

GW - 71-0

MONITORING REPORTS

DATE:

2001

*GW-071***RECEIVED****JAN 13 2002**ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

January 16, 2002

Mr. Bill Olson
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

Dear Mr. Olson:

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.

Annual analysis for all other monitoring wells.

The analysis for monitoring wells 2, 4, 6, and 7 did not indicate any abnormally high reading for any analyte. Monitoring well 3 was dry and could not be sampled. Monitoring well 10, adjacent to the old flare pit which was closed in 1995, exceeds several water quality standards for organics.

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

Sincerely yours,

David Bays
Principal Environmental Scientistcc: Denny Foust - NMOCD - Aztec
Melvina Betoni
Troy Chamberlain
Chaco Regulatory File

Chaco Plant Groundwater Monitoring Well Results 2001

All Results Expressed as Micrograms/Liter (ppb)

Monitoring Well 1 (semi-annual)	3/14/01	6/25/01	10/16/01	12/17/01
Benzene	< 0.5		1.4	
Toluene	< 0.5		<0.5	
Ethyl Benzene	< 0.5		<0.5	
Xylenes	< 0.5		2.8	
Cadmium	0.00005		<0.0004	
Chromium	<0.0001		0.001	
Mercury	0.0008		0.0174	
Total Naphthalenes	ND		ND	
Total Benzopyrenes	ND		ND	
Monitoring Well 8 (semi-annual)				
Benzene	< 0.5		<0.5	
Toluene	< 0.5		<0.5	
Ethyl Benzene	< 0.5		<0.5	
Xylenes	< 0.5		<0.5	
Cadmium	0.00009		<0.0004	
Chromium	0.0005		0.001	
Mercury	0.0006		0.0002	
Total Naphthalenes	ND		ND	
Total Benzopyrenes	ND		ND	
Monitoring Well 9 (quarterly)				
Benzene	< 0.5	<0.5	<0.5	<0.5
Toluene	< 0.5	<0.5	<0.5	<0.5
Ethyl Benzene	< 0.5	<0.5	<0.5	<0.5
Xylenes	< 0.5	<0.5	<0.5	<0.5
Monitoring Well 10 (quarterly)				
Benzene	53	190	74	68
Toluene	3.4	5.3	<5.0	<2.5
Ethyl Benzene	21	52	40	28
Xylenes	78	300	170	120

NA = Not Analyzed

ND = None Detected

Chaco Plant Groundwater Monitoring Well Results 2001

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 25, 2001

Test	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7
pH	8.1	NS	7.5	6.1	8.2	7.3
Alkalinity - CO ₃	490	NS	400	100	430	310
Alkalinity - HCO ₃	480	NS	400	100	420	310
Calcium	110	NS	530	400	48	380
Magnesium	37	NS	83	59	8.2	74
Total Hardness	425	NS	1700	1239	150	1250
Chloride	1700	NS	450	190	120	180
Sulfate as SO ₄	23	NS	2400	1900	290	2100
Fluoride	4.2	NS	1.6	0.61	5.9	2.5
Nitrate as NO ₃	0.12	NS	2.3	0.4	2.1	0.14
Nitrate as NO ₂	ND	NS	ND	ND	ND	ND
Ammonium as N	0.42	NS	0.12	0.15	0.10	1.1
Phosphate	0.18	NS	0.80	0.13	0.09	0.06
Potassium	2.7	NS	20	8.6	4.8	7.2
Sodium	1100	NS	950	530	820	610
TDS	3000	NS	4700	3500	2300	3700
Conductivity	5400	NS	5600	4000	3300	2200
Cadmium	<0.005	NS	<0.005	<0.005	<0.005	<0.005
Chromium	<0.005	NS	0.008	0.006	0.009	<0.005
Mercury	0.0031	NS	0.0057	0.0025	0.00037	0.0040

MW-03 – Not Sampled, Insufficient Recoverable Liquid Volume



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

Pinnacle Lab ID number **103044**
April 04, 2001

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/SCOTT POPE

On 03/16/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), 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 other analyses were performed by EnviroTest Laboratories, LLC, Casper, WY.

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

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

H. Mitchell Rubenstein, Ph. D.
General Manager

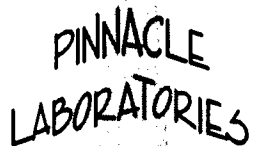
MR: jt

Enclosure



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
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CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 103044
PROJECT #	: 62800107	DATE RECEIVED	: 03/16/01
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 04/04/01
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
103044 - 01	CHA 0301 MW1	AQUEOUS	03/14/01
103044 - 02	CHA 0301 MW8	AQUEOUS	03/14/01
103044 - 03	CHA 0301 MW9	AQUEOUS	03/14/01
103044 - 04	CHA 0301 MW10	AQUEOUS	03/14/01
103044 - 05	TRIP BLANK	AQUEOUS	03/12/01



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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 103044

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	CHA 0301 MW1	AQUEOUS	03/14/01	NA	03/18/01	1
02	CHA 0301 MW8	AQUEOUS	03/14/01	NA	03/19/01	1
03	CHA 0301 MW9	AQUEOUS	03/14/01	NA	03/19/01	1

PARAMETER	DET. LIMIT	UNITS	CHA 0301 MW1	CHA 0301 MW8	CHA 0301 MW9
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5	0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 95 93 97
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A



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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 103044

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
04	CHA 0301 MW10	AQUEOUS	03/14/01	NA	03/19/01	5
05	TRIP BLANK	AQUEOUS	03/12/01	NA	03/19/01	1

PARAMETER	DET. LIMIT	UNITS	CHA 0301 MW10	TRIP BLANK
BENZENE	0.5	UG/L	53	< 0.5
TOLUENE	0.5	UG/L	3.4	< 0.5
ETHYLBENZENE	0.5	UG/L	21	< 0.5
TOTAL XYLENES	0.5	UG/L	78	< 0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 111 95
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A



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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 103044
BLANK I. D.	: 031801	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 03/18/01
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

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

SURROGATE:
BROMOFLUOROBENZENE (%) 96
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A



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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 103037-01
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D. : 103044
DATE EXTRACTED : NA
DATE ANALYZED : 03/18/01
SAMPLE MATRIX : AQUEOUS
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	17.5	88	17.9	90	2	(80 - 120)	20
TOLUENE	<0.5	20.0	19.1	96	19.9	100	4	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.1	101	20.8	104	3	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	55.0	92	56.7	95	3	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

Enviro-Test Laboratories LLC.

Chemical Analysis Report

PINNACLE LABORATORIES, INC

Date: 29 MAR 2001

Attn: PROJECT MANAGER

2709D PAN AMERICAN FREEWAY NE

ALBUQUERQUE NM 87107

Lab Work Order #: L2618

Date Received: 20 MAR 2001

Project P.O. #: 103044

Project Reference:

Comments:

APPROVED BY: _____

Dave Demorest

Project Manager



Enviro • Test
LABORATORIES LLC.

420 West Street Casper, Wyoming 82601
Phone: (307) 235-5741 Fax: (307) 266-1676
Toll Free 1(800)666-0306

Limit of Liability: Although care and due diligence is taken in the performance of our services, our liability in all cases is limited to re-analysis at our expense or refunding the analytical costs charged for the work performed.

Chemical Analysis Report

PINNACLE LABORATORIES, INC
2709D PAN AMERICAN FREEWAY NE
ALBUQUERQUE NM 87107

ATTN: PROJECT MANAGER

Report Date: 29-MAR-01

Page: 2 of 4

PO No.: 103044

WO NO.: L2618

Sample ID: CHA 0301 MW1 / 103044-01

Job Name:

Sampled By: CLIENT

Date Collected: 14-MAR-01

Lab Sample ID: L2618-1

Matrix: WATER

Test Description	Result	Units of Measure	D.L.	Prep Date	Analyzed	By
Misc						
Cadmium (Cd)	0.00005	mg/L	0.00004	27-MAR-01	28-MAR-01	GC
Chromium (Cr)	<0.0001	mg/L	0.0001	27-MAR-01	28-MAR-01	GC
Mercury (Hg)-Total	0.0008	mg/L	0.0002	23-MAR-01	23-MAR-01	MB
Modified 8270 SIMS						
naphthalene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
2-methylnaphthalene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
1-methylnaphthalene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
acenaphthylene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
acenaphthene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
fluorene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
phenanthrene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
anthracene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
fluoranthene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
pyrene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(a)anthracene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
chrysene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(b)fluoranthene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(k)fluoranthene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(a)pyrene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Indeno(1,2,3-c,d)pyrene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Dibenzo(a,h)Anthracene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(g,h,i)Perylene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Surrogate: Nitrobenzene d5(Surr.)	57	%	44-114	19-MAR-01	24-MAR-01	PR
Surrogate: 2-Fluorobiphenyl (surr)	65	%	43-127	19-MAR-01	24-MAR-01	PR
Surrogate: P-Terphenyl D14 (Surr)	80	%	78-137	19-MAR-01	24-MAR-01	PR



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Chemical Analysis Report

PINNACLE LABORATORIES, INC
2709D PAN AMERICAN FREEWAY NE
ALBUQUERQUE NM 87107
ATTN: PROJECT MANAGER

Report Date: 29-MAR-01
Page: 3 of 4
PO No.: 103044
WO NO.: L2618

Sample ID: CHA 0301 MW8 / 103044-02
Job Name:
Sampled By: CLIENT

Date Collected: 14-MAR-01
Lab Sample ID: L2618-2
Matrix: WATER

Test Description	Result	Units of Measure	D.L.	Prep Date	Analyzed	By
Misc						
Cadmium (Cd)	0.00009	mg/L	0.00004	27-MAR-01	28-MAR-01	GC
Chromium (Cr)	0.0005	mg/L	0.0001	27-MAR-01	28-MAR-01	GC
Mercury (Hg)-Total	0.0006	mg/L	0.0002	23-MAR-01	23-MAR-01	MB
Modified 8270 SIMS						
naphthalene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
2-methylnaphthalene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
1-methylnaphthalene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
acenaphthylene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
acenaphthene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
fluorene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
phenanthrene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
anthracene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
fluoranthene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
pyrene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(a)anthracene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
chrysene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(b)fluoranthene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(k)fluoranthene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(a)pyrene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Indeno(1,2,3-c,d)pyrene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Dibenzo(a,h)Anthracene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Benzo(g,h,i)Perylene	<0.4	ug/L	0.4	19-MAR-01	24-MAR-01	PR
Surrogate: Nitrobenzene d5(Surr.)	67	%	44-114	19-MAR-01	24-MAR-01	PR
Surrogate: 2-Fluorobiphenyl (surr)	77	%	43-127	19-MAR-01	24-MAR-01	PR
Surrogate: P-Terphenyl D14 (Surr)	93	%	78-137	19-MAR-01	24-MAR-01	PR



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Methodology Reference

<u>ETL Test Code</u>	<u>Matrix</u>	<u>Test Description</u>	<u>Methodology Reference</u>
8270-SIMS-CA	Water	Modified 8270 SIMS	EPA 8270C Modified for S.I.M.
CD-TOT-LOW-CA	Water	Cadmium (Cd)-Total	SM 3125-ICP-MS
CR-TOT-LOW-CA	Water	Chromium (Cr)-Total	SM 3125-ICP-MS
HG-TOT-HYD-CA	Water	Mercury (Hg)-Total	SM 3112 B-AAS Cold Vapor



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ENVIRO-TEST QC REPORT

Page 1 of 5

Workorder #: L2618

QC Type: BLANK

Lab QC Number:		Result	Qualifier	Units	Limit	Analyzed
WG8386-1						
8270-SIMS-CA	naphthalene	<0.4		ug/L	0.4	23-MAR-01
	2-methylnaphthalene	<0.4		ug/L	0.4	23-MAR-01
	1-methylnaphthalene	<0.4		ug/L	0.4	23-MAR-01
	acenaphthylene	<0.4		ug/L	0.4	23-MAR-01
	acenaphthene	<0.4		ug/L	0.4	23-MAR-01
	fluorene	<0.4		ug/L	0.4	23-MAR-01
	phenanthrene	<0.4		ug/L	0.4	23-MAR-01
	anthracene	<0.4		ug/L	0.4	23-MAR-01
	fluoranthene	<0.4		ug/L	0.4	23-MAR-01
	pyrene	<0.4		ug/L	0.4	23-MAR-01
	Benzo(a)anthracene	<0.4		ug/L	0.4	23-MAR-01
	chrysene	<0.4		ug/L	0.4	23-MAR-01
	Benzo(b)fluoranthene	<0.4		ug/L	0.4	23-MAR-01
	Benzo(k)fluoranthene	<0.4		ug/L	0.4	23-MAR-01
	Benzo(a)pyrene	<0.4		ug/L	0.4	23-MAR-01
	Indeno(1,2,3-c,d)pyrene	<0.4		ug/L	0.4	23-MAR-01
	Dibenzo(a,h)Anthracene	<0.4		ug/L	0.4	23-MAR-01
	Benzo(g,h,i)Perylene	<0.4		ug/L	0.4	23-MAR-01
WG8401-2						
HG-TOT-HYD-CA	Mercury (Hg)-Total	<0.0002		mg/L	0.0002	23-MAR-01
WG8414-1						
CD-TOT-LOW-CA	Cadmium (Cd)	0.00005		mg/L	0.00004	28-MAR-01
CR-TOT-LOW-CA	Chromium (Cr)	<0.0001		mg/L	0.0001	28-MAR-01

QC Type: DUP

Lab QC Number:	RPD	Qualifier	Limit %	Analyzed
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QC Type: LCS

Lab QC Number:		% Recovery	Qualifier	Limit %	Analyzed
WG8386-3					
8270-SIMS-CA	naphthalene	62		N/A	24-MAR-01
	2-methylnaphthalene	61		N/A	24-MAR-01
	1-methylnaphthalene	73		N/A	24-MAR-01
	acenaphthylene	68		N/A	24-MAR-01



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ENVIRO-TEST QC REPORT

Page 2 of 5

Workorder #: L2618

acenaphthene	53	N/A	24-MAR-01
fluorene	71	N/A	24-MAR-01
phenanthrene	91	N/A	24-MAR-01
anthracene	79	N/A	24-MAR-01
fluoranthene	89	N/A	24-MAR-01
pyrene	71	N/A	24-MAR-01
Benzo(a)anthracene	96	N/A	24-MAR-01
chrysene	93	N/A	24-MAR-01
Benzo(b)fluoranthene	85	N/A	24-MAR-01
Benzo(k)fluoranthene	95	N/A	24-MAR-01
Benzo(a)pyrene	90	N/A	24-MAR-01
Indeno(1,2,3-c,d)pyrene	91	N/A	24-MAR-01
Dibenzo(a,h)Anthracene	95	N/A	24-MAR-01
Benzo(g,h,i)Perylene	94	N/A	24-MAR-01

WG8414-2

CD-TOT-LOW-CA	Cadmium (Cd)	102	80-120	28-MAR-01
CR-TOT-LOW-CA	Chromium (Cr)	99	80-120	28-MAR-01

QC Type: MS

Lab QC Number:		% Recovery	Qualifier	Limit %	Analyzed
WG8401-3					
HG-TOT-HYD-CA	Mercury (Hg)-Total	76		75-125	23-MAR-01

QC Type: MSD

Lab QC Number:		RPD	Qualifier	Limit %	Analyzed
WG8401-4					
HG-TOT-HYD-CA	Mercury (Hg)-Total	6.4		0-20	23-MAR-01

**Enviro • Test**
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ENVIRO-TEST QC REPORT

Page 3 of 5

Workorder #: L2618

QC Type: LCSD

Lab QC Number:		RPD	Qualifier	Limit %	Analyzed
WG8386-4					
8270-SIMS-CA	naphthalene	3.2		0-20	24-MAR-01
	2-methylnaphthalene	3.3		0-20	24-MAR-01
	1-methylnaphthalene	1.4		0-20	24-MAR-01
	acenaphthylene	7.6		0-20	24-MAR-01
	acenaphthene	25		0-20	24-MAR-01
	fluorene	2.9		0-20	24-MAR-01
	phenanthrene	13		0-20	24-MAR-01
	anthracene	6.1		0-20	24-MAR-01
	fluoranthene	8.2		0-20	24-MAR-01
	pyrene	32		0-20	24-MAR-01
	Benzo(a)anthracene	1.0		0-20	24-MAR-01
	chrysene	1.1		0-20	24-MAR-01
	Benzo(b)fluoranthene	2.4		0-20	24-MAR-01
	Benzo(k)fluoranthene	13		0-20	24-MAR-01
	Benzo(a)pyrene	2.2		0-20	24-MAR-01
	Indeno(1,2,3-c,d)pyrene	9.4		0-20	24-MAR-01
	Dibenzo(a,h)Anthracene	5.4		0-20	24-MAR-01
	Benzo(g,h,i)Perylene	5.5		0-20	24-MAR-01

QC Type: CCV

Lab QC Number:		% Recovery	Qualifier	Limit %	Analyzed
WG8401-5					
HG-TOT-HYD-CA	Mercury (Hg)-Total	98		90-110	23-MAR-01

QC Type: ICV

Lab QC Number:		% Recovery	Qualifier	Limit %	Analyzed
WG8386-2					
8270-SIMS-CA	naphthalene	96		70-130	23-MAR-01
	2-methylnaphthalene	125		70-130	23-MAR-01
	1-methylnaphthalene	100		70-130	23-MAR-01
	acenaphthylene	104		70-130	23-MAR-01
	acenaphthene	112		70-130	23-MAR-01
	fluorene	123		70-130	23-MAR-01
	phenanthrene	125		70-130	23-MAR-01
	anthracene	114		70-130	23-MAR-01
	fluoranthene	105		70-130	23-MAR-01
	pyrene	114		70-130	23-MAR-01



Limit of Liability: Although care and due diligence is taken in the performance of our services, our liability in all cases is limited to re-analysis at our expense or refunding the analytical costs charged for the work performed.

ENVIRO-TEST QC REPORT

Page 4 of 5

Workorder #: L2618

Benzo(a)anthracene	76	70-130	23-MAR-01
chrysene	112	70-130	23-MAR-01
Benzo(b)fluoranthene	92	70-130	23-MAR-01
Benzo(k)fluoranthene	85	70-130	23-MAR-01
Benzo(a)pyrene	105	70-130	23-MAR-01
Indeno(1,2,3-c,d)pyrene	95	70-130	23-MAR-01
Dibenzo(a,h)Anthracene	85	70-130	23-MAR-01
Benzo(g,h,i)Perylene	104	70-130	23-MAR-01

WG8401-1

HG-TOT-HYD-CA

Mercury (Hg)-Total

106

90-110

23-MAR-01



Enviro • Test
LABORATORIES LLC.

Limit of Liability: Although care and due diligence is taken in the performance of our services, our liability in all cases is limited to re-analysis at our expense or refunding the analytical costs charged for the work performed.

ENVIRO-TEST QC REPORT

Page 5 of 5

Workorder #: L2618

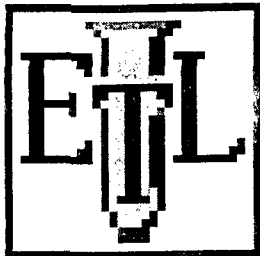
Legend:	QC Type	Description
	BLANK	Laboratory Blank
	BS	Blank Spike
	BSD	Blank Spike Duplicate
	CCB	Continuing Calibration Blank
	CCC	Continuing Calibration Check
	CCV	Cont. Cal. Verification
	DUP	Duplicate
	ICB	Instrument Blank
	ICV	Instrument Calibration Verification
	INST BLK	Instrument Blank
	LCS	Laboratory Control Spike
	LCSD	Lab Control Spike Duplicate
	MS	Matrix Spike
	MSD	Matrix Spike Duplicate
	SPCC	System Performance Check Compound
	SRM	Standard Reference Material
	SSS	Second source std

Qualifier:

- RPD-NA Relative Percent Difference Not Available due to result(s) being less than detection limit.
- A Method blank exceeds detection limit. Blank correction applied, where appropriate.
- B Method blank result exceeds detection limit, however, it is less than 5% of sample concentration. Blank correction not applied.
- C Method blank result exceeds detection limit, however, it is less than 5% of the regulatory limit for the analyte of interest. Blank correction not applied.
- D Duplicate result exceeds limit due to increased variability for low level samples.
- E Matrix spike limit exceeded due to high sample background.
- F Silver recovery low, likely due to elevated chloride levels in sample.
- G Outlier - No assignable cause for nonconformity has been determined.



Limit of Liability: Although care and due diligence is taken in the performance of our services, our liability in all cases is limited to re-analysis at our expense or refunding the analytical costs charged for the work performed.



EXAMPLE REPORT - YOUR COMPANY NAME

Login Chain of Custody Report (In01)

Mar. 20, 2001

01:19 PM

Login Number: L2618
Account: 10185
Project:

Quote Number: Q1064
PINNACLE LABORATORIES, INC

Page: 1 of 1

Contact: PROJECT MANAGER
Report Address: 2709D PAN AMERICAN FREEWAY NE,
ALBUQUERQUE, NM, 87107

Phone: 505-344-3777

Fax#: 505-344-4413

Fax Flag: N

Email:

Email Flag: N

Report Type:

Export Type:

Lab SMP#	Client Sample Number	Collect Date	Receive Date	PR	Due Date	Comments
L2618-1	CHA 0301 MW1 / 103044-01	14-MAR-01 12:50	20-MAR-01		02-APR-01	
Water	S 8270-SIMS-CA	Hold: 28-MAR-01				
Water	S CD-TOT-LOW-CA	Hold: 11-APR-01				
Water	S CR-TOT-LOW-CA	Hold: 11-APR-01				
Water	S HG-TOT-HYD-CA	Hold: 11-APR-01				
L2618-2	CHA 0301 MW8 / 103044-02	14-MAR-01 14:00	20-MAR-01		02-APR-01	
Water	S 8270-SIMS-CA	Hold: 28-MAR-01				
Water	S CD-TOT-LOW-CA	Hold: 11-APR-01				
Water	S CR-TOT-LOW-CA	Hold: 11-APR-01				
Water	S HG-TOT-HYD-CA	Hold: 11-APR-01				

Signature :

CTurney

Date :

3/20/01



Client	Pinnad	Job Number	L2618
--------	--------	------------	-------

Samples Shipped	☒ UPS	Federal Express	Airborn:
Samples Hand Delivered	Client	ETL Lab Courier	Other:

*Air Bill #: 1Z 878168 61 4334 3699	# of Packages Received:
-------------------------------------	-------------------------

	Yes	No	N/A	Comments
1. Chain - of - Custody present?	☒	☐	☐	If no, please fill one out.
2. Are the COC and sample labels legible?	☒	☐	☐	
3. Custody Seal on shipping container?	☐	☒	☐	
If yes, intact on shipping container?	☐	☐	☐	
4. Custody seals on sample containers?	☐	☒	☐	
If yes, intact on sample container?	☐	☐	☐	
5. Samples chilled?	☒	☐	☐	
Is temperature of cooler: $4 \pm 2^{\circ}\text{C}$?	☒	☐	☐	*Record temp: 3.7
6. Samples received intact (good condition)?	☒	☐	☐	
If volatiles required, any with headspace?	☐	☐	☐	
7. Adequate sample volume provided?	☒	☒	☐	only received 500mL for 8270's
8. Samples preserved correctly?	☒	☐	☐	Na ₂ S ₂ O ₃ , ZnAc, (HNO ₃), HCl
Circle preservative types in shipment	☐	☐	☐	H ₂ SO ₄ , NaOH, (Plain), Other
9. Correct containers used?	☒	☐	☐	
10. Samples received within holding time?	☒	☐	☐	
11. Agreement between COC and sample labels?	☒	☐	☐	
12. Gamma Screen mR/Hr @ surface within Bkg?	☒	☐	☐	CBLG
13. Samples OK to release to Lab/Screening?	☒	☐	☐	

Additional Comments: _____

Sample Container (size/material): 4-A250, 2-P250

Received and inspected by: rup Date/Time: 3/26/01, 1000

* = for multiple packages, see attached page(s) for shipping numbers and temperatures.

Chain of Custody Record

(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2859

Rec'd @ 8:00 Ice

PINNACLE
LABORATORIES

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

Pinnacle Lab ID number **106130**
July 23, 2001

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS CHACO SAMPLING
Project Number 1517-0000-54

Attention: ROBERT THOMPSON/SCOTT POPE

On 06/27/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), 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 was performed by Pinnacle Laboratories, Inc., Albuquerque, NM.

All other analyses were performed by Severn Trent Services, Pensacola, FL.

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

MR: ft

Enclosure

PINNACLE
LABORATORIES

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

CLIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 106130
PROJECT #	: 1517-0000-54	DATE RECEIVED	: 06/27/01
PROJECT NAME	: EPFS CHACO SAMPLING	REPORT DATE	: 07/23/01

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
106130 - 01	0601-CHA-MW09	AQUEOUS	06/25/01
106130 - 02	0601-CHA-MW10	AQUEOUS	06/25/01
106130 - 03	0601-CHA-MW04	AQUEOUS	06/25/01
106130 - 04	0601-CHA-MW07	AQUEOUS	06/25/01
106130 - 05	0601-CHA-MW05	AQUEOUS	06/26/01
106130 - 06	0601-CHA-MW02	AQUEOUS	06/26/01
106130 - 07	0601-CHA-MW06	AQUEOUS	06/26/01
106130 - 08	0601-CHA-NCWW	AQUEOUS	06/26/01
106130 - 09	TRIP BLANK	AQUEOUS	06/26/01

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 : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517-0000-54
PROJECT NAME : EPFS CHACO SAMPLING

PINNACLE I.D.: 106130

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	0601-CHA-MW09	AQUEOUS	06/25/01	NA	07/02/01	1
02	0601-CHA-MW10	AQUEOUS	06/25/01	NA	07/02/01	10
03	0601-CHA-MW04	AQUEOUS	06/25/01	NA	07/02/01	1

PARAMETER	DET. LIMIT	UNITS	0601-CHA- MW09	0601-CHA- MW10	0601-CHA- MW04
BENZENE	0.5	UG/L	< 0.5	190	< 0.5
TOLUENE	0.5	UG/L	< 0.5	5.3	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	52	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	300	0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

90

92

93

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A

PINNACLE
LABORATORIES

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517-0000-54
PROJECT NAME : EPFS CHACO SAMPLING

PINNACLE I.D.: 106130

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
04	0601-CHA-MW07	AQUEOUS	06/25/01	NA	07/02/01	1
05	0601-CHA-MW05	AQUEOUS	06/26/01	NA	06/29/01	1
06	0601-CHA-MW02	AQUEOUS	06/26/01	NA	06/29/01	1

PARAMETER	DET. LIMIT	UNITS	0601-CHA-MW07	0601-CHA-MW05	0601-CHA-MW02
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5	0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	< 0.5	< 0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

88

94

89

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A

PINNACLE
LABORATORIES

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517-0000-54
PROJECT NAME : EPFS CHACO SAMPLING

PINNACLE I.D.: 106130

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
07	0601-CHA-MW06	AQUEOUS	06/26/01	NA	06/30/01	1
08	0601-CHA-NCWW	AQUEOUS	06/26/01	NA	06/30/01	25
09	TRIP BLANK	AQUEOUS	06/26/01	NA	06/29/01	1

PARAMETER	DET. LIMIT	UNITS	0601-CHA-MW06	0601-CHA-NCWW	TRIP BLANK
BENZENE	0.5	UG/L	< 0.5	190	< 0.5
TOLUENE	0.5	UG/L	< 0.5	230	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	27	< 0.5
TOTAL XYLENES	0.5	UG/L	< 0.5	200	< 0.5

SURROGATE:

BROMOFLUOROBENZENE (%)

92

94

85

SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

N/A

PINNACLE
LABORATORIES

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106130
BLANK I. D.	: 062901	DATE EXTRACTED	: NA
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/29/01
PROJECT #	: 1517-0000-54	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS CHACO SAMPLING		

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

SURROGATE:
BROMOFLUOROBENZENE (%) 93
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

PINNACLE
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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106130
BLANK I. D.	: 063001	DATE EXTRACTED	: NA
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/30/01
PROJECT #	: 1517-0000-54	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS CHACO SAMPLING		

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

SURROGATE:
BROMOFLUOROBENZENE (%) 95
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106130
BLANK I. D.	: 070201	DATE EXTRACTED	: NA
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 07/02/01
PROJECT #	: 1517-0000-54	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS CHACO SAMPLING		

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

SURROGATE:
BROMOFLUOROBENZENE (%) 96
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
MSMSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 106130
MSMSD #	: 106146-05	DATE EXTRACTED	: NA
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/29/01
PROJECT #	: 1517-0000-54	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS CHACO 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	21.0	105	21.1	106	0	(80 - 120)	20
TOLUENE	<0.5	20.0	21.0	105	21.1	106	0	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.6	108	21.3	107	1	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	64.6	108	63.5	106	2	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

SEVERN

TRENT

SERVICES

STL Pensacola

LOG NO: C1-06756

Received: 28 JUN 01

Reported: 16 JUL 01

Ms. Jacinta Tenorio
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 1

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED			
06756-1	0601-CHA-MW04/106130-03	06-25-01/15:30			
06756-2	0601-CHA-MW07/106130-04	06-25-01/16:30			
06756-3	0601-CHA-MW05/106130-05	06-26-01/09:30			
06756-4	0601-CHA-MW02/106130-06	06-26-01/10:40			
06756-5	0601-CHA-MW06/106130-07	06-26-01/12:05			
PARAMETER	06756-1 MW4	06756-2 MW7	06756-3 MW5	06756-4 MW2	06756-5 MW6
Alkalinity Series (2320B/SM4500)					
Alkalinity (to pH 4.5) as CaCO ₃ , mg/l	400	310	100	490	430
Bicarbonate (2320/4500), mg/l	400	310	100	480	420
Carbon Dioxide, mg/l	25	31	160	8.0	5.0
pH, mg/l	7.5	7.3	6.1	8.1	8.2
Hydroxide, mg/l	<1.0	<1.0	<1.0	<1.0	<1.0
Carbonate (2320/4500), mg/l	1.0	1.0	<1.0	6.0	6.0
Dilution Factor	1	1	1	1	1
Analysis Date	07.05.01	07.05.01	07.05.01	07.05.01	07.05.01
Batch ID	AEW040	AEW040	AEW040	AEW040	AEW040
Analyst	BE	BE	BE	BE	BE
Chloride (325.2/SM4500E/9251), mg/l	450	180	190	1700	120
Dilution Factor	10	5	5	50	5
Prep Date	07.09.01	07.09.01	07.09.01	07.09.01	07.09.01
Analysis Date	07.09.01	07.09.01	07.09.01	07.09.01	07.09.01
Batch ID	CKW35A	CKW35A	CKW35A	CKW35A	CKW35A
Prep Method	325.2	325.2	325.2	325.2	325.2
Analyst	CR	CR	CR	CR	CR

SEVERN

TRENT

SERVICES

STL Pensacola

LOG NO: C1-06756

Received: 28 JUN 01

Reported: 16 JUL 01

Ms. Jacinta Tenorio
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 2

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED				
06756-1	0601-CHA-MW04/106130-03	06-25-01/15:30				
06756-2	0601-CHA-MW07/106130-04	06-25-01/16:30				
06756-3	0601-CHA-MW05/106130-05	06-26-01/09:30				
06756-4	0601-CHA-MW02/106130-06	06-26-01/10:40				
06756-5	0601-CHA-MW06/106130-07	06-26-01/12:05				
PARAMETER	06756-1 MW 4	06756-2 MW 7	06756-3 MW 5	06756-4 MW 2	06756-5 MW 6	
Fluoride (340.2), mg/l	1.6	2.5	0.61	4.2	5.9	
Dilution Factor	1	2	1	5	5	
Analysis Date	07.09.01	07.09.01	07.09.01	07.09.01	07.09.01	
Batch ID	FLW028	FLW028	FLW028	FLW028	FLW028	
Analyst	WG	WG	WG	WG	WG	
Sulfate as SO4 (375.4), mg/l	2400	2100	1900	23	290	
Dilution Factor	100	100	100	1	10	
Analysis Date	07.03.01	07.03.01	07.03.01	07.03.01	07.03.01	
Batch ID	SEW084	SEW084	SEW084	SEW084	SEW084	
Analyst	BE	BE	BE	BE	BE	
Nitrate-Nitrite, Nitrogen (353.2/354.1/4500-NO3)						
Nitrate + Nitrite-N, mg/l	2.3	0.14	0.40	0.12	2.1	
Nitrate-N, mg/l	2.3R4	0.14R4	0.40R4	0.12R4	2.1	
Nitrite-N, mg/l	<0.10R4	<0.10R4	<0.10R4	<0.10R4	<0.10	
Dilution Factor	1	1	1	1	1	
Prep Date	06.28.01	06.28.01	06.28.01	06.28.01	06.28.01	
Analysis Date	07.03.01	07.03.01	07.03.01	07.03.01	07.03.01	
Batch ID	N3W39A	N3W39A	N3W39A	N3W39A	N3W39A	
Prep Method	4500NO2B	4500NO2B	4500NO2B	4500NO2B	4500NO2B	
Analyst	WG	WG	WG	WG	WG	

SEVERN

TRENT

SERVICES

STL Pensacola

LOG NO: C1-06756

Received: 28 JUN 01

Reported: 16 JUL 01

Ms. Jacinta Tenorio
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 3

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED			
06756-1	0601-CHA-MW04/106130-03	06-25-01/15:30			
06756-2	0601-CHA-MW07/106130-04	06-25-01/16:30			
06756-3	0601-CHA-MW05/106130-05	06-26-01/09:30			
06756-4	0601-CHA-MW02/106130-06	06-26-01/10:40			
06756-5	0601-CHA-MW06/106130-07	06-26-01/12:05			
PARAMETER	06756-1 MW 4	06756-2 MW 7	06756-3 MW 5	06756-4 MW 2	06756-5 MW 6
Ammonia (as N) (350.1), mg/l	0.12	1.1	0.15	0.42	0.10
Dilution Factor	1	1	1	1	1
Prep Date	07.05.01	07.05.01	07.05.01	07.05.01	07.05.01
Analysis Date	07.09.01	07.09.01	07.09.01	07.09.01	07.09.01
Batch ID	AAW23A	AAW23A	AAW23A	AAW23A	AAW23A
Prep Method	350.1	350.1	350.1	350.1	350.1
Analyst	WG	WG	WG	WG	WG
Total Phosphorus (365.4), mg/l	0.80	0.06	0.13	0.18	0.09
Dilution Factor	1	1	1	1	1
Prep Date	06.29.01	06.29.01	06.29.01	06.29.01	06.29.01
Analysis Date	07.06.01	07.06.01	07.06.01	07.06.01	07.06.01
Batch ID	TPW32R	TPW32R	TPW32R	TPW32R	TPW32R
Prep Method	365.4	365.4	365.4	365.4	365.4
Analyst	CR	CR	CR	CR	CR
Total Dissolved Solids (160.1), mg/l	4700	3700	3500	3000	2300
Dilution Factor	1	1	1	1	1
Prep Date	06.29.01	06.29.01	06.29.01	06.29.01	06.29.01
Analysis Date	07.02.01	07.02.01	07.02.01	07.02.01	07.02.01
Batch ID	TDW053	TDW053	TDW053	TDW053	TDW053
Prep Method	160.1	160.1	160.1	160.1	160.1
Analyst	ST	ST	ST	ST	ST

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TRENT

SERVICES

STL Pensacola

LOG NO: C1-06756

Received: 28 JUN 01

Reported: 16 JUL 01

Ms. Jacinta Tenorio
Pinnacle Laboratories
2709-D Pan American Freeway Northeast
Albuquerque, NM 87107

Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 4

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES					DATE/ TIME SAMPLED
06756-1	0601-CHA-MW04/106130-03					06-25-01/15:30
06756-2	0601-CHA-MW07/106130-04					06-25-01/16:30
06756-3	0601-CHA-MW05/106130-05					06-26-01/09:30
06756-4	0601-CHA-MW02/106130-06					06-26-01/10:40
06756-5	0601-CHA-MW06/106130-07					06-26-01/12:05
PARAMETER	06756-1 <i>MW 4</i>	06756-2 <i>MW 7</i>	06756-3 <i>MW 5</i>	06756-4 <i>MW 2</i>	06756-5 <i>MW 6</i>	
Specific Conductance (120.1), umhos/cm	5600	2200	4000	5400	3300	
Dilution Factor	1	1	1	1	1	
Analysis Date	07.02.01	07.02.01	07.02.01	07.02.01	07.02.01	
Batch ID	CDW026	CDW026	CDW026	CDW026	CDW026	
Analyst	ST	ST	ST	ST	ST	
Hardness by calculation						
Hardness as CaCO ₃ , mg/l	1700	1250	1239	425	150	
Dilution Factor	1,20	1	1	1	1	
Prep Date	07.03.01	07.03.01	07.03.01	07.03.01	07.03.01	
Analysis Date	07.11.01	07.07.01	07.07.01	07.07.01	07.07.01	
Batch ID	PW201	PW201	PW201	PW201	PW201	
Prep Method	3010A	3010A	3010A	3010A	3010A	
Analyst	GSP	GSP	GSP	GSP	GSP	

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TRENT

SERVICES

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Sampled By: Client

Code: 090810716

Page 5

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED			
06756-1	0601-CHA-MW04/106130-03	06-25-01/15:30			
06756-2	0601-CHA-MW07/106130-04	06-25-01/16:30			
06756-3	0601-CHA-MW05/106130-05	06-26-01/09:30			
06756-4	0601-CHA-MW02/106130-06	06-26-01/10:40			
06756-5	0601-CHA-MW06/106130-07	06-26-01/12:05			
PARAMETER	06756-1 <i>MW 4</i>	06756-2 <i>MW 7</i>	06756-3 <i>MW 5</i>	06756-4 <i>MW 2</i>	06756-5 <i>MW 6</i>
Metals (6010B)					
Cadmium, mg/l	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium, mg/l	530	380M1	400	110	48
Chromium, mg/l	0.008	<0.005	0.006	<0.005	0.009
Magnesium, mg/l	83	74	59	37	8.2
Potassium, mg/l	20	7.2M1	8.6	2.7	4.8
Sodium, mg/l	950	610M1	530	1100	820
Dilution Factor	1,20	1,10	1,10	1,20	1,20
Prep Date	07.03.01	07.03.01	07.03.01	07.03.01	07.03.01
Analysis Date	07.11.01	07.11.01	07.11.01	07.11.01	07.11.01
Batch ID	PW201	PW201	PW201	PW201	PW201
Prep Method	3010A	3010A	3010A	3010A	3010A
Analyst	GSP	GSP	GSP	GSP	GSP
Mercury (7470A), mg/l					
Dilution Factor	0.0057	0.0040	0.0025	0.0031	0.00037
Prep Date	1	1	1	1	1
Analysis Date	07.06.01	07.06.01	07.06.01	07.06.01	07.06.01
Batch ID	HGW045	HGW045	HGW045	HGW045	HGW045
Prep Method	7470A	7470A	7470A	7470A	7470A
Analyst	JDE	JDE	JDE	JDE	JDE

SEVERN

TRENT

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 6

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-6	0601-CHA-NCWW/106130-08	06-26-01/12:35
PARAMETER	06756-6	
Alkalinity Series (2320B/SM4500)		
Alkalinity (to pH 4.5) as CaCO ₃ , mg/l	1000	
Bicarbonate (2320/4500), mg/l	1000	
Carbon Dioxide, mg/l	800	
pH, mg/l	6.4	
Hydroxide, mg/l	<1.0	
Carbonate (2320/4500), mg/l	<1.0	
Dilution Factor	1	
Analysis Date	07.05.01	
Batch ID	AEW040	
Analyst	BE	
Chloride (325.2/SM4500E/9251), mg/l	480	
Dilution Factor	10	
Prep Date	07.09.01	
Analysis Date	07.09.01	
Batch ID	CKW35A	
Prep Method	325.2	
Analyst	CR	
Fluoride (340.2), mg/l	0.30	
Dilution Factor	1	
Analysis Date	07.09.01	
Batch ID	FLW028	
Analyst	WG	

SEVERN

TRENT

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 7

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-6	0601-CHA-NCWW/106130-08	06-26-01/12:35
PARAMETER	06756-6	
Sulfate as SO4 (375.4), mg/l	110	
Dilution Factor	4	
Analysis Date	07.03.01	
Batch ID	SEW084	
Analyst	BE	
Nitrate-Nitrite, Nitrogen (353.2/354.1/4500-NO3)		
Nitrate + Nitrite-N, mg/l	0.15	
Nitrate-N, mg/l	0.15	
Nitrite-N, mg/l	<0.10	
Dilution Factor	1	
Prep Date	06.28.01	
Analysis Date	07.03.01	
Batch ID	N3W39A	
Prep Method	4500NO2B	
Analyst	WG	
Ammonia (as N) (350.1), mg/l	50	
Dilution Factor	10	
Prep Date	07.05.01	
Analysis Date	07.09.01	
Batch ID	AAW23A	
Prep Method	350.1	
Analyst	WG	

SEVERN

TRENT

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 8

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-6	0601-CHA-NCWW/106130-08	06-26-01/12:35
PARAMETER	06756-6	
Total Phosphorus (365.4), mg/l	850	
Dilution Factor	500	
Prep Date	06.29.01	
Analysis Date	07.06.01	
Batch ID	TPW32R	
Prep Method	365.4	
Analyst	CR	
Total Dissolved Solids (160.1), mg/l	7700	
Dilution Factor	1	
Prep Date	06.29.01	
Analysis Date	07.02.01	
Batch ID	TDW053	
Prep Method	160.1	
Analyst	ST	
Specific Conductance (120.1), umhos/cm	5000	
Dilution Factor	1	
Analysis Date	07.02.01	
Batch ID	CDW026	
Analyst	ST	

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TRENT

SERVICES

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 9

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-6	0601-CHA-NCWW/106130-08	06-26-01/12:35
PARAMETER	06756-6	
Hardness by calculation		
Hardness as CaCO ₃ , mg/l	500	
Dilution Factor	1	
Prep Date	07.03.01	
Analysis Date	07.07.01	
Batch ID	PW201	
Prep Method	3010A	
Analyst	GSP	
Metals (6010B)		
Cadmium, mg/l	0.020	
Calcium, mg/l	190	
Chromium, mg/l	4.5	
Magnesium, mg/l	18	
Potassium, mg/l	29	
Sodium, mg/l	770	
Dilution Factor	1,20	
Prep Date	07.03.01	
Analysis Date	07.11.01	
Batch ID	PW201	
Prep Method	3010A	
Analyst	GSP	

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LOG NO: C1-06756

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

REPORT OF RESULTS

Page 10

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-6	0601-CHA-NCWW/106130-08	06-26-01/12:35
PARAMETER	06756-6	
Mercury (7470A), mg/l	0.070	
Dilution Factor	25	
Prep Date	07.06.01	
Analysis Date	07.06.01	
Batch ID	HGW045	
Prep Method	7470A	
Analyst	JDE	

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TRENT

SERVICES

STL Pensacola

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 11

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-7	Method Blank	
06756-8	Lab Control Standard % Recovery	
PARAMETER	06756-7	06756-8
Alkalinity Series (2320B/SM4500)		
Alkalinity (to pH 4.5) as CaCO ₃ , mg/l	<1.0	100 %
Bicarbonate (2320/4500), mg/l	<1.0	---
Carbon Dioxide, mg/l	<1.0	---
Hydroxide, mg/l	<1.0	---
Carbonate (2320/4500), mg/l	<1.0	---
Dilution Factor	1	---
Analysis Date	07.05.01	---
Batch ID	AEW040	AEW040
Analyst	BE	---
Chloride (325.2/SM4500E/9251), mg/l	<2.0	103 %
Dilution Factor	1	---
Prep Date	07.09.01	---
Analysis Date	07.09.01	---
Batch ID	CKW35A	CKW35A
Prep Method	325.2	---
Analyst	CR	---
Fluoride (340.2), mg/l	<0.20	104 %
Dilution Factor	1	---
Analysis Date	07.09.01	---
Batch ID	FLW028	FLW028
Analyst	WG	---

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TRENT

SERVICES

STL Pensacola

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 12

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-7	Method Blank	
06756-8	Lab Control Standard % Recovery	
PARAMETER	06756-7	06756-8
Sulfate as SO ₄ (375.4), mg/l	<5.0	104 %
Dilution Factor	1	---
Analysis Date	07.03.01	---
Batch ID	SEW084	SEW084
Analyst	BE	---
Nitrate-Nitrite, Nitrogen (353.2/354.1/4500-NO ₃)		
Nitrate + Nitrite-N, mg/l	<0.10	99 %
Nitrite-N, mg/l	<0.10	100 %
Dilution Factor	1	---
Prep Date	06.28.01	---
Analysis Date	07.03.01	---
Batch ID	N3W39A	N3W39A
Prep Method	4500NO ₂ B	---
Analyst	WG	---
Ammonia (as N) (350.1), mg/l	<0.05	103 %
Dilution Factor	1	---
Prep Date	07.05.01	---
Analysis Date	07.09.01	---
Batch ID	AAW23A	AAW23A
Prep Method	350.1	---
Analyst	WG	---

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TRENT

SERVICES

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 13

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-7	Method Blank	
06756-8	Lab Control Standard % Recovery	
PARAMETER	06756-7	06756-8
Total Phosphorus (365.4), mg/l	<0.05	89 %
Dilution Factor	1	---
Prep Date	06.29.01	---
Analysis Date	07.06.01	---
Batch ID	TPW32R	TPW32R
Prep Method	365.4	---
Analyst	CR	---
Total Dissolved Solids (160.1), mg/l	<5.0	98 %
Dilution Factor	1	---
Prep Date	06.29.01	---
Analysis Date	07.02.01	---
Batch ID	TDW053	TDW053
Prep Method	160.1	---
Analyst	ST	---
Specific Conductance (120.1), umhos/cm	<1.0	101 %
Dilution Factor	1	---
Analysis Date	07.02.01	---
Batch ID	CDW026	CDW026
Analyst	ST	---

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TRENT

SERVICES

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Project: 106130, AMEC EPFS CHACO SAMPLING

Sampled By: Client

Code: 090810716

Page 14

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-7	Method Blank	
06756-8	Lab Control Standard % Recovery	
PARAMETER	06756-7	06756-8
Hardness by calculation		
Hardness as CaCO ₃ , mg/l	<3.2	---
Dilution Factor	1	---
Prep Date	07.03.01	---
Analysis Date	07.07.01	---
Batch ID	PW201	PW201
Prep Method	3010A	---
Analyst	GSP	---
Metals (6010B)		
Cadmium, mg/l	<0.005	104 %
Calcium, mg/l	<0.50	105 %
Chromium, mg/l	<0.005	105 %
Magnesium, mg/l	<0.50	103 %
Potassium, mg/l	<1.0	98 %
Sodium, mg/l	<1.0	99 %
Dilution Factor	1	---
Prep Date	07.03.01	---
Analysis Date	07.11.01	---
Batch ID	PW201	PW201
Prep Method	3010A	---
Analyst	GSP	---

SEVERN

TRENT

SERVICES

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Sampled By: Client

Code: 090810716

Page 15

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-7	Method Blank	
06756-8	Lab Control Standard % Recovery	
PARAMETER	06756-7	06756-8
Mercury (7470A), mg/l	<0.00020	102 %
Dilution Factor	1	---
Prep Date	07.06.01	---
Analysis Date	07.06.01	---
Batch ID	HGW045	HGW045
Prep Method	7470A	---
Analyst	JDE	---

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TRENT

SERVICES

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Sampled By: Client

Code: 090810716

Page 16

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-9	Matrix Spike % Recovery	
06756-10	Matrix Spike Duplicate % Recovery	
PARAMETER	06756-9	06756-10
Chloride (325.2/SM4500E/9251), mg/l	97 %	102 %
Batch ID	CKW35A	CKW35A
Fluoride (340.2), mg/l	123 %	123 %
Batch ID	FLW028	FLW028
Sulfate as SO4 (375.4), mg/l	102 %	103 %
Batch ID	SEW084	SEW084
Nitrate-Nitrite, Nitrogen (353.2/354.1/4500-NO3)		
Nitrate + Nitrite-N, mg/l	83 %	81 %
Nitrite-N, mg/l	100 %	100 %
Batch ID	N3W39A	N3W39A
Ammonia (as N) (350.1), mg/l	109 %	108 %
Batch ID	AAW23A	AAW23A
Total Phosphorus (365.4), mg/l	95 %	83 %
Batch ID	TPW32R	TPW32R
Hardness by calculation		
Hardness as CaCO3, mg/l	N/A	N/A

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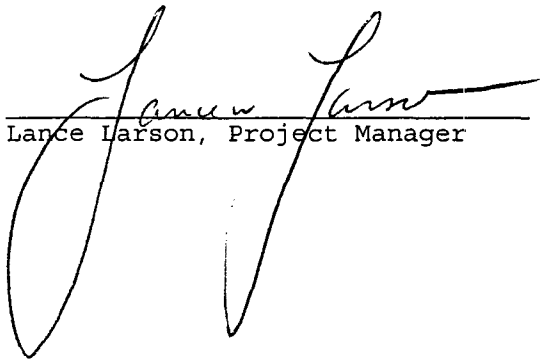
Code: 090810716

Page 17

REPORT OF RESULTS

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES	DATE/ TIME SAMPLED
06756-9	Matrix Spike % Recovery	
06756-10	Matrix Spike Duplicate % Recovery	
PARAMETER	06756-9	06756-10
Metals (6010B)		
Cadmium, mg/l	97 %	98 %
Calcium, mg/l	N/C	N/C
Chromium, mg/l	99 %	101 %
Magnesium, mg/l	88 %	106 %
Potassium, mg/l	171 %M1	173 %M1
Sodium, mg/l	N/C	N/C
Batch ID	PW201	PW201
Mercury (7470A), mg/l	98 %	97 %
Batch ID	HGW045	HGW045

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.


Lance Larson, Project Manager

Final Page Of Report

Data Qualifiers for Final Report

B1	The analyte was detected in the associated method blank (sample itself is flagged even though sample is ND).
B2	The analyte was detected in the sample(s) and in the associated method blank analyzed on the day samples were extruded; however, this analyte was not detected in the blank analyzed with the samples.
B3	The analyte was found in the associated blank as well as in the associated sample(s) (qualifier is applied to the sample, not to the blank).
B4	Sample results were corrected due to contaminants in Fractionation Blank
D	Diluted out (surrogate or spike due to sample dilution)
E	Compound concentration exceeds the upper calibration range of the instrument.
F	The reported value is < STL Pensacola RL and $\geq$ the STL Pensacola MDL; therefore, the quantitation is estimation.
G	Sample and/or duplicate result is at or below 5 X (times) the STL Reporting Limit and the absolute difference between the sample and duplicate result is at or below the STL reporting limit; therefore, the results are "in control".
H1	Sample and/or duplicate is below 5 X (times) the STL Reporting Limit and the absolute difference between the results exceeds the STL Reporting Limit; therefore, the results are "out of control"
H2	Sample and duplicate (or MS and MSD) RPD is above control limit.
J (description)	The analyte was positively identified, the quantitation may be an estimation
J4	(For positive results) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$), non-reportable for NPDES compliance monitoring.
J6	(For positive results) LCS or Surrogate %R is > upper control limit (UCL), results may be biased high
J8	Matrix spike and post spike recoveries are outside control limits. See out of Control Events/Corrective Action Form.
J9	(For positive results) LCS or Surrogate %R is < lower control limit (LCL), results may be biased low
M1	A matrix effect was present (¹ sample, MS or MSD was analyzed twice to confirm surrogate/spike failure, ² sample and/or MS/MSD chromatogram(s) had interfering peaks, ³ sample result was > 4 X spike added, ⁴ metals serial dilution was performed, or ⁵ metals post spike is < 40% R)
M2	The MS and/or MSD %R or RPD was outside upper or lower control limits; not necessarily due to matrix effect.
N/C	Not Calculable; Sample spiked is > 4X spike concentration (may also use this flag in place of negative numbers)
NH	Sample and duplicate results are "out of control". The sample is nonhomogeneous.
NoMS	Not enough sample provided to prepare and/or analyze a method-required matrix spike (MS) and/or duplicate (MSD)
Q	The analytical (post digestion) spike is reported due to the percent recovery being outside limits on the matrix (pre-digestion) spike.
R (description)	The quantitation may be an estimation.
R1	(For nondetects) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$); non-reportable for NPDES compliance monitoring
R2	Improper preservation, no preservative present or insufficient amounts of preservative in sample upon receipt, non-reportable for NPDES compliance monitoring
R3	Improper preservation, incorrect preservative present in sample upon receipt, non-reportable for NPDES compliance
R4	Holding time exceeded, non-reportable for NPDES compliance monitoring.
R5	Sample collection requirements not met, see case narrative.
R6	LCS or surrogate %R is < LCL and analyte is not detected or surrogate %R is < 10% for detects/nondetects.
R7	Internal standard area outside -50% to +100% of calibration verification standard.
R8	Initial calibration or any calibration verification exceeds acceptance criteria.
R9	Not filtered and preserved at time of collection.
R10	Headspace > 1/4" in diameter in volatile vials, non-reportable for NPDES compliance monitoring
R11	Samples were filtered and preserved within 4 hours of collection.
R12	Analysis performed outside the 12-hour tune or not within tune criteria.
S1	The Method of Standard Additions (MSA) has been performed on this sample.
S2	Incorrect sample amount was submitted to the laboratory for analysis
S3 (Flashpoint)	This method is not designed for solids and the results may not be accepted by any regulator for such purposes.
T	Second-column or detector confirmation exceeded the SW-846 criteria of 40% RPD for this compound.
TIC	The compound is not within the initial calibration curve. It is searched for qualitatively or as a Tentatively Identified Compound.
U	The analyte was analyzed for but not detected (at or above the RL or the MDL, whichever is entered next to the "U" value. Value for result will never be below the MDL)
W	Post-digestion spike for Furnace AA is out of control limits (85-115%), while sample absorbance is less than 50% spike absorbance.
@	Adjusted reporting limit due to sample composition, not due to overcal (dilution prior to digestion and/or analysis).
#	Elevated reporting limit due to insufficient sample size
1 pt	The compound has been quantitated against a one point calibration.
* (Metals & Wet Chem)	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)

STL PENSACOLA
STATE CERTIFICATIONS

Alabama Department of Environmental Management, Laboratory ID No. 40150 (Drinking Water by Reciprocity with FL)

Arizona Department of Health Services, Lab ID No. AZ0589 (Hazardous Waste & Wastewater)

Arkansas Department of Pollution Control and Ecology, (No Laboratory ID No. assigned by state) (Environmental)

State of California, Department of Health Services, Laboratory ID No. 01128CA (Hazardous Waste and Wastewater)

State of Connecticut, Department of Health Services, Connecticut Lab Approval No. PH-0697 (Drinking Water, Hazardous Waste and Wastewater)

Delaware Health & Social Services, Division of Public Health, Laboratory ID No. FL094 (Drinking Water by Reciprocity with FL)

Florida DOH Laboratory ID No. E81010 (Drinking Water, Hazardous Waste and Wastewater)

Florida, Radioactive Materials License No. G0733-1

Foreign Soil Permit, Permit No. S-37599

Kansas Department of Health & Environment, Laboratory ID No. E10253 (Wastewater and Hazardous Waste)

Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet, Laboratory ID No. 90043 (Drinking Water)

State of Louisiana, DHH, Office of Public Health Division of Laboratories, Laboratory ID No. LA000017 (Drinking Water)

Louisiana Department of Environmental Quality, Environmental Laboratory Accreditation Program, Agency Interest ID 30748 (Environmental - Accreditation Pending)

State of Maryland, DH&MH Laboratory ID No. 233 (Drinking Water by Reciprocity with Florida)

Commonwealth of Massachusetts, DEP, Laboratory ID No. M-FLO94 (Hazardous Waste and Wastewater)

State of Michigan, Bureau of E&OcCH, Laboratory ID No. 9912 (Drinking Water by Reciprocity with Florida)

New Hampshire DES ELAP, Laboratory ID No. 250599A (Wastewater)

State of New Jersey, Department of Environmental Protection & Energy, Laboratory ID No. 49006 (Wastewater and Hazardous Waste)

New York State, Department of Health, Laboratory ID No. 11503 (Wastewater and Solids/Hazardous Waste)

North Carolina Department of Environment & Natural Resources, Laboratory ID No. 314 (Hazardous Waste and Wastewater)

North Dakota DH&Consol Labs, Laboratory ID No. R-108 (Drinking Water, Wastewater and Hazardous Waste by Reciprocity with Florida)

State of Oklahoma, Oklahoma Department of Environmental Quality, Laboratory ID No. 9810 (Hazardous Waste and Wastewater)

Commonwealth of Pennsylvania, Department of Environmental Resources, Laboratory ID No. 68-467 (Drinking Water)

South Carolina DH&EC, Laboratory ID No. 96026 (Wastewater by Reciprocity with FL and Solids/Hazardous Waste by Reciprocity with CA)

Tennessee Department of Health & Environment, Laboratory ID No. 02907 (Drinking Water)

Virginia Department of General Services, Laboratory ID No. 00008 (Drinking Water by Reciprocity with FL)

State of Washington, Department of Ecology, Laboratory ID No. C282 (Hazardous Waste and Wastewater)

West Virginia Division of Environmental Protection, Office of Water Resources, Laboratory ID No. 136 (Hazardous Waste and Wastewater by Reciprocity with FL)

American Industrial Hygiene Association (AIHA) Accredited Laboratory, Laboratory ID No. 100704

\\word\\certlist\\condcert.lst revised 04/10/01

STL Pensacola PROJECT SAMPLE INSPECTION FORM



Lab Order #: C106756 Date Received: 6/28/01

- | | |
|--|--|
| <p>1. Was there a Chain of Custody? <u>Yes</u> No*</p> <p>2. Was Chain of Custody properly filled out and relinquished? <u>Yes</u> No*</p> <p>3. Were samples received cold? <u>Yes</u> No* N/A
(Criteria: 2° - 6°C: STL-SOP)</p> <p>4. Were all samples properly labeled and identified? <u>Yes</u> No*</p> <p>5. Did samples require splitting or compositing*? Yes* <u>No</u>
Req By: PM Client Other*</p> <p>6. Were samples received in proper containers for analysis requested? <u>Yes</u> No*</p> <p>7. Were all sample containers received intact? <u>Yes</u> No*</p> | <p>8. Were samples checked for preservative? <u>Yes</u> No* N/A
(Check pH of all H₂O requiring preservative (STL-PN SOP 917) except VOA vials that require zero headspace)*</p> <p>9. Is there sufficient volume for analysis requested? <u>Yes</u> No* N/A
(Can)</p> <p>10. Were samples received within Holding Time? (REFER TO STL-SOP 1040) <u>Yes</u> No*</p> <p>11. Is Headspace visible > 1/4" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control section. Yes* No <u>N/A</u></p> <p>12. If sent, were matrix spike bottles returned? Yes No* <u>N/A</u></p> <p>13. Was Project Manager notified of problems? (initials: <u>MHS</u>) <u>Yes</u> No* N/A
PSIF</p> |
|--|--|

Airbill Number(s): 1287816801 43305533

Shipped By: UPS

Cooler Number(s): Client

Shipping Charges: N/A

Cooler Weight(s): 58 lb

Cooler Temp(s) (°C): 4°C
ack

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

Multiple project cooler
#10 Sample out of hold for NNO₃ are to be run as specified per client.

MHS
628

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: MHS Date: 6/28/01

Logged By: Per Date: 6/28/01

- * Note all Out-of-Control and/or questionable events on Comment Section of this form. For holding times, the analytical department will flag immediate hold time samples (pH, Dissolved O₂, Residual Cl) as out of hold time, therefore, these samples will not be documented on this PSIF.
- * If Other, note who requested the splitting or compositing of samples on the Comment Section of this form. All volatile samples requested to be split or composited must be done in the Volatile Lab. Document: "Volatile sample values may be compromised due to sample splitting (compositing)"
- + All preservatives for the State of North Carolina, the State of New York, and other requested samples are to be recorded on the sheet provided to record pH results (STL-SOP 938, section 2.2.9).
- * According to EPA, 1/4" of headspace is allowed in 40 ml vials requiring volatile analysis, however, STL makes it policy to record any headspace as out-of-control (STL-SOP 938, section 2.2.12).

Network Project Manager: Jacinta A. Tenorio

Pinnacle Laboratories, Inc.

2709-D Pan American Freeway, NE

Albuquerque, New Mexico 87107

(505) 344-3777 Fax (505) 344-4413

Run INNO3 as specated even if out of hold time.

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)	Ca, Mg, K, Na, Cd, Cr, Hg	Total Hardness	Total Phosphorus, TDS	Gen Chemistry: Cl, F, SO4, INNO3	NH3, Alk. Group, Conductivity	Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)/8270 SIMS	8240 (TCLP 1311) ZHE	Base/Neutral Acid Compounds GC/MS (625/8270)	URANIUM (ICP-MS)	RADIUM 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
0601-CHA-MW04	10/13/03	6:25	1530	1					X	X	X	X	X	X													
- MW07/10/13/04	11	1030		2					X	X	X	X	X	X													
- MW05/10/13/05	6:26	0930		3					X	X	X	X	X	X													
- MW02/10/13/06		1040		4					X	X	X	X	X	X													
- MW06/10/13/07		1205		5					X	X	X	X	X	X													
- NCNW/10/13/08	↓	1235		6					X	X	X	X	X	X													

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:		RELINQUISHED BY:		RELINQUISHED BY:	
PROJECT #:	106130	Total Number of Containers		PENSACOLA - STL-FL		Signature:	Time:	Signature:	Time:
PROJ. NAME:	AMEC	Chain of Custody Seals		ESL - OR		Printed Name:	Date:	Printed Name:	Date:
QC LEVEL:	IV	Received Intact?		STL - CT		Signature:	Date:	Signature:	Date:
QC REQUIRED:	MS MSD BLANK	Received Good Cond./Cold		ATEL - AZ		Printed Name:	Date:	Printed Name:	Date:
TAT:	STANDARD RUSH!!	LAB NUMBER:		ATEL - MARION		Company		Company	
DUE DATE:			7/11	ATEL - MEIMORE		RECEIVED BY:		RECEIVED BY:	
RUSH SURCHARGE:			-	BARRINGER		Signature:	Time:	Signature:	Time:
CLIENT DISCOUNT:			-	ENVIRO TEST LABS		Printed Name:	Date:	Printed Name:	Date:
SPECIAL CERTIFICATION				WCAS		Signature:	Date:	Signature:	Date:
REQUIRED: YES NO				WOHL		Company		Company	

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: ROBERT THOMPSON				ANALYSIS REQUEST														NUMBER OF CONTAINERS												
COMPANY: AMEC EARTH & ENVIRONMENTAL																														
ADDRESS: 2020 AFTON PLACE																														
PHONE: (505) 327-7928																														
FAX: (505) 326-5721																														
BILL TO: DAVID BAYS																														
COMPANY: EL PASO FIELD SERVICES																														
ADDRESS: 604 REILLY AVE.																														
FARMINGTON, NM 87401																														
SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	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	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides / PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polyuclear Aromatics (610/8310/8270-SIMS)	General Chemistry: "See ATTACHED"	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals: "See ATTACHED"	NUMBER OF CONTAINERS	
0601 - CHA - MW09	6/25/01	1200	H2O	01					X																					2
0601 - CHA - MW10	6/25/01	1330	H2O	02					X																					2
0601 - CHA - MW04	6/25/01	1530	H2O	03					X																					5
0601 - CHA - MW07	6/25/01	1630	H2O	04					X																					5
0601 - CHA - MW05	6/26/01	0930	H2O	05					X																					5
0601 - CHA - MW02	6/26/01	1040	H2O	06					X																					5
0601 - CHA - MW06	6/26/01	1205	H2O	07					X																					5
0601 - CHA - AW NCW03	6/26/01	1235	H2O	08					X																					4
TRIP BLANK	6/26/01	1605	H2O	09					X																					1

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS		RELINQUISHED BY:	
PROJ. NO.: 1517-0000-54		(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒	Signature: [Signature]	Time: 1610
PROJ. NAME: EFES CHAEO SAMPLING		CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER		Printed Name: [Name]	Date: [Date]
P.O. NO.:		METHANOL PRESERVATION ☐		Company: [Company]	See reverse side (Force Majeure)
SHIPPED VIA: GREYHOUND		COMMENTS: FIXED FEE ☐		RECEIVED BY: 1. [Signature] Time: [Time]	
SAMPLE RECEIPT		RECEIVED BY: 2. [Signature] Time: [Time]		RECEIVED BY: 1. [Signature] Time: [Time]	
NO. CONTAINERS: 34		Y/N (NA)		Y/N (NA)	
CUSTODY SEALS: YES		YES		YES	
RECEIVED INTACT: YES		YES		YES	
BLUE ICE: YES		YES		YES	
Pinnacle Laboratories Inc. • 2709-D Pan American Freeway, NE • Albuquerque, New Mexico 87107 • Fax (505) 344-3777 • E-mail: PIN_LAB@WORLDNET.ATT.NET		DISTRIBUTION: White - PLI, Canary - Original		Pinnacle Laboratories Inc.	

PINNACLE
LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
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Pinnacle Lab ID number **112087**
January 07, 2002

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name CHACO PLANT SAMPLING
Project Number 1517000054

Attention: ROBERT THOMPSON/DAVID BAYS

On 12/21/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), 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

MR: jt

Enclosure

PINNACLE
LABORATORIES

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

CLIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 112087
PROJECT #	: 1517000054	DATE RECEIVED	: 12/21/01
PROJECT NAME	: CHACO PLANT SAMPLING	REPORT DATE	: 01/07/02
PINNACLE			DATE
ID #	CLIENT DESCRIPTION	MATRIX	COLLECTED
112087 - 01	CHA-0112-MW9	AQUEOUS	12/17/01
112087 - 02	CHA-0112-MW10	AQUEOUS	12/17/01

**PINNACLE
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GAS CHROMATOGRAPHY RESULTS

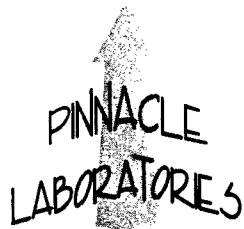
TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000054
PROJECT NAME : CHACO PLANT SAMPLING

PINNACLE I.D.: 112087

SAMPLE			DATE	DATE	DATE	DIL.
D. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	CHA-0112-MW9	AQUEOUS	12/17/01	NA	12/22/01	1
02	CHA-0112-MW10	AQUEOUS	12/17/01	NA	12/27/01	5
PARAMETER		DET. LIMIT	UNITS	CHA-0112-MW9	CHA-0112-MW10	
BENZENE		0.5	UG/L	< 0.5	68	
TOLUENE		0.5	UG/L	< 0.5	< 2.5	
ETHYLBENZENE		0.5	UG/L	< 0.5	28	
TOTAL XYLENES		0.5	UG/L	< 0.5	120	

SURROGATE:
BROMOFLUOROBENZENE (%) 106 119
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A



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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 112087
BLANK I. D.	: 122101	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 12/21/01
PROJECT #	: 1517000054	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING		

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

SURROGATE:
BROMOFLUOROBENZENE (%) 112
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A



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Albuquerque, New Mexico 87107
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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 112087
BLANK I. D.	: 122701	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 12/27/01
PROJECT #	: 1517000054	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING		

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

SURROGATE:
BROMOFLUOROBENZENE (%) 108
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

PINNACLE
LABORATORIES

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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 112087
MSMSD #	: 112087-01	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 12/22/01
PROJECT #	: 1517000054	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	22.2	111	2	(80 - 120)	20
TOLUENE	<0.5	20.0	20.9	104	21.3	107	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.5	102	20.9	104	2	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	63.8	106	64.4	107	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.

CHAIN OF CUSTODY

PRE-ACCESSORY

1/20/87

DATE: 2-20-01 PAGE: 1 OF 1

PROJECT INFORMATION		PRIOR AUTHORIZATION REQUIRED FOR RUSH PROJECTS		RELINQUISHED BY:	
PROJ. NO.	PROJ. NAME	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒	Signature:	Time:
1317000054	Onco plant Sample			Chris A. Meez	11/00
P.O. NO.:		CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER		Printed Name:	Date:
		METHANOL PRESERVATION ☐		Chris A. Meez	12/20/01
SHIPPED VIA: Grayhound		COMMENTS: FIXED FEE ☐		Company:	
SAMPLER RECEIVED				See reverse side (Force Majeure)	
CONTAINERS				RECEIVED BY LAB:	
CONTAINER SIGNS				Signature:	Time:
RECEIVED DATE				Printed Name:	Date:
LAB USE ONLY				Company:	

ANALYSIS REQUEST		RELINQUISHED BY:	
TEST	ANALYSIS REQUEST	Signature:	Time:
504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics		
8021 (CUST)	8260 (CUST) Volatile Organics		
8021 (HALO)	8260 (Full) Volatile Organics		
8021 (EDX)	8260 (Landfill) Volatile Organics		
8021 (TCL)	Pesticides / PCB (608/8081/8082)		
8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE	Herbicides (615/8151)		
8021 (BTEX)/8015 (Gasoline) MTBE	Base/Neutral/Acid Compounds GC/MS (625/8270)		
(M3015) Gas/Purge & Trap	Polynuclear Aromatics (610/8310/8270-SIMS)		
(MOD.8015) Diesel/Direct Inject	General Chemistry:		
Petroleum Hydrocarbons (418.1) TRPH	Priority Pollutant Metals (13)		
	Target Analyte List Metals (23)		
	RCRA Metals (8)		
	RCRA Metals by TCLP (Method 1311)		
	Metals:		
	NUMBER OF CONTAINERS		

PROJECT MANAGER:	DATE	TIME	LAB USE ONLY
Robert Thompson	12-20-01	1533	
COMPANY: AMEC			
ADDRESS: 2060 AFION Place			
Farmington NM 87401			
PHONE: (505) 327-2928			
FAX: (505) 326-5721			
BILL TO: DAVID BAYS			
COMPANY: EL PASO Field Services			
ADDRESS: 614 REILLY AVE			
Farmington NM. 87401			

PLEASE FILL THIS FORM IN COMPLETELY.

PINNACLE
LABORATORIES

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

Pinnacle Lab ID number **110077**
November 02, 2001

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICE
614 RIELLY AVENUE
FARMINGTON, NM 87401

Project Name CHACO PLANT SAMPLING
Project Number 1517000054

Attention: ROBERT THOMPSON/DAVID BAYS

On 10/17/01 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), 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 was analyzed by Pinnacle Laboratories, Inc., Albuquerque, NM.

All other analyses were performed by Enviro-Test Laboratories LLC, Casper, WY.

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

MR: ft

Enclosure



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

CLIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 110077
PROJECT #	: 1517000054	DATE RECEIVED	: 10/17/01
PROJECT NAME	: CHACO PLANT SAMPLING	REPORT DATE	: 11/02/01

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
110077 - 01	CHA-0901-MW10	AQUEOUS	10/16/01
110077 - 02	CHA-0901-MW09	AQUEOUS	10/16/01
110077 - 03	CHA-0901-MW08	AQUEOUS	10/16/01
110077 - 04	CHA-0901-MW01	AQUEOUS	10/16/01
110077 - 05	TRIP BLANK	AQUEOUS	10/12/01



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Albuquerque, New Mexico 87107
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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000054
PROJECT NAME : CHACO PLANT SAMPLING

PINNACLE I.D.: 110077

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	CHA-0901-MW10	AQUEOUS	10/16/01	NA	10/18/01	10*
02	CHA-0901-MW09	AQUEOUS	10/16/01	NA	10/18/01	1
03	CHA-0901-MW08	AQUEOUS	10/16/01	NA	10/18/01	1

PARAMETER	DET. LIMIT	UNITS	CHA-0901-MW10	CHA-0901-MW09	CHA-0901-MW08
BENZENE	0.5	UG/L	74	< 0.5	< 0.5
TOLUENE	0.5	UG/L	< 5.0	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	40	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	170	< 0.5	< 0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 105 99 100
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

* Dilution due to matrix interference.



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000054
PROJECT NAME : CHACO PLANT SAMPLING

PINNACLE I.D.: 110077

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	CHA-0901-MW01	AQUEOUS	10/16/01	NA	10/18/01	1
05	TRIP BLANK	AQUEOUS	10/12/01	NA	10/18/01	1

PARAMETER	DET. LIMIT	UNITS	CHA-0901-MW01	TRIP BLANK
BENZENE	0.5	UG/L	1.4	< 0.5
TOLUENE	0.5	UG/L	< 0.5	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5
TOTAL XYLENES	0.5	UG/L	2.8	< 0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 94 97
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

PINNACLE
LABORATORIES

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 110077
BLANK I. D.	: 101801	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 10/18/01
PROJECT #	: 1517000054	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: CHACO PLANT SAMPLING		

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

SURROGATE:
BROMOFLUOROBENZENE (%) 100
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A



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GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 110077-04
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000054
PROJECT NAME : CHACO PLANT SAMPLING

PINNACLE I.D. : 110077
DATE EXTRACTED : N/A
DATE ANALYZED : 10/18/01
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	1.4	20.0	19.2	89	19.3	90	1	(80 - 120)	20
TOLUENE	<0.5	20.0	19.4	97	19.2	96	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	19.3	97	19.1	96	1	(80 - 120)	20
TOTAL XYLENES	2.8	60.0	57.9	92	57.4	91	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

Enviro-Test Laboratories LLC.

Chemical Analysis Report

PINNACLE LABORATORIES, INC

Date: 31 OCT 2001

Attn: PROJECT MANAGER

2709D PAN AMERICAN FREEWAY NE

ALBUQUERQUE NM 87107

Lab Work Order #: L3922

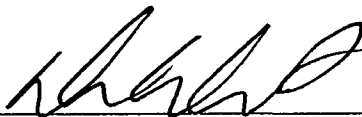
Date Received: 18 OCT 2001

Project P.O. #: 110077

Project Reference: AMEC

Comments:

APPROVED BY: _____



Project Manager



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Enviro • Test
LABORATORIES LLC.

Sample Delivery Group Narrative

October 31, 2001

Customer: Pinnacle Laboratories, Inc.

ETL LLC Job Number: L3922

The following information is pertinent to the interpretation of the data.

The samples were received and analyzed without incident.

If you have any questions regarding the analysis of these samples, please call us at (307) 235-5741 or (800) 666-0306.


Debra Phillabaum
Quality Assurance Manager

Chemical Analysis Report

PINNACLE LABORATORIES, INC
2709D PAN AMERICAN FREEWAY NE
ALBUQUERQUE NM 87107

ATTN: PROJECT MANAGER

Project: AMEC
Purchase Order: 110077

Page: 2 of 4

Report Date: 31-OCT-01
Work Order: L3922
Lab Sample ID: L3922-1
Client Sample ID: CHA-0901-MW08 / 110077-03
Date Collected: 16-OCT-01
Sampled By: CLIENT
Date Received: 18-OCT-01
Matrix: WATER

Parameter	Result	Qualifier	MDL	PQL	Units	DF	Run ID	Analyzed	By
Misc									
Cadmium (Cd) Total	<0.0004		0.0004	0.0002	mg/L	5	R13610	25-OCT-01 08:34	GC
Chromium (Cr) Total	0.001		0.001	0.0008	mg/L	5	R13610	25-OCT-01 08:34	GC
Mercury (Hg)-Total	0.0265		0.0002	0.0002	mg/L		R13671	29-OCT-01 13:03	ML
Modified 8270 SIMS									
naphthalene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
2-methylnaphthalene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
1-methylnaphthalene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
acenaphthylene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
acenaphthene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
fluorene	1.5		0.4		ug/L		R13607	24-OCT-01 00:00	PR
phenanthrene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
anthracene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
fluoranthene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
pyrene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(a)anthracene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
chrysene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(b)fluoranthene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(k)fluoranthene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(a)pyrene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Indeno(1,2,3-c,d)pyrene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Dibenzo(a,h)Anthracene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(g,h,i)Perylene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Surrogate: Nitrobenzene d5(Surr.)	94		36.8-137.8		%		R13607	24-OCT-01 00:00	PR
Surrogate: 2-Fluorobiphenyl (surr)	83		45-119.3		%		R13607	24-OCT-01 00:00	PR
Surrogate: P-Terphenyl D14 (Surr)	91		68.6-134.4		%		R13607	24-OCT-01 00:00	PR



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Chemical Analysis Report

PINNACLE LABORATORIES, INC
2709D PAN AMERICAN FREEWAY NE
ALBUQUERQUE NM 87107

ATTN: PROJECT MANAGER

Project: AMEC
Purchase Order: 110077

Page: 3 of 4

Report Date: 31-OCT-01
Work Order: L3922
Lab Sample ID: L3922-2
Client Sample ID: CHA-0901-MW01 / 110077-04
Date Collected: 16-OCT-01
Sampled By: CLIENT
Date Received: 18-OCT-01
Matrix: WATER

Parameter	Result	Qualifier	MDL	PQL	Units	DF	Run ID	Analysis	By
Misc									
Cadmium (Cd) Total	<0.0004		0.0004	0.0002	mg/L	5	R13610	25-OCT-01 08:32	GC
Chromium (Cr) Total	0.001		0.001	0.0008	mg/L	5	R13610	25-OCT-01 08:32	GC
Mercury (Hg)-Total	0.0174		0.0002	0.0002	mg/L		R13671	29-OCT-01 13:03	ML
Modified 8270 SIMS									
naphthalene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
2-methylnaphthalene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
1-methylnaphthalene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
acenaphthylene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
acenaphthene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
fluorene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
phenanthrene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
anthracene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
fluoranthene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
pyrene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(a)anthracene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
chrysene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(b)fluoranthene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(k)fluoranthene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(a)pyrene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Indeno(1,2,3-c,d)pyrene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Dibenzo(a,h)Anthracene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Benzo(g,h,i)Perylene	<0.4		0.4		ug/L		R13607	24-OCT-01 00:00	PR
Surrogate: Nitrobenzene d5(Surr.)	94		36.8-137.8		%		R13607	24-OCT-01 00:00	PR
Surrogate: 2-Fluorobiphenyl (surr)	95		45-119.3		%		R13607	24-OCT-01 00:00	PR
Surrogate: P-Terphenyl D14 (Surr)	96		68.6-134.4		%		R13607	24-OCT-01 00:00	PR

Reference Information

Page: 4 of 4
Report Date: 31-OCT-01
Work Order: L3922

The following is the Description of sample Qualifiers where applicable:

The following Preparation/Extraction Methods were performed:

ETL Test Code and Matrix		Test Description	Methodology Reference (Based On)
8270-SIMS-CA	Water	Modified 8270 SIMS	SW-846 Method 3510C
CD-TOT-LOW-CA	Water	Cadmium (Cd)-Total	SW846 3010A
CR-TOT-LOW-CA	Water	Chromium (Cr)-Total	SW846 3010A
CD-TOT-LOW-CA	Water	Cadmium (Cd)-Total	
CR-TOT-LOW-CA	Water	Chromium (Cr)-Total	
HG-TOT-HYD-CA	Water	Mercury (Hg)-Total	

The following Analytical Methods were performed:

ETL Test Code and Matrix		Test Description	Methodology Reference (Based On)
8270-SIMS-CA	Water	Modified 8270 SIMS	EPA 8270C Modified for S.I.M.
CD-TOT-LOW-CA	Water	Cadmium (Cd)-Total	SM 3125-ICP-MS
CR-TOT-LOW-CA	Water	Chromium (Cr)-Total	SM 3125-ICP-MS
HG-TOT-HYD-CA	Water	Mercury (Hg)-Total	SM 3112 B-AAS Cold Vapor



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ENVIRO-TEST QC REPORT

Client: PINNACLE LABORATORIES, INC
2709D PAN AMERICAN FREEWAY NE
ALBUQUERQUE NM 87107

Page 1 of 5

Report Date: Oct. 31, 2001
Workorder: L3922

Contact: PROJECT MANAGER

Test	Matrix	Reference	Result	Qualifier	Units	Limit	Analyzed
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8270-SIMS-CA

Water

Batch R13607

WG11165-2 **BLANK**

1-methylnaphthalene	<0.1	ug/L	24-OCT-01
2-methylnaphthalene	<0.1	ug/L	24-OCT-01
acenaphthene	<0.1	ug/L	24-OCT-01
acenaphthylene	<0.1	ug/L	24-OCT-01
anthracene	<0.1	ug/L	24-OCT-01
Benzo(a)anthracene	<0.1	ug/L	24-OCT-01
Benzo(a)pyrene	<0.1	ug/L	24-OCT-01
Benzo(b)fluoranthene	<0.1	ug/L	24-OCT-01
Benzo(g,h,i)Perylene	<0.1	ug/L	24-OCT-01
Benzo(k)fluoranthene	<0.1	ug/L	24-OCT-01
chrysene	<0.1	ug/L	24-OCT-01
Dibenzo(a,h)Anthracene	<0.1	ug/L	24-OCT-01
fluoranthene	<0.1	ug/L	24-OCT-01
fluorene	<0.1	ug/L	24-OCT-01
Indeno(1,2,3-c,d)pyrene	<0.1	ug/L	24-OCT-01
naphthalene	<0.1	ug/L	24-OCT-01
phenanthrene	<0.1	ug/L	24-OCT-01
pyrene	<0.1	ug/L	24-OCT-01

WG11165-4 **BS**

	Amount			
1-methylnaphthalene	96	%	4	70-130 24-OCT-01
2-methylnaphthalene	114	%	4	70-130 24-OCT-01
acenaphthene	86	%	4	70-130 24-OCT-01
acenaphthylene	120	%	4	70-130 24-OCT-01
anthracene	112	%	4	70-130 24-OCT-01
Benzo(a)anthracene	107	%	4	70-130 24-OCT-01
Benzo(a)pyrene	89	%	4	70-130 24-OCT-01
Benzo(b)fluoranthene	100	%	4	70-130 24-OCT-01
Benzo(g,h,i)Perylene	84	%	4	70-130 24-OCT-01
Benzo(k)fluoranthene	86	%	4	70-130 24-OCT-01
chrysene	82	%	4	70-130 24-OCT-01
Dibenzo(a,h)Anthracene	118	%	4	70-130 24-OCT-01
fluoranthene	94	%	4	70-130 24-OCT-01
fluorene	100	%	4	70-130 24-OCT-01
Indeno(1,2,3-c,d)pyrene	108	%	4	70-130 24-OCT-01



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ENVIRO-TEST QC REPORT

Client: PINNACLE LABORATORIES, INC
2709D PAN AMERICAN FREEWAY NE
ALBUQUERQUE NM 87107

Page 2 of 5

Report Date: Oct. 31, 2001

Workorder: L3922

Contact: PROJECT MANAGER

Test	Matrix	Reference	Result	Qualifier	Units	Limit	Analyzed
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8270-SIMS-CA

Water

Batch R13607

WG11165-4 BS

			Amount		
naphthalene	86	%	4	70-130	24-OCT-01
phenanthrene	89	%	4	70-130	24-OCT-01
pyrene	96	%	4	70-130	24-OCT-01

WG11165-5 BSD

WG11165-4

			RPD		
1-methylnaphthalene	79	%	19	30	24-OCT-01
2-methylnaphthalene	92	%	21	30	24-OCT-01
acenaphthene	91	%	5.6	30	24-OCT-01
acenaphthylene	94	%	24	30	24-OCT-01
anthracene	110	%	0.0	30	24-OCT-01
Benzo(a)anthracene	110	%	1.9	30	24-OCT-01
Benzo(a)pyrene	92	%	3.3	30	24-OCT-01
Benzo(b)fluoranthene	100	%	1.0	30	24-OCT-01
Benzo(g,h,i)Perylene	85	%	1.2	30	24-OCT-01
Benzo(k)fluoranthene	79	%	8.5	30	24-OCT-01
chrysene	88	%	7.1	30	24-OCT-01
Dibenzo(a,h)Anthracene	110	%	6.1	30	24-OCT-01
fluoranthene	100	%	10	30	24-OCT-01
fluorene	100	%	2.0	30	24-OCT-01
Indeno(1,2,3-c,d)pyrene	100	%	3.8	30	24-OCT-01
naphthalene	86	%	0.0	30	24-OCT-01
phenanthrene	92	%	3.3	30	24-OCT-01
pyrene	110	%	9.9	30	24-OCT-01

WG11165-3 LCS

			Amount		
1-methylnaphthalene	87	%	4	70-130	24-OCT-01
2-methylnaphthalene	102	%	4	70-130	24-OCT-01
acenaphthene	92	%	4	70-130	24-OCT-01
acenaphthylene	98	%	4	70-130	24-OCT-01
anthracene	122	%	4	70-130	24-OCT-01
Benzo(a)anthracene	117	%	4	70-130	24-OCT-01
Benzo(a)pyrene	99	%	4	70-130	24-OCT-01
Benzo(b)fluoranthene	111	%	4	70-130	24-OCT-01
Benzo(g,h,i)Perylene	86	%	4	70-130	24-OCT-01
Benzo(k)fluoranthene	83	%	4	70-130	24-OCT-01
chrysene	94	%	4	70-130	24-OCT-01



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ENVIRO-TEST QC REPORT

Client: PINNACLE LABORATORIES, INC
2709D PAN AMERICAN FREEWAY NE
ALBUQUERQUE NM 87107

Page 3 of 5
Report Date: Oct. 31, 2001
Workorder: L3922

Contact: PROJECT MANAGER

Test	Matrix	Reference	Results	Qualifier	Units	Limit	Analyzed
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8270-SIMS-CA

Water

Batch R13607

WG11165-3 LCS

Amount

Dibenzo(a,h)Anthracene	113	%	4	70-130	24-OCT-01
fluoranthene	113	%	4	70-130	24-OCT-01
fluorene	101	%	4	70-130	24-OCT-01
Indeno(1,2,3-c,d)pyrene	104	%	4	70-130	24-OCT-01
naphthalene	93	%	4	70-130	24-OCT-01
phenanthrene	100	%	4	70-130	24-OCT-01
pyrene	115	%	4	70-130	24-OCT-01

WG11165-1 SSS

1-methylnaphthalene	107	%		70-130	24-OCT-01
2-methylnaphthalene	108	%		70-130	24-OCT-01
acenaphthene	111	%		70-130	24-OCT-01
acenaphthylene	101	%		70-130	24-OCT-01
anthracene	88	%		70-130	24-OCT-01
Benzo(a)anthracene	82	%		70-130	24-OCT-01
Benzo(a)pyrene	89	%		70-130	24-OCT-01
Benzo(b)fluoranthene	83	%		70-130	24-OCT-01
Benzo(g,h,i)Perylene	91	%		70-130	24-OCT-01
Benzo(k)fluoranthene	88	%		70-130	24-OCT-01
chrysene	110	%		70-130	24-OCT-01
Dibenzo(a,h)Anthracene	99	%		70-130	24-OCT-01
fluoranthene	107	%		70-130	24-OCT-01
fluorene	109	%		70-130	24-OCT-01
Indeno(1,2,3-c,d)pyrene	80	%		70-130	24-OCT-01
naphthalene	121	%		70-130	24-OCT-01
phenanthrene	96	%		70-130	24-OCT-01
pyrene	111	%		70-130	24-OCT-01

CD-TOT-LOW-CA

Water

Batch R13610

WG11136-1 BLANK

Cadmium (Cd)	<0.0004	mg/L			25-OCT-01
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WG11136-3 DUP

L3922-1

Cadmium (Cd)	<0.0004	<0.0004	RPD-NA	mg/L	RPD 9.5 1 25-OCT-01
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WG11136-2 LCS

Cadmium (Cd)	100	%		Amount .1	80-120 25-OCT-01
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WG11136-4 MS

L3922-1

Amount

ENVIRO-TEST QC REPORT

Client: PINNACLE LABORATORIES, INC
2709D PAN AMERICAN FREEWAY NE
ALBUQUERQUE NM 87107

Page 4 of 5

Report Date: Oct. 31, 2001

Workorder: L3922

Contact: PROJECT MANAGER

Test	Matrix	Reference	Result	Qualifier	Units	Limit	Analyzed
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CD-TOT-LOW-CA

Water

Batch R13610

WG11136-4 MS

Cadmium (Cd)

L3922-1

95

%

Amount

.1

75-125

25-OCT-01

CR-TOT-LOW-CA

Water

Batch R13610

WG11136-1 BLANK

Chromium (Cr)

<0.001

mg/L

25-OCT-01

WG11136-3 DUP

Chromium (Cr)

0.001

L3922-1

<0.001

RPD-NA

mg/L

RPD

9.6

1

25-OCT-01

WG11136-2 LCS

Chromium (Cr)

103

%

Amount

.1

80-120

25-OCT-01

WG11136-4 MS

Chromium (Cr)

96

%

Amount

.1

75-125

25-OCT-01

HG-TOT-HYD-CA

Water

Batch R13671

WG11212-1 BLANK

Mercury (Hg)-Total

<0.0002

mg/L

29-OCT-01

WG11212-2 LCS

Mercury (Hg)-Total

108

%

Amount

1

80-120

29-OCT-01

WG11212-3 MS

Mercury (Hg)-Total

110

%

Amount

2

75-125

29-OCT-01

WG11212-4 MSD

Mercury (Hg)-Total

WG11212-3

mg/L

RPD

7.5

20

29-OCT-01

Product - Batch and Sample Number Relations:

8270-SIMS-CA	1		
R13607	L3922-1	L3922-2	
CD-TOT-LOW-CA	1		
R13610	L3922-1	L3922-2	
CR-TOT-LOW-CA	1		
R13610	L3922-1	L3922-2	
HG-TOT-HYD-CA	1		
R13671	L3922-1	L3922-2	



Enviro • Test
LABORATORIES LLC.

420 West 1st Street Casper, Wyoming 82601
Phone: (307) 235-5741 Fax: (307) 266-1676
Toll Free 1(800)666-0306

Results are only applicable to samples submitted for analysis.
Limit of Liability: Although care and due diligence is taken in the performance of our services, our liability in all cases is limited to re-analysis at our expense or refunding the analytical costs charged for the work performed.



Reference Information

Page 5 of 5

Report Date: Oct. 31, 2001

Work Order L3922

The following is a description of Sample types that where applicable:

BLANK	Laboratory Blank
BS	Blank Spike
BSD	Blank Spike Duplicate
DUP	Duplicate
LCS	Laboratory Control Spike
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SSS	Second Source Standard

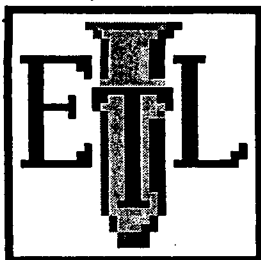
The following is a description of sample Qualifiers that where applicable:

RPD-NA	Relative Percent Difference Not Available due to DL
--------	---



Results are only applicable to samples submitted for analysis.
Limit of Liability: Although care and due diligence is taken in the performance of our services, our liability in all cases is limited to re-analysis at our expense or refunding the analytical costs charged for the work performed.





ENVIROTEST LABORATORIES

Login Chain of Custody Report (In01)

Oct. 19, 2001

11:33 AM

Login Number: L3922
Account: 10185
Project:

Quote Number:
PINNACLE LABORATORIES, INC
AMEC

Page: 1 of 1

Contact:	PROJECT MANAGER				
Report Address:	2709D PAN AMERICAN FREEWAY NE ALBUQUERQUE NM 87107				
Phone:	505-344-3777	Fax#:	505-344-4413	Fax Flag:	N
Email:		Email Flag:	N		
Report Type:		Export Type:			

Lab SMP#	Client Sample Number	Collect Date	Receive Date	PR	Due Date	Comments
L3922-1	CHA-0901-MW08 / 110077-03	16-OCT-01 14:50	18-OCT-01		31-OCT-01	
Water	S 8270-SIMS-CA	Hold: 23-OCT-01				
Water	S CD-TOT-LOW-CA	Hold: 13-NOV-01				
Water	S CR-TOT-LOW-CA	Hold: 13-NOV-01				
Water	S HG-TOT-HYD-CA	Hold: 13-NOV-01				
L3922-2	CHA-0901-MW01 / 110077-04	16-OCT-01 15:50	18-OCT-01		31-OCT-01	
Water	S 8270-SIMS-CA	Hold: 23-OCT-01				
Water	S CD-TOT-LOW-CA	Hold: 13-NOV-01				
Water	S CR-TOT-LOW-CA	Hold: 13-NOV-01				
Water	S HG-TOT-HYD-CA	Hold: 13-NOV-01				

Signature: [Signature]
Date: 10/19/01



Enviro • Test

LABORATORIES LLC.

Sample Receipt Checklist

Client	<u>Pinnacle</u>	Job Number	<u>L3922</u>
--------	-----------------	------------	--------------

Samples Shipped	☒ UPS	Federal Express	Airborn:
Samples Hand Delivered	Client	ETL Lab Courier	Other:

*Air Bill #:	<u>1E 888 168 0143/88527</u>	# of Packages Received:	<u>1</u>
--------------	------------------------------	-------------------------	----------

	Yes	No	N/A	Comments
1. Chain - of - Custody present?	☒	☐	☐	If no, please fill one out.
2. Are the COC and sample labels legible?	☒	☐	☐	
3. Custody Seal on shipping container?	☐	☒	☐	
If yes, intact on shipping container?	☐	☐	☐	
4. Custody seals on sample containers?	☐	☒	☐	
If yes, intact on sample container?	☐	☐	☐	
5. Samples chilled?	☒	☐	☐	
Is temperature of cooler: $4 \pm 2^{\circ}\text{C}$?	☐	☐	☐	*Record temp: <u>2°C</u>
6. Samples received intact (good condition)?	☒	☐	☐	
If volatiles required, any with headspace?	☐	☐	☐	
7. Adequate sample volume provided?	☒	☐	☐	
8. Samples preserved correctly?	☒	☐	☐	Na ₂ S ₂ O ₃ , ZnAc, <u>HNO₃</u> , HCl
Circle preservative types in shipment	☐	☐	☐	H ₂ SO ₄ , NaOH, <u>Plain</u> , Other
9. Correct containers used?	☒	☐	☐	
10. Samples received within holding time?	☒	☐	☐	
11. Agreement between COC and sample labels?	☒	☐	☐	
12. Gamma Screen $\mu\text{R}/\text{Hr}$ @ surface within Bkg?	☒	☐	☐	FOR INTERNAL USE ONLY
13. Samples OK to release to Lab/Screening?	☒	☐	☐	

Additional Comments: _____

Sample Container (size/material): 4-A250, 2-P250

Received and inspected by: SWP Date/Time: 10/18/01, 0940

* = for multiple packages, see attached page(s) for shipping numbers and temperatures.

PROJECT INFORMATION				SAMPLE RECEIPT				ANALYSIS REQUEST												RELINQUISHED BY:	
PROJECT #	PROJ. NAME	QC LEVEL	STD	MS	MSD	BLANK	TAT	LAB NUMBER	COMMENTS	Signature	Time	Signature	Time	Signature	Time	Signature	Time				
110077	AMEC	IV																			
Need 2 week TAT due 10/31/01.									Metals (8) RCRA									RELINQUISHED BY:			
Metals-13 PP List									Metals-TAL (23 METALS)									RELINQUISHED BY:			
TOX									TOC									RELINQUISHED BY:			
Oil and Grease									Volatile Organics GC/MS (8260)									RELINQUISHED BY:			
BOD									COD									RELINQUISHED BY:			
PESTICIDES/PCB (608/8082)									Herbicides (615/8151)									RELINQUISHED BY:			
PNA (8310/8270 SIMS)									8240 (TCLP 1311) ZHE									RELINQUISHED BY:			
Base/Neutral Acid Compounds GC/MS (625/8270)									URANIUM (ICP-MS)									RELINQUISHED BY:			
RADIUM 226+228									Gross Alpha/Beta									RELINQUISHED BY:			
TO-14									NUMBER OF CONTAINERS									RELINQUISHED BY:			

PROJECT INFORMATION				SAMPLE RECEIPT				ANALYSIS REQUEST												RELINQUISHED BY:	
PROJECT #	PROJ. NAME	QC LEVEL	STD	MS	MSD	BLANK	TAT	LAB NUMBER	COMMENTS	Signature	Time	Signature	Time	Signature	Time	Signature	Time				
110077	AMEC	IV																			
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Base/Neutral Acid Compounds GC/MS (625/8270)									URANIUM (ICP-MS)									RELINQUISHED BY:			
RADIUM 226+228									Gross Alpha/Beta									RELINQUISHED BY:			
TO-14									NUMBER OF CONTAINERS									RELINQUISHED BY:			



Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 10/16/01 PAGE: 1 OF 1

PLI Accession #:

710077

PROJECT MANAGER: ROBERT THOMPSON COMPANY: AMEC ADDRESS: 2060 AFTON PLACE FARMINGTON, NM 87401 PHONE: 505-327-7928 FAX: 505-326-5721 BILL TO: DAVID BAYS COMPANY: EL PASO FIELD SERVICE ADDRESS: 614 REILLY AVE. FARMINGTON, NM 87401		ANALYSIS REQUEST Petroleum Hydrocarbons (418.1) TPH (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 ☐		NUMBER OF CONTAINERS Metals: Cd, Cr, Hg RCRA Metals by TCLP (Method 1311) RCRA Metals (8) Target Analyte List Metals (23) Priority Pollutant Metals (13) General Chemistry: Polynuclear Aromatics (610/8310/8270-SIMS) Base/Neutral/Acid Compounds GC/MS (625/8270) Herbicides (615/8151) Pesticides /PCB (608/8081/8082) 8260 (Landfill) Volatile Organics 8260 (CUST) Volatile Organics 8260 (Full) Volatile Organics 8260 (TCL) Volatile Organics	
SAMPLE ID DATE TIME MATRIX LAB ID CHA-0901-MW10 10/16/01 1255 H2O 01 CHA-0901-MW09 10/16/01 1351 H2O 02 CHA-0901-MW08 10/16/01 1450 H2O 03 CHA-0901-MW01 10/16/01 1550 H2O 04 TRIP BLANK 10/16/01 1450 H2O 05		8260 (TCL) Volatile Organics 8260 (Full) Volatile Organics 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: Cd, Cr, Hg NUMBER OF CONTAINERS			

PROJECT INFORMATION PROJ. NO.: 1517000054 PROJ. NAME: CHALO PLANT SAMPLING P.O. NO.: SHIPPED VIA: GREYHOUND		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS (RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒ CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER METHANOL PRESERVATION ☐ COMMENTS: FIXED FEE ☐	
RELINQUISHED BY: Signature: <i>Robert Thompson</i> Printed Name: ROBERT THOMPSON Company: AMEC See reverse side (Force Majeure)		RELINQUISHED BY: Signature: _____ Printed Name: _____ Company: _____	
RECEIVED BY: Signature: _____ Printed Name: _____ Company: _____		RECEIVED BY: Signature: _____ Printed Name: _____ Company: _____	

1-800-499-PLI Inc.: Pinnacle Laboratories, Inc. • 2709-D Pan American Freeway, NE • Albuquerque, New Mexico 87107 • (505) 344-3777 • Fax (505) 344-4413 • E-mail: PIN_LAB@WORLDNET.ATT.NET
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