

GW - 71-0

MONITORING REPORTS

DATE:

2005



Enterprise Products

2006 APR 10 PM 1 49
P.O. Box 4324 Houston, Texas 77210-4324 713.880.6500
2727 North Loop West Houston, Texas 77008-1044 www.epplp.com
5 April 2006

Return Receipt Requested
70051820000655460478

Mr. Ed Martin
New Mexico Oil Conservation Division
1220 S. Saint Francis
Santa Fe, NM 87505

**RE: Enterprise Field Services, LLC Chaco Gas Plant
NMOCD Discharge Plan Number GW-071
Groundwater Monitoring Well Annual Testing Report**

Dear Mr. Martin:

Please find enclosed reports on the following monitoring wells and waste water streams at the Enterprise Field Services Co. (EFS) Chaco Plant. These results are summarized on the attached tables.

Semi-Annual analyses for monitoring wells 1 and 8.
Quarterly analyses for monitoring wells 9 and 10.

If you need additional information, please call me at (713) 880-6629.

Yours truly,

Douglas M. Jordan
Environmental Manager-Midstream Systems

/sjn

cc: Denny Foust - NMOCD - Aztec
Chaco Plant Environmental File
Troy Chamberlain - Enterprise - Farmington
Chaco Regulatory File - Farmington

Chaco Plant Groundwater Monitoring Well Results 2005

All Results Expressed as Micrograms/Liter (ppb)

Monitoring Well 1 (semi-annual)	3/31/05		9/30/05	
Benzene	ND		ND	
Toluene	ND		ND	
Ethyl Benzene	ND		ND	
Xylenes	ND		ND	
Cadmium	ND		ND	
Chromium	ND		ND	
Mercury	ND		ND	
Total Naphthalenes	ND		ND	
Total Benzopyrenes	ND		ND	
Monitoring Well 8 (semi-annual)	3/31/05		9/30/05	
Benzene	ND		ND	
Toluene	ND		ND	
Ethyl Benzene	ND		ND	
Xylenes	ND		ND	
Cadmium	ND		ND	
Chromium	ND		ND	
Mercury	ND		ND	
Total Naphthalenes	ND		ND	
Total Benzopyrenes	ND		ND	
Monitoring Well 9 (quarterly)	3/31/05	7/08/05	9/30/05	12/20/2005
Benzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
Ethyl Benzene	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND
Monitoring Well 10 (quarterly)	3/31/05	7/08/05	9/30/05	12/20/2005
Benzene	ND	ND	2.0	ND
Toluene	ND	ND	ND	ND
Ethyl Benzene	9.3	10	9.1	7.4
Xylenes	15	16	17	8.9

ND = None Detected

Chaco Plant Groundwater Monitoring Well Results 2005

All Results Expressed as Milligrams/Liter (ppm)

pH Expressed in Standard Units (0 - 14 Scale)

Conductivity Expressed as Micromhos/Centimeter

All samples listed on this table were collected on 6/16/2005

Test	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7
pH	7.31	7.43	6.99	6.89	7.85	7.45
Alkalinity - CO ₃	280	280	370	150	550	350
Alkalinity - HCO ₃	NS	NS	NS	NS	NS	NS
Calcium	210	530	350	500	85	270
Magnesium	47	55	55	83	12	44
Total Hardness	730	1400	1100	1600	260	820
Chloride	52	62	120	240	100	140
Sulfate as SO ₄	1200	870	2200	2600	1000	1400
Fluoride	1.8	0.72	1.5	0.54	5.6	2.4
Nitrate as NO ₃	ND	ND	0.56	1.0	3.6	ND
Nitrate as NO ₂	NS	NS	NS	NS	NS	NS
Ammonia as N	NS	NS	NS	NS	NS	NS
Phosphate	ND	ND	ND	ND	ND	ND
Potassium	1.7	4.1	7.9	8.0	4.3	3.9
Sodium	350	250	600	640	640	530
TDS	2200	1700	3500	4400	2500	2800
Conductivity	2700	2200	4300	5300	3500	3700
Cadmium	ND	ND	ND	ND	ND	ND
Chromium	ND	ND	ND	0.020	0.016	ND
Mercury	ND	ND	ND	ND	ND	ND

ND = None Detected



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

RECEIVED

DEC 15 2004

OIL CONSERVATION
DIVISION

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

RE: Change of Ownership

Dear Roger:

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

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

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

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

Sincerely yours,

David Bays, REM
Principal Environmental Scientist

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

New Mexico Discharge Permit Numbers

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

RECEIVED

February 5, 2004

Mr. Bill Olson
New Mexico Oil Conservation Division
1220 S. Saint Francis
Santa Fe, NM 87505

FEB 04 2004
OIL CONSERVATION
DIVISION

Dear Mr. Olson:

GW-71
Please find enclosed reports on the following monitoring wells and waste water streams at the El Paso Field Services Co. (EPFS) Chaco Plant. These results are summarized on the attached tables.

Semi-Annual analyses for monitoring wells 1 and 8.
Quarterly analyses for monitoring wells 9 and 10.

The sampling contractor failed to collect the annual samples on wells 2 through 7 for general water chemistry. A new contractor has been hired to handle the project in the future. Monitoring well 10, adjacent to the old flare pit which was closed in 1995, showed a significant improvement over results obtained in 2002.

If you need any additional information for this reporting period, please call me at (505) 599-2256.

Sincerely yours,

David Bays

David Bays
Principal Environmental Scientist

cc: Denny Foust - NMOCD - Aztec
Max Blackwood
Troy Chamberlain
Chaco Regulatory File

Chaco Plant Groundwater Monitoring Well Results 2003

All Results Expressed as Micrograms/Liter (ppb)

Monitoring Well 1 (semi-annual)	3/26/03	6/13/03	9/24/03	12/30/03
Benzene	ND		< 0.5	
Toluene	ND		< 0.5	
Ethyl Benzene	ND		< 0.5	
Xylenes	ND		< 1.0	
Cadmium	ND		ND	
Chromium	ND		ND	
Mercury	ND		0.032	
Total Naphthalenes	ND		ND	
Total Benzopyrenes	ND		ND	
Monitoring Well 8 (semi-annual)				
Benzene	ND		< 0.5	
Toluene	ND		< 0.5	
Ethyl Benzene	ND		< 0.5	
Xylenes	ND		< 1.0	
Cadmium	ND		ND	
Chromium	ND		ND	
Mercury	ND		0.0028	
Total Naphthalenes	ND		ND	
Total Benzopyrenes	ND		ND	
Monitoring Well 9 (quarterly)				
Benzene	ND	ND	< 0.5	< 0.5
Toluene	ND	ND	< 0.5	< 0.5
Ethyl Benzene	ND	ND	< 0.5	< 0.5
Xylenes	ND	ND	< 1.0	< 1.0
Monitoring Well 10 (quarterly)				
Benzene	20	4.8	23	<2.5
Toluene	ND	ND	<0.5	<2.5
Ethyl Benzene	26	22	12	20
Xylenes	75	57	28	54

NA = Not Analyzed

ND = None Detected

Chaco Plant Groundwater Monitoring Well Results 2003

All Chemical Results Expressed as Milligrams/Liter (ppm)
pH Expressed in Standard Units (0 - 14 Scale)
Conductivity Expressed as Micromhos/Centimeter

All samples listed on this table were collected on June 16, 2003

Test	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7
pH	NS	NS	NS	NS	NS	NS
Alkalinity - CO ₃	NS	NS	NS	NS	NS	NS
Alkalinity - HCO ₃	NS	NS	NS	NS	NS	NS
Calcium	NS	NS	NS	NS	NS	NS
Magnesium	NS	NS	NS	NS	NS	NS
Total Hardness	NS	NS	NS	NS	NS	NS
Chloride	NS	NS	NS	NS	NS	NS
Sulfate as SO ₄	NS	NS	NS	NS	NS	NS
Fluoride	NS	NS	NS	NS	NS	NS
Nitrate as NO ₃	NS	NS	NS	NS	NS	NS
Nitrate as NO ₂	NS	NS	NS	NS	NS	NS
Ammonium as N	NS	NS	NS	NS	NS	NS
Phosphate	NS	NS	NS	NS	NS	NS
Potassium	NS	NS	NS	NS	NS	NS
Sodium	NS	NS	NS	NS	NS	NS
TDS	1890	NS	NS	NS	NS	3500
Conductivity	5000	NS	NS	NS	NS	4000
Cadmium	ND	NS	NS	NS	NS	<0.005
Chromium	0.005	NS	NS	NS	NS	0.008
Mercury	ND	NS	NS	NS	NS	<0.0002

Not Sampled

ND = None Detected

ANALYTICAL REPORT

IINA BA, LTD 3130
DAVE COX
612 E. MURRAY DRIVE
FARMINGTON, NM 87401

Lab Number: 03-A47333
Sample ID: 0303026-004C
Sample Type: Water
Site ID:

Project:
Project Name:
Sampler:

Date Collected: 3/26/03
Time Collected: 15:50
Date Received: 3/28/03
Time Received: 8:15

Page: 1

Chaco Plant, MW-1/032603

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Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
ORGANIC PARAMETERS									
Naphthalene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Acenaphthene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Anthracene	ND	mg/l	0.00050	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Fluoranthene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Fluorene	ND	mg/l	0.00050	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Pyrene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo (a) anthracene	ND	mg/l	0.00010	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo (a) pyrene	ND	mg/l	0.00010	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo (b) fluoranthene	ND	mg/l	0.00010	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo (k) fluoranthene	ND	mg/l	0.00014	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Chrysene	ND	mg/l	0.00010	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Dibenzo (a,h) anthracene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Indeno (1,2,3-cd) pyrene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Acenaphthylene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo (g,h,i) perylene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Phenanthrene	ND	mg/l	0.00050	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
1-Methylnaphthalene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
2-Methylnaphthalene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A47333
Sample ID: 0303026-004C
Project:
Page 2

Sample Extraction Data

Parameter	Wt/Vol		Date	Time	Analyst	Method
	Extracted	Extract Vol				
PAH's	1000 ml	1.00 ml	4/ 1/03		M. Ricke	3510/610

Surrogate	% Recovery	Target Range
PAH Surrogate	94.	34. - 115.

LABORATORY COMMENTS:

ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
= Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496

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P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.

Client Sample Info: Chaco Plant

Work Order: 0303026

Client Sample ID: MW-1 / 032603

Project: Chaco Plant

Collection Date: 3/26/2003 2:50:00 PM

Lab ID: 0303026-004A

Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: JEM		
Benzene	ND	0.5		µg/L	1	4/1/2003
Ethylbenzene	ND	0.5		µg/L	1	4/1/2003
m,p-Xylene	ND	1.0		µg/L	1	4/1/2003
o-Xylene	ND	0.5		µg/L	1	4/1/2003
Toluene	ND	0.5		µg/L	1	4/1/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

R - RPD outside accepted precision limits

B - Analyte detected in the associated Method Blank

E - Value above Upper Quantitation Limit - UQL

* - Value exceeds Maximum Contaminant Level

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MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496

iiná bá

P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0303026
Project: Chaco Plant
Lab ID: 0303026-004B

Client Sample Info: Chaco Plant
Client Sample ID: MW-1 / 032603
Collection Date: 3/26/2003 2:50:00 PM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL		SW6010B		(SW3005A)		Analyst: DJC
Cadmium	ND	0.001		mg/L	1	3/31/2003
Chromium	ND	0.028		mg/L	1	3/31/2003
MERCURY, TOTAL		SW7470		(SW7470)		Analyst: DJC
Mercury	ND	0.001		mg/L	1	3/31/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

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MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

ANALYTICAL REPORT

IINA BA, LTD 3130
DAVE COX
612 E. MURRAY DRIVE
FARMINGTON, NM 87401

Lab Number: 03-A47332
Sample ID: 0303026-003C
Sample Type: Water
Site ID:

Project:
Project Name:
Sampler:

Date Collected: 3/26/03
Time Collected: 13:05
Date Received: 3/28/03
Time Received: 8:15

Chaco Plant, MW-8/032603

Page: 1

4/14/03

Analyte	Result	Units	Report	Dil	Analysis	Analysis	Analyst	Method	Batch
			Limit	Factor	Date	Time			

ORGANIC PARAMETERS									
Naphthalene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Acenaphthene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Anthracene	ND	mg/l	0.00050	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Fluoranthene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Fluorene	0.00057	mg/l	0.00050	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Pyrene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo(a)anthracene	ND	mg/l	0.00010	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo(a)pyrene	ND	mg/l	0.00010	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo(b)fluoranthene	ND	mg/l	0.00010	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo(k)fluoranthene	ND	mg/l	0.00014	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Chrysene	ND	mg/l	0.00010	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Dibenzo(a,h)anthracene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Indeno(1,2,3-cd)pyrene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Acenaphthylene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Benzo(g,h,i)perylene	ND	mg/l	0.00020	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
Phenanthrene	ND	mg/l	0.00050	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
1-Methylnaphthalene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897
2-Methylnaphthalene	ND	mg/l	0.00100	1.0	4/ 4/03	3:48	Noorbakhsh	8310	1897

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 03-A47332
Sample ID: 0303026-003C
Project:
Page 2

Sample Extraction Data

Parameter	Wt/Vol		Date	Time	Analyst	Method
	Extracted	Extract Vol				
PAH's	1000 ml	1.00 ml	4/ 1/03		M. Ricke	3510/610

Surrogate	% Recovery	Target Range
-----	-----	-----
PAH Surrogate	86.	34. - 115.

LABORATORY COMMENTS:

ND = Not detected at the report limit.
B = Analyte was detected in the method blank.
J = Estimated Value below Report Limit.
E = Estimated Value above the calibration limit of the instrument.
= Recovery outside Laboratory historical or method prescribed limits.

End of Sample Report.

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496

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P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.

Client Sample Info: Chaco Plant

Work Order: 0303026

Client Sample ID: MW-8 / 032603

Project: Chaco Plant

Collection Date: 3/26/2003 1:05:00 PM

Lab ID: 0303026-003A

Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: JEM		
Benzene	ND	0.5		µg/L	1	4/1/2003
Ethylbenzene	ND	0.5		µg/L	1	4/1/2003
m,p-Xylene	ND	1.0		µg/L	1	4/1/2003
o-Xylene	ND	0.5		µg/L	1	4/1/2003
Toluene	ND	0.5		µg/L	1	4/1/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

R - RPD outside accepted precision limits

B - Analyte detected in the associated Method Blank

E - Value above Upper Quantitation Limit - UQL

* - Value exceeds Maximum Contaminant Level

Page 3 of 7

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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P.O. Box 3788
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ANALYTICAL REPORT

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.

Client Sample Info: Chaco Plant

Work Order: 0303026

Client Sample ID: MW-8 / 032603

Project: Chaco Plant

Collection Date: 3/26/2003 1:05:00 PM

Lab ID: 0303026-003B

Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL		SW6010B	(SW3005A)	Analyst: DJC		
Cadmium	ND	0.001		mg/L	1	3/31/2003
Chromium	ND	0.028		mg/L	1	3/31/2003
MERCURY, TOTAL		SW7470	(SW7470)	Analyst: DJC		
Mercury	ND	0.001		mg/L	1	3/31/2003

Qualifiers: ND - Not Detected at the Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted precision limits
E - Value above Upper Quantitation Limit - UQL

Page 4 of 7

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.

Client Sample Info: Chaco Plant

Work Order: 0303026

Client Sample ID: MW-9 / 032603

Project: Chaco Plant

Collection Date: 3/26/2003 11:00:00 AM

Lab ID: 0303026-002A

Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: JEM
Benzene	ND	0.5		µg/L	1	4/1/2003
Ethylbenzene	ND	0.5		µg/L	1	4/1/2003
m,p-Xylene	ND	1.0		µg/L	1	4/1/2003
o-Xylene	ND	0.5		µg/L	1	4/1/2003
Toluene	ND	0.5		µg/L	1	4/1/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

R - RPD outside accepted precision limits

B - Analyte detected in the associated Method Blank

E - Value above Upper Quantitation Limit - UQL

* - Value exceeds Maximum Contaminant Level

Page 2 of 7

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

612 E. Murray Drive
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P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.

Client Sample Info: Chaco Plant

Work Order: 0303026

Client Sample ID: MW-10 / 032603

Project: Chaco Plant

Collection Date: 3/26/2003 9:48:00 AM

Lab ID: 0303026-001A

Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: JEM		
Benzene	20	0.5		µg/L	1	4/1/2003
Ethylbenzene	26	0.5		µg/L	1	4/1/2003
m,p-Xylene	46	1.0		µg/L	1	4/1/2003
o-Xylene	29	0.5		µg/L	1	4/1/2003
Toluene	ND	0.5		µg/L	1	4/1/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

R - RPD outside accepted precision limits

B - Analyte detected in the associated Method Blank

E - Value above Upper Quantitation Limit - UQL

* - Value exceeds Maximum Contaminant Level

Page 1 of 7

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

amec

Project No.: 1517000054

Task: Task 1 - 2003

Date: 26-Mar-03

Site Name: Chaco Plant

[illegible]

Comments:



3/26/03



Well Number 11W-1
Serial No. 11A

☐ Development
☐ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name EPFS Chaco Sampling Project Manager Don Fernald Project No. 1517000054

Client Company EPFS Phase Task No. 1-2003

Site Name Chaco Plant Site Address Rural San Juan County

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal
☐ Stabilization of Indicator Parameters

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 25.04'
Initial Depth to Water (feet) 6.1'
Height of Water Column in Well (feet) 18.94'
Diameter (inches): Well _____ Gravel Pack _____

Instruments

☒ PH Meter

☐ DO Monitor

Methods of Development

Pump

☐ Centrifugal

☐ Submersible

☐ Peristaltic

Bailer

☒ Bottom Valve

☐ Double Check Valve

☐ Stainless-steel Kemmerer

☐ Other _____

Model Modell

Serial No. (if applicable) YSI 63

☒ Conductivity Meter

☒ Temperature Meter

☐ Other _____

Water Disposal

EPFS Pond onsite

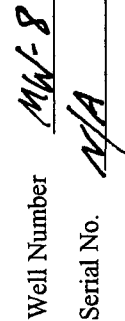
Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
3/26	13:55	✓					5	5			6.4	7.98	799		1st brown - clear
	14:03	✓					5	10							"
	14:08	✓					5	15							"
	14:13	✓					5	20			5.9	9.3	854		"
	14:20	✓					5	25							"
	14:25	✓					5	30							"
	14:34	✓					5	35			6.7	8.93	765		"
	14:50	✓					5	37							"

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

Comments

Developer's Signature (S) _____ Date 3/26/03 Reviewer DF Date 5/9/03

☐ Developing
☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Page / of

Project Name
EPFS Chaco Sampling

Project Manager
Don Fernald

Project No. 1517000054

Client Company EPFS

Phase, Task No. 1-2003

Site Name Chaco Plant

Site Address Rural San Juan County

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal

Water Volume Calculation
Initial Depth of Well (feet) 21.69'

Stabilization of Indicator Parameters

Initial Depth to Water (feet) 8.35

☐ Other

Height of Water Column in Well (feet) 13.34

100

Diameter (inches):	Well
	4 1/2
	Gravel Pack

Methods of Development

Pump

Bailer

☐ Centrifugal☒ Bottom Valve☐ Submersible☐ Double Check Valve☐ Peristaltic☐ Stainless-steel Kemmerer☐ Other

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
3/26	12:28		✓				5	5			11.2	6.76	952		light pr. - clear
	12:36		✓				5	10			11.2	7.81	1419		"
	12:45		✓				5	15							"
	12:51		✓				5	20			11.4	7.96	1554		"
	1:00		✓				5	25			11.4	8.48	1635		"
							1	26							"

Circle the date and time that the development criteria are met

Comments

Developer's Signature (s)

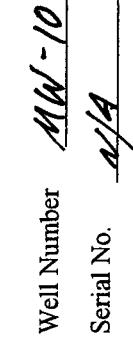
Date _____

3/26/03

Reviewer

Date _____

9/13

☐ Development
☒ Purging

WELL DEVELOPMENT AND PURGING DATA

Page 1 of 1

Project Name	EPFS Chaco Sampling
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Project Manager Don Fernald

Project No. 1517000054

Client Company EPFS

EPFS

Phase Task No. 1-2003

Site Name Chaco Plant

Site Address Rural San Juan County

Site Address Rural San Juan County

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal

Stabilization of Indicator Parameters

☐ Other

Water Volume Calculation

Initial Depth of Well (feet)

Initial Depth to Water (feet)

Height of Water Column in Well (feet) 10.94' Gravel Pack

Diameter (inches): Well 4"

Methods of Development

Pump

Bailer

☐ Centrifugal

☐ Bottom Valve:

☐ Submersible☐ Double Check Valve☐ Peristaltic☐ Stainless-steel Kemmerer☐ Other

Water Removal Data

[illegible]

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

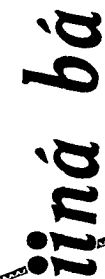
Comments	Very thin layer of hydrocarbon on surface

Developer's Signature (s)

Date 3/26/03

Reviewer

Date 5/9/83



B 1879

Page ____ of ____

Date: 2/26/03

612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499
(505) 327-1072 • FAX: (505) 327-1496

Purchase Order No.: 1517000054		Job No. 151700054 1/03	
Name AMEC - Don Fernald		Title PM	
Company AMEC		Company AMEC	
Address 2060 Alton		Mailing Address	
City, State, Zip Farmington, NM 87401		City, State, Zip	
Sampling Location: Chaco Plant		Telephone No. 505-327-7928	
Telefax No. 505-326-5721		ANALYSIS REQUESTED	
Number of Containers		LAB ID	
Chaco MW-10 / 032603		✓	
Chaco MW-9 / 032603		✓	
Chaco MW-8 / 032603		✓	
Chaco MW-1 / 032603		✓	
Relinquished by: [Signature]		Date/Time 3/26/03 1705	
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Method of Shipment:		10 Working Days	
Authorized by: [Signature]		Special Instructions:	

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496
April 17, 2003

iiná bá

P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

Don Fernald
AMEC Earth & Environmental Inc.
2060 Afton Place
Farmington, NM 87401
TEL: (505) 327-7928
FAX (505) 326-5721

RE: Chaco Plant

Order No.: 0303026

Dear Don Fernald:

iiná bá, Ltd. received 5 samples on 3/26/2003 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

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

Sincerely,



David Cox

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496



P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

iina bá, Ltd.

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.

Project: Chaco Plant

Lab Order: 0303026

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

PROJECT QUALITY CONTROL DATA

Project Number:

Project Name:

Page: 3

Laboratory Receipt Date: 3/28/03

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
Benzo(k)fluoranthene	mg/l	0.00200	0.00214	107	46 - 138	1897
Chrysene	mg/l	0.00200	0.00230	115	46 - 134	1897
Dibenzo(a,h)anthracene	mg/l	0.00200	0.00157	78	25 - 142	1897
Indeno(1,2,3-cd)pyrene	mg/l	0.00200	0.00195	98	47 - 139	1897
Acenaphthylene	mg/l	0.00200	0.00172	86	37 - 121	1897
Benzo(g,h,i)perylene	mg/l	0.00200	0.00197	98	42 - 143	1897
Phenanthrene	mg/l	0.00200	0.00189	94	52 - 122	1897
1-Methylnaphthalene	mg/l	0.00200	0.00129	64	18 - 150	1897
2-Methylnaphthalene	mg/l	0.00200	0.00137	68	28 - 125	1897

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS					
Naphthalene	< 0.00100	mg/l	1897	4/ 4/03	3:48
Acenaphthene	< 0.00100	mg/l	1897	4/ 4/03	3:48
Anthracene	< 0.00050	mg/l	1897	4/ 4/03	3:48
Fluoranthene	< 0.00020	mg/l	1897	4/ 4/03	3:48
Fluorene	< 0.00050	mg/l	1897	4/ 4/03	3:48
Pyrene	< 0.00020	mg/l	1897	4/ 4/03	3:48
Benzo(a)anthracene	< 0.00010	mg/l	1897	4/ 4/03	3:48
Benzo(a)pyrene	< 0.00010	mg/l	1897	4/ 4/03	3:48
Benzo(b)fluoranthene	< 0.00010	mg/l	1897	4/ 4/03	3:48
Benzo(k)fluoranthene	< 0.00014	mg/l	1897	4/ 4/03	3:48
Chrysene	< 0.00010	mg/l	1897	4/ 4/03	3:48
Dibenzo(a,h)anthracene	< 0.00020	mg/l	1897	4/ 4/03	3:48
Indeno(1,2,3-cd)pyrene	< 0.00020	mg/l	1897	4/ 4/03	3:48
Acenaphthylene	< 0.00100	mg/l	1897	4/ 4/03	3:48
Benzo(g,h,i)perylene	< 0.00020	mg/l	1897	4/ 4/03	3:48

Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number:

Project Name:

Page: 4

Laboratory Receipt Date: 3/28/03

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Analysis Date	Analysis Time
Phenanthrene	< 0.00050	mg/l	1897	4/ 4/03	3:48
1-Methylnaphthalene	< 0.00100	mg/l	1897	4/ 4/03	3:48
2-Methylnaphthalene	< 0.00100	mg/l	1897	4/ 4/03	3:48

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
---------	-------------	-------	------------	---------------	---------------

UST PARAMETERS

PAH Surrogate	83.	% Rec	1897	4/ 4/03	3:48
---------------	-----	-------	------	---------	------

= Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 325695

PROJECT QUALITY CONTROL DATA

Project Number:

Project Name:

Page: 1

Laboratory Receipt Date: 3/28/03

Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
UST ANALYSIS								
Naphthalene	mg/l	< 0.00100	0.00148	0.00200	74	41. - 139.	1897	blank
Acenaphthene	mg/l	< 0.00100	0.00201	0.00200	100	41. - 139.	1897	blank
Anthracene	mg/l	< 0.00050	0.00177	0.00200	88	48. - 119.	1897	blank
Fluoranthene	mg/l	< 0.00020	0.00206	0.00200	103	49. - 132.	1897	blank
Fluorene	mg/l	< 0.00050	0.00172	0.00200	86	47. - 122.	1897	blank
Pyrene	mg/l	< 0.00020	0.00194	0.00200	97	49. - 133.	1897	blank
Benzo(a)anthracene	mg/l	< 0.00010	0.00219	0.00200	110	50. - 135.	1897	blank
Benzo(a)pyrene	mg/l	< 0.00010	0.00199	0.00200	100	45. - 138.	1897	blank
Benzo(b)fluoranthene	mg/l	< 0.00010	0.00218	0.00200	109	52. - 138.	1897	blank
Benzo(k)fluoranthene	mg/l	< 0.00014	0.00209	0.00200	104	46. - 138.	1897	blank
Chrysene	mg/l	< 0.00010	0.00225	0.00200	112	46. - 134.	1897	blank
Dibenzo(a,h)anthracene	mg/l	< 0.00020	0.00176	0.00200	88	25. - 142.	1897	blank
Indeno(1,2,3-cd)pyrene	mg/l	< 0.00020	0.00201	0.00200	100	47. - 139.	1897	blank
Acenaphthylene	mg/l	< 0.00100	0.00100	0.00200	50	37. - 121.	1897	blank
Benzo(g,h,i)perylene	mg/l	< 0.00020	0.00205	0.00200	102	42. - 143.	1897	blank
Phenanthrene	mg/l	< 0.00050	0.00185	0.00200	92	52. - 122.	1897	blank
1-Methylnaphthalene	mg/l	< 0.00100	0.00153	0.00200	76	18. - 150.	1897	blank
2-Methylnaphthalene	mg/l	< 0.00100	0.00135	0.00200	68	28. - 125.	1897	blank

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
UST PARAMETERS						
Naphthalene	mg/l	0.00148	0.00168	12.66	41.	1897
Acenaphthene	mg/l	0.00201	0.00225	11.27	50.	1897
Anthracene	mg/l	0.00177	0.00190	7.08	33.	1897

Project QC continued . . .

PROJECT QUALITY CONTROL DATA

Project Number:

Project Name:

Page: 2

Laboratory Receipt Date: 3/28/03

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
Fluoranthene	mg/l	0.00206	0.00216	4.74	13.	1897
Fluorene	mg/l	0.00172	0.00187	8.36	31.	1897
Pyrene	mg/l	0.00194	0.00195	0.51	24.	1897
Benzo(a)anthracene	mg/l	0.00219	0.00220	0.46	28.	1897
Benzo(a)pyrene	mg/l	0.00199	0.00206	3.46	27.	1897
Benzo(b)fluoranthene	mg/l	0.00218	0.00212	2.79	26.	1897
Benzo(k)fluoranthene	mg/l	0.00209	0.00216	3.29	34.	1897
Chrysene	mg/l	0.00225	0.00223	0.89	29.	1897
Dibenzo(a,h)anthracene	mg/l	0.00176	0.00169	4.06	34.	1897
Indeno(1,2,3-cd)pyrene	mg/l	0.00201	0.00203	0.99	31.	1897
Acenaphthylene	mg/l	0.00100	0.00170	51.85#	43.	1897
Benzo(g,h,i)perylene	mg/l	0.00205	0.00205	0.00	31.	1897
Phenanthrene	mg/l	0.00185	0.00195	5.26	31.	1897
1-Methylnaphthalene	mg/l	0.00153	0.00148	3.32	48.	1897
2-Methylnaphthalene	mg/l	0.00135	0.00172	24.10	42.	1897

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
Naphthalene	mg/l	0.00200	0.00176	88	41 - 139	1897
Acenaphthene	mg/l	0.00200	0.00224	112	41 - 139	1897
Anthracene	mg/l	0.00200	0.00186	93	48 - 119	1897
Fluoranthene	mg/l	0.00200	0.00206	103	49 - 132	1897
Fluorene	mg/l	0.00200	0.00190	95	47 - 122	1897
Pyrene	mg/l	0.00200	0.00213	106	49 - 133	1897
Benzo(a)anthracene	mg/l	0.00200	0.00221	110	50 - 135	1897
Benzo(a)pyrene	mg/l	0.00200	0.00203	102	45 - 138	1897
Benzo(b)fluoranthene	mg/l	0.00200	0.00211	106	52 - 138	1897

Project QC continued . . .

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496

iiná bá

P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.

Client Sample Info: Chaco Plant

Work Order: 0303026

Client Sample ID: Trip Blank

Project: Chaco Plant

Collection Date: 3/24/2003 7:40:00 AM

Lab ID: 0303026-005A

Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: JEM
Benzene	ND	0.5		µg/L	1	4/1/2003
Ethylbenzene	ND	0.5		µg/L	1	4/1/2003
m,p-Xylene	ND	1.0		µg/L	1	4/1/2003
o-Xylene	ND	0.5		µg/L	1	4/1/2003
Toluene	ND	0.5		µg/L	1	4/1/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

R - RPD outside accepted precision limits

B - Analyte detected in the associated Method Blank

E - Value above Upper Quantitation Limit - UQL

* - Value exceeds Maximum Contaminant Level

Page 7 of 7

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

iiná bá, Ltd.

Sample Receipt Checklist

Client Name: **AME1004**

Date and Time Received:

3/26/2003

Work Order Number: **0303026**

Received by: **DWC**

Checklist completed by:

Signature

Date

Reviewed by:

Initials

Date

Matrix: **AQ**

Carrier name: **Don Fernald**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	NEV'D ON ICE 6°C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	

Adjusted? _____

Checked by:

(W) 3/26/03

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

4/ 4/03

IINA BA, LTD 3130
DAVE COX
612 E. MURRAY DRIVE
FARMINGTON, NM 87401

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name:
Project Number: .
Laboratory Project Number: 325695.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980.

Sample Identification	Lab Number	Collection Date
0303026-003C	03-A47332	3/26/03
0303026-004C	03-A47333	3/26/03

These results relate only to the items tested.
This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By: Roxanne L Connor

Report Date: 4/ 4/03

Paul E. Lane, Jr., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Serv.
Eric S. Smith, Assistant Technical Director
Roxanne L. Connor, Technical Services

Gail A. Lage, Technical Serv.
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

**TEST AMERICA ANALYTICAL
TESTING CORP.-NASHVILLE**

COOLER RECEIPT FORM

BC#



Client: Iina Ba, LTD

Cooler Received On: 3/28/03 And Opened On: 3/28/03 By: SHANE GAMBILL

[Signature]
(Signature)

1. Temperature of Cooler when opened 2 - 0 Degrees Celsius
2. Were custody seals on outside of cooler?.....YES...NO...NA
a. If yes, how many, what kind and where: 1/2/3/4 FRONT/BACK/SIDE
3. Were custody seals on containers and intact?.....NO...YES...NA
4. Were the seals intact, signed, and dated correctly?.....YES...NO...NA
5. Were custody papers inside cooler?.....YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?.....YES...NO...NA
7. Did you sign the custody papers in the appropriate place?.....YES...NO...NA
8. What kind of packing material used? Bubblewrap Peanuts Vermiculite Other None
9. Was sufficient ice used (if appropriate)?.....YES...NO...NA
10. Did all bottles arrive in good condition(unbroken)?.....YES...NO...NA
11. Were all bottle labels complete (#, date, signed, pres, etc)?.....YES...NO...NA
12. Did all bottle labels and tags agree with custody papers?.....YES...NO...NA
13. Were correct bottles used for the analysis requested?.....YES...NO...NA
14. a. Were VOA vials received?.....YES...NO...NA
b. Was there any observable head space present in any VOA vial?.....NO...YES...NA
15. Was sufficient amount of sample sent in each bottle?.....YES...NO...NA
16. Were correct preservatives used?.....YES...NO...NA
If not, record standard ID of preservative used here _____
17. Was residual chlorine present?.....NO...YES...NA
18. See attached for resolution of non-conformance:

Fed-Ex

UPS

Velocity

Airborne

Route

Off-street

Misc.

iiiná bá, Ltd.
612 E. Murray Drive
Farrington, NM 87401
(505) 327-1072

CHAIN-OF-CUSTODY RECORD

325695

Subcontractor:

Test America, Inc.
2960 Foster Creighton Drive
Nashville, TN 372040566

TEL: (800) 765-0980
FAX: (615) 726-3404

Acct #: 3130

27-Mar-03

Sample ID	Matrix	Collection Date	Bottle Type	Requested Tests				
				SW8310				

0303026-003C	Aqueous	3/26/2003 1:05:00 PM	1LAMGU	1	47332			
0303026-004C	Aqueous	3/26/2003 2:50:00 PM	1LAMGU	1	↓ 333			

Comments: Please analyze two (2) aqueous samples for PAH SW8310.

Date/Time	Date/Time
Relinquished by: <i>J Moore</i>	Received by: <i>WJ</i>
	3/26/03 15:15
Relinquished by:	Received by:

ina bá, Ltd.

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0303026
Project: Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B_AQ-T

Sample ID	MBLK_030331	SampType: MBLK	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 3/31/2003	Run ID: ICP_1_030331B					
Client ID:	ZZZZZ	Batch ID: 344	TestNo: SW6010B	(SW3005A)	Analysis Date: 3/31/2003	SeqNo: 63136					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	LCS_030331	SampType: LCS	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 3/31/2003	Run ID: ICP_1_030331B					
Client ID:	ZZZZZ	Batch ID: 344	TestNo: SW6010B	(SW3005A)	Analysis Date: 3/31/2003	SeqNo: 63137					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	LCSD_030331	SampType: LCSD	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 3/31/2003	Run ID: ICP_1_030331B					
Client ID:	ZZZZZ	Batch ID: 344	TestNo: SW6010B	(SW3005A)	Analysis Date: 3/31/2003	SeqNo: 63138					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	0303027-001AMS	SampType: MS	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 3/31/2003	Run ID: ICP_1_030331B					
Client ID: ZZZZZ		Batch ID: 344	TestNo: SW6010B	(SW3005A)	Analysis Date: 3/31/2003	SeqNo: 63140					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	0303026-003BD	SampType: DUP	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 3/31/2003	Run ID: ICP_1_030331B					
Client ID:	MW-8 / 032603	Batch ID: 344	TestNo: SW6010B	(SW3005A)	Analysis Date: 3/31/2003	SeqNo: 63142					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0303026
 Project: Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B_AQ-T

Sample ID	0303026-003BD	SampType: DUP	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 3/31/2003	Run ID: ICP_1_030331B					
Client ID:	MW-8 / 032603	Batch ID: 344	TestNo: SW6010B	(SW3005A)	Analysis Date: 3/31/2003	SeqNo: 63142					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCB1_030331	SampType: CCB	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030331B					
Client ID:	ZZZZZ	Batch ID: 344	TestNo: SW6010B		Analysis Date: 3/31/2003	SeqNo: 63134					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCB2_030331	SampType: CCB	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030331B					
Client ID:	ZZZZZ	Batch ID: 344	TestNo: SW6010B		Analysis Date: 3/31/2003	SeqNo: 63144					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCV1_030331	SampType:	CCV	TestCode:	6010B_AQ-T	Units:	mg/L	Prep Date:	Run ID: ICP_1_030331B		
Client ID:	ZZZZZ	Batch ID:	344	TestNo:	SW6010B				Analysis Date:	SeqNo: 63135	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCV2_030331	SampType: CCV	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030331B					
Client ID:	ZZZZZ	Batch ID: 344	TestNo: SW6010B		Analysis Date: 3/31/2003	SeqNo: 63145					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0303026
Project: Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B_AQ-T

Sample ID	ICV_030331	SampType: ICV	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030331B					
Client ID: ZZZZZ	Batch ID: 344	TestNo: SW6010B			Analysis Date: 3/31/2003	SeqNo: 63146					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.1032	0.00100	0.1	0	103	90	110	0	0		
Chromium	0.5075	0.0280	0.5	0	102	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
Page 3 of 7

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0303026
 Project: Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	MB_030401	SampType: MBLK	TestCode: BTEX_W	Units: µg/L	Prep Date: 4/1/2003	Run ID: GC-1_030401A					
Client ID: ZZZZZ		Batch ID: R4337	TestNo: SW8021B		Analysis Date: 4/1/2003	SeqNo: 63204					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	LCS_030401	SampType: LCS	TestCode: BTEX_W	Units: µg/L	Prep Date: 4/1/2003	Run ID: GC-1_030401A					
Client ID:	ZZZZZ	Batch ID: R4337	TestNo: SW8021B		Analysis Date: 4/1/2003	SeqNo: 63208					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	0303026-002AMS	SampType: MS	TestCode: BTEX_W	Units: µg/L	Prep Date: 4/1/2003	Run ID: GC-1_030401A					
Client ID:	MW-9 / 032603	Batch ID: R4337	TestNo: SW8021B		Analysis Date: 4/1/2003	SeqNo: 63207					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	0303026-002AMSD	SampType: MSD	TestCode: BTEX_W	Units: µg/L	Prep Date: 4/1/2003	Run ID: GC-1_030401A						
Client ID:	MW-9 / 032603	Batch ID: R4337	TestNo: SW8021B		Analysis Date: 4/1/2003	SeqNo: 63206						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0303026
 Project: Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	0303026-002AMSD	SampType: MSD	TestCode: BTEX_W	Units: µg/L	Prep Date: 4/1/2003	Run ID: GC-1_030401A					
Client ID:	MW-9 / 032603	Batch ID: R4337	TestNo: SW8021B		Analysis Date: 4/1/2003	SeqNo: 63206					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ethylbenzene	186.4	2.5	200	0	93.2	82	108	200.7	7.42	5	R
m,p-Xylene	377.1	5.0	400	0.745	94.1	80	113	406.6	7.52	5	R
o-Xylene	190.2	2.5	200	0	95.1	82	105	205	7.48	4	R
Toluene	187.8	2.5	200	0.795	93.5	83	105	195	3.77	5	

Sample ID	CCV1_030401	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 4/1/2003	Run ID: GC-1_030401A						
Client ID: ZZZZZ		Batch ID: R4337	TestNo: SW8021B		Analysis Date: 4/1/2003	SeqNo: 63201						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	19.74	0.50	20	0	98.7	85	115	0	0		
Ethylbenzene	19.06	0.50	20	0	95.3	85	115	0	0		
m,p-Xylene	38.84	1.0	40	0	97.1	85	115	0	0		
o-Xylene	19.38	0.50	20	0	96.9	85	115	0	0		
Toluene	19.24	0.50	20	0	96.2	85	115	0	0		

Sample ID	CCV2_030401	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 4/1/2003	Run ID: GC-1_030401A					
Client ID:	ZZZZZ	Batch ID: R4337	TestNo: SW8021B		Analysis Date: 4/1/2003	SeqNo: 63202					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	18.77	0.50	20	0	93.9	85	115	0	0		
Ethylbenzene	18.25	0.50	20	0	91.2	85	115	0	0		
m,p-Xylene	37.1	1.0	40	0	92.7	85	115	0	0		
o-Xylene	20.23	0.50	20	0	101	85	115	0	0		
Toluene	18.7	0.50	20	0	93.5	85	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0303026
 Project: Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_CTW

Sample ID	MBLK_030331	SampType: MBLK	TestCode: HG_CTW	Units: mg/L	Prep Date: 3/31/2003	Run ID: AA_030331A
Client ID:	ZZZZZ	Batch ID: 343	TestNo: SW7470	(SW7470)	Analysis Date: 3/31/2003	SeqNo: 63120
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	0.01322	0.00100	0.0125	0	106 80 120 0	0

Sample ID	LCS_033103	SampType: LCS	TestCode: HG_CTW	Units: mg/L	Prep Date: 3/31/2003	Run ID: AA_030331A
Client ID:	ZZZZZ	Batch ID: 343	TestNo: SW7470	(SW7470)	Analysis Date: 3/31/2003	SeqNo: 63123
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	0.01322	0.00100	0.0125	0	106 80 120 0	0

Sample ID	0303026-003BMS	SampType: MS	TestCode: HG_CTW	Units: mg/L	Prep Date: 3/31/2003	Run ID: AA_030331A
Client ID:	MW-8 / 032603	Batch ID: 343	TestNo: SW7470	(SW7470)	Analysis Date: 3/31/2003	SeqNo: 63128
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	0.01326	0.00100	0.0125	0	106 70 130 0	0

Sample ID	0303026-003BMSD	SampType: MSD	TestCode: HG_CTW	Units: mg/L	Prep Date: 3/31/2003	Run ID: AA_030331A
Client ID:	MW-8 / 032603	Batch ID: 343	TestNo: SW7470	(SW7470)	Analysis Date: 3/31/2003	SeqNo: 63129
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	0.01325	0.00100	0.0125	0	106 70 130 0.01326	0.0943 20

Sample ID	0303027-001AD	SampType: DUP	TestCode: HG_CTW	Units: mg/L	Prep Date: 3/31/2003	Run ID: AA_030331A
Client ID:	ZZZZZ	Batch ID: 343	TestNo: SW7470	(SW7470)	Analysis Date: 3/31/2003	SeqNo: 63305
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	0.00025	0.00100	0	0	0 0 0 0	0 J

Sample ID	CCV1_030331	SampType: CCV	TestCode: HG_CTW	Units: mg/L	Prep Date: 3/31/2003	Run ID: AA_030331A
Client ID:	ZZZZZ	Batch ID: 343	TestNo: SW7470		Analysis Date: 3/31/2003	SeqNo: 63121
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0303026
Project: Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_CTW

Sample ID	CCV1_030331	SampleType: CCV	TestCode: HG_CTW	Units: mg/L	Prep Date: 3/31/2003	Run ID: AA_030331A						
Client ID: ZZZZ		Batch ID: 343	TestNo: SW7470		Analysis Date: 3/31/2003	SeqNo: 63121						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00943	0.00100	0.01	0	94.3	80	120	0	0	0	

Sample ID	CCV2_030331	SampleType: CCV	TestCode: HG_CTW		Units: mg/L	Prep Date: 3/31/2003	Run ID: AA_030331A					
Client ID: ZZZZZ		Batch ID: 343	TestNo: SW7470			Analysis Date: 3/31/2003	SeqNo: 63131					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.01149	0.00100	0.01	0	115	80	120	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

iiná bá, Ltd.

Date: 17-Apr-03

CLIENT: AMEC Earth & Environmental Inc.

Work Order: 0303026

Project: Chaco Plant

Test No: SW8021B

Matrix: W

QC SUMMARY REPORT SURROGATE RECOVERIES

Sample ID	14FBZ	4BCBZ	FLBZ
0303026-001A	98.7	127	101
0303026-002A	107	124	106
0303026-002A	102	124	102
0303026-002A	105	127	102
0303026-002AMS	107	124	106
0303026-002AMSD	102	124	102
0303026-003A	105	120	104
0303026-004A	104	123	103
0303026-005A	102	122	99.9
CCV1_030401	106	119	102
CCV2_030401	103	122	100
LCS_030401	100	120	99.6
MB_030401	105	117	104

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

1

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Page _____ of _____

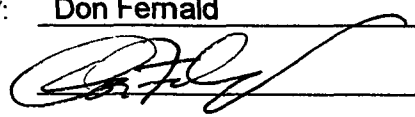
Date:

612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499
(505) 327-1072 • FAX: (505) 327-1496

[illegible]



NOTICE OF TRANSMITTAL

TO: David Bays DATE: July 2, 2003
El Paso Field Services PROJECT NO.: 1517000054
PO Box 4990 PROJECT NAME: Chaco Plant Groundwater
Farmington, NM 87499 Sampling
SUBMITTED BY: Don Fernald
SIGNED: 

THE ENCLOSED DOCUMENTS AND/OR DRAWINGS ARE SUBMITTED:

☐ FOR YOUR APPROVAL ☐ AS REQUESTED ☐ FOR YOUR REVIEW AND COMMENT
☐ FOR YOUR INFORMATION ☐ FOR YOUR SIGNATURE

NUMBER OF COPIES:	DESCRIPTION:
1	Well Observation/Purge Data Forms for the June 2003 ground water sampling event
1	Chain of Custody Records for iina' ba' Labs
1	Analytical data from Monitoring Wells, MW-2, MW-7, MW-9 and MW-10

612 E. Murray Drive
Farmington, NM 87499

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P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 23-Jun-03

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0306033
Project: 1517000054; Chaco Plant
Lab ID: 0306033-001

Client Sample Info: Chaco Plant
Client Sample ID: 061603-MW2
Collection Date: 6/16/2003 12:20:00 PM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL		SW6010B		(SW3005A)		Analyst: DJC
Cadmium	ND	0.003		mg/L	1	6/20/2003 11:44:57 AM
Chromium	0.005	0.003		mg/L	1	6/20/2003 11:44:57 AM
MERCURY, TOTAL		SW7470		(SW7470)		Analyst: DJC
Mercury	ND	0.001		mg/L	1	6/18/2003
TOTAL DISSOLVED SOLIDS		E160.1				Analyst: HNR
Total Dissolved Solids (Residue, Filterable)	1890	40		mg/L	1	6/17/2003

Qualifiers: ND - Not Detected at the Practical Quantitation Limit (PQL) S - Spike Recovery outside accepted recovery limits
J - Analyte detected below Practical Quantitation Limit R - RPD outside accepted precision limits
B - Analyte detected in the associated Method Blank E - Value above Upper Quantitation Limit - UQL
* - Value exceeds Maximum Contaminant Level

Page 1 of 2

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

612 E. Murray Drive
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Shiprock, NM 87420

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ANALYTICAL REPORT

Date: 23-Jun-03

CLIENT: AMEC Earth & Environmental Inc.

Client Sample Info: Chaco Plant

Work Order: 0306033

Client Sample ID: 061603-MW7

Project: 1517000054; Chaco Plant

Collection Date: 6/16/2003 10:50:00 AM

Lab ID: 0306033-002

Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS, TOTAL		SW6010B		(SW3005A)		Analyst: DJC
Cadmium	ND	0.003		mg/L	1	6/20/2003 11:52:03 AM
Chromium	0.170	0.003		mg/L	1	6/20/2003 11:52:03 AM
MERCURY, TOTAL		SW7470		(SW7470)		Analyst: DJC
Mercury	ND	0.001		mg/L	1	6/18/2003
TOTAL DISSOLVED SOLIDS		E160.1				Analyst: HNR
Total Dissolved Solids (Residue, Filterable)	3000	40		mg/L	1	6/17/2003

Qualifiers: ND - Not Detected at the Practical Quantitation Limit (PQL)

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

R - RPD outside accepted precision limits

B - Analyte detected in the associated Method Blank

E - Value above Upper Quantitation Limit - UQL

* - Value exceeds Maximum Contaminant Level

Page 2 of 2

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 20-Jun-03

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0306030
Project: Job #151700054
Lab ID: 0306030-001A

Client Sample Info: Chaco Plant
Client Sample ID: MW-9
Collection Date: 6/13/2003 10:00:00 AM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B			Analyst: JEM	
Benzene	ND	0.5		µg/L	1	6/19/2003
Ethylbenzene	ND	0.5		µg/L	1	6/19/2003
m,p-Xylene	ND	1.0		µg/L	1	6/19/2003
o-Xylene	ND	0.5		µg/L	1	6/19/2003
Toluene	ND	0.5		µg/L	1	6/19/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

L - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

Page 1 of 3

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 20-Jun-03

CLIENT: AMEC Earth & Environmental Inc.

Client Sample Info: Chaco Plant

Work Order: 0306030

Client Sample ID: MW-10

Project: Job #151700054

Collection Date: 6/13/2003 11:20:00 AM

Lab ID: 0306030-002A

Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: JEM		
Benzene	4.8	0.5		µg/L	1	6/18/2003
Toluene	ND	0.5		µg/L	1	6/18/2003
Ethylbenzene	22	0.5		µg/L	1	6/18/2003
m,p-Xylene	37	1.0		µg/L	1	6/18/2003
o-Xylene	20	0.5		µg/L	1	6/18/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

R - RPD outside accepted precision limits

B - Analyte detected in the associated Method Blank

E - Value above Upper Quantitation Limit - UQL

* - Value exceeds Maximum Contaminant Level

Page 2 of 3

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

amec

Project No.: 1517000054

Task: Task 2 - 2003

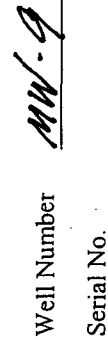
Date: 13-Jun-03

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Comments: _____

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6/16/03



☐ Development **WELL DEVELOPMENT AND PURGING DATA** Page of
☒ Purging

Site Name	Chaco Plant
Site Address	Rural San Juan County

☒ 3 to 5 Casing Volumes of Water Removal

☐ Stabilization of Indicator Parameters

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

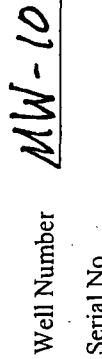
Water Disposal

EPFS Pond onsite

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
6/13/13	7:30		✓				5	5			15.1	7.16	1405		Black/HSC adobe
	9:10		✓				5	10			14.3	7.43	1628		"
	9:16		✓				5	15			14.4	8.56	1643		"
	9:55		✓		13.21		5	20			14.3	8.67	1638		"

Comments

Developer's Signature (s) John Lee Date 6/13/03 Reviewer CA Date 6/1/03



Well Number MW-10

☐ Development
☒ Purging

WELL DEVELOPMENT AND

Page of
ING DATA

Project Name EPFS Chaco Sampling

Project Manager Don Fernald

Project No. 1517000054

Client Company EPFS

EPFS

Phase.Task No. 2-2003

Site Name Chaco Plant

Site Address

Rural San Juan County

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal

- ☐ Stabilization of Indicator Parameters

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 22.13

Initial Depth to Water (feet) 10.93

Height of Water Column in Well (feet) 11.2

Diameter (inches): Well 4" Gravel Pack 4"

Methods of Development

Pump	Bailer

☐ Centrifugal

☐ Submersible

☐ Peristaltic

☒ Bottom Valve

☐ Double Check Valve☐ Stainless-steel Kemmerer☐ Other

Water Removal Data

[illegible]

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

Comments	<u>< 1/4" product on surface</u>

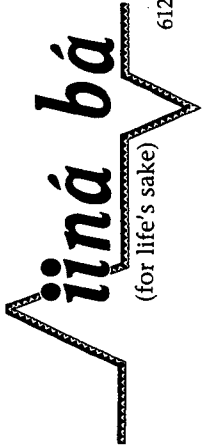
Developer's Signature (s)

Date 6/3/23

Reviewer

Date _____

7/1/03



CHAIN OF CUSTODY RECORD

B
1
7
1
4

(for life's sake)

Date:

Page

612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499
(505) 327-1072 • FAX: (505) 327-1496

[illegible]

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496

June 20, 2003

Don Fernald
AMEC Earth & Environmental Inc.
2060 Alton Place
Farmington, NM 87401

TEL: (505) 327-7928
FAX (505) 326-5721

RE: Job #151700054

Dear Don Fernald:

Order No.: 0306030

iiná bá. Ltd. received 3 samples on 6/13/2003 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

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

Sincerely,



David Cox

• *iiná bá* •

P.O. Box 3788
Shiprock, NM 87420

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612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496

iiná bá

P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

iiná bá, Ltd.

Date: 20-Jun-03

CLIENT: AMEC Earth & Environmental Inc.

Project: Job #151700054

Lab Order: 0306030

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

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iiná bá

P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

ANALYTICAL REPORT

Date: 20-Jun-03

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0306030
Project: Job #151700054
Lab ID: 0306030-003A

Client Sample Info: Chaco Plant
Client Sample ID: Trip Blank
Collection Date: 6/13/2003 9:55:00 AM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: JEM
Benzene	ND	0.5		µg/L	1	6/18/2003
Ethylbenzene	ND	0.5		µg/L	1	6/18/2003
m,p-Xylene	ND	1.0		µg/L	1	6/18/2003
o-Xylene	ND	0.5		µg/L	1	6/18/2003
Toluene	ND	0.5		µg/L	1	6/18/2003

Qualifiers: ND - Not Detected at the Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted precision limits
E - Value above Upper Quantitation Limit - UQL

Page 3 of 3

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

iiná bá, Ltd.

Sample Receipt Checklist

Client Name: AME1004

Date and Time Received:

6/13/2003

Work Order Number: 0306030

Received by: HNR

Checklist completed by:

Heidi M
Signature

6/13/03
Date

Reviewed by:

JM
Initials

6/18/03
Date

Matrix:

Carrier name: Courier

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	

Adjusted? _____

Checked by: _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____

Date contacted: _____

Person contacted: _____

Contacted by: _____

Regarding: _____

Comments: _____

Corrective Action: _____

inná bá, Ltd.

Date: 20-10-03

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0306030
Project: Job #151700054

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID MB_03061	SampleType: MBLK	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/18/2003	Run ID: GC-1_030618B
Client ID: ZZZZZ	Batch ID: R4659	TestNo: SW8021B		Analysis Date: 6/18/2003	SeqNo: 67469
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Benzene ND 0.50
Ethylbenzene ND 0.50
m,p-Xylene ND 1.0
o-Xylene ND 0.50
Toluene 0.1239 0.50

J

Sample ID MB_030619	SampleType: MBLK	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/19/2003	Run ID: GC-1_030619A
Client ID: ZZZZZ	Batch ID: R4660	TestNo: SW8021B		Analysis Date: 6/19/2003	SeqNo: 67488
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Benzene ND 0.50
Ethylbenzene ND 0.50
m,p-Xylene ND 1.0
o-Xylene ND 0.50
Toluene 0.1483 0.50

J

Sample ID LCS_030618	SampleType: LCS	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/18/2003	Run ID: GC-1_030618B
Client ID: ZZZZZ	Batch ID: R4659	TestNo: SW8021B		Analysis Date: 6/18/2003	SeqNo: 67468
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Benzene 41.34 0.50 40 0 0 103 85 110 0 0
Ethylbenzene 39.65 0.50 40 0 0 99.1 85 113 0 0
m,p-Xylene 80.75 1.0 80 0 0 101 86 112 0 0
o-Xylene 40.64 0.50 40 0 0 102 83 112 0 0
Toluene 40.31 0.50 40 0.1239 0 100 83 110 0 0

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0306030
 Project: Job #151700034

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	LCS_030619	SampleType: LCS	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/19/2003	Run ID: GC-1_030619A					
Client ID:	ZZZZZ	Batch ID: R4660	TestNo: SW8021B		Analysis Date: 6/19/2003	SeqNo: 67487					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	42.84	0.50	40	0	107	85	110	0	0		
Ethylbenzene	42.4	0.50	40	0	106	85	113	0	0		
m,p-Xylene	85.06	1.0	80	0	106	86	112	0	0		
o-Xylene	42.09	0.50	40	0	105	83	112	0	0		
Toluene	41.87	0.50	40	0.1483	104	83	110	0	0		

Sample ID	0306031-001AMS	SampleType: MS	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/18/2003	Run ID: GC-1_030618B					
Client ID: ZZZZZ		Batch ID: R4659	TestNo: SW8021B		Analysis Date: 6/18/2003	SeqNo: 67470					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	704.1	2.5	200	522.4	90.8	73	124	0	0		
Ethylbenzene	226.8	2.5	200	35.02	95.9	83	116	0	0		
m,p-Xylene	493.3	5.0	400	113.2	95	75	121	0	0		
o-Xylene	266.8	2.5	200	75.8	95.5	81	113	0	0		
Toluene	634.5	2.5	200	455.1	89.7	84	110	0	0		

Sample ID	0306026-003AMS	SampleType: MS	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/19/2003	Run ID: GC-1_030619A					
Client ID:	ZZZZZ	Batch ID: R4660	TestNo: SW8021B		Analysis Date: 6/19/2003	SeqNo: 67489					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	473.4	5.0	400	56.93	104	73	124	0	0		
Ethylbenzene	459.3	5.0	400	46.85	103	83	116	0	0		
m,p-Xylene	2513	10	800	1683	104	75	121	0	0		
o-Xylene	425.8	5.0	400	1.438	106	81	113	0	0		
Toluene	422.7	5.0	400	11.95	103	84	110	0	0		

Sample ID	0306031-001AMSD	SampleType: MSD	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/18/2003	Run ID: GC-1_030618B					
Client ID:	ZZZZZ	Batch ID: R4659	TestNo: SW8021B		Analysis Date: 6/18/2003	SeqNo: 67471					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	692.9	2.5	200	522.4	85.2	72	117	704.1	1.61	6.9	
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Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0306030
 Project: Job #151700054

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	0306031-001AMSD	SampType: MSD	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/18/2003	Run ID: GC-1_030618B					
Client ID: ZZZZZ	Batch ID: R4659		TestNo: SW8021B		Analysis Date: 6/18/2003	SeqNo: 67471					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ethylbenzene	218.6	2.5	200	35.02	91.8	80	111	226.8	3.69	6.7	
m,p-Xylene	477.3	5.0	400	113.2	91	72	117	493.3	3.30	6.6	
o-Xylene	258.9	2.5	200	75.8	91.6	80	110	266.8	3.00	6.2	
Toluene	624.8	2.5	200	455.1	84.9	82	110	634.5	1.54	6.2	

Sample ID	0306026-003AMSD	SampType: MSD	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/19/2003	Run ID: GC-1_030619A					
Client ID: ZZZZZ		Batch ID: R4660	TestNo: SW8021B		Analysis Date: 6/19/2003	SeqNo: 67490					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	461.5	5.0	400	56.93	101	72	117	473.4	2.53	6.9	
Ethylbenzene	448.3	5.0	400	46.85	100	80	111	459.3	2.42	6.7	
m,p-Xylene	2454	10	800	1683	96.4	72	117	2513	2.40	6.6	
o-Xylene	420.8	5.0	400	1.438	105	80	110	425.8	1.18	6.2	
Toluene	412.3	5.0	400	11.95	100	82	110	422.7	2.49	6.2	

Sample ID	CCV1_030618	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/18/2003	Run ID: GC-1_030618B					
Client ID:	ZZZZZ	Batch ID: R4659	TestNo: SW8021B		Analysis Date: 6/18/2003	SeqNo: 67465					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	21.57	0.50	20	0	108	85	115	0	0		
Ethylbenzene	21.16	0.50	20	0	106	85	115	0	0		
m,p-Xylene	42.43	1.0	40	0	106	85	115	0	0		
o-Xylene	21	0.50	20	0	105	85	115	0	0		
Toluene	20.95	0.50	20	0	105	85	115	0	0		

Sample ID	CCV2_030618	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/18/2003	Run ID: GC-1_030618B					
Client ID:	ZZZZZ	Batch ID: R4659	TestNo: SW8021B		Analysis Date: 6/18/2003	SeqNo: 67466					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	42.48	0.50	40	0	106	85	115	0	0		
Ethylbenzene	41.7	0.50	40	0	104	85	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0306030
 Project: Job #151700054

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	CCV2_030618	SampType:	CCV	TestCode:	BTEX_W	Units:	µg/L	Prep Date:	6/18/2003	Run ID:	GC-1_030618B
Client ID:	ZZZZZ	Batch ID:	R4659	TestNo:	SW8021B			Analysis Date:	6/18/2003	SeqNo:	67466
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCV3_030618	SampType:	CCV	TestCode:	BTEX_W	Units:	µg/L	Prep Date:	6/18/2003	Run ID:	GC-1_030618B
Client ID:	ZZZZZ	Batch ID:	R4659	TestNo:	SW8021B			Analysis Date:	6/18/2003	SeqNo:	67467
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.56	0.50	20	0	103	85	115	0	0		
Ethylbenzene	20.2	0.50	20	0	101	85	115	0	0		
m,p-Xylene	40.65	1.0	40	0	102	85	115	0	0		
o-Xylene	20.23	0.50	20	0	101	85	115	0	0		
Toluene	20.05	0.50	20	0	100	85	115	0	0		

Sample ID	CCV1_030619	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/19/2003	Run ID: GC-1_030619A					
Client ID: ZZZZZ		Batch ID: R4660	TestNo: SW8021B		Analysis Date: 6/19/2003	SeqNo: 67485					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.86	0.50	20	0	109	85	115	0	0		
Ethylbenzene	21.25	0.50	20	0	106	85	115	0	0		
m,p-Xylene	42.71	1.0	40	0	107	85	115	0	0		
o-Xylene	21.09	0.50	20	0	105	85	115	0	0		
Toluene	21.2	0.50	20	0	106	85	115	0	0		

Sample ID	CCV2_030619	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/19/2003	Run ID: GC-1_030619A					
Client ID: ZZZZZ		Batch ID: R4660	TestNo: SW8021B		Analysis Date: 6/19/2003	SeqNo: 67486					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.79	0.50	20	0	104	85	115	0	0		
Ethylbenzene	20.15	0.50	20	0	101	85	115	0	0		
m,p-Xylene	40.62	1.0	40	0	102	85	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0306030
Project: Job #151700054

ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX_W

Sample ID	CCV2_030619	SampleType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 6/19/2003	Run ID: GC-1_030619A						
Client ID: ZZZZZ		Batch ID: R4660	TestNo: SW8021B		Analysis Date: 6/19/2003	SeqNo: 67486						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene		20.24	0.50	20	0	101	85	115	0	0		
Toluene		20.24	0.50	20	0	101	85	115	0	0		

Qualifiers:

N/D - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.

Work Order: 0306030

Project: Job #151700054

Test No: W8021B

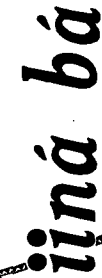
Matrix: W

QC SUMMARY REPORT SURROGATE RECOVERIES

Sample ID	14FBZ	4BCBZ	FLBZ
0306026-003AAS	100	103	95.9
0306026-003AMSD	100	99.9	96.0
0306030-001A	103	101	97.4
0306030-002A	98.2	104	95.3
0306030-003A	101	97.7	96.4
0306031-001AMS	98.4	97.4	92.9
0306031-001AMSD	98.7	95.2	94.0
CCV1_030618	100	105	96.2
CCV1_030619	102	100	96.8
CCV2_030618	101	99.2	95.9
CCV2_030619	101	97.0	96.5
CCV3_030618	102	96.2	96.5
LCS_030618	100	103	96.1
LCS_030619	101	97.8	96.6
MB_03061	101	102	96.0
MB_030619	102	97.7	97.3

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	90-113
4BCBZ	= 4-Bromochlorobenzene	82-137
FLBZ	= Fluorobenzene	85-115

* Surrogate recovery outside acceptance limits

B
174

4713

Date:

05/30/83

Page

of

612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499
(505) 327-1072 • FAX: (505) 327-1496

[illegible]

amec

Project No.: 1517000054

Task: Task 2 - 2003

Date: 15-Jun-03

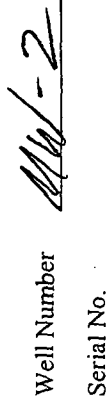
Site Name: Chaco Plant

[illegible]

Comments: _____



6/16/02

☐ Development
☒ Purging

Page / of

Project Name EPFS Chaco Sampling

Project Manager Don Fernald

Project No. 1517000054

Client Company EPFS

EPFS

Phase.Task No.

Phase.Task No. 2-2003

Site Name Chaco Plant

Site Address Rural San Juan County

Development Criteria

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal

☐ Stabilization of Indicator Parameters

Water Volume Calculation

Initial Depth of Well (feet) 27.26

Initial Depth to Water (feet)

Height of Water Column in Well (feet) 11.26

Diameter (inches): Well 4" Gravel Pack 11.5"

Instruments

☒ PH Meter

Serial No. (if applicable)

VS 163

☐ DO Monitor

Methods of Development

Pump
Bailer

☐ Centrifugal

☐ Submersible

☐ Peristaltic

Bailer

☒ Bottom Valve

☐ Double Check Valve☐ Stainless-steel Kemmerer☐ Other

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons)		Product Volume Removed (gallons)		Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
6/16/06	11:35		X				5	5	none	none	15.1	7.65	2046		Brown
	11:45		X				10.5	10			15.0	8.52	2089		
	11:55		X				5	15			15.0	8.83	2130		
	12:04		X				5	20			15.1	8.7	2163		
	12:14		X			17.58	5	25			14.8	8.06	2171		

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

Comments

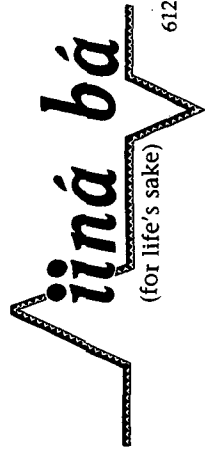
Developer's Signature(s)

Date _____

6/16/03

Reviewer

Date _____



CHAIN OF CUSTODY RECORD

B
1715

Page _____ of _____

Date:

612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499
(505) 327-1072 • FAX: (505) 327-1496

[illegible]

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496

iiná bá

P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

June 23, 2003

Don Fernald
AMEC Earth & Environmental Inc.
2060 Afton Place
Farmington, NM 87401

TEL: (505) 327-7928
FAX (505) 326-5721

RE: 1517000054; Chaco Plant

Order No.: 0306033

Dear Don Fernald:

iiná bá, Ltd. received 2 samples on 6/16/2003 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

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

Sincerely,



David Cox

612 E. Murray Drive
Farmington, NM 87499

Off: (505) 327-1072
FAX: (505) 327-1496

iiná bá

P.O. Box 3788
Shiprock, NM 87420

Off: (505) 368-4065

iiná bá, Ltd.

Date: 23-Jun-03

CLIENT: AMEC Earth & Environmental Inc.

Project: 1517000054; Chaco Plant

Lab Order: 0306033

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

iiná bá, Ltd.

Sample Receipt Checklist

Client Name: AME1004

Date and Time Received:

6/16/2003

Work Order Number: 0306033

Received by: JEM

Checklist completed by:

J. Moore
Signature

6/16/03
Date

Reviewed by:

JR
Initials

6/17/03
Date

Matrix:

Carrier name: Courier

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☒	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	

Adjusted? _____ Checked by: _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

iiná bá, Ltd.

Date: 23-Jun-03

CLIENT: AMEC Earth & Environmental Inc.

Work Order: 0306033

Project: 1517000054; Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B_AQ-T

Sample ID	MBLK_030618	SampType: MBLK	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 6/18/2003	Run ID: ICP_1_030620B						
Client ID: ZZZZZ		Batch ID: 416	TestNo: SW6010B	(SW3005A)	Analysis Date: 6/20/2003	SeqNo: 67530						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	LCS_030618	SampType: LCS	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 6/18/2003	Run ID: ICP_1_030620B					
Client ID: ZZZZZ		Batch ID: 416	TestNo: SW6010B	(SW3005A)	Analysis Date: 6/20/2003	SeqNo: 67531					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	0306033-002AMS	SampType: MS	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 6/18/2003	Run ID: ICP_1_030620B					
Client ID:	061603-MW7	Batch ID: 416	TestNo: SW6010B	(SW3005A)	Analysis Date: 6/20/2003	SeqNo: 67535					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	0306033-001AD	SampType: DUP	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date: 6/18/2003	Run ID: ICP_1_030620B					
Client ID:	061603-MW2	Batch ID: 416	TestNo: SW6010B	(SW3005A)	Analysis Date: 6/20/2003	SeqNo: 67533					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCB1_030620	SampType: CCB	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030620B					
Client ID:	ZZZZZ	Batch ID: 416	TestNo: SW6010B		Analysis Date: 6/20/2003	SeqNo: 67536					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0306033
 Project: 1517000054; Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B_AQ-T

Sample ID	CCB1_030620	SampType: CCB	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030620B					
Client ID: ZZZZ		Batch ID: 416	TestNo: SW6010B		Analysis Date: 6/20/2003	SeqNo: 67536					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	0.00300	0	0	0	0	0	0	0	0	

Sample ID	CCB2_030620	SampType: CCB	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030620B					
Client ID:	ZZZZZ	Batch ID: 416	TestNo: SW6010B		Analysis Date: 6/20/2003	SeqNo: 67539					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCV1_030620	SampType: CCV	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030620B					
Client ID:	ZZZZZ	Batch ID: 416	TestNo: SW6010B		Analysis Date: 6/20/2003	SeqNo: 67537					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	CCV2_030620	SampType: CCV	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030620B					
Client ID:	ZZZZZ	Batch ID: 416	TestNo: SW6010B		Analysis Date: 6/20/2003	SeqNo: 67540					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	ICV_030620	SampType: ICV	TestCode: 6010B_AQ-T	Units: mg/L	Prep Date:	Run ID: ICP_1_030620B					
Client ID:	ZZZZZ	Batch ID: 416	TestNo: SW6010B		Analysis Date: 6/20/2003	SeqNo: 67538					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 Page 2 of 5

CLIENT: AMEC Earth & Environmental Inc.
 Work Order: 0306033
 Project: 1517000054; Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_CTW

Sample ID	MBLK_030618	SampType: MBLK	TestCode: HG_CTW	Units: mg/L	Prep Date: 6/18/2003	Run ID: AA_030618B
Client ID:	ZZZZZ	Batch ID: 415	TestNo: SW7470	(SW7470)	Analysis Date: 6/18/2003	SeqNo: 67370
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Mercury	ND	0.00100				

Sample ID	LCS_030618	SampType: LCS	TestCode: HG_CTW	Units: mg/L	Prep Date: 6/18/2003	Run ID: AA_030618B
Client ID:	ZZZZZ	Batch ID: 415	TestNo: SW7470	(SW7470)	Analysis Date: 6/18/2003	SeqNo: 67374
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Mercury	0.0132	0.00100	0.0125	0	106 70 130	0 0

Sample ID	0306033-001AMS	SampType: MS	TestCode: HG_CTW	Units: mg/L	Prep Date: 6/18/2003	Run ID: AA_030618B
Client ID:	061603-MW2	Batch ID: 415	TestNo: SW7470	(SW7470)	Analysis Date: 6/18/2003	SeqNo: 67378
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Mercury	0.01608	0.00100	0.0125	0	129 70 130	0 0

Sample ID	0306023-001AD	SampType: DUP	TestCode: HG_CTW	Units: mg/L	Prep Date: 6/18/2003	Run ID: AA_030618B
Client ID:	ZZZZZ	Batch ID: 415	TestNo: SW7470	(SW7470)	Analysis Date: 6/18/2003	SeqNo: 67376
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Mercury	ND	0.00100	0	0	0 0 0	0 0 20

Sample ID	CCB1_030618	SampType: CCB	TestCode: HG_CTW	Units: mg/L	Prep Date:	Run ID: AA_030618B
Client ID:	ZZZZZ	Batch ID: 415	TestNo: SW7470		Analysis Date: 6/18/2003	SeqNo: 67371
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual
Mercury	ND	0.00100	0	0	0 0 0	0 0

Sample ID	CCB2_030618	SampType: CCB	TestCode: HG_CTW	Units: mg/L	Prep Date:	Run ID: AA_030618B
Client ID:	ZZZZZ	Batch ID: 415	TestNo: SW7470		Analysis Date: 6/18/2003	SeqNo: 67380
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val %RPD RPDLimit Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.

Work Order: 0306033

Project: 1517000054; Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: HG_CTW

Sample ID	CCB2_030618	SampType: CCB	TestCode: HG_CTW	Units: mg/L	Prep Date:	Run ID: AA_030618B						
Client ID:	ZZZZZ	Batch ID: 415	TestNo: SW7470		Analysis Date: 6/18/2003	SeqNo: 67380						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		ND	0.00100	0	0	0	0	0	0	0	0	

Sample ID	CCV1_030618	SampType: CCV	TestCode: HG_CTW	Units: mg/L	Prep Date:	Run ID: AA_030618B						
Client ID:	ZZZZZ	Batch ID: 415	TestNo: SW7470		Analysis Date: 6/18/2003	SeqNo: 67372						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.01056	0.00100	0.01	0	106	80	120	0	0	0	

Sample ID	CCV2_030618	SampType: CCV	TestCode: HG_CTW	Units: mg/L	Prep Date:	Run ID: AA_030618B						
Client ID: ZZZZZ		Batch ID: 415	TestNo: SW7470		Analysis Date: 6/18/2003	SeqNo: 67381						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.01103	0.00100	0.01	0	110	80	120	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: AMEC Earth & Environmental Inc.
Work Order: 0306033
Project: 1517000054; Chaco Plant

ANALYTICAL QC SUMMARY REPORT

TestCode: TDS_W

Sample ID	MBLK	Sample Type: MBLK	TestCode: TDS_W	Units: mg/L	Prep Date:	Run ID: WET CHEM_030617A					
Client ID:	ZZZZZ	Batch ID: R4665	TestNo: E160.1		Analysis Date: 6/17/2003	SeqNo: 67563					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		26	40								J

Sample ID	LCS 3071	SampType:	LCS	TestCode:	TDS_W	Units:	mg/L	Prep Date:	Run ID: WET CHEM_030617A														
Client ID:	ZZZZZ	Batch ID:	R4665	TestNo:	E160.1				Analysis Date:	6/17/2003													
Analyte		Result		PQL	40.0	SPK value	3160	SPK Ref Val	26	%REC	101	LowLimit	90	HighLimit	110	RPD Ref Val	0	%RPD	0	RPDLimit	0	Qual	
Total Dissolved Solids (Residue, Filtera																							

Sample ID	0306031-002BD	Sample Type: DUP	TestCode: TDS_W	Units: mg/L	Prep Date:	Run ID: WET CHEM_030617A					
Client ID: ZZZZ		Batch ID: R4665	TestNo: E160.1		Analysis Date: 6/17/2003	SeqNo: 67567					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		35950	40.0	0	0	0	0	36280	0.928		12

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CHAIN OF CUSTODY RECORD

B 1715

Page

Date: 6/18/00

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PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **309133**
October 20, 2003

TERRACON
#4A CR 3499
FLORA VISTA, NM 87415

EL PASO FIELD SERVICES
614 REILLY AVE
FARMINGTON, NM 87401

Project Name CHACO PLANT SAMPLING
Project Number 69037021

Attention: ROBERT THOMPSON

On 09/25/03 Pinnacle Laboratories Inc., (ADHS Lincense No. AZ0643), 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 8021 analyses were performed by Pinnacle Laboratories, Inc. Albuquerque, NM.

All remaining analyses were performed by Environmental Services Laboratory, Inc. Portland, OR.

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



H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: TERRACON	PINNACLE ID	: 309133
PROJECT #	: 69037021	DATE RECEIVED	: 09/25/03
PROJECT NAME	: CHACO PLANT SAMPLING	REPORT DATE	: 10/20/03
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
309133 - 01	MW-10	AQUEOUS	09/24/03
309133 - 02	MW-09	AQUEOUS	09/24/03
309133 - 03	MW-08	AQUEOUS	09/24/03
309133 - 04	MW-01	AQUEOUS	09/24/03
309133 - 05	TRIP BLANK	AQUEOUS	09/23/03

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
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Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : TERRACON
PROJECT # : 69037021
PROJECT NAME : CHACO PLANT SAMPLING

PINNACLE I.D. : 309133
ANALYST : BP

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	MW-10	AQUEOUS	09/24/03	NA	10/03/03	1
02	MW-09	AQUEOUS	09/24/03	NA	10/02/03	1
03	MW-08	AQUEOUS	09/24/03	NA	10/02/03	1
PARAMETER		DET. LIMIT	UNITS	MW-10	MW-09	MW-08
BENZENE		0.5	UG/L	23	< 0.5	< 0.5
TOLUENE		0.5	UG/L	< 0.5	< 0.5	< 0.5
ETHYLBENZENE		0.5	UG/L	12	< 0.5	< 0.5
TOTAL XYLENES		1.0	UG/L	28	< 1.0	< 1.0

SURROGATE:
BROMOFLUOROBENZENE (%) 118 97 98
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
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Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : TERRACON
PROJECT # : 69037021
PROJECT NAME : CHACO PLANT SAMPLING

PINNACLE I.D. : 309133
ANALYST : BP

SAMPLE		MATRIX	DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.		SAMPLED	EXTRACTED	ANALYZED	FACTOR
04	MW-01	AQUEOUS	09/24/03	NA	10/02/03	1
05	TRIP BLANK	AQUEOUS	09/23/03	NA	10/02/03	1
PARAMETER		DET. LIMIT	UNITS	MW-01	TRIP BLANK	
BENZENE		0.5	UG/L	< 0.5	< 0.5	
TOLUENE		0.5	UG/L	< 0.5	< 0.5	
ETHYLBENZENE		0.5	UG/L	< 0.5	< 0.5	
TOTAL XYLENES		1.0	UG/L	< 1.0	< 1.0	

SURROGATE:
BROMOFLUOROBENZENE (%) 97 102
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 309133
BLANK I. D.	: 100103	DATE EXTRACTED	: N/A
CLIENT	: TERRACON	DATE ANALYZED	: 10/01/03
PROJECT #	: 69037021	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0

SURROGATE:

BROMOFLUOROBENZENE (%)

97

SURROGATE LIMITS: (80 - 120)

CHEMIST NOTES:

N/A

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 309133
BLANK I. D.	: 100203	DATE EXTRACTED	: N/A
CLIENT	: TERRACON	DATE ANALYZED	: 10/02/03
PROJECT #	: 69037021	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0

SURROGATE:

BROMOFLUOROBENZENE (%)

97

SURROGATE LIMITS: (80 - 120)

CHEMIST NOTES:

N/A

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCSLCS

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 309133
LCSLCS #	: 100103	DATE EXTRACTED	: N/A
CLIENT	: TERRACON	DATE ANALYZED	: 10/01/03
PROJECT #	: 69037021	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	22.1	111	21.3	107	4	(80 - 120)	20
TOLUENE	<0.5	20.0	21.5	108	20.8	104	3	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.7	109	20.9	105	4	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	64.8	108	62.7	105	3	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCSLCSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 309133
LCSLCSD #	: 100203	DATE EXTRACTED	: N/A
CLIENT	: TERRACON	DATE ANALYZED	: 10/02/03
PROJECT #	: 69037021	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	21.8	109	21.4	107	2	(80 - 120)	20
TOLUENE	<0.5	20.0	21.3	107	20.9	105	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.5	108	21.1	106	2	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	64.1	107	62.6	104	2	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 309133
MSMSD #	: 309138-01	DATE EXTRACTED	: N/A
CLIENT	: TERRACON	DATE ANALYZED	: 10/02/03
PROJECT #	: 69037021	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	21.7	109	21.5	108	1	(80 - 120)	20
TOLUENE	<0.5	20.0	21.1	106	20.9	105	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.4	107	21.2	106	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	63.5	106	63.1	105	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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



Environmental Services Laboratory, Inc.

17400 SW Upper Boones Ferry Road, Suite 270 • Portland, OR 97224 • (503) 670-8520

October 06, 2003

Jacinta A. Tenorio
Pinnacle Laboratories
2709-D Pan American Fwy NE
Albuquerque, NM 87107

TEL: 505 344-3777
FAX (505) 344-4413

RE: 309133/TERR

Dear Jacinta A. Tenorio:

Order No.: 0309253

Environmental Services Laboratory received 2 samples on 9/26/03 for the analyses presented in the following report.

There were no analytical problems encountered and all analytical data met requirements established under NELAC protocol or laboratory specifications except where noted in a Case Narrative. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety, without the written approval of the laboratory. The following checked data sections are included in this report.

☒ Base Sample Report ☒ Method Blank Report ☒ Sample Duplicate Report ☒ Matrix Spike/Matrix Spike Duplicate Report ☒ Laboratory Control Spike/Spike Duplicate Report
☒ Continuing Calibration Verification Report ☒ Initial Calibration Verification Report

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

Project Manager

Keith Hunter
Technical Review

Environmental Services Laboratory

Date: 06-Oct-03

CLIENT: Pinnacle Laboratories
Lab Order: 0309253
Project: 309133/TERR
Lab ID: 0309253-01A

Client Sample ID: MW-08/309133-03
Tag Number:
Collection Date: 9/24/03
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
MERCURY		EPA 7470A		(3005A)		Analyst: mal
Mercury	0.0028	0.00013		mg/L	1	9/27/03
ICP METALS		EPA 6010B		(3005A)		Analyst: mal
Cadmium	ND	0.0010		mg/L	1	9/27/03
Chromium	ND	0.0010		mg/L	1	9/27/03
PAH BY SIM, AQUEOUS		8270-SIM		(3510C)		Analyst: rlr
1-Methylnaphthalene	ND	0.40		µg/L	4	10/1/03
2-Methylnaphthalene	ND	0.40		µg/L	4	10/1/03
Acenaphthene	ND	0.40		µg/L	4	10/1/03
Acenaphthylene	ND	0.40		µg/L	4	10/1/03
Anthracene	ND	0.40		µg/L	4	10/1/03
Benz(a)anthracene	ND	0.40		µg/L	4	10/1/03
Benzo(a)pyrene	ND	0.40		µg/L	4	10/1/03
Benzo(b)fluoranthene	ND	0.40		µg/L	4	10/1/03
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	10/1/03
Benzo(k)fluoranthene	ND	0.40		µg/L	4	10/1/03
Chrysene	ND	0.40		µg/L	4	10/1/03
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	10/1/03
Fluoranthene	ND	0.40		µg/L	4	10/1/03
Fluorene	0.56	0.40		µg/L	4	10/1/03
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	10/1/03
Naphthalene	ND	0.40		µg/L	4	10/1/03
Phenanthrene	ND	0.40		µg/L	4	10/1/03
Pyrene	ND	0.40		µg/L	4	10/1/03
Surr: 2-Fluorobiphenyl	57.0	43-116		%REC	4	10/1/03
Surr: 4-Terphenyl-d14	46.0	33-141		%REC	4	10/1/03
Surr: Nitrobenzene-d5	63.0	35-114		%REC	4	10/1/03

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Environmental Services Laboratory

Date: 06-Oct-03

CLIENT: Pinnacle Laboratories
Lab Order: 0309253
Project: 309133/TERR
Lab ID: 0309253-02A

Client Sample ID: MW-01/309133-04
Tag Number:
Collection Date: 9/24/03
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
MERCURY		EPA 7470A		(3005A)		Analyst: mal
Mercury	0.032	0.0013		mg/L	10	9/27/03
ICP METALS		EPA 6010B		(3005A)		Analyst: mal
Cadmium	ND	0.0010		mg/L	1	9/27/03
Chromium	ND	0.0010		mg/L	1	9/27/03
PAH BY SIM, AQUEOUS		8270-SIM		(3510C)		Analyst: rlr
Acenaphthene	ND	0.40		µg/L	4	10/1/03
Acenaphthylene	ND	0.40		µg/L	4	10/1/03
Anthracene	ND	0.40		µg/L	4	10/1/03
Benz(a)anthracene	ND	0.40		µg/L	4	10/1/03
Benzo(a)pyrene	ND	0.40		µg/L	4	10/1/03
Benzo(b)fluoranthene	ND	0.40		µg/L	4	10/1/03
Benzo(g,h,i)perylene	ND	0.40		µg/L	4	10/1/03
Benzo(k)fluoranthene	ND	0.40		µg/L	4	10/1/03
Chrysene	ND	0.40		µg/L	4	10/1/03
Dibenz(a,h)anthracene	ND	0.40		µg/L	4	10/1/03
Fluoranthene	ND	0.40		µg/L	4	10/1/03
Fluorene	ND	0.40		µg/L	4	10/1/03
Indeno(1,2,3-cd)pyrene	ND	0.40		µg/L	4	10/1/03
Naphthalene	ND	0.40		µg/L	4	10/1/03
Phenanthrene	ND	0.40		µg/L	4	10/1/03
Pyrene	ND	0.40		µg/L	4	10/1/03
Surr: 2-Fluorobiphenyl	63.0	43-116		%REC	4	10/1/03
Surr: 4-Terphenyl-d14	35.0	33-141		%REC	4	10/1/03
Surr: Nitrobenzene-d5	64.0	35-114		%REC	4	10/1/03

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Environmental Services Laboratory

Date: 06-Oct-03

CLIENT: Pinnacle Laboratories

Work Order: 0309253

Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 02 HG A

Sample ID: MB-6268	SampType: MBLK	TestCode: 02 HG A	Units: mg/L	Prep Date: 9/27/03	Run ID: MERC_030927A						
Client ID: ZZZZZ	Batch ID: 6268	TestNo: EPA 7470A (3005A)		Analysis Date: 9/27/03	SeqNo: 181627						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.00013									

Sample ID: LCS-6268	SampType: LCS	TestCode: 02 HG A	Units: mg/L	Prep Date: 9/27/03	Run ID: MERC_030927A						
Client ID: ZZZZZ	Batch ID: 6268	TestNo: EPA 7470A (3005A)		Analysis Date: 9/27/03	SeqNo: 181628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00102	0.00013	0.001	0	102	80	120	0	0	0	

Sample ID: 0309232-01A MS	SampType: MS	TestCode: 02 HG A	Units: mg/L	Prep Date: 9/27/03	Run ID: MERC_030927A						
Client ID: ZZZZZ	Batch ID: 6268	TestNo: EPA 7470A (3005A)		Analysis Date: 9/27/03	SeqNo: 181630						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury, TCLP	0.238	0.0065	0.002	0.238	-50	75	125	0	0		S.M

Sample ID: 0309232-01A MSD	SampType: MSD	TestCode: 02 HG A	Units: mg/L	Prep Date: 9/27/03	Run ID: MERC_030927A						
Client ID: ZZZZZ	Batch ID: 6268	TestNo: EPA 7470A (3005A)		Analysis Date: 9/27/03	SeqNo: 181631						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury, TCLP	0.234	0.0065	0.002	0.238	-225	75	125	0.238	1.48	20	S.M

Sample ID: 0309228-04B DUP	SampType: DUP	TestCode: 02 HG A	Units: mg/L	Prep Date: 9/27/03	Run ID: MERC_030927A						
Client ID: ZZZZZ	Batch ID: 6268	TestNo: EPA 7470A (3005A)		Analysis Date: 9/27/03	SeqNo: 181633						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury, TCLP	0.00034	0.00013	0	0	0	0	0	0.00029	15.9	20	

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 0309253
Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 02 HG A

Sample ID: CCV	SampType: CCV	TestCode: 02 HG A	Units: mg/L	Prep Date: 9/27/03	Run ID: MERC_030927A						
Client ID: ZZZZZ	Batch ID: 6268	TestNo: EPA 7470A		Analysis Date: 9/27/03	SeqNo: 181636						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00193	0.00013	0.002	0	96.5	90	110	0	0	0	

Sample ID: ICV	SampType: ICV	TestCode: 02 HG A	Units: mg/L	Prep Date: 9/27/03	Run ID: MERC_030927A						
Client ID: ZZZZZ	Batch ID: 6268	TestNo: EPA 7470A		Analysis Date: 9/27/03	SeqNo: 181626						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00204	0.00013	0.002	0	102	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
 Work Order: 0309253
 Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 02 ICPA

Sample ID: MB-6269	SampType: MBLK	TestCode: 02 ICPA	Units: mg/L	Prep Date: 9/27/03	Run ID: ICP_030927B						
Client ID: ZZZZZ	Batch ID: 6269	TestNo: EPA 6010B (3005A)		Analysis Date: 9/27/03	SeqNo: 181639						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.010									
Barium	ND	0.0010									
Cadmium	ND	0.0010									
Chromium	ND	0.0010									
Lead	ND	0.0060									
Selenium	ND	0.015									
Silver	ND	0.0030									

Sample ID: LCS-6269		SampType: LCS		TestCode: 02 ICPA		Units: mg/L		Prep Date: 9/27/03		Run ID: ICP_030927B	
Client ID: ZZZZZ		Batch ID: 6269		TestNo: EPA 6010B		(3005A)		Analysis Date: 9/27/03		SeqNo: 181640	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.468	0.010	0.5	0	93.6	80	120	0	0		
Barium	0.532	0.0010	0.5	0	106	80	120	0	0		
Cadmium	0.506	0.0010	0.5	0	101	80	120	0	0		
Chromium	0.511	0.0010	0.5	0	102	80	120	0	0		
Lead	0.496	0.0060	0.5	0	99.2	80	120	0	0		
Selenium	0.505	0.015	0.5	0	101	80	120	0	0		
Silver	0.504	0.0030	0.5	0	101	80	120	0	0		

Sample ID: 0309232-01A MS	SampType: MS	TestCode: 02 ICPA	Units: mg/L	Prep Date: 9/27/03	Run ID: ICP_030927B						
Client ID: ZZZZZ	Batch ID: 6269	TestNo: EPA 6010B (3005A)		Analysis Date: 9/27/03	SeqNo: 181642						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.482	0.010	0.5	0	96.4	75	125	0	0		
Barium, TCLP	1.15	0.0010	0.5	0.61	108	75	125	0	0		
Cadmium, TCLP	0.496	0.0010	0.5	0.0029	98.6	75	125	0	0		
Chromium, TCLP	0.481	0.0010	0.5	0	96.2	75	125	0	0		
Lead, TCLP	0.489	0.0060	0.5	0	97.8	75	125	0	0		
Selenium, TCLP	0.598	0.015	0.5	0	120	75	125	0	0		
Silver, TCLP	0.542	0.0030	0.5	0	108	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
 Work Order: 0309253
 Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 02 ICPA

Sample ID: 0309232-01A MSD		SampType: MSD	TestCode: 02 ICPA		Units: mg/L		Prep Date: 9/27/03		Run ID: ICP_030927B		
Client ID: ZZZZZ		Batch ID: 6269	TestNo: EPA 6010B		(3005A)		Analysis Date: 9/27/03		SeqNo: 181643		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.507	0.010	0.5	0	101	75	125	0.482	5.06	20	
Barium, TCLP	1.11	0.0010	0.5	0.61	100	75	125	1.15	3.54	20	
Cadmium, TCLP	0.528	0.0010	0.5	0.0029	105	75	125	0.496	6.25	20	
Chromium, TCLP	0.499	0.0010	0.5	0	99.8	75	125	0.481	3.67	20	
Lead, TCLP	0.525	0.0060	0.5	0	105	75	125	0.489	7.10	20	
Selenium, TCLP	0.621	0.015	0.5	0	124	75	125	0.598	3.77	20	
Silver, TCLP	0.54	0.0030	0.5	0	108	75	125	0.542	0.370	20	

Sample ID: 0309228-04B DUP	SampType: DUP	TestCode: 02 ICPA	Units: mg/L	Prep Date: 9/27/03	Run ID: ICP_030927B						
Client ID: ZZZZZ	Batch ID: 6269	TestNo: EPA 6010B (3005A)		Analysis Date: 9/27/03	SeqNo: 181645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.010	0	0	0	0	0	0	0	20	
Barium, TCLP	0.88	0.0010	0	0	0	0	0	0.76	14.6	20	
Cadmium, TCLP	ND	0.0010	0	0	0	0	0	0.001	0	20	
Chromium, TCLP	ND	0.0010	0	0	0	0	0	0	0	20	
Lead, TCLP	ND	0.0060	0	0	0	0	0	0	0	20	
Selenium, TCLP	ND	0.015	0	0	0	0	0	0.0297	0	20	
Silver, TCLP	ND	0.0030	0	0	0	0	0	0	0	20	

Sample ID: CCV	SampType: CCV	TestCode: 02 ICPA	Units: mg/L	Prep Date: 9/27/03	Run ID: ICP_030927B						
Client ID: ZZZZZ	Batch ID: 6269	TestNo: EPA 6010B		Analysis Date: 9/27/03	SeqNo: 181648						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.461	0.010	0.5	0	92.2	90	110	0	0		
Barium	0.496	0.0010	0.5	0	99.2	90	110	0	0		
Cadmium	0.493	0.0010	0.5	0	98.6	90	110	0	0		
Chromium	0.499	0.0010	0.5	0	99.8	90	110	0	0		
Lead	0.486	0.0060	0.5	0	97.2	90	110	0	0		
Selenium	0.508	0.015	0.5	0	102	90	110	0	0		
Silver	0.512	0.0030	0.5	0	102	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
 Work Order: 0309253
 Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 02 ICPA

Sample ID: ICVLOW	SampType: ICV	TestCode: 02 ICPA	Units: mg/L	Prep Date: 9/27/03	Run ID: ICP_030927B						
Client ID: ZZZZZ	Batch ID: 6269	TestNo: EPA 6010B		Analysis Date: 9/27/03	SeqNo: 181638						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.488	0.010	0.5	0	97.6	90	110	0	0		
Barium	0.506	0.0010	0.5	0	101	90	110	0	0		
Cadmium	0.502	0.0010	0.5	0	100	90	110	0	0		
Chromium	0.513	0.0010	0.5	0	103	90	110	0	0		
Lead	0.5	0.0060	0.5	0	100	90	110	0	0		
Selenium	0.513	0.015	0.5	0	103	90	110	0	0		
Silver	0.505	0.0030	0.5	0	101	90	110	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
 Work Order: 0309253
 Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: MB-6281 SampType: MBLK TestCode: 06 PAH A Units: µg/L Prep Date: 10/1/03 Run ID: HEISENBURG_031001A
 Client ID: ZZZZZ Batch ID: 6281 TestNo: 8270-SIM (3510C) Analysis Date: 10/1/03 SeqNo: 182063

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.10									
2-Methylnaphthalene	ND	0.10									
Acenaphthene	ND	0.10									
Acenaphthylene	ND	0.10									
Anthracene	ND	0.10									
Benzo(a)anthracene	ND	0.10									
Benzo(a)pyrene	ND	0.10									
Benzo(b)fluoranthene	ND	0.10									
Benzo(g,h,i)perylene	ND	0.10									
Benzo(k)fluoranthene	ND	0.10									
Chrysene	ND	0.10									
Dibenz(a,h)anthracene	ND	0.10									
Fluoranthene	ND	0.10									
Fluorene	ND	0.10									
Indeno(1,2,3-cd)pyrene	ND	0.10									
Naphthalene	ND	0.10									
Phenanthrene	ND	0.10									
Pyrene	ND	0.10									
Surr: 2-Fluorobiphenyl	0.57	0	1	0	57	43	116	0	0	0	
Surr: 4-Terphenyl-d14	0.4	0	1	0	40	33	141	0	0	0	
Surr: Nitrobenzene-d5	0.61	0	1	0	61	35	114	0	0	0	

Sample ID: LCS-6281	SampType: LCS	TestCode: 06 PAH A	Units: µg/L	Prep Date: 10/1/03	Run ID: HEISENBURG_031001A						
Client ID: ZZZZZ	Batch ID: 6281	TestNo: 8270-SIM	(3510C)	Analysis Date: 10/1/03	SeqNo: 182064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	1.4	0.10	2	0	70	21	133	0	0		
2-Methylnaphthalene	1.78	0.10	2	0	89	21	133	0	0		
Acenaphthene	1.28	0.10	2	0	64	47	145	0	0		
Acenaphthylene	1.36	0.10	2	0	68	33	145	0	0		
Anthracene	1.39	0.10	2	0	69.5	27	133	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: Pinnacle Laboratories
 Work Order: 0309253
 Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: LCS-6281	SampType: LCS	TestCode: 06 PAH A		Units: µg/L	Prep Date: 10/1/03		Run ID: HEISENBURG_031001A				
Client ID: ZZZZZ	Batch ID: 6281	TestNo: 8270-SIM		(3510C)	Analysis Date: 10/1/03		SeqNo: 182064				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	1.33	0.10	2	0	66.5	33	143	0	0		
Benzo(a)pyrene	1.29	0.10	2	0	64.5	17	163	0	0		
Benzo(b)fluoranthene	1.49	0.10	2	0	74.5	24	159	0	0		
Benzo(g,h,i)perylene	0.82	0.10	2	0	41	1	219	0	0		
Benzo(k)fluoranthene	1.68	0.10	2	0	84	11	162	0	0		
Chrysene	1.37	0.10	2	0	68.5	17	168	0	0		
Dibenz(a,h)anthracene	1.03	0.10	2	0	51.5	1	227	0	0		
Fluoranthene	1.53	0.10	2	0	76.5	26	137	0	0		
Fluorene	1.33	0.10	2	0	66.5	59	121	0	0		
Indeno(1,2,3-cd)pyrene	0.94	0.10	2	0	47	1	171	0	0		
Naphthalene	1.31	0.10	2	0	65.5	21	133	0	0		
Phenanthrene	1.49	0.10	2	0	74.5	54	120	0	0		
Pyrene	1.29	0.10	2	0	64.5	52	115	0	0		
Surr: 2-Fluorobiphenyl	0.64	0	1	0	64	43	116	0	0		
Surr: 4-Terphenyl-d14	0.36	0	1	0	36	33	141	0	0		
Surr: Nitrobenzene-d5	0.7	0	1	0	70	35	114	0	0		

Sample ID: LCSD-6281	Samp Type: LCSD	TestCode: 06 PAH A	Units: µg/L	Prep Date: 10/1/03	Run ID: HEISENBURG_031001A						
Client ID: ZZZZZ	Batch ID: 6281	TestNo: 8270-SIM	(3510C)	Analysis Date: 10/1/03	SeqNo: 182065						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	1.42	0.10	2	0	71	21	133	1.4	1.42	30	
2-Methylnaphthalene	1.7	0.10	2	0	85	21	133	1.78	4.60	30	
Acenaphthene	1.29	0.10	2	0	64.5	47	145	1.28	0.778	30	
Acenaphthylene	1.31	0.10	2	0	65.5	33	145	1.36	3.75	30	
Anthracene	1.38	0.10	2	0	69	27	133	1.39	0.722	30	
Benz(a)anthracene	1.29	0.10	2	0	64.4	33	143	1.33	3.13	30	
Benzo(a)pyrene	1.29	0.10	2	0	64.5	17	163	1.29	0	30	
Benzo(b)fluoranthene	1.8	0.10	2	0	90	24	159	1.49	18.8	30	
Benzo(g,h,i)perylene	0.82	0.10	2	0	41	1	219	0.82	0	30	
Benzo(k)fluoranthene	2.1	0.10	2	0	105	11	162	1.68	22.2	30	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
 Work Order: 0309253
 Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: LCSD-6281	SampType: LCSD	TestCode: 06 PAH A	Units: µg/L	Prep Date: 10/1/03	Run ID: HEISENBURG_031001A						
Client ID: ZZZZZ	Batch ID: 6281	TestNo: 8270-SIM	(3510C)	Analysis Date: 10/1/03	SeqNo: 182065						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chrysene	1.45	0.10	2	0	72.5	17	168	1.37	5.67	30	
Dibenz(a,h)anthracene	1.05	0.10	2	0	52.5	1	227	1.03	1.92	30	
Fluoranthene	1.55	0.10	2	0	77.5	26	137	1.53	1.30	30	
Fluorene	1.32	0.10	2	0	66	59	121	1.33	0.755	30	
Indeno(1,2,3-cd)pyrene	0.91	0.10	2	0	45.5	1	171	0.94	3.24	30	
Naphthalene	1.31	0.10	2	0	65.5	21	133	1.31	0	30	
Phenanthrene	1.46	0.10	2	0	73	54	120	1.49	2.03	30	
Pyrene	1.6	0.10	2	0	80	52	115	1.29	21.5	30	
Surr: 2-Fluorobiphenyl	0.6	0	1	0	60	43	116	0	0	30	
Surr: 4-Terphenyl-d14	0.46	0	1	0	46	33	141	0	0	30	
Surr: Nitrobenzene-d5	0.55	0	1	0	55	35	114	0	0	30	

Sample ID: 0309253-01A DUP		SampType: DUP		TestCode: 06 PAH A		Units: µg/L		Prep Date: 10/1/03		Run ID: HEISENBURG_031001A	
Client ID: MW-08/309133-03		Batch ID: 6281		TestNo: 8270-SIM		(3510C)		Analysis Date: 10/1/03		SeqNo: 182067	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.40	0	0	0	0	0	0	0	20	
2-Methylnaphthalene	ND	0.40	0	0	0	0	0	0	0	20	
Acenaphthene	ND	0.40	0	0	0	0	0	0	0	20	
Acenaphthylene	ND	0.40	0	0	0	0	0	0	0	20	
Anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Benz(a)anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(a)pyrene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(b)fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(g,h,i)perylene	ND	0.40	0	0	0	0	0	0	0	20	
Benzo(k)fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Chrysene	ND	0.40	0	0	0	0	0	0	0	20	
Dibenz(a,h)anthracene	ND	0.40	0	0	0	0	0	0	0	20	
Fluoranthene	ND	0.40	0	0	0	0	0	0	0	20	
Fluorene	0.72	0.40	0	0	0	0	0	0	0	20	R, T
Indeno(1,2,3-cd)pyrene	ND	0.40	0	0	0	0	0	0.56	25.0	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
 Work Order: 0309253
 Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: 0309253-01A DUP		SampType: DUP		TestCode: 06 PAH A		Units: µg/L		Prep Date: 10/1/03		Run ID: HEISENBURG_031001A	
Client ID: MW-08/309133-03		Batch ID: 6281		TestNo: 8270-SIM		(3510C)		Analysis Date: 10/1/03		SeqNo: 182067	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.40	0	0	0	0	0	0	0	0	20
Phenanthrene	ND	0.40	0	0	0	0	0	0	0	0	20
Pyrene	ND	0.40	0	0	0	0	0	0	0	0	20
Surr: 2-Fluorobiphenyl	2.28	0	4	0	57	43	116	0	0	0	0
Surr: 4-Terphenyl-d14	1.72	0	4	0	43	33	141	0	0	0	0
Surr: Nitrobenzene-d5	3.04	0	4	0	76	35	114	0	0	0	0

Sample ID: CCV	SampType: CCV	TestCode: 06 PAH A	Units: µg/L	Prep Date:		Run ID: HEISENBURG_031001A					
Client ID: ZZZZZ	Batch ID: R15053	TestNo: 8270-SIM		Analysis Date: 10/1/03		SeqNo: 182062					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	1.14	0.10	1	0	114	80	120	0	0		
2-Methylnaphthalene	1.09	0.10	1	0	109	80	120	0	0		
Acenaphthene	1.1	0.10	1	0	110	80	120	0	0		
Acenaphthylene	1.1	0.10	1	0	110	80	120	0	0		
Anthracene	1.17	0.10	1	0	117	80	120	0	0		
Benz(a)anthracene	1.06	0.10	1	0	106	80	120	0	0		
Benzo(a)pyrene	1.08	0.10	1	0	108	80	120	0	0		
Benzo(b)fluoranthene	1.08	0.10	1	0	108	80	120	0	0		
Benzo(g,h,i)perylene	1.08	0.10	1	0	108	80	120	0	0		
Benzo(k)fluoranthene	1.05	0.10	1	0	105	80	120	0	0		
Chrysene	1.18	0.10	1	0	118	80	120	0	0		
Dibenz(a,h)anthracene	1.2	0.10	1	0	120	80	120	0	0		
Fluoranthene	1.14	0.10	1	0	114	80	120	0	0		
Fluorene	1.01	0.10	1	0	101	80	120	0	0		
Indeno(1,2,3-cd)pyrene	1.15	0.10	1	0	115	80	120	0	0		
Naphthalene	1.05	0.10	1	0	105	80	120	0	0		
Phenanthrene	1.15	0.10	1	0	115	80	120	0	0		
Pyrene	1.15	0.10	1	0	115	80	120	0	0		
Surr: 2-Fluorobiphenyl	0.86	0	1	0	86	43	116	0	0		
Surr: 4-Terphenyl-d14	0.64	0	1	0	64	33	141	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
 Work Order: 0309253
 Project: 309133/TERR

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: CCV	SampType: CCV	TestCode: 06 PAH A	Units: µg/L	Prep Date:	Run ID: HEISENBURG_031001A						
Client ID: ZZZZZ	Batch ID: R15053	TestNo: 8270-SIM		Analysis Date: 10/1/03	SeqNo: 182062						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: CCV	SampType: CCV	TestCode: 06 PAH A	Units: µg/L	Prep Date:	Run ID: HEISENBURG_031001A						
Client ID: ZZZZZ	Batch ID: R15053	TestNo: 8270-SIM		Analysis Date: 10/2/03	SeqNo: 182517						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Acenaphthene	1.11	0.10	1	0	111	80	120	0	0	0	
Acenaphthylene	1.09	0.10	1	0	109	80	120	0	0	0	
Anthracene	1.17	0.10	1	0	117	80	120	0	0	0	
Benzo(a)anthracene	0.96	0.10	1	0	96	80	120	0	0	0	
Benzo(a)pyrene	1.07	0.10	1	0	107	80	120	0	0	0	
Benzo(b)fluoranthene	1.18	0.10	1	0	118	80	120	0	0	0	
Benzo(g,h,i)perylene	1.1	0.10	1	0	110	80	120	0	0	0	
Benzo(k)fluoranthene	1.2	0.10	1	0	120	80	120	0	0	0	
Chrysene	1.17	0.10	1	0	117	80	120	0	0	0	
Dibenz(a,h)anthracene	1.12	0.10	1	0	112	80	120	0	0	0	
Fluoranthene	1.02	0.10	1	0	102	80	120	0	0	0	
Fluorene	0.95	0.10	1	0	95	80	120	0	0	0	
Indeno(1,2,3-cd)pyrene	1.19	0.10	1	0	119	80	120	0	0	0	
Naphthalene	1	0.10	1	0	100	80	120	0	0	0	
Phenanthrene	1.09	0.10	1	0	109	80	120	0	0	0	
Pyrene	1.19	0.10	1	0	119	80	120	0	0	0	
Surr: 2-Fluorobiphenyl	0.82	0	1	0	82	43	116	0	0	0	
Surr: 4-Terphenyl-d14	1.24	0	1	0	124	33	141	0	0	0	
Surr: Nitrobenzene-d5	0.83	0	1	0	83	35	114	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

ENVIRONMENTAL SERVICES LABORATORY – GLOSSARY OF FLAGS

<u>QUALIFIER</u>	<u>DESCRIPTION</u>
AA	This sample was analyzed after the holding time had expired.
AB	The hydrocarbon pattern in this sample is not typical of gasoline.
AC	The hydrocarbon pattern in this sample is not typical of diesel.
AD	The hydrocarbon pattern in this sample is not typical of oil.
AE	The hydrocarbon pattern in this sample extends into the gasoline range.
AF	The hydrocarbon pattern in this sample extends into the diesel range.
AG	The hydrocarbon pattern in this sample extends into the oil range.
A	This analysis was performed on a VOA sample containing headspace.
B	Analyte detected in the Method Blank above the reporting level.
C	The Relative Percent Difference (RPD) for the primary result and confirmation result was greater than 40%. The higher result was reported.
D	The sample was supplied in an inappropriate container according to method criteria.
E	This value is above the quantitation limit. It is considered an estimate.
H	The Matrix Spike/Matrix Spike Duplicate (MS/MSD) result was outside control limits. The Laboratory Control Standard/Duplicate (LCS/LCSD) result was in control validating the batch.
J	The result is above the Method Detection Limit (MDL) and below the Reporting level (RL). It is considered an estimate.
M	The MS/MSD recoveries are not calculable due to a high amount of analyte in sample.
MI	This indicates a high level of matrix interference affecting the spike or surrogate recovery.
N	See case narrative.
O	Detection Limits are elevated due to sample dilution. See case narrative.
Q	Further inspection of the sample confirms a non-homogenous sample matrix affecting RPD result.
R	The RPD result is outside method control limits. See other qualifiers or case narrative.
S	The spike recovery is outside method control limits. See other qualifiers or case narrative.
T	The RPD between the sample result and duplicate result was greater than 20%. The original result was less than three times the reporting level, therefore the RPD is not applicable.
X	Unable to quantitate surrogate recovery due to sample dilution.

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87107
(505) 344-3777 Fax (505) 344-4413

Network Project Manager: Jacinta Tenorio

ANALYSIS REQUEST

[illegible]

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:		RELINQUISHED BY:		RELINQUISHED BY:	
PROJECT #:	309133	Total Number of Containers		PENSACOLA - STL-FL		Signature:	J Time:	Signature:	Time:
PROJ. NAME:	TEKK	Chain of Custody Seals		ESL - OR	X				
QC LEVEL:	STD. IV	Received Intact?		ATEL - AZ		Printed Name:	Date:	Printed Name:	Date:
QC REQUIRED:	MS MSD BLANK	Received Good Cond./Cold		ATEL - MARION					
TAT:	STANDARD RUSH!!	LAB NUMBER:		ATEL - MELMORE		Company		Company	
				EHL		RECEIVED BY:	1.	RECEIVED BY:	2.
COMMENTS:				GEL		Signature:	Time:	Signature:	Time:
DUE DATE:	10/9			U OF MIAMI					
RUSH SURCHARGE:	--			WCAS		Printed Name:	Date:	Printed Name:	Date:
CLIENT DISCOUNT:	--			WOHL					
SPECIAL CERTIFICATION						Company		Company	
REQUIRED: YES NO									

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: ROBERT THOMPSON

COMPANY: TERRACON

ADDRESS: #4 CR 3499
FLORA VISTA, NM 87415

PHONE: (505) 334-2900

FAX: (505) 334-9703

BILL TO: DAVID BAYS

COMPANY: EL PASO FIELD SERVICE

ADDRESS: 614 REILLY AVE.
FARMINGTON, NM 87401

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTX)/8015 (Gasoline) MTBE	8021 (BTX) CMTBE CMTB CPMCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB C/D/BCP C	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics C/PBMS	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	PCRA Metals (8)	PCRA Metals by TCLP (Method 1311)	Metals: Cd, Cr, Hg	NUMBER CONTAINERS
MW-10	9-24-03	1040	H ₂ O	01					X																				2
MW-09	9-24-03	1140	H ₂ O	02					X																				2
MW-08	9-24-03	1258	H ₂ O	03					X																				5
MW-01	9-24-03	1415	H ₂ O	04					X																				5
Trip Blank	9/23/03	1750	"	05					X																				1

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ. NO.: 69037021	(RUSH) ☐ 24hr* ☐ 48hr* ☐ 72hr* ☐ 1 WEEK	(NORMAL) ☒	
PROJ. NAME: CHACO PLANT SAMPLE	CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ AZ ☐ OTHER		
P.O. NO.:	METHANOL PRESERVATION ☐	METALS ☐ TOTAL ☐ DISSOLVED	
COMMENTS:			
SHIPPED VIA: GREYHOUND			
SAMPLE RECEIPT			
NO. CONTAINERS	15		
CUSTODY SEALS	Y/N (NA)		
RECEIVED INTACT	YES		
BLUE ICE/ICE	4.8c		

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
Signature: [Signature]	Signature: [Signature]
Date: 9-24-03	Date: [Date]
Printed Name: ROBERT THOMPSON	Printed Name: [Name]
Company: TERRACON	Company: [Company]
See Reverse side (Force Majeure)	
RECEIVED BY: 1.	RECEIVED BY: (LAB) 2.
Signature: [Signature]	Signature: [Signature]
Date: [Date]	Date: [Date]
Printed Name: [Name]	Printed Name: [Name]
Company: [Company]	Company: Pinnacle Laboratories Inc.

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **312106**
January 15, 2004

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

TERRACON
#4 A CR3499
FLORA VISTA, NM 87415

Project Name CHACO PLANT SAMPLING
Project Number 69032071

Attention: JAKE TANNER/DAVID BAYS

On 12/31/03 Pinnacle Laboratories Inc., (ADHS License No. AZ0643), 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.

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



H. Mitchell Rubenstein, Ph.D.
General Manager, Pinnacle Laboratories, Inc.

MR: jt

Enclosure

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: EL PASO FIELD SERVICES	PINNACLE ID	: 312106
PROJECT #	: 69032071	DATE RECEIVED	: 12/31/03
PROJECT NAME	: CHACO PLANT SAMPLING	REPORT DATE	: 01/15/04

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
312106 - 01	MW-10	AQUEOUS	12/30/03
312106 - 02	MW-9	AQUEOUS	12/30/03
312106 - 03	TRIP BLANK	AQUEOUS	12/29/03

PINNACLE
LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021B MODIFIED
CLIENT : EL PASO FIELD SERVICES
PROJECT # : 69032071
PROJECT NAME : CHACO PLANT SAMPLING

PINNACLE I.D. : 312106
ANALYST : BP

SAMPLE			DATE	DATE	DATE	DIL.
D. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	MW-10	AQUEOUS	12/30/03	NA	01/06/04	5
02	MW-9	AQUEOUS	12/30/03	NA	01/05/04	1
03	TRIP BLANK	AQUEOUS	12/29/03	NA	01/05/04	1
PARAMETER		DET. LIMIT	UNITS	MW-10	MW-9	TRIP BLANK
BENZENE		0.5	UG/L	< 2.5	< 0.5	< 0.5
TOLUENE		0.5	UG/L	< 2.5	< 0.5	< 0.5
ETHYLBENZENE		0.5	UG/L	20	< 0.5	< 0.5
TOTAL XYLENES		1.0	UG/L	54	< 1.0	< 1.0

SURROGATE:

BROMOFLUOROBENZENE (%)	100	100	99
SURROGATE LIMITS (80 - 120)			

CHEMIST NOTES:

N/A

PINNACLE
LABORATORIES

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Albuquerque, New Mexico 87107
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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 312106
BLANK I. D.	: 010504	DATE EXTRACTED	: N/A
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 01/05/04
PROJECT #	: 69032071	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING	ANALYST	: BP

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0

SURROGATE:
BROMOFLUOROBENZENE (%) 98
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

PINNACLE
LABORATORIES

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Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 312106
BATCH #	: 010504	DATE EXTRACTED	: N/A
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 01/05/04
PROJECT #	: 69032071	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.5	103	20.2	101	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.6	103	19.4	97	6	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.5	103	19.7	99	4	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	63.3	106	57.6	96	9	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 312106
MSMSD #	: 312103-02	DATE EXTRACTED	: N/A
CLIENT	: EL PASO FIELD SERVICES	DATE ANALYZED	: 01/06/04
PROJECT #	: 69032071	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	0.9	20.0	21.8	105	22.1	106	1	(80 - 120)	20
TOLUENE	5.1	20.0	24.7	98	25.0	100	1	(80 - 120)	20
ETHYLBENZENE	1.4	20.0	21.9	103	21.8	102	0	(80 - 120)	20
TOTAL XYLENES	4.9	60.0	63.9	98	64.6	100	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

Pinnacle Laboratories Inc.

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PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: JAKE TANNER				ANALYSIS REQUEST																			
COMPANY: TERRACON ADDRESS: #4 A.C.R. 3499 Flora Vista, NM 87415 PHONE: (505) 334-2900 FAX: (505) 334-9703 BILL TO: David Bays COMPANY: El Paso Field Services ADDRESS: 614 Reilly Ave. Farmington, NM 87401				WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.																			
				PROJECT INFORMATION																			
				PROJECT NO.: 69032071																			
				PROJECT NAME: CHACO PLANT Sampling																			
				P.O. NO.:																			
SAMPLE ID: MW-10 MW-9 Trip Blank				DATE: 12/30/03 1522 ACU " 1615 12/29/03 1137 J				TIME:				LAB ID:											
				(MOD 8015) Diesel/Direct Inject (M8015) Gas/Purge & Trap 8021 (BTEX)/8015 (Gasoline) MTBE 8021 (BTEX) CMTBE DTMB DPCE 8021 (TCL) 8021 (EDX) 8021 (HALO) 8021 (CUST) 504.1 EDB □/DBCP □				8260 (TCL) Volatile Organics 8260 (Full) Volatile Organics □PBMS 8260 (CUST) Volatile Organics 8260 (Landfill) Volatile Organics Pesticides/PCB (608/8081/8082) Herbicides (615/8151) Base/Neutral/Acid Compounds GC/MS (625/8270) Polynuclear Aromatics (610/8310/8270-SIMS) General Chemistry:				Priority Pollutant Metals (13) Target Analyte List Metals (23) RCRA Metals (8) RCRA Metals by TCLP (Method 1311) Metals:											
																NUMBER OF CONTAINERS							
																				2 2 1			
COMMENTS: Send Results to: David Bays El Paso Field Service 614 Reilly Ave. Farmington, NM 87401				RELINQUISHED BY: 1. Signature: Date: Time:																			
				RELINQUISHED BY: 2. Signature: Date: Time:																			
				RECEIVED BY: Signature: Date: Time:																			
				RECEIVED BY: Signature: Date: Time:																			
				RECEIVED BY: Signature: Date: Time:																			

Date: 01/09/04

To:

El Paso Field Services

614 Reilly Avenue

Farmington, NM 87401

Attention: Mr. David Bays

Regarding: Chaco Plant Quarterly Sample Event for Monitor Wells 9 and 10

Job Number: 69037032

We are transmitting ☒ herewith ☐ under separate cover

Item	Date	Description
2	12/30/03	Ground Water Sampling Data Reports (MW-09 and MW-10)
1	12/30/03	Chain-of-Custody Form

Remarks:

Thank you for the opportunity to perform this project for you. If you have any questions, please let us know.

Yours truly,

Terracon

By:

Cc:

Terracon

GROUND-WATER SAMPLING DATA SUMMARY

A. GENERAL DATA

Name: Chaco Plant GW Sampling

Project No.: 69037021

Location: EPFS Chaco Plant

Well ID: MW-09

B. WATER-LEVEL DATA

Date: 30-DEC-03 Time: 15:42

Static Water Level: 11.4 ft. bmp

Measuring Point: Top of Riser

Total Well Depth: 21.26 ft. bmp

Measuring Method: O/W Interface Probe

Height of Water Column (h): 9.86 ft.

Casing Diameter (d): 4 in.

C. EVACUATION DATA

Date: 30-DEC-03

Well Casing Volume 2"(0.1632 gal./ft.): _____ gal.

Evacuation Method: Disposable Bailer

4"(0.6528 gal./ft.): 6.79 gal.

Evacuation Record						
Time:	15:57	16:06	16:11	16:12		
Vol. Purged (gal.):	5	5	5	4.5		
Water Temperature (°C):	12.4	12.4	13.8	14.4		
pH (standard units):	7.94	7.99	7.98	8.00		
Conductivity (μS/cm):	1540	1580	1600	1600		
Turbidity (subjective):	N/A	N/A	N/A	N/A		
Odor (subjective):	No odor observed	No odor observed	No odor observed	No odor observed		

D. SAMPLING DATA

Date: 30-DEC-03 Time: 16:20

Total No. Of Sample Containers: 2

Analysis Requested: BTEX

Laboratory: Pinnacle

Field Filtered: _____ Yes ☒ No

Filter Method: N/A

Samples Preserved: Yes

Preservative: HgCl₂

Comments: Purged 3 casing volumes from well.

Sampled By: Jake Tanner

Terracon

GROUND-WATER SAMPLING DATA SUMMARY

A. GENERAL DATA

Name: Chaco Plant GW Sampling

Project No.: 69037021

Location: EPFS Chaco Plant

Well ID: MW-10

B. WATER-LEVEL DATA

Date: 30-DEC-03 Time: 14:13

Static Water Level: 11.22 ft. bmp

Measuring Point: Top of Riser

Total Well Depth: 22.25 ft. bmp

Measuring Method: O/W Interface Probe

Height of Water Column (h): 11.05 ft.

Casing Diameter (d): 4 in.

C. EVACUATION DATA

Date: 30-DEC-03

Well Casing Volume 2"(0.1632 gal./ft.): _____ gal.

Evacuation Method: Disposable Bailer

4"(0.6528 gal./ft.): 7.21 gal.

Evacuation Record						
Time:	14:37	14:48	14:58	15:05	15:09	
Vol. Purged (gal.):	5	5	5	5	5	
Water Temperature (°C):	12.5	12.5	12.4	12.9	13.3	
pH (standard units):	7.14	7.43	7.47	7.58	7.62	
Conductivity (μS/cm):	2670	2400	2370	2310	2250	
Turbidity (subjective):	N/A	N/A	N/A	N/A	N/A	
Odor (subjective):	HC, sulfur-like odor	HC, sulfur-like odor	HC, sulfur-like odor	HC, sulfur-like odor	HC, sulfur-like odor	

D. SAMPLING DATA

Date: 30DEC03 Time: 15:09

Total No. Of Sample Containers: 2

Analysis Requested: BTEX

Laboratory: Pinnacle

Field Filtered: _____ Yes ☒ No

Filter Method: N/A

Samples Preserved: _____ Yes

Preservative: HgCl₂

Comments: Purged 3 casing volumes from well.

Sampled By: Jake Tanner

LABORATORY

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 30 Dec 03 PAGE: 1 OF 1

PROJECT MANAGER: JAKE TANNER

ANALYSIS REQUEST

COMPANY: TERRACON
ADDRESS: #4 A.C.R. 3499
Flora Vista, NM 87415

PHONE: (505) 334-2900

FAX: (505) 334-9703

BILL TO: David Bays

COMPANY: El Paso Field Service

ADDRESS: 614 Reilly Ave.
Farmington, NM 87401

Petroleum Hydrocarbons (418.1) TRPH	
(MOD.8015) Diesel/Direct Inject	
(M8015) Gas/Purge & Trap	
8021 (BTX)/8015 (Gasoline) MTBE	
8021 (BTX) ☐ MTBE ☐ TMB ☐ PCE	
8021 (TCL)	
8021 (EDX)	
8021 (HALO)	
8021 (CUST)	
504.1 EDB ☐ /DBCP ☐	
8260 (TCL) Volatile Organics	
8260 (Full) Volatile Organics ☐ PBMS	
8260 (CUST) Volatile Organics	
8260 (Landfill) Volatile Organics	
Pesticides/PCB (608/8081/8082)	
Herbicides (615/8151)	
Base/Neutral/Acid Compounds GC/MS (625/8270)	
Polynuclear Aromatics (610/8310/8270-SIMS)	
General Chemistry:	
Priority Pollutant Metals (13)	
Target Analyte List Metals (23)	
RCRA Metals (8)	
RCRA Metals by TCLP (Method 1311)	
Metals:	

MMW - 1D
MMW - 9

WEEKEND ANALYSES MAY RESULT IN AN ADDITIONAL SURCHARGE - PLEASE INQUIRE.

PROJECT INFORMATION

PROJ. NO.: 69032071

PROJ. NAME: CHACO PLANT Site

P.O. NO.:

SHIPPED VIA: 6 Bay Hound

NO CONTAINERS

CUSTODY SEALS

RECEIVED INTACT

BLUE ICE/ICE

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

CERTIFICATION REQUIRED ☐ NM ☐ SDWA ☐ AZ ☐ OTHER

METHANOL PRESERVATION ☐ METALS ☐ TOTAL ☐ DISSOLVED

COMMENTS:

Send Results To:
David Bays
El Paso Field Service
614 Reilly Ave.
Farmington, NM 87401

Signature: [Signature] Time: 11:53

Printed Name: JAKE TANNER

Date: 30 Dec 03

Company: Terracon

See Reverse Side (For Major Use)

RECEIVED BY: 1

Signature: [Signature] Time: 1

Printed Name: [Signature] Date: 1

Signature: [Signature] Time: 2

Printed Name: [Signature] Date: 2

Company: Pinnacle Laboratories Inc.

RECEIVED BY: (LAB) 2

Signature: [Signature] Time: 2

Printed Name: [Signature] Date: 2

Company: Pinnacle Laboratories Inc.

PLEASE FILL THIS FORM IN COMPLETELY.

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