GRCC 04
Iyanbito Drinking water results

PINNACLE LABORATORIES

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

Date	Invoice #
07/30/2004	86906

Bill To
N.M. Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Client #: 810-134

P.O. No.	Terms	Project #	Project Name
	Net 30	(None)	Iyanbito Water Wells

Quantity	Description	Rate	Amount
2	Item 004 Method 8021 (BTEX) Aqueous	40.00	80.00
2	Item 013 Method 8270 SIMS (PAH's) Aqueous	135.00	270.00
2	Cations/Anions (OCD) -Fl, Ca, K, Mg, Na, Alk Group, Cl, S04, TDS, pH, Conductivity	160.00	320.00
2	Item 049 Metals by ICAP Method 6010: Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Si, Ag, Na, Tl, Zn	200.00	400.00
2	Line 154 Total U by ICP-MS (per NMED Contract)	45.00	90.00
2	Fluoride	-16.00	-32.00

RECEIVED
AUG 1 8 2004
OIL CONSERVATION DIVISION

Remit to: Pinnacle Laboratories, Inc.
2709-D Pan American Freeway NE
Albuquerque, NM 87107

Accession #: 406100
Authorized By: Wayne Price

Sales Tax (5.8125%)	$0.00
Total	$1,128.00

PINNACLE LABORATORIES

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Pinnacle Lab ID number **406100**
August 12, 2004

NMOCD
1220 S. St. Francis
SANTA FE, NM 87505

Project Name Iyanbito Water Wells
Project Number (NONE)

Attention: Wayne Price

On 06/24/2004 Pinnacle Laboratories Inc., (ADHS License No. AZ0643), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA method 8021 analyses were performed by Pinnacle Laboratories, Inc. Albuquerque, NM.

EPA method 8270 SIMS analyses were performed by Environmental Services Laboratory, Inc. Portland, OF

All remaining analyses were performed by General Engineering Laboratories, LLC. Charleston, SC.

Due to a laboratory oversight fluoride analysis was not performed. We apologize for this error and an appropriate credit will be applied.

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

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

MR: jt

Enclosure

PINNACLE LABORATORIES

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

CLIENT	: NMOCD	PINNACLE ID	: 406100
PROJECT #	: (NONE)	DATE RECEIVED	: 06/24/2004
PROJECT NAME	: Iyanbito Water Wells	REPORT DATE	: 08/12/2004

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
406100 - 01	I-666	AQUEOUS	06/24/2004
406100 - 02	I-668	AQUEOUS	06/24/2004

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GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021B MODIFIED
CLIENT : NMOCD
PROJECT # : (NONE)
PROJECT NAME : Iyanbito Water Wells

PINNACLE I.D. : 406100
ANALYST : BP/GAB

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	I-666	AQUEOUS	06/24/2004	NA	06/28/2004	1
02	I-668	AQUEOUS	06/24/2004	NA	06/28/2004	1

PARAMETER	DET. LIMIT	UNITS	I-666	I-668
BENZENE	0.5	UG/L	< 0.5	< 0.5
TOLUENE	**0.5**	**UG/L**	**1.9**	< 0.5
ETHYLBENZENE	0.5	UG/L	< 0.5	< 0.5
TOTAL XYLENES	1.0	UG/L	< 1.0	< 1.0
METHYL-t-BUTYL ETHER	2.5	UG/L	< 2.5	< 2.5

SURROGATE:

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

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 406100
BLANK I. D.	: 062804	DATE EXTRACTED	: N/A
CLIENT	: NMOCD	DATE ANALYZED	: 06/28/2004
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: Iyanbito Water Wells	ANALYST	: BP/GAB

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
METHYL-t-BUTYL ETHER	UG/L	<2.5

SURROGATE:
BROMOFLUOROBENZENE (%) 101
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 406100
BATCH #	: 062804	DATE EXTRACTED	: N/A
CLIENT	: NMOCD	DATE ANALYZED	: 06/28/2004
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: Iyanbito Water Wells	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	19.6	98	20.1	101	3	(80 - 120)	20
TOLUENE	<0.5	20.0	19.8	99	20.2	101	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.7	104	21.1	106	2	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	60.5	101	61.8	103	2	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	23.6	118	23.8	119	1	(70 - 133)	20

CHEMIST NOTES:
N/A

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

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

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GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021B MODIFIED	PINNACLE I.D.	: 406100
MSMSD #	: 406100-02	DATE EXTRACTED	: N/A
CLIENT	: NMOCD	DATE ANALYZED	: 06/28/2004
PROJECT #	: (NONE)	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: Iyanbito Water Wells	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.2	101	21.2	106	5	(80 - 120)	20
TOLUENE	<0.5	20.0	20.2	101	21.3	107	5	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	21.1	106	22.1	111	5	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	62.1	104	64.8	108	4	(80 - 120)	20
METHYL-t-BUTYL ETHER	<2.5	20.0	22.4	112	25.3	127	12	(70 - 133)	20

CHEMIST NOTES:
N/A

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

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

Cation-Anion Balance Worksheet

Accession Number: 406100-01

Anions	Result (mg/l)	Factor	Total (me/l)
Alkalinity	176		
Chloride	3.18	0.02821	0.08971
Fluoride		0.05264	0.00000
Nitrate as N	0	0.01613	0.00000
Sulfate	.600	0.02082	12.49200
Carbonate	1.06	0.03333	0.03533
Bi-Carbonate	174	0.01639	2.85186
	Total Anions =		**15.4689**

Cations	Result (mg/l)	Factor	Total (me/l)
Calcium	155	0.04990	7.73450
Potassium	3.3	0.02558	0.08441
Magnesium	106	0.08229	8.72274
Sodium	32.3	0.04350	1.40505
Copper		0.03147	0.00000
Iron		0.05372	0.00000
Manganese		0.03640	0.00000
Zinc		0.03059	0.00000
	Total Cations =		**17.9467**

Anion/Cation Balance (% difference) =	7.4%	
Total Anions+Cations =	1005 mg/l	(calculated)
Total Dissolved Solids =	1110 mg/l	(measured)
TDS/ion sum ratio =	1.10	
Electrical Cond =	1300 umh/cm	(measured)
TDS/EC ratio =	0.854	

Cation-Anion Balance Worksheet

Accession Number: 406100-02

Anions	Result (mg/l)	Factor	Total (me/l)
Alkalinity	181		
Chloride	4.18	0.02821	0.11792
Fluoride		0.05264	0.00000
Nitrate as N		0.01613	0.00000
Sulfate	.489	0.02082	10.18098
Carbonate	0.535	0.03333	0.01783
Bi-Carbonate	180	0.01639	2.95020
	Total Anions =		**13.2669294**

Cations	Result (mg/l)	Factor	Total (me/l)
Calcium	204	0.04990	10.17960
Potassium	2.24	0.02558	0.05730
Magnesium	48.7	0.08229	4.00752
Sodium	16	0.04350	0.69600
Copper		0.03147	0.00000
Iron		0.05372	0.00000
Manganese		0.03640	0.00000
Zinc		0.03059	0.00000
	Total Cations =		**14.9404222**

Anion/Cation Balance (% difference) = 5.9%

Total Anions+Cations =	873	mg/l	(calculated)
Total Dissolved Solids =	963	mg/l	(measured)
TDS/ion sum ratio =	1.10		
Electrical Cond =	1140	umh/cm	(measured)
TDS/EC ratio =	0.845		

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Pinnacle Labs, Inc
Address : 2709D Pan American Freeway NE
Albuquerque, New Mexico 87107
Contact: Mr. Mitch Rubenstein
Project: NMED-DOE/OB

Report Date: July 19, 2004

Client Sample ID: I-666/406100-01
Sample ID: 115713001
Matrix: Water
Collect Date: 24-JUN-04
Receive Date: 26-JUN-04
Collector: Client

Project: PINL00904
Client ID: PINL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	AnalystDate	Time	Batch	Mtd.
Conductivity Analysis Federal												
9050A Specific Conductivity Federal												
Conductivity		1300		1.00	+/-	1.00	umhos/cm	1	EXN1 07/15/04	1543	349210	1
Electrode Analysis Federal												
SW9040B pH Federal												
pH at Temp 22.3C	H	7.87		0.010	+/-	0.100	SU	1	JAR2 06/26/04	1345	344555	2
Ion Chromatography Federal												
SW846 9056 Chloride in Liquid												
Chloride		3.18		0.0322	+/-	0.200	mg/L	1	VH1 06/29/04	2108	345025	3
Sulfate		600		9.65	+/-	20.0	mg/L	50	VH1 06/30/04	1624	345025	4
Mercury Analysis-CVAA												
7470 Cold Vapor Hg Liquid												
Mercury	U	-0.0525		0.0472	+/-	0.200	ug/L	1	NOR1 07/01/04	1940	344995	5
Metals Analysis-ICP-MS												
6020 TAL Metals + Uranium												
Aluminum	U	5.60		9.08	+/-	15.0	ug/L	1	PRB 07/08/04	0138	345327	6
Antimony	U	0.079		0.280	+/-	2.00	ug/L	1				
Arsenic	U	0.835		1.00	+/-	3.00	ug/L	1				
Barium		12.1		0.190	+/-	2.00	ug/L	1				
Beryllium	U	0.035		0.080	+/-	0.200	ug/L	1				
Cadmium	U	0.027		0.040	+/-	1.00	ug/L	1				
Cobalt	J	0.586		0.060	+/-	1.00	ug/L	1				
Copper		5.27		0.690	+/-	1.00	ug/L	1				
Lead	J	0.490		0.050	+/-	2.00	ug/L	1				
Magnesium		106000		6.33	+/-	10.0	ug/L	1				
Manganese		47.6		1.61	+/-	5.00	ug/L	1				
Nickel		2.36		0.070	+/-	2.00	ug/L	1				
Potassium		3300		15.1	+/-	300	ug/L	1				
Selenium	U	0.421		0.640	+/-	5.00	ug/L	1				
Silver	U	0.017		0.040	+/-	1.00	ug/L	1				
Thallium	J	0.279		0.020	+/-	0.500	ug/L	1				
Uranium		2.59		0.020	+/-	0.200	ug/L	1				
Vanadium	U	-7.94		5.44	+/-	10.0	ug/L	1				
Zinc		1040		1.09	+/-	10.0	ug/L	1				
Calcium		155000		200	+/-	500	ug/L	5	PRB 07/07/04	2059	345327	7
Iron		2030		79.0	+/-	125	ug/L	5				
Sodium		32300		48.4	+/-	1250	ug/L	5				
Chromium	J	1.99		0.380	+/-	3.00	ug/L	1	PRB 07/15/04	1437	348304	9

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Albuquerque, New Mexico 87107
Contact: Mr. Mitch Rubenstein
Project: NMED-DOE/OB

Report Date: July 19, 2004

Client Sample ID: I-666/406100-01
Sample ID: 115713001

Project: PINL00904
Client ID: PINL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Solids Analysis Federal													
EPA 160.1 Solids, Dissolved-F													
Total Dissolved Solids		1110		3.07	+/-	10.0	mg/L		JLD1	06/29/04	1441	344970	10
Titration Analysis Federal													
EPA 310.1 Total Alkalinity Federal													
Alkalinity, Total as CaCO3		176		1.45	+/-	2.00	mg/L		EXN1	06/30/04	1701	345259	11
Bicarbonate alkalinity (CaCO3)		174		1.45	+/-	2.00	mg/L						
Carbonate alkalinity (CaCO3)	U	1.06		1.45	+/-	2.00	mg/L						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005 PREP	ARG1	07/13/04	0837	348303
SW846 3005A	ICP-MS 3005 PREP	CQH1	06/30/04	1815	345326
SW846 7470A Pr	EPA 7470A Mercury Prep Liquid	ETL	06/30/04	1330	344992

The following Analytical Methods were performed

Method	Description
1	SW846 9050A
2	SW846 9040B
3	SW846 9056
4	SW846 9056
5	SW846 7470A
6	SW846 3005/6020
7	SW846 3005/6020
8	SW846 3005/6020
9	SW846 3005/6020
10	EPA 160.1
11	EPA 310.1

Notes:
The Qualifiers in this report are defined as follows :

< Result is less than amount reported.
> Result is greater than amount reported.

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Contact: Mr. Mitch Rubenstein
Project: NMED-DOE/OB

Report Date: July 19, 2004

Client Sample ID: I-666/406100-01
Sample ID: 115713001

Project: PINL00904
Client ID: PINL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.

E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Amy Jamison.

Reviewed by Amy Jamison

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company : Pinnacle Labs, Inc
Address : 2709D Pan American Freeway NE

Albuquerque, New Mexico 87107
Contact: Mr. Mitch Rubenstein
Project: NMED-DOE/OB

Report Date: July 19, 2004

Client Sample ID: I-668/406100-02
Sample ID: 115713002
Matrix: Water
Collect Date: 24-JUN-04
Receive Date: 26-JUN-04
Collector: Client

Project: PINL00904
Client ID: PINL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.
Conductivity Analysis Federal											
9050A Specific Conductivity Federal											
Conductivity		1140		1.00	+/-	1.00	umhos/cm	1	EXN1 07/15/04	1546	349210 1
Electrode Analysis Federal											
SW9040B pH Federal											
pH at Temp 22.8C	H	7.53		0.010	+/-	0.100	SU	1	JAR2 06/26/04	1346	344555 2
Ion Chromatography Federal											
SW846 9056 Chloride in Liquid											
Chloride		4.18		0.0322	+/-	0.200	mg/L	1	VH1 06/29/04	2125	345025 3
Sulfate		489		9.65	+/-	20.0	mg/L	50	VH1 06/30/04	1641	345025 4
Mercury Analysis-CVAA											
7470 Cold Vapor Hg Liquid											
Mercury	U	0.0141		0.0472	+/-	0.200	ug/L	1	NOR1 07/01/04	1947	344995 5
Metals Analysis-ICP-MS											
6020 TAL Metals + Uranium											
Aluminum		15.8		9.08	+/-	15.0	ug/L	1	PRB 07/08/04	0159	345327 6
Antimony	U	0.063		0.280	+/-	2.00	ug/L	1			
Arsenic	J	1.03		1.00	+/-	3.00	ug/L	1			
Barium		12.4		0.190	+/-	2.00	ug/L	1			
Beryllium	U	0.024		0.080	+/-	0.200	ug/L	1			
Cadmium	U	0.005		0.040	+/-	1.00	ug/L	1			
Cobalt		2.42		0.060	+/-	1.00	ug/L	1			
Copper		3.21		0.690	+/-	1.00	ug/L	1			
Lead	J	0.083		0.050	+/-	2.00	ug/L	1			
Magnesium		48700		6.33	+/-	10.0	ug/L	1			
Manganese		31.9		1.61	+/-	5.00	ug/L	1			
Nickel		3.73		0.070	+/-	2.00	ug/L	1			
Potassium		2240		15.1	+/-	300	ug/L	1			
Selenium	J	0.974		0.640	+/-	5.00	ug/L	1			
Silver	U	0.010		0.040	+/-	1.00	ug/L	1			
Thallium	J	0.083		0.020	+/-	0.500	ug/L	1			
Uranium		10.4		0.020	+/-	0.200	ug/L	1			
Vanadium	U	-7.7		5.44	+/-	10.0	ug/L	1			
Zinc		46.7		1.09	+/-	10.0	ug/L	1			
Calcium		204000		200	+/-	500	ug/L	5	PRB 07/07/04	2120	345327 7
Iron		1370		79.0	+/-	125	ug/L	5			
Sodium		16000		48.4	+/-	1250	ug/L	5			
Chromium	U	0.068		0.380	+/-	3.00	ug/L	1	PRB 07/15/04	1442	348304 8
Solids Analysis Federal											

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Albuquerque, New Mexico 87107
Contact: Mr. Mitch Rubenstein
Project: NMED-DOE/OB

Report Date: July 19, 2004

Client Sample ID: I-668/406100-02
Sample ID: 115713002

Project: PINL00904
Client ID: PINL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	AnalystDate	Time	Batch	Mtd.
Solids Analysis Federal												
EPA 160.1 Solids, Dissolved-F												
Total Dissolved Solids		963		3.07	+/-	10.0	mg/L		JLD1 06/29/04	1441	344970	9
Titration Analysis Federal												
EPA 310.1 Total Alkalinity Federal												
Alkalinity, Total as CaCO3		181		1.45	+/-	2.00	mg/L		EXN1 06/30/04	1719	345259	10
Bicarbonate alkalinity (CaCO3)		180		1.45	+/-	2.00	mg/L					
Carbonate alkalinity (CaCO3)	U	0.535		1.45	+/-	2.00	mg/L					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005 PREP	ARG1	07/13/04	0837	348303
SW846 3005A	ICP-MS 3005 PREP	CQH1	06/30/04	1815	345326
SW846 7470A Pr	EPA 7470A Mercury Prep Liquid	ETL	06/30/04	1330	344992

The following Analytical Methods were performed

Method	Description
1	SW846 9050A
2	SW846 9040B
3	SW846 9056
4	SW846 9056
5	SW846 7470A
6	SW846 3005/6020
7	SW846 3005/6020
8	SW846 3005/6020
9	EPA 160.1
10	EPA 310.1

Notes:
The Qualifiers in this report are defined as follows :

< Result is less than amount reported.
> Result is greater than amount reported.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.

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Company : Pinnacle Labs, Inc
Address : 2709D Pan American Freeway NE

Albuquerque, New Mexico 87107
Contact: Mr. Mitch Rubenstein
Project: NMED-DOE/OB

Report Date: July 19, 2004

Client Sample ID: I-668/406100-02
Sample ID: 115713002

Project: PINL00904
Client ID: PINL001

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF	AnalystDate	Time	Batch Mtd.

J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
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h Sample preparation or preservation holding time exceeded.
The above sample is reported on an "as received" basis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Amy Jamison.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 19, 2004

Client : Pinnacle Labs, Inc
2709D Pan American Freeway NE
Albuquerque, New Mexico

Contact: Mr. Mitch Rubenstein

Workorder: 115713

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Conductivity Analysis Federal											
Batch 349210											
QC1200663478 116180001 DUP											
Conductivity			335		337	umhos/cm	1		(0%-10%)	EXN1	07/15/04 15:48
QC1200663482 LCS											
Conductivity	1410				1460	umhos/cm		103	(95%-105%)		07/15/04 15:42
Electrode Analysis Federal											
Batch 344555											
QC1200652353 115711001 DUP											
pH		H	7.19	H	7.20	SU	0		(0%-10%)	JAR2	06/26/04 13:45
QC1200652354 LCS											
pH	7.00				6.98	SU		100	(95%-105%)		06/26/04 13:16
Ion Chromatography Federal											
Batch 345025											
QC1200653437 115711001 DUP											
Sulfate			20.2		20.6	mg/L	2		(0%-20%)	VH1	06/30/04 15:50
Chloride			41.5		41.7	mg/L	1		(0%-20%)		
QC1200653441 LCS											
Sulfate	20.0				19.7	mg/L		98	(90%-110%)		06/29/04 20:01
Chloride	10.0				9.67	mg/L		97	(90%-110%)		
QC1200653436 MB											
Sulfate				U	ND	mg/L					06/29/04 19:44
Chloride				U	ND	mg/L					
QC1200653439 115711001 PS											
Sulfate	20.0		4.05		23.5	mg/L		97	(90%-110%)		06/30/04 16:07
Chloride	10.0		8.29		18.7	mg/L		104	(90%-110%)		
Metals Analysis - ICPMS Federal											
Batch 345327											
QC1200654171 115713001 DUP											
Aluminum		U	ND	U	ND	ug/L	N/A		(+/-15.0)	PRB	07/08/04 01:43
Antimony		U	ND	U	ND	ug/L	N/A		(+/-2.00)		
Arsenic		U	ND	J	1.55	ug/L	N/A		(+/-3.00)		
Barium			12.1		11.6	ug/L	4		(0%-20%)		
Beryllium		U	ND	U	ND	ug/L	N/A		(+/-0.200)		
Cadmium		U	ND	U	ND	ug/L	N/A		(+/-1.00)		
Calcium			155000		153000	ug/L	1		(0%-20%)		07/07/04 21:04
Chromium			4.39		4.95	ug/L	12 ^		(+/-3.00)		07/08/04 01:43
Cobalt		J	0.586	J	0.593	ug/L	N/A ^		(+/-1.00)		
Copper			5.27		4.89	ug/L	7		(0%-20%)		
Iron			2030		2080	ug/L	2		(0%-20%)		07/07/04 21:04
Lead		J	0.490	J	0.473	ug/L	N/A ^		(+/-2.00)		07/08/04 01:43
Magnesium			106000		99000	ug/L	7		(0%-20%)		
Manganese			47.6		47.6	ug/L	0		(0%-20%)		
Nickel			2.36		2.54	ug/L	7 ^		(+/-2.00)		
Potassium			3300		3210	ug/L	3		(0%-20%)		

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QC Summary

Workorder: 115713

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS Federal										
Batch 345327										
Selenium	U	ND	U	ND	ug/L	N/A		(+/-5.00)		
Silver	U	ND	U	ND	ug/L	N/A		(+/-1.00)	PRB	07/08/04 01:43
Sodium		32300		31200	ug/L	3		(0%-20%)		07/07/04 21:04
Thallium	J	0.279	J	0.040	ug/L	N/A ^		(+/-0.500)		07/08/04 01:43
Uranium		2.59		2.51	ug/L	3		(0%-20%)		
Vanadium	U	ND	U	ND	ug/L	N/A		(+/-10.0)		
Zinc		1040		1020	ug/L	2		(0%-20%)		
QC1200654170 LCS										
Aluminum	2000			2230	ug/L		111	(80%-120%)		07/08/04 01:33
Antimony	50.0			56.1	ug/L		112	(80%-120%)		
Arsenic	50.0			54.6	ug/L		109	(80%-120%)		
Barium	50.0			53.2	ug/L		106	(80%-120%)		
Beryllium	50.0			59.6	ug/L		119	(80%-120%)		
Cadmium	50.0			55.6	ug/L		111	(80%-120%)		
Calcium	2000			2260	ug/L		113	(80%-120%)		07/07/04 20:54
Chromium	50.0			59.4	ug/L		119	(80%-120%)		07/08/04 01:33
Cobalt	50.0			54.2	ug/L		108	(80%-120%)		
Copper	50.0			55.1	ug/L		110	(80%-120%)		
Iron	2000			2280	ug/L		114	(80%-120%)		07/07/04 20:54
Lead	50.0			55.8	ug/L		112	(80%-120%)		07/08/04 01:33
Magnesium	2000			2290	ug/L		114	(80%-120%)		
Manganese	50.0			56.0	ug/L		112	(80%-120%)		
Nickel	50.0			54.7	ug/L		109	(80%-120%)		
Potassium	2000			2210	ug/L		111	(80%-120%)		
Selenium	50.0			57.5	ug/L		115	(80%-120%)		
Silver	50.0			55.6	ug/L		111	(80%-120%)		
Sodium	2000			2190	ug/L		110	(80%-120%)		07/07/04 20:54
Thallium	50.0			51.6	ug/L		103	(80%-120%)		07/08/04 01:33
Uranium	50.0			57.4	ug/L		115	(80%-120%)		
Vanadium	50.0			46.6	ug/L		93	(80%-120%)		
Zinc	50.0			57.6	ug/L		115	(80%-120%)		
QC1200654169 MB										
Aluminum			U	ND	ug/L					07/08/04 01:27
Antimony			U	ND	ug/L					
Arsenic			J	1.05	ug/L					
Barium			U	ND	ug/L					
Beryllium			U	ND	ug/L					
Cadmium			U	ND	ug/L					
Calcium			J	44.2	ug/L					07/07/04 20:48
Chromium				3.61	ug/L					07/08/04 01:27
Cobalt			U	ND	ug/L					
Copper			U	ND	ug/L					
Iron			U	ND	ug/L					07/07/04 20:48
Lead			U	ND	ug/L					07/08/04 01:27
Magnesium			U	ND	ug/L					
Manganese			U	ND	ug/L					
Nickel			U	ND	ug/L					
Potassium			U	ND	ug/L					

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QC Summary

Workorder: 115713

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS Federal											
Batch 345327											
Selenium				U	ND	ug/L					
Silver				U	ND	ug/L				PRB	07/08/04 01:27
Sodium				U	ND	ug/L					07/07/04 20:48
Thallium				U	ND	ug/L					07/08/04 01:27
Uranium				U	ND	ug/L					
Vanadium				U	ND	ug/L					
Zinc				J	1.87	ug/L					
QC1200654172 115713001 MS											
Aluminum	2000	U	ND		2210	ug/L		110	(75%-125%)		07/08/04 01:48
Antimony	50.0	U	ND		55.3	ug/L		110	(75%-125%)		
Arsenic	50.0	U	ND		54.2	ug/L		107	(75%-125%)		
Barium	50.0		12.1		64.9	ug/L		106	(75%-125%)		
Beryllium	50.0	U	ND		55.6	ug/L		111	(75%-125%)		
Cadmium	50.0	U	ND		52.3	ug/L		104	(75%-125%)		
Calcium	2000		155000		159000	ug/L		N/A	(75%-125%)		07/07/04 21:09
Chromium	50.0		4.39		57.3	ug/L		106	(75%-125%)		07/08/04 01:48
Cobalt	50.0	J	0.586		50.3	ug/L		100	(75%-125%)		
Copper	50.0		5.27		53.1	ug/L		96	(75%-125%)		
Iron	2000		2030		4240	ug/L		110	(75%-125%)		07/07/04 21:09
Lead	50.0	J	0.490		53.0	ug/L		105	(75%-125%)		07/08/04 01:48
Magnesium	2000		106000		98400	ug/L		N/A	(75%-125%)		
Manganese	50.0		47.6		97.8	ug/L		101	(75%-125%)		
Nickel	50.0		2.36		51.5	ug/L		98	(75%-125%)		
Potassium	2000		3300		5250	ug/L		98	(75%-125%)		
Selenium	50.0	U	ND		55.9	ug/L		111	(75%-125%)		
Silver	50.0	U	ND		53.3	ug/L		107	(75%-125%)		
Sodium	2000		32300		33100	ug/L		N/A	(75%-125%)		07/07/04 21:09
Thallium	50.0	J	0.279		49.3	ug/L		98	(75%-125%)		07/08/04 01:48
Uranium	50.0		2.59		56.8	ug/L		108	(75%-125%)		
Vanadium	50.0	U	ND		44.5	ug/L		89	(75%-125%)		
Zinc	50.0		1040		1080	ug/L		N/A	(75%-125%)		
QC1200654173 115713001 SDILT											
Aluminum		U	ND	U	ND	ug/L	N/A				07/08/04 01:53
Antimony		U	ND	U	ND	ug/L	N/A				
Arsenic		U	ND	J	1.36	ug/L	716				
Barium			12.1		2.51	ug/L	3.82				
Beryllium		U	ND	U	ND	ug/L	N/A				
Cadmium		U	ND	U	ND	ug/L	N/A				
Calcium			31000		6110	ug/L	1.54				07/07/04 21:15
Chromium			4.39	J	1.64	ug/L	86.8				07/08/04 01:53
Cobalt		J	0.586	J	0.108	ug/L	7.85				
Copper			5.27		1.71	ug/L	61.8				
Iron			406		79.2	ug/L	2.51				07/07/04 21:15
Lead		J	0.490	J	0.106	ug/L	8.16				07/08/04 01:53
Magnesium			106000		20600	ug/L	2.91				
Manganese			47.6		9.61	ug/L	1.03				
Nickel			2.36	U	ND	ug/L	127				
Potassium			3300		685	ug/L	3.72				

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QC Summary

Workorder: 115713

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS Federal											
Batch 345327											
Selenium		U	ND	J	1.81	ug/L	2040				
Silver		U	ND	U	ND	ug/L	N/A			PRB	07/08/04 01:53
Sodium			6450		1270	ug/L	1.9				07/07/04 21:15
Thallium		J	0.279	J	0.276	ug/L	395				07/08/04 01:53
Uranium			2.59		0.506	ug/L	2.39				
Vanadium		U	ND	U	ND	ug/L	N/A				
Zinc			1040		224	ug/L	8.03				
Batch 348304											
QC1200661231 115713002 DUP											
Chromium		U	ND	U	ND	ug/L	N/A		(+/-3.00)	PRB	07/15/04 14:48
QC1200661234 LCS											
Chromium	50.0				51.1	ug/L		102	(80%-120%)		07/15/04 14:32
QC1200661230 MB											
Chromium				U	ND	ug/L					07/15/04 14:25
QC1200661233 115713002 MS											
Chromium	50.0	U	ND		51.1	ug/L		102	(75%-125%)		07/15/04 14:53
QC1200661232 115713002 SDILT											
Chromium		U	ND	U	ND	ug/L	N/A				07/15/04 14:58
Metals Analysis-Mercury Federal											
Batch 344995											
QC1200653361 115713001 DUP											
Mercury		U	ND	U	ND	ug/L	N/A		(+/-0.200)	NOR1	07/01/04 19:42
QC1200653360 LCS											
Mercury	2.00				2.17	ug/L		109	(80%-120%)		07/01/04 19:38
QC1200653359 MB											
Mercury				U	ND	ug/L					07/01/04 19:32
QC1200653362 115713001 MS											
Mercury	2.00	U	ND		1.97	ug/L		98	(75%-125%)		07/01/04 19:43
QC1200653363 115713001 SDILT											
Mercury		U	ND	U	ND	ug/L	N/A				07/01/04 19:45
Solids Analysis Federal											
Batch 344970											
QC1200653298 115711001 DUP											
Total Dissolved Solids			329		347	mg/L	5		(0%-10%)	JLD1	06/29/04 14:41
QC1200653297 LCS											
Total Dissolved Solids	300				306	mg/L		102	(95%-105%)		
QC1200653296 MB											
Total Dissolved Solids				U	ND	mg/L					
Titration Analysis Federal											
Batch 345259											
QC1200654013 115713001 DUP											
Bicarbonate alkalinity (CaCO3)			174		175	mg/L	0		(0%-20%)	EXN1	06/30/04 17:08
Carbonate alkalinity (CaCO3)		U	ND	U	ND	mg/L	N/A		(+/-2.00)		
Alkalinity, Total as CaCO3			176		177	mg/L	1		(0%-20%)		
QC1200654016 LCS											
Alkalinity, Total as CaCO3	100				98.9	mg/L		99	(90%-110%)		06/30/04 14:39
QC1200654015 115713001 MS											
Alkalinity, Total as CaCO3	100		176		274	mg/L		99	(80%-120%)		06/30/04 17:15

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QC Summary

Workorder: 115713

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

Notes:
The Qualifiers in this report are defined as follows:

- < Result is less than amount reported.
- > Result is greater than amount reported.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Pinnacle Laboratories, Inc.

Interlab Chain of Custody

1157137

Date: 6/25 Page: 1 of 1

Network Project Manager: Jacinta Tenorio

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

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	TCLP RCRA (8) Metals	Metals-13 PP List	Metals-TAL (23 Metals) + U	Dissolved Fe, Mn, Pb (6010)		TOC	Gen Chemistry: Chloride, Sulfate	Alkalinity (carbonate, bicarb)	TDS, pH, conductivity, *	Volatile Organics GC/MS (8260)	BOD	COD	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	PNA (8310)/8270 SIMS	8260 (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
I-666/ 406100-01	6/24	1300	AQ					X				X	X	X									X					3
I-668/ 406100-02	6/24	1300	AQ					X				X	X	X									X					3

PROJECT INFORMATION	
PROJECT #:	406100
PROJ. NAME:	NMOCD
QC LEVEL:	STD. IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!!
DUE DATE:	
RUSH SURCHARGE:	
CLIENT DISCOUNT:	
SPECIAL CERTIFICATION REQUIRED:	YES NO

SAMPLE RECEIPT	
Total Number of Containers	
Chain of Custody Seals	
Received Intact?	
Received Good Cond./Cold	
LAB NUMBER:	

COMMENTS:
* CATION/ANION BALANCE (if available)

SAMPLES SENT TO:	
PENSACOLA - STL-FL	
ESL - OR	
ATEL - AZ	
ATEL - MARION	
ATEL - MELMORE	
EHL	
GEL	X
U OF MIAMI	
WCAS	
WOHL	

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signature: [signature] Time: 1500	Signature: Time:
Printed Name: Mitchell Kubota Date: 06/25	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2.**
Signature: [signature] Time: 1000	Signature: Time:
Printed Name: Mike Kinslow Date: 6-26-04	Printed Name: Date:
Company GEL	Company

Environmental Services Laboratory, Inc.

E S L

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

June 30, 2004

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

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

RE: 406100/NMOCD

Order No.: 0406232

Dear Jacinta A. Tenorio:

Environmental Services Laboratory received 2 samples on 6/28/04 for the analyses presented in the following report.

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

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

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

Project Manager

Keith Hunter
Technical Review

Environmental Services Laboratory

Date: *30-Jun-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	I-666/406100-01
Lab Order:	0406232	**Tag Number:**	
Project:	406100/NMOCD	**Collection Date:**	
Lab ID:	0406232-01A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.10		µg/L	1	6/29/04
2-Methylnaphthalene	ND	0.10		µg/L	1	6/29/04
Acenaphthene	ND	0.10		µg/L	1	6/29/04
Acenaphthylene	ND	0.10		µg/L	1	6/29/04
Anthracene	ND	0.10		µg/L	1	6/29/04
Benz(a)anthracene	ND	0.10		µg/L	1	6/29/04
Benzo(a)pyrene	ND	0.10		µg/L	1	6/29/04
Benzo(b)fluoranthene	ND	0.10		µg/L	1	6/29/04
Benzo(g,h,i)perylene	ND	0.10		µg/L	1	6/29/04
Benzo(k)fluoranthene	ND	0.10		µg/L	1	6/29/04
Chrysene	ND	0.10		µg/L	1	6/29/04
Dibenz(a,h)anthracene	ND	0.10		µg/L	1	6/29/04
Fluoranthene	ND	0.10		µg/L	1	6/29/04
Fluorene	ND	0.10		µg/L	1	6/29/04
Indeno(1,2,3-cd)pyrene	ND	0.10		µg/L	1	6/29/04
Naphthalene	ND	0.10		µg/L	1	6/29/04
Phenanthrene	ND	0.10		µg/L	1	6/29/04
Pyrene	ND	0.10		µg/L	1	6/29/04
Surr: 2-Fluorobiphenyl	81.0	43-116		%REC	1	6/29/04
Surr: 4-Terphenyl-d14	86.0	33-141		%REC	1	6/29/04
Surr: Nitrobenzene-d5	62.0	35-114		%REC	1	6/29/04

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Environmental Services Laboratory

Date: *30-Jun-04*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	I-668/406100-02
Lab Order:	0406232	**Tag Number:**	
Project:	406100/NMOCD	**Collection Date:**	
Lab ID:	0406232-02A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**		**(3510C)**		Analyst: **rlr**
1-Methylnaphthalene	ND	0.10		µg/L	1	6/29/04
2-Methylnaphthalene	ND	0.10		µg/L	1	6/29/04
Acenaphthene	ND	0.10		µg/L	1	6/29/04
Acenaphthylene	ND	0.10		µg/L	1	6/29/04
Anthracene	ND	0.10		µg/L	1	6/29/04
Benz(a)anthracene	ND	0.10		µg/L	1	6/29/04
Benzo(a)pyrene	ND	0.10		µg/L	1	6/29/04
Benzo(b)fluoranthene	ND	0.10		µg/L	1	6/29/04
Benzo(g,h,i)perylene	ND	0.10		µg/L	1	6/29/04
Benzo(k)fluoranthene	ND	0.10		µg/L	1	6/29/04
Chrysene	ND	0.10		µg/L	1	6/29/04
Dibenz(a,h)anthracene	ND	0.10		µg/L	1	6/29/04
Fluoranthene	ND	0.10		µg/L	1	6/29/04
Fluorene	ND	0.10		µg/L	1	6/29/04
Indeno(1,2,3-cd)pyrene	ND	0.10		µg/L	1	6/29/04
Naphthalene	ND	0.10		µg/L	1	6/29/04
Phenanthrene	ND	0.10		µg/L	1	6/29/04
Pyrene	ND	0.10		µg/L	1	6/29/04
Surr: 2-Fluorobiphenyl	89.0	43-116		%REC	1	6/29/04
Surr: 4-Terphenyl-d14	96.0	33-141		%REC	1	6/29/04
Surr: Nitrobenzene-d5	65.0	35-114		%REC	1	6/29/04

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Environmental Services Laboratory

Date: *30-Jun-04*

CLIENT: Pinnacle Laboratories
Work Order: 0406232
Project: 406100/NMOCD

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: **MB-7264** SampType: **MBLK** TestCode: **06 PAH A** Units: **µg/L** Prep Date: **6/29/04** Run ID: **HEISENBURG_040629A**
Client ID: **ZZZZZ** Batch ID: **7264** TestNo: **8270-SIM** **(3510C)** Analysis Date: **6/29/04** SeqNo: **211020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.10									
2-Methylnaphthalene	ND	0.10									
Acenaphthene	ND	0.10									
Acenaphthylene	ND	0.10									
Anthracene	ND	0.10									
Benz(a)anthracene	ND	0.10									
Benzo(a)pyrene	ND	0.10									
Benzo(b)fluoranthene	ND	0.10									
Benzo(g,h,i)perylene	ND	0.10									
Benzo(k)fluoranthene	ND	0.10									
Chrysene	ND	0.10									
Dibenz(a,h)anthracene	ND	0.10									
Fluoranthene	ND	0.10									
Fluorene	ND	0.10									
Indeno(1,2,3-cd)pyrene	ND	0.10									
Naphthalene	ND	0.10									
Phenanthrene	ND	0.10									
Pyrene	ND	0.10									
Surr: 2-Fluorobiphenyl	0.83	0	1	0	83	43	116	0	0		
Surr: 4-Terphenyl-d14	1	0	1	0	100	33	141	0	0		
Surr: Nitrobenzene-d5	0.67	0	1	0	67	35	114	0	0		

Sample ID: **LCS-7264** SampType: **LCS** TestCode: **06 PAH A** Units: **µg/L** Prep Date: **6/29/04** Run ID: **HEISENBURG_040629A**
Client ID: **ZZZZZ** Batch ID: **7264** TestNo: **8270-SIM** **(3510C)** Analysis Date: **6/29/04** SeqNo: **211021**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	0.97	0.10	1	0	97	21	133	0	0		
2-Methylnaphthalene	0.93	0.10	1	0	93	21	133	0	0		
Acenaphthene	1	0.10	1	0	100	47	145	0	0		
Acenaphthylene	0.96	0.10	1	0	96	33	145	0	0		

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

CLIENT: Pinnacle Laboratories
Work Order: 0406232
Project: 406100/NMOCD

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: **LCS-7264** SampType: **LCS** TestCode: **06 PAH A** Units: **µg/L** Prep Date: **6/29/04** Run ID: **HEISENBURG_040629A**
Client ID: **ZZZZZ** Batch ID: **7264** TestNo: **8270-SIM** **(3510C)** Analysis Date: **6/29/04** SeqNo: **211021**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anthracene	1.04	0.10	1	0	104	27	133	0	0		
Benz(a)anthracene	0.99	0.10	1	0	99	33	143	0	0		
Benzo(a)pyrene	1.02	0.10	1	0	102	17	163	0	0		
Benzo(b)fluoranthene	1.04	0.10	1	0	104	24	159	0	0		
Benzo(g,h,i)perylene	0.8	0.10	1	0	80	1	219	0	0		
Benzo(k)fluoranthene	0.96	0.10	1	0	96	11	162	0	0		
Chrysene	1.02	0.10	1	0	102	17	168	0	0		
Dibenz(a,h)anthracene	0.64	0.10	1	0	64	1	227	0	0		
Fluoranthene	1.07	0.10	1	0	107	26	137	0	0		
Fluorene	1.01	0.10	1	0	101	59	121	0	0		
Indeno(1,2,3-cd)pyrene	0.73	0.10	1	0	73	1	171	0	0		
Naphthalene	0.98	0.10	1	0	98	21	133	0	0		
Phenanthrene	1.03	0.10	1	0	103	54	120	0	0		
Pyrene	0.99	0.10	1	0	99	52	115	0	0		
Surr: 2-Fluorobiphenyl	0.85	0	1	0	85	43	116	0	0		
Surr: 4-Terphenyl-d14	0.87	0	1	0	87	33	141	0	0		
Surr: Nitrobenzene-d5	0.58	0	1	0	58	35	114	0	0		

Sample ID: **LCSD-7264** SampType: **LCSD** TestCode: **06 PAH A** Units: **µg/L** Prep Date: **6/29/04** Run ID: **HEISENBURG_040629A**
Client ID: **ZZZZZ** Batch ID: **7264** TestNo: **8270-SIM** **(3510C)** Analysis Date: **6/29/04** SeqNo: **211022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	1.06	0.10	1	0	106	21	133	0.97	8.87	30	
2-Methylnaphthalene	1.01	0.10	1	0	101	21	133	0.93	8.25	30	
Acenaphthene	1.02	0.10	1	0	102	47	145	1	1.98	30	
Acenaphthylene	1	0.10	1	0	100	33	145	0.96	4.08	30	
Anthracene	1.09	0.10	1	0	109	27	133	1.04	4.69	30	
Benz(a)anthracene	1	0.10	1	0	100	33	143	0.99	1.01	30	
Benzo(a)pyrene	1.03	0.10	1	0	103	17	163	1.02	0.976	30	
Benzo(b)fluoranthene	1.04	0.10	1	0	104	24	159	1.04	0	30	
Benzo(g,h,i)perylene	0.79	0.10	1	0	79	1	219	0.8	1.26	30	

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

CLIENT: Pinnacle Laboratories
Work Order: 0406232
Project: 406100/NMOCD

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: **LCSD-7264** SampType: **LCSD** TestCode: **06 PAH A** Units: **µg/L** Prep Date: **6/29/04** Run ID: **HEISENBURG_040629A**
Client ID: **ZZZZZ** Batch ID: **7264** TestNo: **8270-SIM** **(3510C)** Analysis Date: **6/29/04** SeqNo: **211022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	0.94	0.10	1	0	94	11	162	0.96	2.11	30	
Chrysene	1.02	0.10	1	0	102	17	168	1.02	0	30	
Dibenz(a,h)anthracene	0.63	0.10	1	0	63	1	227	0.64	1.57	30	
Fluoranthene	1.06	0.10	1	0	106	26	137	1.07	0.939	30	
Fluorene	1.03	0.10	1	0	103	59	121	1.01	1.96	30	
Indeno(1,2,3-cd)pyrene	0.71	0.10	1	0	71	1	171	0.73	2.78	30	
Naphthalene	1.09	0.10	1	0	109	21	133	0.98	10.6	30	
Phenanthrene	1.04	0.10	1	0	104	54	120	1.03	0.966	30	
Pyrene	0.94	0.10	1	0	94	52	115	0.99	5.18	30	
Surr: 2-Fluorobiphenyl	0.87	0	1	0	87	43	116	0	0	30	
Surr: 4-Terphenyl-d14	0.8	0	1	0	80	33	141	0	0	30	
Surr: Nitrobenzene-d5	0.61	0	1	0	61	35	114	0	0	30	

Sample ID: **CCV** SampType: **CCV** TestCode: **06 PAH A** Units: **µg/L** Prep Date: Run ID: **HEISENBURG_040629A**
Client ID: **ZZZZZ** Batch ID: **R17225** TestNo: **8270-SIM** Analysis Date: **6/29/04** SeqNo: **211019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1-Methylnaphthalene	0.49	0.10	0.5	0	98	80	120	0	0		
2-Methylnaphthalene	0.47	0.10	0.5	0	94	80	120	0	0		
Acenaphthene	0.46	0.10	0.5	0	92	80	120	0	0		
Acenaphthylene	0.44	0.10	0.5	0	88	80	120	0	0		
Anthracene	0.45	0.10	0.5	0	90	80	120	0	0		
Benz(a)anthracene	0.42	0.10	0.5	0	84	80	120	0	0		
Benzo(a)pyrene	0.45	0.10	0.5	0	90	80	120	0	0		
Benzo(b)fluoranthene	0.5	0.10	0.5	0	100	80	120	0	0		
Benzo(g,h,i)perylene	0.4	0.10	0.5	0	80	80	120	0	0		
Benzo(k)fluoranthene	0.46	0.10	0.5	0	92	80	120	0	0		
Chrysene	0.44	0.10	0.5	0	88	80	120	0	0		
Dibenz(a,h)anthracene	0.4	0.10	0.5	0	80	80	120	0	0		
Fluoranthene	0.45	0.10	0.5	0	90	80	120	0	0		
Fluorene	0.44	0.10	0.5	0	88	80	120	0	0		

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

CLIENT: Pinnacle Laboratories
Work Order: 0406232
Project: 406100/NMOCD

ANALYTICAL QC SUMMARY REPORT

TestCode: 06 PAH A

Sample ID: **CCV** SampType: **CCV** TestCode: **06 PAH A** Units: **µg/L** Prep Date: Run ID: **HEISENBURG_040629A**
Client ID: **ZZZZZ** Batch ID: **R17225** TestNo: **8270-SIM** Analysis Date: **6/29/04** SeqNo: **211019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	0.45	0.10	0.5	0	90	80	120	0	0		
Naphthalene	0.44	0.10	0.5	0	88	80	120	0	0		
Phenanthrene	0.46	0.10	0.5	0	92	80	120	0	0		
Pyrene	0.46	0.10	0.5	0	92	80	120	0	0		
Surr: 2-Fluorobiphenyl	0.56	0	0.5	0	112	43	116	0	0		
Surr: 4-Terphenyl-d14	0.62	0	0.5	0	124	33	141	0	0		
Surr: Nitrobenzene-d5	0.4	0	0.5	0	80	35	114	0	0		

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

ENVIRONMENTAL SERVICES LABORATORY – GLOSSARY OF FLAGS

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

0406252

PINNACLE LABORATORIES

Pinnacle Laboratories, Inc.

Interlab Chain of Custody

Date: 0625 Page: 1 of 1

Network Project Manager: Jacinta Tenorio

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

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	TCLP RCRA (8) Metals	Metals-13 PP List	Metals-TAL (23 Metals)	Dissolved Fe, Mn, Pb (6010)		TOC	Gen Chemistry:			Volatile Organics GC/MS (8260)	BOD	COD	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	PNA (~~8310~~/8270 SIM)	8260 (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
I-666 / 406100-01				01																X								
I-668, 406100-02				02																X								

PROJECT INFORMATION	
PROJECT #:	406100
PROJ. NAME:	~~EVAM~~ NMOCD
QC LEVEL:	STD. IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!!
DUE DATE:	
RUSH SURCHARGE:	
CLIENT DISCOUNT:	
SPECIAL CERTIFICATION REQUIRED:	YES NO

SAMPLE RECEIPT	
Total Number of Containers	
Chain of Custody Seals	
Received Intact?	
Received Good Cond./Cold	
LAB NUMBER:	

COMMENTS:

SAMPLES SENT TO:	
PENSACOLA - STL-FL	
ESL - OR	X
ATEL - AZ	
ATEL - MARION	
ATEL - MELMORE	
EHL	
GEL	
U OF MIAMI	
WCAS	
WOHL	

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signature: [illegible] Time: 1500	Signature: Time:
Printed Name: [illegible] Date: 0625	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2.**
Signature: [illegible] Time: 9:15	Signature: Time:
Printed Name: [illegible] Date: 6/28/00	Printed Name: Date:
Company [illegible]	Company

PINNACLE LABORATORIES

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 6/24/04 PAGE: 1 OF 1

PLI Accession #: 406100

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:

COMPANY: OCD
ADDRESS: 1220 S. St. Francis
Santa Fe NM 87505
PHONE: 505-476-3487
FAX:
BILL TO: Wayne Price
COMPANY: Same as above
ADDRESS:

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject		(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☒ 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)	Polynuclear Aromatics (610/8310/8270 SIMS)	General Chemistry:	Item 051 - OCD	Priority Pollutant Metals (13)	Target Analyte List Metals (23) + U	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		NUMBER OF CONTAINERS
I-666	6/24/04	1300	AQ							X														X	X			X					6 S+
I-668	6/24/04	1300	AQ							X														X	X			X					6

PROJECT INFORMATION

PROJ. NO.:
PROJ. NAME: Iyanbito Water Wells
P.O. NO.:
SHIPPED VIA:

SAMPLE RECEIPT

NO. CONTAINERS	1 + 1
CUSTODY SEALS	Y/N
RECEIVED INTACT	405
BLUE ICE/ICE	5.1°C

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒
CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐
8270 is not Preserved
I-666 = N. Water well
I-668 = S. Water Well

RELINQUISHED BY: 1.
Signature: Wayne Price Time: 17:42
Printed Name: WAYNE PRICE Date: 6/24/04
Company:
See reverse side (Force Majeure)

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

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

RECEIVED BY: (LAB) 2.
Signature: [signature] Time: 17
Printed Name: [signature] Date: 0624
Pinnacle Laboratories Inc.