	UG/L	<0.5
1,1-DICHLOROETHANE	UG/L	<0.2
1,2-DICHLOROETHANE (EDC)	UG/L	<0.5
1,1-DICHLOROETHENE	UG/L	<0.2
CIS-1,2-DICHLOROETHENE	UG/L	<0.2
TRANS-1,2-DICHLOROETHENE	UG/L	<1.0
1,2-DICHLOROPROPANE	UG/L	<0.2
CIS-1,3-DICHLOROPROPENE	UG/L	<0.2
TRANS-1,3-DICHLOROPROPENE	UG/L	<0.2
ETHYLBENZENE	UG/L	<0.5
METHYL-t-BUTYL ETHER	UG/L	<2.5
METHYLENE CHLORIDE	UG/L	<2.0
1,1,2,2-TETRACHLOROETHANE	UG/L	<0.2
TETRACHLOROETHENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
1,1,1-TRICHLOROETHANE	UG/L	<1.0
1,1,2-TRICHLOROETHANE	UG/L	<0.2
TRICHLOROETHENE	UG/L	<0.2
TRICHLOROFLUOROMETHANE	UG/L	<0.2
VINYL CHLORIDE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5

SURROGATES:

BROMOCHLOROMETHANE (%)	91
TRIFLUOROTOLUENE (%)	94

88
7/18/95

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST : PURGEABLE HALOCARBONS/AROMATICS (EPA 601/602)
 MSMSD # : 50637901 ATI I.D. : 506374
 CLIENT : EL PASO NATURAL GAS CO. DATE EXTRACTED : NA
 PROJECT # : (NONE) DATE ANALYZED : 06/20/95
 PROJECT NAME : CHACO S. COND. POND SAMPLE MATRIX : AQUEOUS
 REF. I.D. : 50637901 UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
BENZENE	<0.5	10	11	110	10	100	10
CHLOROBENZENE	<0.5	10	11	110	10	100	10
1,1-DICHLOROETHENE	<0.2	10	8.2	82	7.8	78	5
TOLUENE	<0.5	10	12	120	11	110	9
TRICHLOROETHENE	<0.2	10	12	120	11	110	9

Handwritten signature and date: 7/15/96

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Analytical Technologies, Inc.

Sample ID

Lab Name: Analytical Technologies Inc.

Client Name: ATI-NM

Client Project ID: EPN -- 506374

Lab Sample ID: 95-06-155-01

950675

Date Collected: 06/14/95

Date Extracted: 06/21/95

Date Analyzed: 07/01/95

Sample Matrix: Water

Cleanup: Acid

Sample Volume: 1000 mL

Final Volume: 10 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Aroclor 1016	ND	0.5
Aroclor 1221	ND	0.5
Aroclor 1232	ND	0.5
Aroclor 1242	ND	0.50
Aroclor 1248	ND	0.50
Aroclor 1254	ND	0.50
Aroclor 1260	ND	0.50

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	48	43 - 124

ND = Not Detected



Sample ID

Lab Name: Analytical Technologies Inc.

Client Name: ATI-NM

Client Project ID: EPN -- 506374

Lab Sample ID: WRB1 06/21/95

Sample Matrix: Water

Cleanup: Acid

Reagent Blank

Date Collected: N/A

Date Extracted: 06/21/95

Date Analyzed: 07/01/95

Sample Volume: 1000 mL

Final Volume: 10 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Aroclor 1216	ND	0.50
Aroclor 1221	ND	0.50
Aroclor 1232	ND	0.50
Aroclor 1242	ND	0.50
Aroclor 1248	ND	0.50
Aroclor 1254	ND	0.50
Aroclor 1260	ND	0.50

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	96	43 - 124

ND = Not Detected

C. J.
7/1/95



Analytical Technologies, Inc.

Sample

Lab Name: Analytical Technologies, Inc.

950675

Client Name: ATI-NM

Client Project ID: EPN -- 506374

Date Extracted: 06/21/95

Date Analyzed: 07/01/95

Lab Sample ID: 95-06-155-01

GC Column: DB-1701

Sample Matrix: Water

Analyte	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS Percent Recovery	QC Limits % Rec
Aroclor 1260	15	ND	8.60	57	50-150

Analyte	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD Percent Recovery	RPD	QC Limits RPD
Aroclor 1260	15	8.65	58	0.6	20

SURROGATE RECOVERY MS/MSD

Analyte	% Recovery (MS)	% Recovery (MSD)	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	52	51	43 - 124

ND = Not Detected

Chk
 RP
 7/15/95



Analytical Technologies, Inc.

Lab Name: Analytical Technologies, Inc.

Lab Sample ID: WBS1

Client Name: ATI-NM

Date Extracted: 06/21/95

Client Project ID: EPN -- 506374

Date Analyzed: 07/01/95

Sample Matrix: Water

GC Column: DB-17

Analyte	Spike Added (ug/L)	BS Concentration (ug/L)	BS Percent Recovery	QC Limits % Rec
Aroclor 1260	15.0	14.7	98	50-150

Analyte	Spike Added (ug/L)	BSD Concentration (ug/L)	BSD Percent Recovery	RPD	QC Limits RPD
Aroclor 1260	15.0	14.7	98	10	20

SURROGATE RECOVERY BS/BSD

Analyte	% Recovery (BS)	% Recovery (BSD)	% Rec Limits
2,4,5,6-Tetrachloro-m-xylene	102	104	43 - 124

OK
2/18/95



Analytical Technologies, Inc.

Lab Name: Analytical Technologies Inc.

Client Name: ATI - NM

Client Project ID: EPN -- 506374

Lab Sample ID: 95-06-155-01

Sample Matrix: Water

Cleanup: N/A

Sample ID

950675

Date Collected: 6/14/95

Date Extracted: 6/21/95

Date Analyzed: 6/28/95

Sample Volume: 1000 mL

Final Volume: 100 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	71	30
Acenaphthylene	ND	30
1-Methylnaphthalene	ND	30
2-Methylnaphthalene	380	30
Acenaphthene	ND	50
Fluorene	8.1	4.0
Phenanthrene	ND	3.0
Anthracene	ND	1.0
Fluoranthene	ND	3.0
Pyrene	ND	4.0
Benzo(a)anthracene	ND	1.0
Chrysene	ND	2.0
Benzo(b)fluoranthene	ND	1.0
Benzo(k)fluoranthene	ND	1.0
Benzo(a)pyrene	ND	1.0
Dibenzo(a,h)anthracene	ND	3.0
Benzo(g,h,i)perylene	ND	4.0
Indeno(1,2,3-c,d)pyrene	ND	3.0

SURROGATE RECOVERY

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

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

I = Surrogate not recovered due to sample dilution



Analytical Technologies Inc.

Lab Name: Analytical Technologies Inc.

Client Name: ATI - NM

Client Project ID: EPN -- 506374

Lab Sample ID: WRB1 6/21/95

Sample Matrix: Water

Cleanup: N/A

Sample ID

Reagent Blank

Date Collected: N/A

Date Extracted: 6/21/95

Date Analyzed: 6/28/95

Sample Volume: 1000 mL

Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.30
Acenaphthylene	ND	0.30
1-Methylnaphthalene	ND	0.30
2-Methylnaphthalene	ND	0.30
Acenaphthene	ND	0.50
Fluorene	ND	0.040
Phenanthrene	ND	0.030
Anthracene	ND	0.010
Fluoranthene	ND	0.030
Pyrene	ND	0.040
Benzo(a)anthracene	ND	0.010
Chrysene	ND	0.020
Benzo(b)fluoranthene	ND	0.010
Benzo(k)fluoranthene	ND	0.010
Benzo(a)pyrene	ND	0.010
Dibenzo(a,h)anthracene	ND	0.030
Benzo(g,h,i)perylene	ND	0.040
Indeno(1,2,3-c,d)pyrene	ND	0.030

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	77	15 - 117

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

GK
7/10/95



Lab Name: Analytical Technologies Inc.

Lab Sample ID: WBS1,2 6/21/95

Client Name: ATI - NM

Date Extracted: 6/21/95

Client Project ID: EPN -- 506374

Date Analyzed: 6/28/95

Sample Matrix: Water

Sample Volume: 1000 mL

Final Volume: 1 mL

Analyte	Spike Added (ug/kg)	BS Concentration (ug/kg)	BS Percent Recovery	QC Limits % Rec
Acenaphthylene	10.0	4.03	40	23 - 122
Phenanthrene	1.00	0.676	68	34 - 112
Pyrene	1.00	0.679	68	35 - 116
Dibenzo(a,h)anthracene	1.00	0.700	70	35 - 123
Benzo(k)fluoranthene	0.250	0.175	70	39 - 119

Analyte	Spike Added (ug/kg)	BSD Concentration (ug/kg)	BSD Percent Recovery	RPD	QC Limits RPD
Acenaphthylene	10.0	4.46	45	10	20
Phenanthrene	1.00	0.747	75	10	20
Pyrene	1.00	0.676	68	0	20
Dibenzo(a,h)anthracene	1.00	0.711	71	2	20
Benzo(k)fluoranthene	0.250	0.173	69	1	20

SURROGATE RECOVERY BS/BSD

Analyte	% Recovery(BS)	% Recovery(BSD)	% Rec Limits
2-Chloroanthracene	75	77	15 - 117

ND = Not Detected

O.K.
7/18/95

CHAIN OF CUSTODY

DATE: 6-14-95 PAGE 1 OF 1

ATI LAB I.D. 506374

PROJECT MANAGER: JOHN LAMON

COMPANY: EL PASO NATURAL GAS CO.

ADDRESS: P.O. BOX 4990

PHONE: 505-597-2144

FAX: 505-597-2261

BILL TO: SAME AS ABOVE

COMPANY: _____

ADDRESS: _____

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
950575	6-14-95	1630	WATER	01
Trip Blank	9/9	-	WATER	02

ANALYSIS REQUEST		SAMPLED & RELINQUISHED BY: 1.		RELINQUISHED BY: 2.		RELINQUISHED BY: 3.	
Petroleum Hydrocarbons (418.1)		Signature: <u>John Lam</u>	Time: <u>1730</u>	Signature: _____	Time: _____	Signature: _____	Time: _____
(MOD 8015) Gas/Diesel		Printed Name: <u>JOHN LAMON</u>	Date: <u>6-14-95</u>	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)		Company: <u>EL PASO NATURAL GAS</u>	Phone: <u>505-597-2261</u>	Company: _____	Phone: _____	Company: _____	Phone: _____
BTXE/MTBE (8020)		Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____
WQCC 103 A+B+C		Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
(ATTACHED)		Company: _____	Phone: _____	Company: _____	Phone: _____	Company: _____	Phone: _____
Chlorinated Hydrocarbons (601/8010)		Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____
Aromatic Hydrocarbons (502/8020)		Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.		Company: _____	Phone: _____	Company: _____	Phone: _____	Company: _____	Phone: _____
F, N, Cl, SO ₄ , TDS, CN		Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____
Pesticides (PCB 508/8080)		Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
Herbicides (615/8150)		Company: _____	Phone: _____	Company: _____	Phone: _____	Company: _____	Phone: _____
Base/Neutral/Acid Compounds GC/MS (625/8270)		Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____
Volatile Organics GC/MS (624/8240)		Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
Polynuclear Aromatics (617/8310)		Company: _____	Phone: _____	Company: _____	Phone: _____	Company: _____	Phone: _____
As, Pb, Cd, Cr, Pb, Hg, Se, Ag		Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____
SDWA Primary Standards - Arizona		Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
SDWA Secondary Standards - Federal		Company: _____	Phone: _____	Company: _____	Phone: _____	Company: _____	Phone: _____
SDWA Primary Standards - Federal		Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____
SDWA Secondary Standards - Federal		Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
AI, B, CC, MD, NI, CU, Fe, Mn		Company: _____	Phone: _____	Company: _____	Phone: _____	Company: _____	Phone: _____
GENERAL CHEMISTRY		Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____
The 13 Priority Pollutant Metals		Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
RCRA Metals by Total Digestion		Company: _____	Phone: _____	Company: _____	Phone: _____	Company: _____	Phone: _____
RCRA Metals by TCLP (1311)		Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____

PROJECT INFORMATION

PROJ. NO.: 10

PROJ. NAME: CHARLES S. CANO PARK

P.O. NO.: Y N NA

SHIPPED VIA: AIR BOONE

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

Comments: CHARGE TO: 75B011071-0007-0113

SEND RESULTS TO JOHN LAMON

AT THE ABOVE ADDRESS

RECEIVED BY: 1. Signature: _____ Time: _____

RECEIVED BY: 2. Signature: _____ Time: _____

RECEIVED BY: 3. Signature: _____ Time: _____

Signature: John Lam Time: 1730

Printed Name: JOHN LAMON Date: 6-14-95

Company: EL PASO NATURAL GAS Phone: 505-597-2261

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____ Phone: _____

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____ Phone: _____

CHAIN OF CUSTODY

DATE: 6-14-95 PAGE 1 OF 1

ATI LAB I.D.

506834

PROJECT MANAGER: JOHN LAMBOIN

COMPANY: EL PASO NATURAL GAS CO.

ADDRESS: PO BOX 4990

PHONE: FARMINGTON N.M. 87499

FAX: 505-599-2144

505-599-2261

BILL TO: SAME AS ABOVE

COMPANY:

ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
950675	6-14-95	1:30	WATER	1

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1)	(MOD 8015) Gas/Diesel	Diesel/Gasoline/BTXE/MTBE (MCD 8015/8020)	BTXE/MTBE (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/Neutr/Acid Compounds GC/MS (625/8270)	Volatile 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	X	MITRATE	The 13 Priority Pollutant Metals	RCRA Metals by Total Digestion	RCRA Metals TCLP (1311)
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PROJECT INFORMATION

PROJ. NO.: 1

PROJ. NAME: CHACO S. CANA PAVO

NO. CONTAINERS: YIN (NA)

CUSTODY SEALS: Y

RECEIVED INTACT: Y

REMARKS: blue

PREPARED BY: FCB-EL

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

RUSH ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒ 12 WEEK

Comments: CHARGE TO: 958011071-0007-0113

SEND RESULTS TO JOHN LAMBOIN

AT THE ABOVE ADDRESS

SAMPLED & RELINQUISHED BY: 1. Signature: [Signature] Time: 1:35

Printed Name: DENNIS BIRD Date: 6-14-95

Company: EL PASO NATURAL GAS

2. RELINQUISHED BY: Signature: [Signature] Time: [Blank]

Printed Name: [Blank] Date: [Blank]

Company: [Blank]

3. RECEIVED BY: (LAB) Signature: [Signature] Time: 10:17

Printed Name: [Signature] Date: 6/16/95

Company: Analytical Technologies, Inc.

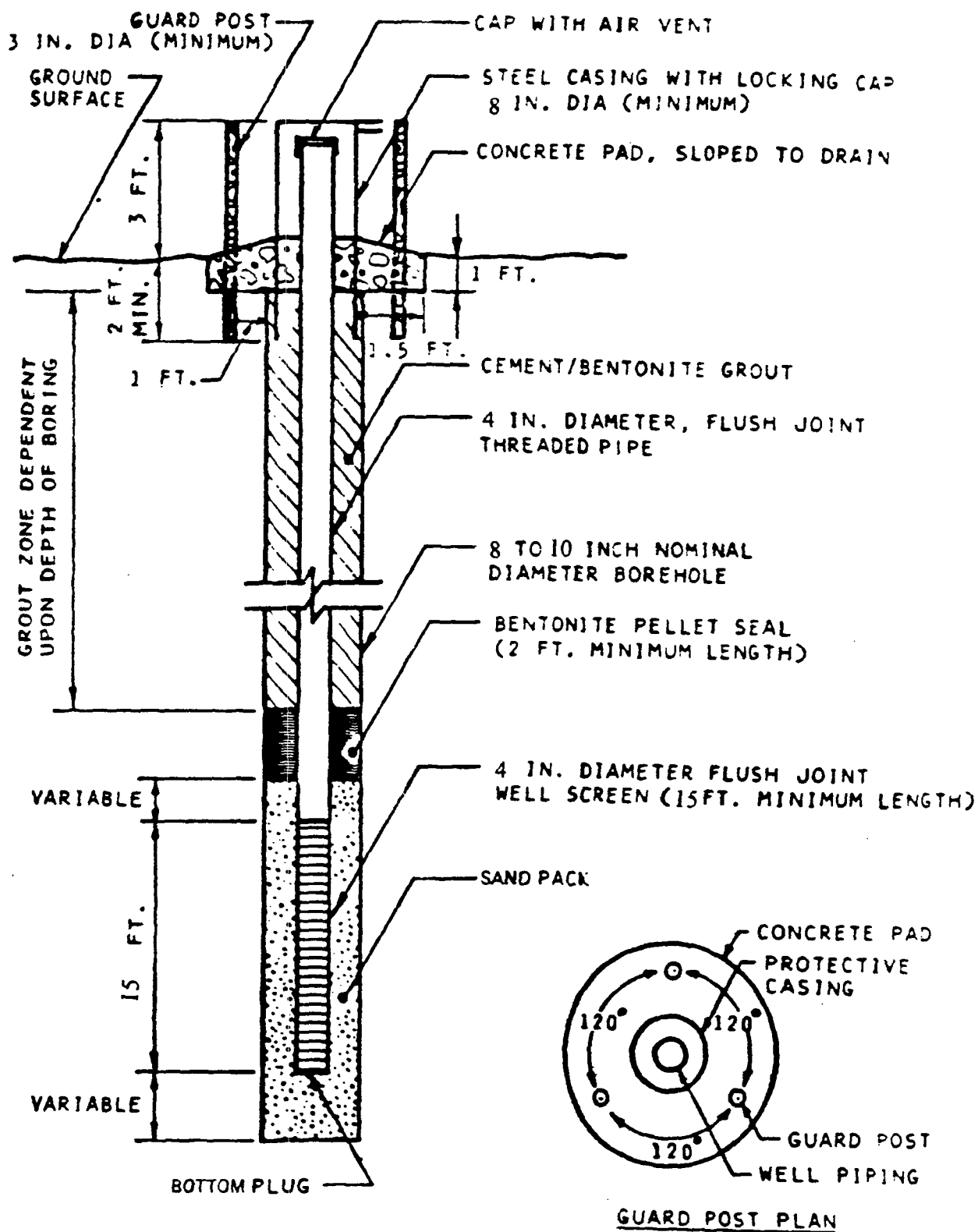
Chain of Custody

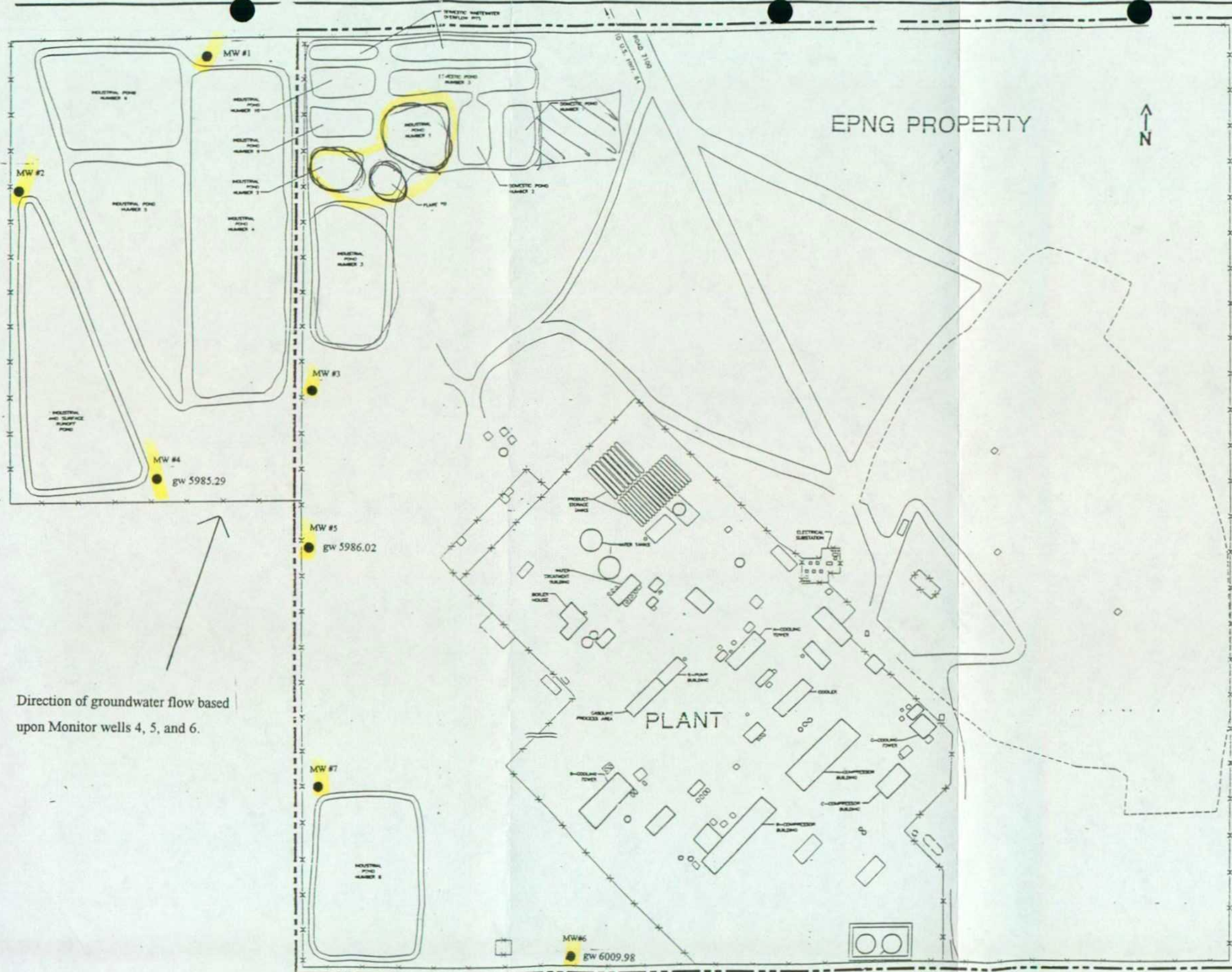
[illegible]

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





Direction of groundwater flow based upon Monitor wells 4, 5, and 6.