

AP - 002

ANNUAL MONITORING REPORT

YEAR(S):

1998

American Environmental Network (NM) Inc.

Albuquerque Office: 2709-D Pan American Freeway NE
Albuquerque, NM 87107
(505) 344-3777

Remit to: American Environmental Network (NM), Inc.
P.O. Box 5676
Boston, MA 02206

American Environmental Network, Inc.

Bill N.M. Oil Conservation Division
To: 2040 South Pacheco
Santa Fe, NM 87505

Client #: 810-134

Date	Invoice
7/29/98	77917

Proj Name: Lorene ST Hobbs-NM

Original

BALANCE DUE: 720.00

PO Number	Terms	Project
	Net 30	AEN ALB-810

Quantity	Description	Rate	Amount
2	Item-24: Metals by ICAP Method 6010: Al, Sb As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Tl, V, Zn	200.00	400.00
2	F, Br, Ca, K, Mg, Na, Alk.Group, Cl, SO4, TDS, Cation/Anion Balance, Conductivity	160.00	320.00
SENT TO: ROGER ANDERSON ON FOR PAYMENT J. Price AUG 3 1998 RECEIVED Hobbs 000			
Accession #: 806376 Authorized By: Wayne Price			TOTAL: 720.00

A finance charge of 11/2% will be charged on balances 30 days past due

DISTRIBUTION: White-Customer Yellow-File Pink-Accounting
2709-D Pan American Freeway, NE • Albuquerque, NM 87107 • (505) 344-3777 • Fax (505) 344-4413

American Environmental Network, Inc.

AEN I.D.

806376

July 29, 1998

NMOCD
2040 S. PACHECO
SANTA FE, NM 87505

Project Name LORENE ST HOBBS-NM
Project Number (none)

Attention: WAYNE PRICE

On 6/24/98 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

Bromide was analyzed by Law Environmental National Laboratories, Pensacola, FL.

All other parameters were performed by STL, Pensacola, FL.

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



Kimberly D. McNeill
Project Manager

MR: mt

Enclosure



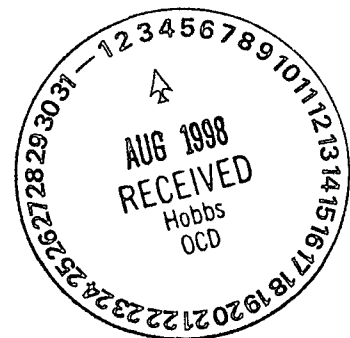
H. Mitchell Rubenstein, Ph. D.
General Manager



American Environmental Network, Inc.

CLIENT	: NMOCD	AEN I.D.	: 806376
PROJECT #	: (none)	DATE RECEIVED	: 6/24/98
PROJECT NAME	: LORENE ST HOBBS-NM	REPORT DATE	: 7/29/98

AEN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	9806231410-1722 LORENE	AQUEOUS	6/23/98
02	9806231420-1804 LORENE	AQUEOUS	6/23/98





Severn Trent Laboratories

11 East Olive Road
Pensacola FL 32514

Tel: (850) 474-1001
Fax: (850) 474-4789

SIGNATURE PAGE

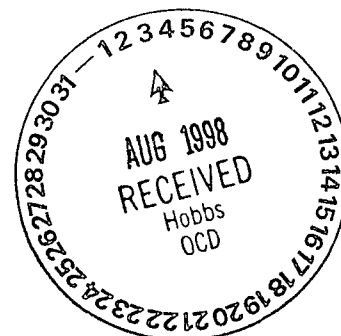
Reviewed by:


STL Project Manager

Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
ALBUQUERQUE, NEW MEXICO

Project Name: MNOCD-HOBBS
Project Number: 806376
Project Location: LORENE ST. HOBBS-NM
Accession Number: 806357

Project Manager: KIMBERLY D. MCNEILL
Sampled By: N/S



Other Laboratory Locations:

- 149 Rangeway Road, North Billerica MA 01862
- 16203 Park Row, Suite 110, Houston TX 77084
- 200 Monroe Turnpike, Monroe CT 06468

- 120 Southcenter Court, Suite 300, Morrisville NC 27560
- 315 Fullerton Avenue, Newburgh NY 12550
- Westfield Executive Park, 53 Southampton Road, Westfield MA 01085
- 628 Route 10, Whippany NJ 07981

a part of

Severn Trent Laboratories

Analysis Report

Analysis: TOTAL ALKALINITY

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Department: WET CHEM



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Date 07-Jul-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: TOTAL ALKALINITY
Matrix: WATER
QC Level: II

Lab ID: 001 Sample Date/Time: 23-JUN-98 1410
Client Sample Id: 806376-01 Received Date: 25-JUN-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
ALKALINITY, TOTAL (2320B)	MG/L	260	1		ASW048	BE
PH (150.1)	UNITS	7.5	NA		PHW134	AB
BICARBONATE, CaCO ₃ (2330B)	MG/L	260	1		NONE	DPH
CARBONATE, CaCO ₃ (2330B)	MG/L	1	1		NONE	DPH
CARBON DIOXIDE, FREE AS CaCO ₃	MG/L	16	1		NONE	DPH
HYDROXIDE (2330B) AS CaCO ₃	MG/L	ND	1		NONE	DPH

Comments:



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"FINAL REPORT FORMAT - SINGLE"

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: TOTAL ALKALINITY
Matrix: WATER
QC Level: II

Lab ID: 002
Client Sample Id: 806376-02

Sample Date/Time: 23-JUN-98 1420
Received Date: 25-JUN-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
ALKALINITY, TOTAL (2320B)	MG/L	170	1		ASW048	BE
PH (150.1)	UNITS	7.7	NA		PHW134	AB
BICARBONATE, CaCO ₃ (2330B)	MG/L	170	1		NONE	DPH
CARBONATE, CaCO ₃ (2330B)	MG/L	1	1		NONE	DPH
CARBON DIOXIDE, FREE AS CaCO ₃	MG/L	7	1		NONE	DPH
HYDROXIDE (2330B) AS CaCO ₃	MG/L	ND	1		NONE	DPH

Comments:

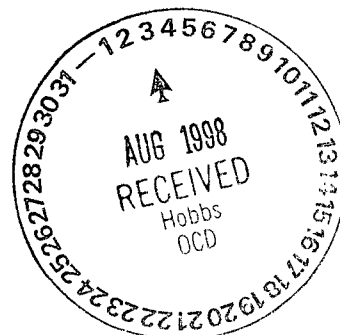


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"Method Report Summary"

Accession Number: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: TOTAL ALKALINITY

Client Sample Id:	Parameter:	Unit:	Result:
806376-01	ALKALINITY, TOTAL (2320B)	MG/L	260
	PH (150.1)	UNITS	7.5
	BICARBONATE, CACO3 (2330B)	MG/L	260
	CARBONATE, CACO3 (2330B)	MG/L	1
	CARBON DIOXIDE, FREE AS CACO3	MG/L	16
806376-02	ALKALINITY, TOTAL (2320B)	MG/L	170
	PH (150.1)	UNITS	7.7
	BICARBONATE, CACO3 (2330B)	MG/L	170
	CARBONATE, CACO3 (2330B)	MG/L	1
	CARBON DIOXIDE, FREE AS CACO3	MG/L	7



Analysis Report

Analysis: Group of Single Wetchem

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Department: WET CHEM



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"FINAL REPORT FORMAT - SINGLE"

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: Group of Single Wetchem
Matrix: WATER
QC Level: II

Lab ID: 001
Client Sample Id: 806376-01
Sample Date/Time: 23-JUN-98 1410
Received Date: 25-JUN-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
CHLORIDE (4500-CL B)	MG/L	160	1		CIW072	RB
CONDUCTIVITY (120.1/2510 B)	UMH/CM	1200	1		CDW012	ED
FLUORIDE (340.2/4500-F C)	MG/L	1.2	0.2		FLW028	ED
SULFATE (375.4)	MG/L	200	50	+	SEW080	BE
TOTAL DISSOLVED SOLIDS (160.1)	MG/L	790	5		TDW039	ED

Comments:



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"FINAL REPORT FORMAT - SINGLE"

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: Group of Single Wetchem
Matrix: WATER
QC Level: II

Lab ID: 002
Client Sample Id: 806376-02

Sample Date/Time: 23-JUN-98 1420
Received Date: 25-JUN-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
CHLORIDE (4500-CL B)	MG/L	150	1		CIW072	RB
CONDUCTIVITY (120.1/2510 B)	UMH/CM	1100	1		CDW012	ED
FLUORIDE (340.2/4500-F C)	MG/L	1.6	0.2		FLW028	ED
SULFATE (375.4)	MG/L	140	50	+	SEW080	BE
TOTAL DISSOLVED SOLIDS (160.1)	MG/L	650	5		TDW039	ED

Comments:



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Date 10-Jul-98

"Method Report Summary"

Accession Number: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: Group of Single Wetchem

Client Sample Id:	Parameter:	Unit:	Result:
806376-01	CHLORIDE (4500-CL B)	MG/L	160
	CONDUCTIVITY (120.1/2510 B)	UMH/CM	1200
	FLUORIDE (340.2/4500-F C)	MG/L	1.2
	SULFATE (375.4)	MG/L	200
	TOTAL DISSOLVED SOLIDS (160.1)	MG/L	790
806376-02	CHLORIDE (4500-CL B)	MG/L	150
	CONDUCTIVITY (120.1/2510 B)	UMH/CM	1100
	FLUORIDE (340.2/4500-F C)	MG/L	1.6
	SULFATE (375.4)	MG/L	140
	TOTAL DISSOLVED SOLIDS (160.1)	MG/L	650



Analysis Report

Analysis: Group of Single Metals

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Department: METALS



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"FINAL REPORT FORMAT - SINGLE"

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: Group of Single Metals
Matrix: WATER
QC Level: II

Lab Id: 001
Client Sample Id: 806376-01

Sample Date/Time: 23-JUN-98 1410
Received Date: 25-JUN-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
SILVER (6010A)	MG/L	ND	0.005		AYW178	GJ
ALUMINUM (200.7)	MG/L	ND	0.1		LXW178	GJ
ARSENIC (200.7)	MG/L	0.013	0.005		RXW178	GJ
BORON (200.7)	MG/L	0.42	0.05		OXW178	GJ
BARIUM (200.7)	MG/L	0.051	0.001		BXW178	GJ
BERYLLIUM (200.7)	MG/L	0.002	0.001		YXW178	GJ
CALCIUM (200.7)	MG/L	99	1.0		IOW178	GSP
CADMIUM (200.7)	MG/L	0.002	0.001		BXW178	GJ
COBALT (200.7)	MG/L	ND	0.005		TXW178	GJ
CHROMIUM (200.7)	MG/L	ND	0.005		HXW178	GJ
COPPER (200.7)	MG/L	ND	0.01		FWW178	GSP
IRON (200.7)	MG/L	0.07	0.05		NXW178	GJ
POTASSIUM (200.7)	MG/L	3.3	0.1		XXW178	GJ
MAGNESIUM (200.7)	MG/L	18	0.05		JXW178	GJ
MANGANESE (200.7)	MG/L	ND	0.01		GOW178	GSP
MOLYBDENUM (200.7)	MG/L	0.007	0.005		DXW178	GJ
SODIUM (200.7)	MG/L	120	0.2		10W178	GSP
NICKEL (200.7)	MG/L	ND	0.005		EXW178	GJ
LEAD (200.7)	MG/L	ND	0.003		PXW178	GJ
ANTIMONY (200.7)	MG/L	ND	0.01		3XW178	GJ
SILICON (6010A)	MG/L	26	1.0	+	2YW178	GJ
THALLIUM (6010A)	MG/L	ND	0.01		4YW178	GJ
VANADIUM (6010A)	MG/L	0.052	0.005		VYW178	GJ
ZINC (6010A)	MG/L	ND	0.02		5YW178	GJ
SELENIUM (7740)	MG/L	ND	0.005		S7W091	CH

Comments:



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"FINAL REPORT FORMAT - SINGLE"

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: Group of Single Metals
Matrix: WATER
QC Level: II

Lab Id: 002
Client Sample Id: 806376-02

Sample Date/Time: 23-JUN-98 1420
Received Date: 25-JUN-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
SILVER (6010A)	MG/L	ND	0.005		AYW178	GJ
ALUMINUM (200.7)	MG/L	ND	0.1		LXW178	GJ
ARSENIC (200.7)	MG/L	0.014	0.005		RXW178	GJ
BORON (200.7)	MG/L	0.37	0.05		OXW178	GJ
BARIUM (200.7)	MG/L	0.097	0.001		BXW178	GJ
BERYLLIUM (200.7)	MG/L	0.002	0.001		YXW178	GJ
CALCIUM (200.7)	MG/L	80	1.0		IOW178	GSP
CADMIUM (200.7)	MG/L	0.002	0.001		CXW178	GJ
COBALT (200.7)	MG/L	ND	0.005		TXW178	GJ
CHROMIUM (200.7)	MG/L	ND	0.005		HXW178	GJ
COPPER (200.7)	MG/L	ND	0.01		FOW178	GSP
IRON (200.7)	MG/L	0.10	0.05		NXW178	GJ
POTASSIUM (200.7)	MG/L	3.0	0.1		XXW178	GJ
MAGNESIUM (200.7)	MG/L	14	0.05		JXW178	GJ
MANGANESE (200.7)	MG/L	0.03	0.01		GOW178	GSP
MOLYBDENUM (200.7)	MG/L	0.006	0.005		DXW178	GJ
SODIUM (200.7)	MG/L	110	0.2		10W178	GSP
NICKEL (200.7)	MG/L	ND	0.005		EXW178	GJ
LEAD (200.7)	MG/L	0.003	0.003		PXW178	GJ
ANTIMONY (200.7)	MG/L	ND	0.01		3XW178	GJ
SILICON (6010A)	MG/L	26	1.0		2YW178	GJ
THALLIUM (6010A)	MG/L	0.01	0.01	+	4YW178	GJ
VANADIUM (6010A)	MG/L	0.058	0.005		VYW178	GJ
ZINC (6010A)	MG/L	0.021	0.02		5YW178	GJ
SELENIUM (7740)	MG/L	ND	0.005		S7W091	CH

Comments:



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Date 15-Jul-98

"Method Report Summary"

Accession Number: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Test: Group of Single Metals

Client Sample Id:	Parameter:	Unit:	Result:
806376-01	ARSENIC (200.7)	MG/L	0.013
	BORON (200.7)	MG/L	0.42
	BARIUM (200.7)	MG/L	0.051
	BERYLLIUM (200.7)	MG/L	0.002
	CALCIUM (200.7)	MG/L	99
	CADMIUM (200.7)	MG/L	0.002
	IRON (200.7)	MG/L	0.07
	POTASSIUM (200.7)	MG/L	3.3
	MAGNESIUM (200.7)	MG/L	18
	MOLYBDENUM (200.7)	MG/L	0.007
	SODIUM (200.7)	MG/L	120
	SILICON (6010A)	MG/L	26
	VANADIUM (6010A)	MG/L	0.052
806376-02	ARSENIC (200.7)	MG/L	0.014
	BORON (200.7)	MG/L	0.37
	BARIUM (200.7)	MG/L	0.097
	BERYLLIUM (200.7)	MG/L	0.002
	CALCIUM (200.7)	MG/L	80
	CADMIUM (200.7)	MG/L	0.002
	IRON (200.7)	MG/L	0.10
	POTASSIUM (200.7)	MG/L	3.0
	MAGNESIUM (200.7)	MG/L	14
	MANGANESE (200.7)	MG/L	0.03
	MOLYBDENUM (200.7)	MG/L	0.006
	SODIUM (200.7)	MG/L	110
	LEAD (200.7)	MG/L	0.003
	SILICON (6010A)	MG/L	26
	THALLIUM (6010A)	MG/L	0.01
	VANADIUM (6010A)	MG/L	0.058
	ZINC (6010A)	MG/L	0.021



Data Qualifiers for Final Report

AEN-Pensacola Inorganic/Organic

@	Adjusted reporting limit due to sample matrix (dilution prior to digestion and/or analysis)
+	Elevated reporting limit due to dilution into calibration range
*	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)
#	Elevated reporting limit due to insufficient sample size
D	Diluted out
J5	The reported value is quantitated as a TIC; therefore, it is estimated
ND = Not Detected	N/S = Not Submitted N/A = Not Applicable

Florida Projects Inorganic/Organic

Y1	Improper preservation, no preservative present in sample upon receipt
Y2	Improper preservation, incorrect preservative present in sample upon receipt
Y3	Improper preservation, sample temperature exceeded EPA temperature limits of 2-6°C upon receipt
Y (FL description)	The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Q	Sample held beyond the accepted holding time
I	The reported value is < Laboratory RL and > laboratory MDL
U1	The reported value is ≤ Laboratory MDL (value for sample result is reported as the MDL)
U (FL description)	Indicates the compound was analyzed for but not detected.
T	The reported value is < Laboratory MDL (value shall not be used for statistical analysis)
V	The analyte was detected in both the sample and the associated method blank.
J1	Surrogate recovery limits have been exceeded
J2	The sample matrix interfered with the ability to make any accurate determinations
J3	The reported value failed to meet the established quality control criteria for either precision or accuracy
J (FL description)	Estimated value; not accurate.

AFCEE Projects (under QAPP) and All Other (AEN-PN) Projects/Sites for Inorganic/Organic Parameters

J4	(For positive results) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$)
J (AFCEE description)	The analyte was positively identified, the quantitation is an estimation
R1	(For nondetects) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$)
R2	Improper preservation, no preservative present in sample upon receipt
R3	Improper preservation, incorrect preservative present in sample upon receipt
R4	Holding time exceeded
R5	Collection requirements not met, improper container used for sample
R (AFCEE description)	The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
F	< RL and > laboratory MDL
F (AFCEE description)	The analyte was positively identified but the associated numerical value is below the AFCEE or lab RL
U2	≤ Laboratory MDL (value for result will be the MDL, never below the MDL)
U (AFCEE description)	The analyte was analyzed for but not detected. The associated numerical value is at or below the MDL
B (AFCEE description)	The analyte was found in the associated blank, as well as in the sample

ICR Projects Inorganic/Organic

A	Acceptable
R6	Rejected

Examples: ICR Flags

R6 = Laboratory extracted the sample but the refrigerator malfunctioned so the extract became warm and client was notified

R6 = Sample arrived in laboratory in good condition; however, the laboratory did not analyze it within EPA's established holding time limit

CLP and CLP-like Projects

Refer to referenced CLP Statement of Work (SOW) for explanation of data qualifiers

IDL = Laboratory Instrument Detection Limit

MDL = Laboratory Method Detection Limit

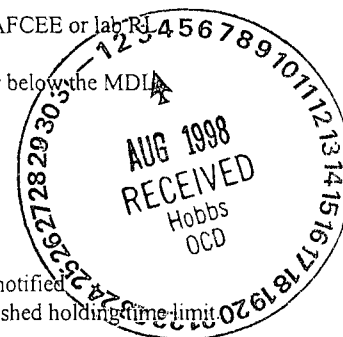
RL = Reporting Limit (AFCEE RLs are listed in the AFCEE QAPP)

CLP CRDL = CLP Contract Required Detection Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

CLP CRQL = CLP Contract Required Quantitation Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

Any time a sample arrives at the laboratory improperly preserved (at improper pH or temperature) or after holding time has expired or prepared or analyzed after holding time, client must be notified in writing (i.e. case narrative).

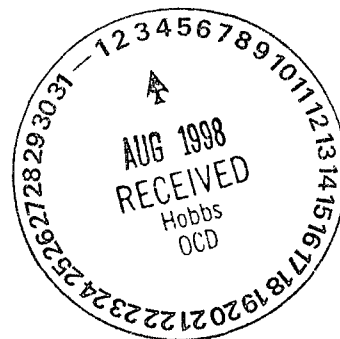
AEN-Pensacola uses the most current promulgated methods contained in the reference manuals.



Quality Control Report

Analysis: TOTAL ALKALINITY

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Department: WET CHEM



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Date 07-Jul-98

"WetChem Quality Control Report"

Parameter:	ALKALINITY	PH
Batch Id:	ASW048	PHW134
Blank Result:	<1	N/A
Anal. Method:	2320B	150.1
Prep. Method:	N/A	N/A
Analysis Date:	29-JUN-98	25-JUN-98
Prep. Date:	29-JUN-98	25-JUN-98

Sample Duplication

Sample Dup:	806353-1	806341-1
Rept Limit:	<1	N/A
Sample Result:	<1	8.14
Dup Result:	<1	8.15
Sample RPD:	N/C	0.01
Max RPD:	1	0.12
Dry Weight%	N/A	N/A

Matrix Spike

Sample Spiked:	806353-2	N/A
Rept Limit:	<1	N/A
Sample Result:	11	
Spiked Result:	42	
Spike Added:	25	
% Recovery:	124	
% Rec Limits:	72-127	
Dry Weight%	N/A	

ICV

ICV Result:	263	10.08
True Result:	250	10.00
% Recovery:	105	101
% Rec Limits:	90-110	90-110

LCS

LCS Result:		7.02
True Result:		6.87
% Recovery:		102
% Rec Limits:		96-104



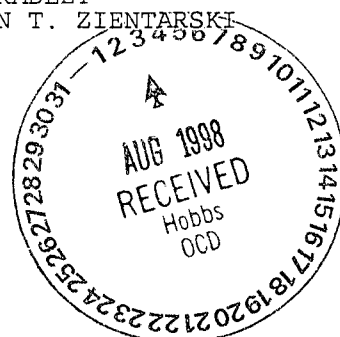
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Date 07-Jul-98

----- Common Footnotes WetChem -----

N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
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RH = RICKY HAGENDORFER



Quality Control Report

Analysis: Group of Single Wetchem

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Department: WET CHEM



[0] Page 1
Date 10-Jul-98

"WetChem Quality Control Report"

Parameter:	CHLORIDE	CONDUCT'Y	FLUORIDE	SULFATE	TDS
Batch Id:	CIW072	CDW012	FLW028	SEW080	TDW039
Blank Result:	<1	<1	<0.2	<10	<5
Anal. Method:	4500-CL B	120.1	340.2	375.4	160.1
Prep. Method:	N/A	N/A	N/A	N/A	N/A
Analysis Date:	29-JUN-98	02-JUL-98	01-JUL-98	30-JUN-98	01-JUL-98
Prep. Date:	29-JUN-98	02-JUL-98	01-JUL-98	30-JUN-98	30-JUN-98

Sample Duplication

Sample Dup:	806423-1	806357-1	806323-1	806320-3	806355-2
Rept Limit:	<1	<1	<0.2	<10	<5
Sample Result:	228.0	1212	0.92	<10	1468
Dup Result:	228.0	1212	0.87	<10	1424
Sample RPD:	0	0	0.05 G	N/C	3
Max RPD:	5	2	0.2	10	16
Dry Weight%	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	806423-1	N/A	806323-1	806320-3	N/A
Rept Limit:	<1	N/A	<0.2	<10	N/A
Sample Result:	228.0		0.92	<10	
Spiked Result:	281.0		1.75	21	
Spike Added:	55.0		0.80	20	
% Recovery:	96		104	105	
% Rec Limits:	90-111		79-132	56-154	
Dry Weight%	N/A		N/A	N/A	

ICV

ICV Result:	100.5		1.08	22	
True Result:	100.0		1.20	20	
% Recovery:	101		90	110	
% Rec Limits:	90-110		90-110	90-110	

LCS

LCS Result:	1426			300	
True Result:	1412			293	
% Recovery:	101			102	
% Rec Limits:	98-102			77-129	



[0) Page 2
Date 10-Jul-98

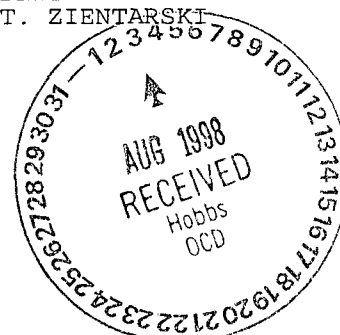
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SEVERN TRENT LABORATORIES

11 East Olive Road Pensacola, Florida 32514 (850) 474-1001

Quality Control Report

Analysis: Group of Single Metals

Accession: 806357
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 806376
Project Name: MNOCD-HOBBS
Project Location: LORENE ST. HOBBS-NM
Department: METALS



[0] Page 1
Date 15-Jul-98

"Metals Quality Control Report"

Parameter:	SILVER	ALUMINUM	ARSENIC	BORON	BARIUM	BERYLLIUM
Batch Id:	AYW178	LXW178	RXW178	OXW178	BXW178	YXW178
Blank Result:	<0.005	<0.1	<0.005	<0.05	<0.001	<0.001
Anal. Method:	6010A	200.7	200.7	200.7	200.7	200.7
Prep. Method:	3010A	200.7	200.7	200.7	200.7	200.7
Analysis Date:	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98
Prep. Date:	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98

Sample Duplication

Sample Dup:	806357-1	806357-1	806357-1	806357-1	806357-1	806357-1
Rept Limit:	<0.005	<0.1	<0.005	<0.05	<0.001	<0.001
Sample Result:	0.19	2.0	2.06	2.48	2.04	2.03
Dup Result:	0.20	2.0	2.09	2.53	2.05	2.04
Sample RPD:	5	0	1	2	0	0
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	806357-1	806357-1	806357-1	806357-1	806357-1	806357-1
Rept Limit:	<0.005	<0.1	<0.005	<0.05	<0.001	<0.001
Sample Result:	<0.005	<0.1	0.013	0.42	0.051	0.002
Spiked Result:	0.19	2.0	2.06	2.48	2.04	2.03
Spike Added:	0.2	2.0	2.0	2.0	2.0	2.0
% Recovery:	95	100	102	103	99	101
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	0.50	5.1	0.99	1.03	0.98	0.51
True Result:	0.5	5	1.0	1.0	1.0	0.5
% Recovery:	100	102	99	103	98	102
% Rec Limits:	95-105	95-105	95-105	95-105	95-105	95-105

LCS

LCS Result:	0.19	2.0	2.00	1.98	1.99	2.01
True Result:	0.2	2.0	2.0	2.0	2.0	2.0
% Recovery:	95	100	100	99	100	101
% Rec Limits:	80-120	80-120	80-120	80-120	80-120	80-120



[0] Page 2
Date 15-Jul-98

"Metals Quality Control Report"

Parameter:	CALCIUM	COBALT	CHROMIUM	COPPER	IRON	POTASSIUM
Batch Id:	IOW178	TXW178	HXW178	FOW178	NXW178	XXW178
Blank Result:	<1	<0.005	<0.005	<0.01	<0.05	<0.1
Anal. Method:	200.7	200.7	200.7	200.7	200.7	200.7
Prep. Method:	200.7	200.7	200.7	200.7	200.7	200.7
Analysis Date:	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98
Prep. Date:	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98

Sample Duplication

Sample Dup:	806357-1	806357-1	806357-1	806357-1	806357-1	806357-1
Rept Limit:	<1	<0.005	<0.005	<0.01	<0.05	<0.1
Sample Result:	130	1.97	1.97	2.0	2.16	26
Dup Result:	130	1.98	1.98	2.0	2.16	27
Sample RPD:	0	1	1	0	0	4
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	806357-1	806357-1	806357-1	806357-1	806357-1	806357-1
Rept Limit:	<1	<0.005	<0.005	<0.01	<0.05	<0.1
Sample Result:	99	<0.005	<0.005	<0.01	0.07	3.3
Spiked Result:	130	1.97	1.97	2.0	2.16	26
Spike Added:	20	2.0	2.0	2.0	2.0	20
% Recovery:	155 F	99	99	100	105	114
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	25	0.98	0.98	5.0	5.18	4.9
True Result:	25	1.0	1.0	5.0	5.0	5.0
% Recovery:	100	98	98	100	104	98
% Rec Limits:	95-105	95-105	95-105	95-105	95-105	95-105

LCS

LCS Result:	20	1.98	1.98	2.0	2.07	20
True Result:	20	2.0	2.0	2.0	2.0	20
% Recovery:	100	99	99	100	104	100
% Rec Limits:	80-120	80-120	80-120	80-120	80-120	80-120



[0] Page 3
Date 15-Jul-98

"Metals Quality Control Report"

Parameter:	MAGNESIUM	MANGANESE	MOLYBDENUM	SODIUM	NICKEL	LEAD
Batch Id:	JXW178	GOW178	DXW178	10W178	EXW178	PXW178
Blank Result:	<0.05	<0.01	<0.005	<0.2	<0.005	<0.003
Anal. Method:	200.7	200.7	200.7	200.7	200.7	200.7
Prep. Method:	200.7	200.7	200.7	200.7	200.7	200.7
Analysis Date:	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98	30-JUN-98
Prep. Date:	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98

Sample Duplication

Sample Dup:	806357-1	806357-1	806357-1	806357-1	806357-1	806357-1
Rept Limit:	<0.05	<0.01	<0.005	<0.2	<0.005	<0.003
Sample Result:	38	1.9	2.13	140	1.94	1.91
Dup Result:	38	1.9	2.16	140	1.95	1.93
Sample RPD:	0	0	1	0	1	1
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	806357-1	806357-1	806357-1	806357-1	806357-1	806357-1
Rept Limit:	<0.05	<0.01	<0.005	<0.2	<0.005	<0.003
Sample Result:	18	<0.01	0.007	120	<0.005	<0.003
Spiked Result:	38	1.9	2.13	140	1.94	1.91
Spike Added:	20	2.0	2.0	20	2.0	2.0
% Recovery:	100	95	106	100	97	96
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	5.13	4.9	1.00	25	0.98	1.01
True Result:	5.0	5.0	1.0	25	1.0	1.0
% Recovery:	103	98	100	100	98	101
% Rec Limits:	95-105	95-105	95-105	95-105	95-105	95-105

LCS

LCS Result:	19	1.9	2.13	19	1.97	1.94
True Result:	20	2.0	2.0	20	2.0	2.0
% Recovery:	95	95	107	95	99	97
% Rec Limits:	80-120	80-120	80-120	80-120	80-120	80-120



[0] Page 4
Date 15-Jul-98

"Metals Quality Control Report"

Parameter:	ANTIMONY	SILICON	THALLIUM	VANADIUM	ZINC	SELENIUM
Batch Id:	3XW178	2YW178	4YW178	VYW178	5YW178	S7W091
Blank Result:	<0.01	<1.0	<0.01	<0.005	<0.02	<0.005
Anal. Method:	200.7	6010A	6010A	6010A	6010A	7740
Prep. Method:	200.7	3010A	3010A	3010A	3010A	3020A
Analysis Date:	30-JUN-98	01-JUL-98	30-JUN-98	30-JUN-98	30-JUN-98	08-JUL-98
Prep. Date:	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98	29-JUN-98	07-JUL-98

Sample Duplication

Sample Dup:	806357-1	806357-1	806357-1	806357-1	806357-1	806418-1
Rept Limit:	<0.01	<1.0	<0.01	<0.005	<0.02	<0.005
Sample Result:	1.86	29	1.94	2.12	1.88	0.032
Dup Result:	1.88	29	1.96	2.13	1.90	0.031
Sample RPD:	1	0	1	0	1	3
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	806357-1	806357-1	806357-1	806357-1	806357-1	806418-1
Rept Limit:	<0.01	<1.0	<0.01	<0.005	<0.02	<0.005
Sample Result:	<0.01	26	<0.01	0.052	<0.02	<0.005
Spiked Result:	1.86	29	1.94	2.12	1.88	0.032
Spike Added:	2.0	2.0	2.0	2.0	2.0	0.040
% Recovery:	93	150 F	97	103	94	80
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	0.96	2.1	1.00	1.00	1.00	0.021
True Result:	1.0	2.0	1.0	1.0	1.0	0.020
% Recovery:	96	105	100	100	100	105
% Rec Limits:	95-105	95-105	95-105	95-105	95-105	90-110

LCS

LCS Result:	1.81	2.1	1.97	2.06	1.93	0.040
True Result:	2.0	2.0	2.0	2.0	2.0	0.040
% Recovery:	91	105	99	103	97	100
% Rec Limits:	80-120	80-120	80-120	80-120	80-120	80-120



[0] Page 5
Date 15-Jul-98

"Metals Quality Control Report"

Parameter:	CADMIUM	COBALT
Batch Id:	CXW178	CXW178
Blank Result:	<0.001	<0.005
Anal. Method:	200.7	200.7
Prep. Method:	200.7	200.7
Analysis Date:	30-JUN-98	30-JUN-98
Prep. Date:	29-JUN-98	29-JUN-98

Sample Duplication

Sample Dup:	806357-1	806357-1
Rept Limit:	<0.001	<0.005

Sample Result:	1.92	1.97
Dup Result:	1.93	1.98
Sample RPD:	1	1
Max RPD:	20	20
Dry Weight%	N/A	N/A

Matrix Spike

Sample Spiked:	806357-1	806357-1
Rept Limit:	<0.001	<0.005

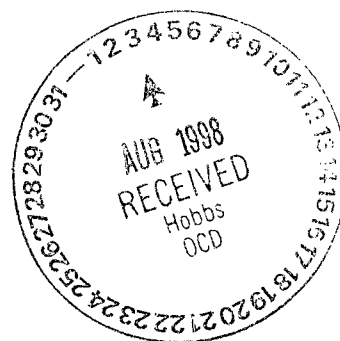
Sample Result:	0.002	<0.005
Spiked Result:	1.92	1.97
Spike Added:	2.0	2.0
% Recovery:	96	99
% Rec Limits:	75-125	75-125
Dry Weight%	N/A	N/A

ICV

ICV Result:	1.01	0.98
True Result:	1.0	1.0
% Recovery:	101	98
% Rec Limits:	95-105	95-105

LCS

LCS Result:	1.96	1.98
True Result:	2.0	2.0
% Recovery:	98	99
% Rec Limits:	80-120	80-120



[0] Page 6
Date 15-Jul-98

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DISS. OR D = DISSOLVED
T & D = TOTAL AND DISSOLVED
R = REACTIVE
T = TOTAL
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I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
N/C* = NOT CALCULABLE; SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE
ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING
LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE AEN REPORTING LIMIT. HOWEVER,
THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= THE RELATIVE PERCENT DIFFERENCE (RPD) EXCEEDS THE AEN CONTROL LIMIT
AND IS "OUT OF CONTROL; DUE TO A NON-HOMOGENEOUS SAMPLE MATRIX.
J = (FLORIDA DEP 'J' FLAG) - MATRIX SPIKE AND POST SPIKE RECOVERY IS OUT OF
THE ACCEPTABLE RANGE. SEE OUT OF CONTROL EVENTS FORM.
U = (FLORIDA DEP 'U' FLAG) - THE COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.
S = METHOD OF STANDARD ADDITIONS (MSA) WAS PERFORMED ON THIS SAMPLE.

FROM QUALITY CONTROL REPORT:

RPD= RELATIVE PERCENT DEVIATION.

REPT LIMIT= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.

NOTE: ALL RESULTS REPORTED UNDER 'SAMPLE DUPLICATION' ARE THE MS/MSD.

NOTE: THE UNITS REPORTED ON THE QUALITY CONTROL REPORT ARE REPORTED ON AN AS
RUN BASIS. (NOT ADJUSTED FOR DRY WEIGHT).

SW-846, 3rd Edition.

EPA 600/4-79-020, Revised March 1983.

NIOSH Manual of Analytical Methods, 4th Edition.

Standard Methods For the Examination of Water and Wastewater, 18th Edition, 1992.

Methods For the Determination of Metals in Environmental Samples - Supplement I,

EPA 600/R-94-111, May 1994.

GJ = GARY JACOBS
JLH = JAMES L. HERED

GSP = GARY ST PERE
JL = JANET LECLEAR



American Environmental Network of Florida

PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 806357

Date Received: 25-Jun-98

1. Was there a Chain of Custody? ☒ Yes ☐ No*
2. Was Chain of Custody properly filled out and relinquished? ☒ Yes ☐ No*
3. Were samples received cold? ☒ Yes ☐ No* N/A
(Criteria: 2° - 6°C: AEN-SOP 1055)
4. Were all samples properly labeled and identified? ☒ Yes ☐ No*
5. Did samples require splitting? Yes* ☒ No
Req By: PM Client Other*
6. Were samples received in proper containers for analysis requested? ☒ Yes ☐ No*
7. Were all sample containers received intact? ☒ Yes ☐ No*

8. Were samples checked for preservative? ☒ Yes ☐ No* N/A
(Check pH of all H₂O requiring preservative (AEN-PN SOP 917) except VOA vials that require zero headspace)*
9. Is there sufficient volume for analysis requested? ☒ Yes ☐ No*
10. Were samples received within Holding Time? ☒ Yes ☐ No*
(REFER TO AEN-SOP 1040)
11. Is Headspace visible > ¼" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control Yes* No ☒ N/A
12. If sent, were matrix spike bottles returned? Yes No* ☒ N/A
13. Was Project Manager notified of problems? (initials: PSIF skng) ☒ Yes ☐ No* ☒ N/A LLC 6/25/98

Airbill Number(s): _____

Shipped By: Fedx

Cooler Number(s): _____

Shipping Charges: N/A

Cooler Weight(s): N/A

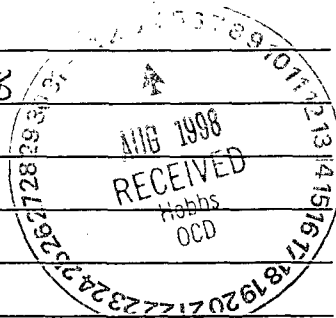
Cooler Temp(s) (°C): 5.0°C

CCK7
(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

PH received out of hold time. LLC 6/25/98

Samples received packed in blue ice. LLC 6/25/98



(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: A. Kitt Date: 25-Jun-98 Logged By: A. Kitt Date: 25-Jun-98

- * Note all Out-of-Control and/or questionable events on Comment Section of this form.
- * Note who requested the splitting of samples on the Comment Section of this form.
- * 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 (AEN-SOP 938, section 2.2.9).
- * According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).

Interlab Chain of Custody

DATE: 6/24/98 PAGE: 1 OF 1

[illegible]

CHAIN OF CUSTODY

DATE: 6/23/98 PAGE: 1 OF 1

AEN(NM) Accession # 806357/806370

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:				COMPANY: NMCD - Hobbs			
ADDRESS: P.O. 1980 (10002 APO)				Hobbs NM 88240			
PHONE: 505-393-6161				FAX:			
BILL TO: S.A.B.				COMPANY:			
ADDRESS:							
SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons (418.1) TRPH		
980623/1410 -	6/23/98	2:10pm	WATER	0.2	(MOD.8015) Diesel/Direct Inject		
1722 LORENE					(M8015) Gas/Purge & Trap		
980623/1420 -	"	2:20pm	WATER	0.2	8021 (BTEX)/8015 (Gasoline)		
1804 LORENE					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)		
					Herbicides (615/8151)		
					Base/Neutral/Acid Compounds GC/MS (625/8270)		
					Polynuclear Aromatics (610/8310)		
					General Chemistry: IFM 025		
					METALS " 024		
					PH, TDS, 504		
					Priority Pollutant Metals (13)		
					Target Analyte List Metals (23)		
					RCRA Metals (8)		
					RCRA Metals by TCLP (Method 1311)		
					Metals:		
					NUMBER OF CONTAINERS		

AEN ACCESSION #:

801,357

PART 1 - Bottle Shipment Information

CLIENT:							CLIENT PROJECT NUMBER:																	
QUANTITY OF SAMPLE CONTAINERS SHIPPED	PRESERVATIVE							PLASTIC CONTAINERS				GLASS CONTAINERS					NOTES							
	H ₂ SO ₄	HNO ₃	HCL	Zn Acetate	Na ₂ S ₂ O ₃	Unpreserved	NaOH	8 oz.	16 oz.	32 oz.	½ gallon	1 gallon	Whirl-pak	100-ML Cup	120 ml (A)	1 liter (A)		1 liter (C)	40 ml Vial	4 oz. wm	8 oz. wm	16 oz. wm	32 oz. wm	D.I. Trip Blank
Relinquished By:							Time		Date		Received By:							Time		Date				

PART 2 - Sample/Project Information

PARAMETERS AND PRESERVATIVES REQUESTED

[illegible]

Total Number of Bottles/Containers:

1

Relinquished By	Date	Time	Received By	Date	Time
Anda R. Kilt	6/21/98	1500	[Signature]	6/29/98	1500
	6/29/98	1500	Anda R. Kilt	11/9/98	1500

Client <u>American Env. Network</u>			Purchase Order Number <u>55987</u>
Address <u>11 E. Olive Rd.</u>			Project Number <u>806376</u>
City <u>Pensacola</u>	State <u>FL</u>	Zip <u>3251</u>	Project Name <u>MNOCD-HOBBS</u>
Phone Number (<u>850 474-1001</u>)	Fax Number ()		Project Location <u>Lorene St. Hobbs-NM</u>
Project Manager			Sampled By <u>NIS</u>

TURNAROUND TIMES		check below	SPECIAL INSTRUCTIONS					
Standard	14-21 days							
RUSH (must be approved in advance)								
< - 48 hours	2x standard price							
3-7 days	1.5x standard price							
TCLP	1 week rush 1.5x standard price							
QC Level	none	I	II	III	IV	(circle one)	Copies of report needed	2

LAW ENVIRONMENTAL NATIONAL LABORATORIES

TEST DATA REPORT

07/14/98

--- Project Information ---

Mr. Rick Hayes

AEN

11 E. Olive Road

Pensacola, FL 32514

Page 1

Project Name: AEN4

ACCESS.#806357 PO#55987

--- Sample Information ---

Station ID: 806376-01

Lab ID: AB51704

Collector:

Date Sampled: 06/23/98

Time Sampled: 14:10

Log In Date: 06/29/98

Log In Time: 17:49

--- Test Information ---

Analysis

Parameter	Units	Method	Rpt Lim	Result	Date	Tech
10621-300.0 Anions Water mg/L	mg/L	EPA 300.0			07/07/98	MG
Bromide	mg/L	EPA 300.0	0.300	0.620	07/07/98	MG

Remarks:

Signed:

Carl B. Causey

Technical Services Director



LAW ENVIRONMENTAL NATIONAL LABORATORIES

TEST DATA REPORT

07/14/98

--- Project Information ---

Mr. Rick Hayes

AEN

11 E. Olive Road

Pensacola, FL 32514

Page 1

Project Name: AEN4

ACCESS.#806357 PO#55987

--- Sample Information ---

Station ID: 806376-02

Lab ID: AB51705

Collector:

Date Sampled: 06/23/98

Time Sampled: 14:20

Log In Date: 06/29/98

Log In Time: 17:49

--- Test Information ---

Analysis

Parameter	Units	Method	Rpt Lim	Result	Date	Tech
10621-300.0 Anions Water mg/L	mg/L	EPA 300.0			07/07/98	MG
Bromide	mg/L	EPA 300.0	0.300	0.391	07/07/98	MG

Remarks:

Signed:

Carl B. Causey

Technical Services Director



LAW ENVIRONMENTAL NATIONAL LABORATORIES

TEST DATA REPORT

07/13/98

--- Project Information ---

Mr. Rick Hayes

Page 1

AEN

Project Name: AEN4

11 E. Olive Road

ACCESS.#806357 PO#55987

Pensacola, FL 32514

--- Sample Information ---

Station ID: 806376-01

Date Sampled: 06/23/98

Lab ID: AB51704

Time Sampled: 14:10

Collector:

Log In Date: 06/29/98

Log In Time: 17:49

--- Test Information ---

Analysis

Parameter	Units	Method	Rpt Lim	Result	Date	Tech
10621-300.0 Anions Water mg/L	mg/L	EPA 300.0			07/07/98	MG
Bromide	mg/L	EPA 300.0	0.300	0.620	07/07/98	MG

Remarks:

Signed:

Carl B. Causey

Technical Services Director



LAW ENVIRONMENTAL NATIONAL LABORATORIES

TEST DATA REPORT

07/13/98

--- Project Information ---

Mr. Rick Hayes

Page 1

AEN

Project Name: AEN4

11 E. Olive Road

ACCESS.#806357 PO#55987

Pensacola, FL 32514

--- Sample Information ---

Station ID: 806376-02

Date Sampled: 06/23/98

Lab ID: AB51705

Time Sampled: 14:20

Collector:

Log In Date: 06/29/98

Log In Time: 17:49

--- Test Information ---

Analysis

Parameter	Units	Method	Rpt Lim	Result	Date	Tech
10621-300.0 Anions Water mg/L	mg/L	EPA 300.0			07/07/98	MG
Bromide	mg/L	EPA 300.0	0.300	0.391	07/07/98	MG

Remarks:

Signed:

Carl B. Causey

Technical Services Director



11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

CHAIN OF CUSTODY

AEN ACCESSION #:

806357

PART 1 - Bottle Shipment Information

CLIENT:							CLIENT PROJECT NUMBER:																		
QUANTITY OF SAMPLE CONTAINERS SHIPPED	PRESERVATIVE						PLASTIC CONTAINERS				GLASS CONTAINERS						NOTES								
	H ₂ SO ₄	HNO ₃	HCL	Zn Acetate	Na ₂ S ₂ O ₃	Unpreserved	NaOH	8 oz.	16 oz.	32 oz.	½ gallon	1 gallon	Whirl-pak	100-ML Cup	120 ml (A)			1 liter (A)	1 liter (C)	40 ml Vial	4 oz. wm	8 oz. wm	16 oz. wm	32 oz. wm	ID I. Trip Blank
Relinquished By:							Date		Date		Received By:							Date		Date					

PART 2 - Sample/Project Information

PARAMETERS AND PRESERVATIVES REQUESTED

[illegible]

Cooler Temp.	30°C
--------------	------

				Total Number of Bottles/Containers:		2
Relinquished By	Date	Time	Received By	Date	Time	
<i>Kinda L. Kutt</i>	6/29/98	1500	<i>[Signature]</i>	6/29/98	1500	
	6/29/98	1550	<i>Kinda A. Chadwick</i>	6/29/98	15:50	

Client <u>American Env. Network</u>			Purchase Order Number <u>55987</u>
Address <u>11 E. Olive Rd.</u>			Project Number <u>806376</u>
City <u>Pensacola</u>	State <u>FL</u>	Zip <u>3251</u>	Project Name <u>MNOCD-HOBBS</u>
Phone Number (<u>850 474-1201</u>)	Fax Number ()	<u>12245678</u>	Project Location <u>Lorene St. Hobbs-NM</u>
Project Manager			Sampled By <u>NIS</u>

TURNAROUND TIMES		check below	SPECIAL INSTRUCTIONS
Standard	14-21 days		
RUSH (must be approved in advance)			
< - 48 hours	2x standard price		
3-7 days	1.5x standard price		
TCLP	1 week rush 1.5x standard price		
QC Level	none I II III IV (circle one)		Copies of report needed 2

CHAIN OF CUSTODY

AEN(NM) Accession #:

806376

DATE: 6/23/98 PAGE: 1 OF 1

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: COMPANY: <u>WACD - Hobbs</u> ADDRESS: <u>P.O. 1980 (10002 BOP)</u> <u>Hobbs NM 88240</u> PHONE: <u>505-393-6161</u> FAX: _____ BILL TO: <u>S.A.B</u> COMPANY: _____ ADDRESS: _____		ANALYSIS REQUEST Petroleum Hydrocarbons (418.1) TRPH (MOD.8015) Diesel/Direct Inject (M8015) Gas/Purge & Trap 8021 (BTEX)/8015 (Gasoline) 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) Herbicides (615/8151) Base/Neutral/Acid Compounds GC/MS (625/8270) Polynuclear Aromatics (610/8310) General Chemistry: <u>IFM 025</u> <u>METALS " 024"</u> <u>PH, TDS, 504</u> Priority Pollutant Metals (13) Target Analyte List Metals (23) RCRA Metals (8) RCRA Metals by TCLP (Method 1311) Metals: NUMBER OF CONTAINERS			
PROJECT INFORMATION PROJ. NO.: _____ PROJ. NAME: <u>LORENE ST</u> P.O. NO.: <u>Hobbs - NM</u> SHIPPED VIA: _____ SAMPLE RECEIPT NO. CONTAINERS: <u>10</u> CUSTODY SEALS: <u>Y/N/NA</u> RECEIVED INTACT: <u>YES</u> BLUE ICE/ICE: <u>1300</u>	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS (RUSH) ☐ 12hr ☐ 48hr ☐ 172hr ☒ 1 WEEK (NORMAL) ☒ CERTIFICATION REQUIRED: ☒ NM ☐ SDWA ☐ OTHER METHANOL PRESERVATION ☐ COMMENTS: <u>FIXED FEE</u> <u>980623/1410 - SAMPLE TAKEN FROM DRK-YH</u> <u>SP100T - (WATER WELL)</u> <u>980623/1420 - SAMPLE TAKEN FROM HOSE</u> <u>CONNECTED TO WELL HOUSE</u>	RELINQUISHED BY: Signature: _____ Printed Name: <u>WACD</u> Date: <u>6/23/98</u> Time: <u>3:00 PM</u> Company: <u>WACD</u>	RELINQUISHED BY: Signature: _____ Printed Name: _____ Date: _____ Time: _____ Company: _____		
SAMPLE ID <u>980623/1410 -</u> <u>1722 LORENE</u> <u>980623/1420 -</u> <u>1804 LORENE</u>	DATE <u>6/23/98</u> <u>"</u> <u>"</u> <u>"</u>	TIME <u>2:15 PM</u> <u>2:20 PM</u> <u>"</u> <u>"</u>	MATRIX <u>WATER</u> <u>WATER</u> <u>"</u> <u>"</u>	LAB ID <u>01</u> <u>02</u> <u>"</u> <u>"</u>	ANALYSIS REQUEST 8260 (TCL) Volatile Organics 8260 (Full) Volatile Organics 8260 (CUST) Volatile Organics 8260 (Landfill) Volatile Organics Pesticides /PCB (608/8081) Herbicides (615/8151) Base/Neutral/Acid Compounds GC/MS (625/8270) Polynuclear Aromatics (610/8310) General Chemistry: <u>IFM 025</u> <u>METALS " 024"</u> <u>PH, TDS, 504</u> Priority Pollutant Metals (13) Target Analyte List Metals (23) RCRA Metals (8) RCRA Metals by TCLP (Method 1311) Metals: NUMBER OF CONTAINERS



American Environmental Network, Inc.

AEN I.D. 804352

June 10, 1998

NM-OCD
2040 S. PACHEO
SANTA FE, NM 87505

RECEIVED

JUN 11 1998

Project Name SHELL GRIMES
Project Number (none)

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Attention: BILL OLSON

On 4/10/98 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **non-aq** 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.

This report is being reissued in part to correct detection limits. We apologize for any inconvenience this may have caused. This report was originally sent out on May 21, 1998.

EPA method 418.1 was added per client request.

Metals and EPA method 8270 were analyzed by American Environmental Network (CT) Inc., Monroe, CT.

All other parameters were performed by American Environmental Network (NM) Inc., Albuquerque, NM.

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



Kimberly D. McNeill
Project Manager



H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

American Environmental Network, Inc.

CLIENT	: NM-OCD	AEN I.D.	: 804352
PROJECT #	: (none)	DATE RECEIVED	: 4/10/98
PROJECT NAME	: SHELL GRIMES	REPORT DATE	: 5/21/98

AEN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	9804081345	NON-AQ	4/8/98

TABLE AS-1.0
7098-0831A
AEN-NEW MEXICO
MISCELLANEOUS ATOMIC SPECTROSCOPY

Soil

All values are mg/Kg dry weight basis.

Client Sample I.D.	804352-01			
Lab Sample I.D.	980831A-01			
Aluminum	5860			
Antimony	12.6U			
Arsenic	2.4			
Barium	103.			
Beryllium	1.0U			
Boron	21.0U			
Cadmium	1.0U			
Calcium	14500			
Chromium	5.9			
Cobalt	10.5U			
Copper	6.8			
Iron	6300			
Lead	9.3			
Magnesium	2300			
Manganese	166.			
Molybdenum	4.2U			
Nickel	8.7			
Potassium	1830			
Selenium	1.0U			
Silicon	719.			
Silver	2.1U			
Sodium	1050U			
Thallium	2.1U			
Vanadium	11.1			
Zinc	31.7			

See Appendix for qualifier definitions

U.S. EPA - CLP

3
BLANKS

Lab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A0831Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
		1	C	2	C	3	C			
Aluminum								40.000U		P
Antimony								12.000U		P
Arsenic								2.000U		P
Barium								40.000U		P
Beryllium								1.000U		P
Cadmium								1.000U		P
Calcium								1000.000U		P
Chromium								2.000U		P
Cobalt								10.000U		P
Copper								5.000U		P
Iron								20.000U		P
Lead								0.600U		P
Magnesium								1000.000U		P
Manganese								3.000U		P
Mercury										NR
Nickel								8.000U		P
Potassium								1000.000U		P
Selenium								1.000U		P
Silver								2.000U		P
Sodium								1000.000U		P
Thallium								2.000U		P
Vanadium								10.000U		P
Zinc								4.000U		P
Cyanide										NR
Boron								20.000U		P

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

B-30(17-21')S

Lab Name: IEA

Contract: _____

Lab Code: IEA Case No.: 0831

SAS No.: _____

SDG No.: A0831Matrix: SOILLevel (low/med): LOW% Solids for Sample: 88.3Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	1758.9456	714.1024	453.00	230.6		P
Antimony	75-125	113.3031	13.5900 U	113.25	100.0		P
Arsenic	75-125	10.1493	2.2650 U	9.06	112.0		P
Barium	75-125	451.3137	45.3001 U	453.00	99.6		P
Beryllium	75-125	11.6704	1.1325 U	11.32	103.0		P
Cadmium	75-125	1.9238	1.1325 U	1.13	169.9		P
Calcium			1132.5028 U	0.00	0.0		P
Chromium	75-125	45.9052	2.2650 U	45.30	101.3		P
Cobalt	75-125	109.6258	11.3250 U	113.25	96.8		P
Copper	75-125	61.3973	5.6625 U	56.62	108.4		P
Iron		2387.0238	1947.5735	226.50	194.0		P
Lead	75-125	10.8554	6.6538	4.53	92.8		P
Magnesium			1132.5028 U	0.00	0.0		P
Manganese	75-125	143.6876	34.4952	113.25	96.4		P
Mercury							NR
Nickel	75-125	109.7876	9.0600 U	113.25	96.9		P
Potassium			1132.5028 U	0.00	0.0		P
Selenium	75-125	2.5981	1.1325 U	2.26	114.7		P
Silver	75-125	11.8334	2.2650 U	11.32	104.5		P
Sodium			1132.5028 U	0.00	0.0		P
Thallium	75-125	8.5560	2.2650 U	11.32	75.5		P
Vanadium	75-125	112.3932	11.3250 U	113.25	99.2		P
Zinc	75-125	127.6612	21.5917	113.25	93.6		P
Cyanide							NR
Boron	75-125	224.5493	22.6500 U	226.50	99.1		P

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

B-30(17-21') D

Lab Name: IEA

Contract: _____

Lab Code: IEACase No.: 0831

SAS No.: _____

SDG No.: A0831Matrix: SOILLevel (low/med): LOW% Solids for Sample: 88.3% Solids for Duplicate: 88.3Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		714.1024		720.1411		0.8		P
Antimony		13.5900	U	13.5900	U			P
Arsenic		2.2650	U	2.2650	U			P
Barium		45.3001	U	45.3001	U			P
Beryllium		1.1325	U	1.1325	U			P
Cadmium		1.1325	U	1.1325	U			P
Calcium		1132.5028	U	1132.5028	U			P
Chromium		2.2650	U	2.2650	U			P
Cobalt		11.3250	U	11.3250	U			P
Copper		5.6625	U	5.6625	U			P
Iron		1947.5735		1987.3875		2.0		P
Lead		6.6538		6.7774		1.8		P
Magnesium		1132.5028	U	1132.5028	U			P
Manganese		34.4952		35.2431		2.1		P
Mercury								NR
Nickel		9.0600	U	9.0600	U			P
Potassium		1132.5028	U	1132.5028	U			P
Selenium		1.1325	U	1.1325	U			P
Silver		2.2650	U	2.2650	U			P
Sodium		1132.5028	U	1132.5028	U			P
Thallium		2.2650	U	2.2650	U			P
Vanadium		11.3250	U	11.3250	U			P
Zinc	4.5	21.5917		22.8230		5.5		P
Cyanide								NR
Boron		22.6500	U	22.6500	U			P

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A0831Solid LCS Source: INORG. VENT.

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)		%R	Solid (mg/kg)				%R
	True	Found		True	Found	C	Limits	
Aluminum				5510.0	4089.0		3620.0 7400.0	74.2
Antimony				93.1	111.4		9.5 177.0	119.7
Arsenic				60.6	63.4		43.0 78.2	104.7
Barium				3160.0	3098.7		2170.0 4150.0	98.1
Beryllium				157.0	166.4		107.0 207.0	106.0
Cadmium				78.0	78.8		55.7 100.0	101.1
Calcium				1680.0	1717.0		1260.0 2100.0	102.2
Chromium				183.0	187.4		134.0 232.0	102.4
Cobalt				113.0	116.7		89.7 136.0	103.3
Copper				110.0	119.0		85.4 135.0	108.2
Iron				10600.0	9812.2		5090.0 16100.0	92.6
Lead				85.9	89.6		64.1 108.0	104.4
Magnesium				2650.0	2735.5		2080.0 3220.0	103.2
Manganese				473.0	449.0		373.0 573.0	94.9
Mercury								
Nickel				108.0	113.4		84.9 132.0	105.1
Potassium				2630.0	2290.4		1920.0 3340.0	87.1
Selenium				75.4	75.5		49.8 101.0	100.2
Silver				152.0	168.1		113.0 191.0	110.6
Sodium				630.0	767.4	B	389.0 871.0	121.8
Thallium				160.0	170.8		91.4 228.0	106.8
Vanadium				99.0	102.0		67.6 130.0	103.1
Zinc				721.0	656.8		507.0 936.0	91.1
Cyanide								
Boron				92.8	96.4		67.7 118.0	103.9

American Environmental Network, Inc.

AEN I.D.

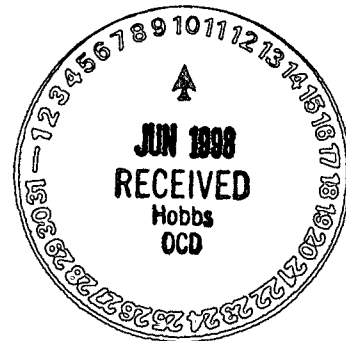
805331

June 3, 1998

NM-OCD
2040 S. PACHEO
SANTA FE, NM 87505

Project Name Shell-Westgate Tasker St. (1329)
Project Number (none)

Attention: WAYNE PRICE



On 5/8/98 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **non-aq** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA method 8310 was canceled per client request.

EPA method 8260 was performed by American Environmental Network (NM) Inc., Albuquerque, NM.

All other parameters were performed by American Environmental Network (CT) Inc., Monroe, CT.

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

Kimberly D. McNeill
Project Manager

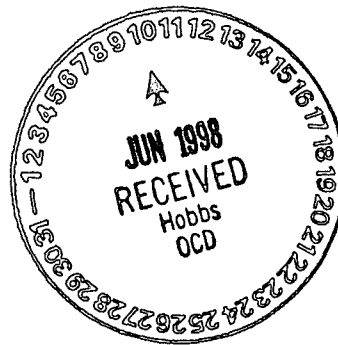
H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

Enclosure

American Environmental Network, Inc.

CLIENT	: NM-OCD	AEN I.D.	: 805331
PROJECT #	: (none)	DATE RECEIVED	: 5/8/98
PROJECT NAME	: Shell-Westgate Tasker St. (1329)	REPORT DATE	: 6/3/98
AEN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	9805061520	NON-AQ	5/6/98



American Environmental Network, Inc.

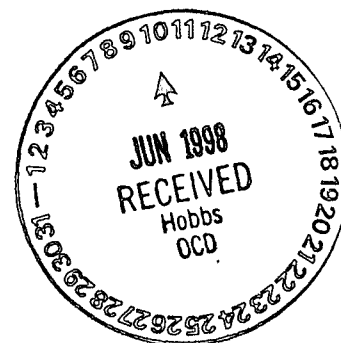
GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : (none)
 PROJECT NAME : SHELL-WESTGATE TASKER ST (1329)

AEN I.D. : 805331
 DATE RECEIVED : 5/7/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
805331-01	9805061520	NON-AQ	5/6/98	5/8/98	05/11/98	100
PARAMETER	DET. LIMIT	UNITS				

Dichlorodifluoromethane	0.05	< 5.0	MG/KG
Chloromethane	0.05	< 5.0	MG/KG
Vinyl Chloride	0.05	< 5.0	MG/KG
Bromomethane	0.05	< 5.0	MG/KG
Chloroethane	0.05	< 5.0	MG/KG
Trichlorofluoromethane	0.05	< 5.0	MG/KG
Acetone	0.5	< 50	MG/KG
Acrolein	0.25	< 25	MG/KG
1,1-Dichloroethene	0.05	< 5.0	MG/KG
Iodomethane	0.05	< 5.0	MG/KG
Methylene Chloride	0.05	< 5.0	MG/KG
Acrylonitrile	0.25	< 25	MG/KG
cis-1,2-Dichloroethene	0.05	< 5.0	MG/KG
Methyl-t-butyl Ether	0.05	< 5.0	MG/KG
1,1,2,1,2,2-Trichlorotrifluoroethane	0.05	< 5.0	MG/KG
1,1-Dichloroethane	0.05	< 5.0	MG/KG
trans-1,2-Dichloroethene	0.05	< 5.0	MG/KG
2-Butanone	0.5	< 50	MG/KG
Carbon Disulfide	0.05	< 5.0	MG/KG
Bromochloromethane	0.05	< 5.0	MG/KG
Chloroform	0.05	< 5.0	MG/KG
2,2-Dichloropropane	0.05	< 5.0	MG/KG
1,2-Dichloroethane	0.05	< 5.0	MG/KG
Vinyl Acetate	0.05	< 5.0	MG/KG
1,1,1-Trichloroethane	0.05	< 5.0	MG/KG
1,1-Dichloropropene	0.05	< 5.0	MG/KG
Carbon Tetrachloride	0.05	< 5.0	MG/KG
Benzene	0.05	< 5.0	MG/KG
1,2-Dichloropropane	0.05	< 5.0	MG/KG
Trichloroethene	0.05	< 5.0	MG/KG
Bromodichloromethane	0.05	< 5.0	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 50	MG/KG
cis-1,3-Dichloropropene	0.05	< 5.0	MG/KG
trans-1,3-Dichloropropene	0.05	< 5.0	MG/KG
1,1,2-Trichloroethane	0.05	< 5.0	MG/KG
1,3-Dichloropropane	0.05	< 5.0	MG/KG
Dibromomethane	0.05	< 5.0	MG/KG
Toluene	0.05	< 5.0	MG/KG
1,2-Dibromoethane	0.05	< 5.0	MG/KG
4-Methyl-2-Pentanone	0.5	< 50	MG/KG
2-Hexanone	0.5	< 50	MG/KG
Dibromochloromethane	0.05	< 5.0	MG/KG
Tetrachloroethene	0.05	< 5.0	MG/KG
Chlorobenzene	0.05	< 5.0	MG/KG
Ethylbenzene	0.05	14	MG/KG
1,1,1,2-Tetrachloroethane	0.05	< 5.0	MG/KG



American Environmental Network, Inc.

GC/MS RESULTS

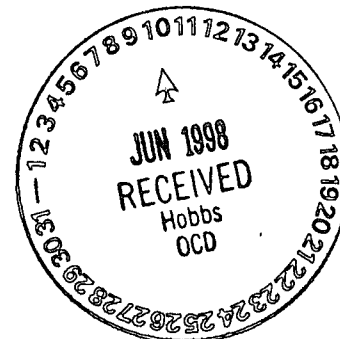
TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD AEN I.D. : 805331
 PROJECT # : (none) DATE RECEIVED : 5/7/98
 PROJECT NAME : SHELL-WESTGATE TASKER ST (1329)

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
805331-01	9805061520	NON-AQ	5/6/98	5/8/98	05/11/98	100
PARAMETER	DET. LIMIT		UNITS			
m&p Xylenes	0.05	43 ✓	MG/KG			
o-Xylene	0.05	< 5.0	MG/KG			
Styrene	0.05	< 5.0	MG/KG			
Bromoform	0.05	< 5.0	MG/KG			
1,1,2,2-Tetrachloroethane	0.05	< 5.0	MG/KG			
1,2,3-Trichloropropane	0.05	< 5.0	MG/KG			
Isopropyl Benzene	0.05	14 ✓	MG/KG			
Bromobenzene	0.05	< 5.0	MG/KG			
trans-1,4-Dichloro-2-Butene	0.05	< 5.0	MG/KG			
n-Propylbenzene	0.05	9.3 ✓	MG/KG			
2-Chlorotoluene	0.05	< 5.0	MG/KG			
4-Chlorotoluene	0.05	< 5.0	MG/KG			
1,3,5-Trimethylbenzene	0.05	24 ✓	MG/KG			
tert-Butylbenzene	0.05	< 5.0 ✓	MG/KG			
1,2,4-Trimethylbenzene	0.05	66 ✓	MG/KG			
sec-Butylbenzene	0.05	8.9 ✓	MG/KG			
1,3-Dichlorobenzene	0.05	< 5.0	MG/KG			
1,4-Dichlorobenzene	0.05	< 5.0	MG/KG			
p-Isopropyltoluene	0.05	6.8 ✓	MG/KG			
1,2-Dichlorobenzene	0.05	< 5.0	MG/KG			
n-Butylbenzene	0.05	11 ✓	MG/KG			
1,2-Dibromomono-3-chloropropane	0.05	< 5.0	MG/KG			
1,2,4-Trichlorobenzene	0.05	< 5.0	MG/KG			
Naphthalene	0.05	7.7 ✓	MG/KG			
Hexachlorobutadiene	0.05	< 5.0	MG/KG			
1,2,3-Trichlorobenzene	0.05	< 5.0	MG/KG			

* = SURROGATES NOT RECOVERABLE DUE TO NECESSARY DILUTION OF SAMPLE

SURROGATE % RECOVERY

1,2-Dichloroethane-d4 *
 (80 - 120)
 Toluene-d8 *
 (81 - 117)
 Bromofluorobenzene *
 (74 - 121)



American Environmental Network, Inc.

GC/MS RESULTS

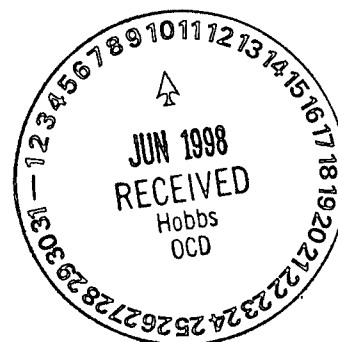
TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : (none)
 PROJECT NAME : SHELL-WESTGATE TASKER ST (1329)

AEN I.D. : 805331

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
REAGENT BLANK	050898	NON-AQ	5/8/98	05/11/98	1

PARAMETER	DET. LIMIT	UNITS
-----------	------------	-------

Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	< 0.5	MG/KG
Acrolein	0.25	< 0.25	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
Acrylonitrile	0.25	< 0.25	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
Methyl-t-butyl Ether	0.05	< 0.05	MG/KG
1,1,2,1,2,2-Trichlorotrifluoroethane	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Bromochloromethane	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
2,2-Dichloropropane	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
1,1-Dichloropropene	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
1,3-Dichloropropane	0.05	< 0.05	MG/KG
Dibromomethane	0.05	< 0.05	MG/KG
Toluene	0.05	< 0.05	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	< 0.05	MG/KG
1,1,1,2-Tetrachloroethane	0.05	< 0.05	MG/KG



American Environmental Network, Inc.

GC/MS RESULTS

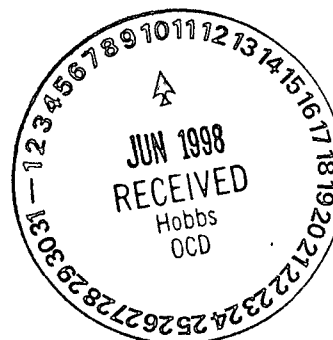
TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : (none)
 PROJECT NAME : SHELL-WESTGATE TASKER ST (1329)

AEN I.D. : 805331

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
REAGENT BLANK	050898	NON-AQ	5/8/98	05/11/98	1
PARAMETER	DET. LIMIT	UNITS			
m&p Xylenes	0.05 < 0.05	MG/KG			
o-Xylene	0.05 < 0.05	MG/KG			
Styrene	0.05 < 0.05	MG/KG			
Bromoform	0.05 < 0.05	MG/KG			
1,1,2,2-Tetrachloroethane	0.05 < 0.05	MG/KG			
1,2,3-Trichloropropane	0.05 < 0.05	MG/KG			
Isopropyl Benzene	0.05 < 0.05	MG/KG			
Bromobenzene	0.05 < 0.05	MG/KG			
trans-1,4-Dichloro-2-Butene	0.05 < 0.05	MG/KG			
n-Propylbenzene	0.05 < 0.05	MG/KG			
2-Chlorotoluene	0.05 < 0.05	MG/KG			
4-Chlorotoluene	0.05 < 0.05	MG/KG			
1,3,5-Trimethylbenzene	0.05 < 0.05	MG/KG			
tert-Butylbenzene	0.05 < 0.05	MG/KG			
1,2,4-Trimethylbenzene	0.05 < 0.05	MG/KG			
sec-Butylbenzene	0.05 < 0.05	MG/KG			
1,3-Dichlorobenzene	0.05 < 0.05	MG/KG			
1,4-Dichlorobenzene	0.05 < 0.05	MG/KG			
p-Isopropyltoluene	0.05 < 0.05	MG/KG			
1,2-Dichlorobenzene	0.05 < 0.05	MG/KG			
n-Butylbenzene	0.05 < 0.05	MG/KG			
1,2-Dibromomo-3-chloropropane	0.05 < 0.05	MG/KG			
1,2,4-Trichlorobenzene	0.05 < 0.05	MG/KG			
Naphthalene	0.05 < 0.05	MG/KG			
Hexachlorobutadiene	0.05 < 0.05	MG/KG			
1,2,3-Trichlorobenzene	0.05 < 0.05	MG/KG			

SURROGATE % RECOVERY

1,2-Dichloroethane-d4 115
 (80 - 120)
 Toluene-d8 112
 (81 - 117)
 Bromofluorobenzene 100
 (74 - 121)



American Environmental Network, Inc.

Spike Recovery and RPD Summary Report - SOIL

Method : C:\HPCHEM\1\METHODS\82600310.M (RTE Integrator)
Title : AEN New Mexico GC/MS
Last Update : Wed Mar 11 12:23:32 1998
Response via : Initial Calibration

Non-Spiked Sample: 051198B4.D

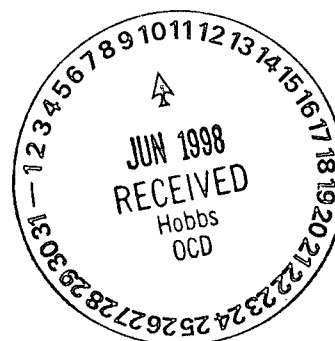
Spike Sample	Spike Duplicate Sample
File ID : 051198S1.D	051198S2.D
Sample : SEBS	SEBS
Acq Time: 11 May 98 12:36 pm	11 May 98 1:12 pm

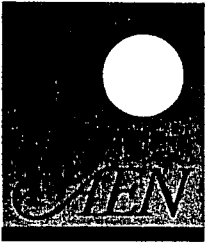
Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC RPD	Limits % Rec
1,1-Dichloroethene	0.00	2.50	2.52	2.49	101	100	1	22	59-172
Benzene	0.00	2.50	2.62	2.66	105	106	2	21	66-142
Trichloroethene	0.00	2.50	2.65	2.62	106	105	1	24	62-137
Toluene	0.00	2.50	2.61	2.60	104	104	1	21	59-139
Chlorobenzene	0.00	2.50	2.58	2.60	103	104	1	21	60-133

- Fails Limit Check

82600310.M

Tue May 12 10:32:03 1998





American Environmental Network

200 Monroe Turnpike • Monroe, CT 06468 • (203) 261-4458 • Fax (203) 268-5346

June 02, 1998

Ms. Kim Mcneill
AEN-NEW MEXICO
2709-D Pan American Freeway, Ne
Albuquerque, NM 87107

Dear Ms. Mcneill :

Please find enclosed the analytical results of 1 sample(s) received at our laboratory on May 11, 1998. This report contains sections addressing the following information at a minimum:

- . sample summary
- . analytical methodology
- . state certifications
- . definition of data qualifiers and terminology
- . analytical results
- . chain-of-custody

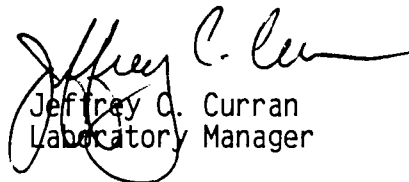
IEA Report #7098-1045A	Purchase Order #805331-01
Project ID: NMOCD-TASKER STREET	

Copies of this analytical report and supporting data are maintained in our files for a minimum of five years unless special arrangements have been made. Unless specifically indicated, all analytical testing was performed at this laboratory location and no portion of the testing was subcontracted.

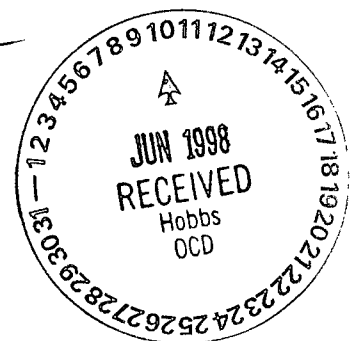
We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (203) 261-4458 for any additional information. Thank you for utilizing our services; we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Very truly yours,


Jeffrey D. Curran
Laboratory Manager

JCC



7098-1045A
AEN-NEW MEXICO

Case Narrative

Metals - ICAP metals were determined using a JA61E trace ICAP; mercury was determined by the cold vapor technique utilizing the Thermo Jarrell Ash Model QS-1 E mercury analyzer using guidance provided in SW846 according to the following methods: ICAP-3050/6010; mercury-7471.

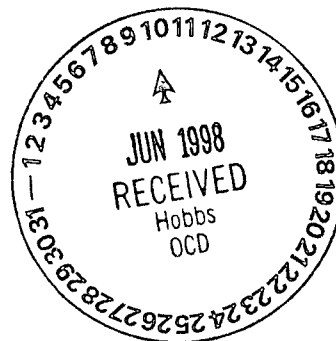
No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

IEC's are electronically employed by the JA61E trace ICAP. However, the ICSA is utilized as a monitoring device to detect any additional adjustments that may be required. These modifications are calculated and applied manually. They are so noted in the raw data.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS using guidance provided in Methods 3550/8270B. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Sample 9805061520 was analyzed twice due to results exhibiting suppression of an internal standard area. Both analyses were reported since matrix interference was proven. -

Sample 9805061520 would only concentrate down to a final volume of 10 mls rather than 1ml.



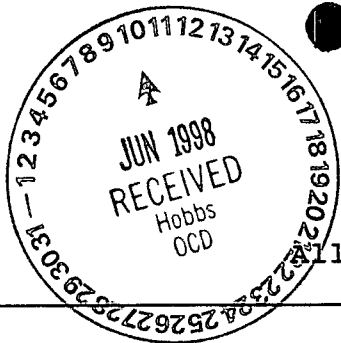


TABLE SV-1.0
7098-1045A
AEN-NEW MEXICO
TCL SEMI-VOLATILE ORGANICS

Soil
page 1 of 2

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	9805061520	9805061520 RE	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKMJ	981045A-01	981045A-01RE	
Method Blank I.D.	SBLKMJ	SBLKMJ	SBLKMJ	
Quant. Factor	1.00	56.2	56.2	
Phenol	U	U	U	330
bis(2-Chloroethyl) ether	U	U	U	330
2-Chlorophenol	U	U	U	330
1,3-Dichlorobenzene	U	U	U	330
1,4-Dichlorobenzene	U	U	U	330
Benzyl alcohol	U	U	U	330
1,2-Dichlorobenzene	U	U	U	330
2-Methylphenol	U	U	U	330
2,2'-oxybis(1-Chloropropane)	U	U	U	330
4-Methylphenol	U	U	U	330
N-Nitroso-di-n-propylamine	U	U	U	330
Hexachloroethane	U	U	U	330
Nitrobenzene	U	U	U	330
Isophorone	U	U	U	330
2-Nitrophenol	U	U	U	330
2,4-Dimethylphenol	U	U	U	330
Benzoic acid	U	U	U	1600
bis(2-Chloroethoxy)methane	U	U	U	330
2,4-Dichlorophenol	U	U	U	330
1,2,4-Trichlorobenzene	U	U	U	330
Naphthalene	U	20000	20000	330
4-Chloroaniline	U	U	U	330
Hexachlorobutadiene	U	U	U	330
4-Chloro-3-methylphenol	U	U	U	330
2-Methylnaphthalene	U	47000	48000	330
Hexachlorocyclopentadiene	U	U	U	330
2,4,6-Trichlorophenol	U	U	U	330
2,4,5-Trichlorophenol	U	U	U	1600
2-Chloronaphthalene	U	U	U	330
2-Nitroaniline	U	U	U	1600
Dimethylphthalate	U	U	U	330
Acenaphthylene	U	U	U	330
2,6-Dinitrotoluene	U	U	U	330
3-Nitroaniline	U	U	U	1600
Acenaphthene	U	U	U	330
Date Received		05/11/98	05/11/98	
Date Extracted	05/15/98	05/15/98	05/15/98	
Date Analyzed	05/22/98	05/30/98	06/01/98	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

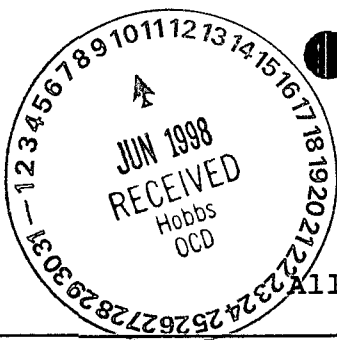


TABLE SV-1.0
7098-1045A
AEN-NEW MEXICO
TCL SEMI-VOLATILE ORGANICS

Soil
page 2 of 2

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	9805061520	9805061520 RE	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKMJ	981045A-01	981045A-01RE	
Method Blank I.D.	SBLKMJ	SBLKMJ	SBLKMJ	
Quant. Factor	1.00	56.2	56.2	
2,4-Dinitrophenol	U	U	U	1600
4-Nitrophenol	U	U	U	1600
Dibenzofuran	U	12000J	11000J	330
2,4-Dinitrotoluene	U	U	U	330
Diethylphthalate	U	U	U	330
4-Chlorophenyl-phenylether	U	U	U	330
Fluorene	U	8400J	8400J	330
4-Nitroaniline	U	U	U	1600
4,6-Dinitro-2-methylphenol	U	U	U	1600
N-Nitrosodiphenylamine (1)	U	U	U	330
4-Bromophenyl-phenylether	U	U	U	330
Hexachlorobenzene	U	U	U	330
Pentachlorophenol	U	U	U	1600
Phenanthrene	U	17000J	16000J	330
Anthracene	U	3400J	1800J	330
Carbazole	U	U	U	330
Di-n-butylphthalate	U	U	U	330
Fluoranthene	U	U	U	330
Pyrene	U	U	1400J	330
Butylbenzylphthalate	U	U	U	330
3,3'-Dichlorobenzidine	U	U	U	660
Benzo(a)anthracene	U	880J	800J	330
Chrysene	U	5100J	5000J	330
bis(2-Ethylhexyl)phthalate	U	U	U	330
Di-n-octylphthalate	U	U	U	330
Benzo(b)fluoranthene	U	U	U	330
Benzo(k)fluoranthene	U	U	U	330
Benzo(a)pyrene	U	U	U	330
Indeno(1,2,3-cd)pyrene	U	U	U	330
Dibenzo(a,h)anthracene	U	U	U	330
Benzo(g,h,i)perylene	U	U	U	330
Date Received		05/11/98	05/11/98	
Date Extracted	05/15/98	05/15/98	05/15/98	
Date Analyzed	05/22/98	05/30/98	06/01/98	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE AS-1.0
7098-1045A
AEN-NEW MEXICO
MISCELLANEOUS ATOMIC SPECTROSCOPY

Soil

All values are mg/Kg dry weight basis.

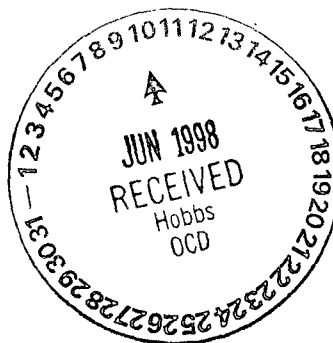
Client Sample I.D.	9805061520			
Lab Sample I.D.	981045A-01			
Aluminum	3680			
Antimony	13.8U			
Arsenic	3.5			
Barium	47.6			
Beryllium	1.2U			
Boron	23.0U			
Cadmium	1.2U			
Calcium	26800			
Chromium	4.3			
Cobalt	11.5U			
Copper	5.8U			
Iron	4340			
Lead	4.1			
Magnesium	1960			
Manganese	78.1			
Molybdenum	4.6U			
Nickel	9.2U			
Potassium	1770			
Selenium	1.2U			
Silicon	1520			
Silver	2.3U			
Sodium	2040			
Thallium	2.3U			
Vanadium	12.2			
Zinc	15.6			

See Appendix for qualifier definitions



ORGANICS APPENDIX

- U - Indicates that the compound was analyzed for but not detected.
- J - Indicates that the compound was analyzed for and determined to be present in the sample. The mass spectrum of the compound meets the identification criteria of the method. The concentration listed is an estimated value, which is less than the specified minimum detection limit but is greater than zero.
- B - This flag is used when the analyte is found in the blanks as well as the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte.
- N - Indicates that the compound was analyzed for but not requested as an analyte. Value will not be listed on tabular result sheet.
- S - Estimated due to surrogate outliers.
- X - Matrix spike compound.
- (1) - Cannot be separated.
- (2) - Decomposes to azobenzene. Measured and calibrated as azobenzene.
- A - This flag indicates that a TIC is a suspected aldol condensation product.
- E - Indicates that it exceeds calibration curve range.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- C - Confirmed by GC/MS.
- T - Compound present in TCLP blank.
- P - This flag is used for a pesticide/aroclor target analyte when there is a greater than 25 percent difference for detected concentrations between the two GC columns (see Form X).



INORGANICS APPENDIX

C - Concentration qualifiers

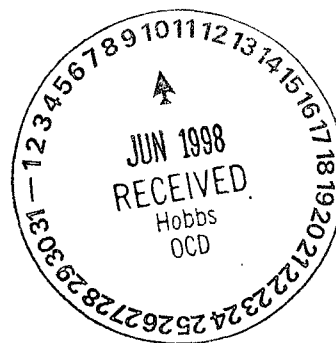
- U - Indicates analyte was not detected at method reporting limit.
- B - Indicates analyte result between IDL and contract required detection limit (CRDL)

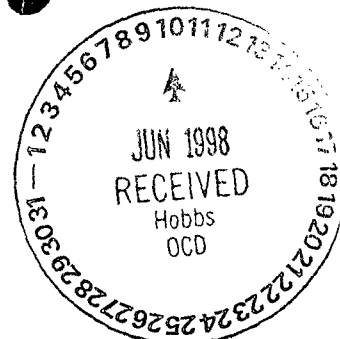
Q - QC qualifiers

- E - Reported value is estimated because of the presence of interference
- M - Duplicate injection precision not met
- N - Spiked sample recovery not within control limits
- S - The reported value was determined by the method of standard additions (MSA)
- W - Post-digest spike recovery furnace analysis was out of 85-115 percent control limit, while sample absorbance was less than 50 percent of spike absorbance
- * - Duplicate analysis not within control limit
- + - Correlation coefficient for MSA is less than 0.995

M - Method codes

- P - ICP
- A - Flame AA
- F - Furnace AA
- CV - Cold vapor AA (manual)
- C - Cyanide
- NR - Not Required
- NC - Not Calculated as per protocols





STATE CERTIFICATIONS

In some instances it may be necessary for environmental data to be reported to a regulatory authority with reference to a certified laboratory. For your convenience, the laboratory identification numbers for the ARN-Connecticut laboratory are provided in the following table. Many states certify laboratories for specific parameters or tests within a category (i.e. method 325.2 for wastewater). The information in the following table indicates the lab is certified in a general category of testing such as drinking water or wastewater analysis. The laboratory should be contacted directly if parameter-specific certification information is required.

ARN-Connecticut Certification Summary (as of September 1997)

State	Responsible Agency	Certification	Lab Number
Connecticut	Department of Health Services	Drinking Water, Wastewater	PH-0497
Maine	Department of Human Services	Wastewater	CT023
Massachusetts	Department of Environmental Protection	Potable/Non-Potable Water	CT023
New Hampshire	Department of Environmental Services	Drinking Water, Wastewater	2528
New Jersey	Department of Environmental Protection	Drinking Water, Wastewater	46410
New York	Department of Health	CLP, Drinking Water, Wastewater, Solid/Hazardous Waste	10602
North Carolina	Division of Environmental Management	Wastewater Hazardous Waste	388
North Dakota	Department of Health and Consolidated Laboratories	Non-Potable/Potable Hazardous Waste	R-138
Oklahoma	Department of Environmental Quality	General Water Quality/Sludge Testing	9614
Rhode Island	Department of Health	Chemistry...Non-Potable Water and Wastewater	A43
Washington	Department of Ecology	Wastewater Hazardous Waste	4C231
West Virginia	Division of Environmental Protection	Wastewater Hazardous Waste	263
Wisconsin	Department of Natural Resources	Wastewater Hazardous Waste	998355710

Date Issued : 05/11

IEA CT

Page: 1

Master Login Report-7098-1045A

Client : AEN-NEM MEXICO
Project Number : A54331-NMOC
Project Name : NMOC-TASKER STREET
Project Manager: Eric N. Johnson
Project Type : RCRA
Project Site : NM

Report : MS. KIM MCNEILL
2709-D PAN AMERICAN FREEWAY, NE
ALBUQUERQUE, NM 87107

Billing : MS. KIM MCNEILL
2709-D PAN AMERICAN FREEWAY, NE
ALBUQUERQUE, NM 87107

Project Start Date:
Diskette Type : NONE
Sales Person : House Account (CT)
PO Number : 805331-01
Client Contact : KIM MCNEILL
Report Type : LVL2

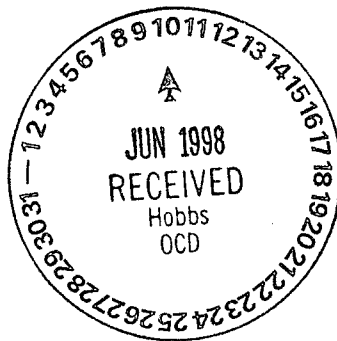
Sample Number	QC	Client ID	Samp Date	Rec Date	Due Date	Verb Date	Fri	Mu	DI	Total Price	Mat	Analyses	CS	SV	AS	CC	VO	GC	DM
981045A-01		9805061520	05/06	05/11	05/22	05/22				369.75									
							1	15		216.75	50	BNA-8270B-TCL	DONE	LOG					RECV
							1	15		153.00	50	MET-SM846-MISC	DONE		LOG				RECV
							1	15		0.00	50	SI-SM846	DONE		LOG				RECV



[Handwritten signature]

7098-1045A
AEN-NEW MEXICO
SAMPLE SUMMARY

CLIENT ID	LAB ID	MATRIX	DATE COLLECTED	DATE RECEIVED
9805061520	981045A-01	SOIL	05/06/98	05/11/98



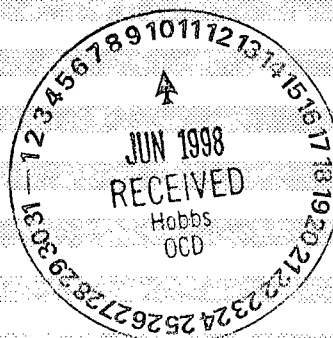
IEA-CT ANALYTICAL SUMMARY

Page:1

Client ID: 9805061520
Job Number: 7098-1045A

Date: 6/2/98

Qty	Matrix	Analysis	Description
1	SOIL	BNA-8270B-TCL	TCL Semi-Volatile Or
1	SOIL	MET-SW846-MISC	Miscellaneous Metals
1	SOIL	SB-SW846	Antimony
1	SOIL	SI-SW846	Silicon



2

AMOC D

P.O. 1980

505-393-6161

MMOCD - SAB

ET '24 YRUE PRICE

9805061520

5/26/98	3:20 PM
---------	---------

| *

Petroleum Hydrocarbons (418.1) TRPH
(MOD.8015) Diesel/Direct/Inject

(M8015) Gas/Purge & Trap

Gasoline/BTEX & MTBE (M8015/8020)

BTXE/MTBE (8020)

BTEX & Chlorinated Aromatics (602/8020)

BTEX/MTBE/EDC & EDB (8020/8010/Short)

Chlorinated Hydrocarbons (601/8010)

504 EDB ☐ / DBCP ☐

Polynuclear Aromatics (610/8310)

Volatile Organics (624/8240) GC/MS

Volatile Organics (8260) GC/MS

Pesticides/PCB (608/8080)

Herbicides (615/8150)

Base/Neutral/Acid Compounds GC/MS (625/8270)

General Chemistry:

Priority Pollutant Metals (13)

Target Analyte List Metals (23)

RCRA Metals (8)

RCRA Metals by TCLP (Method 1311)

Metals: TOTAL (PMOC)

PROJ. NO.: SHELL-QUEST GATE
PROJ. NAME: TASKER ST (1329)
P.O. NO.:
SHIPPED VIA:

COMMENTS: FIXED FEE ☐
 CERTIFICATION REQUIRED: ☐ NM ☐ SDW
 METHANOL PRESERVATION ☐
 {RUSH} ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK

☐ OTHER _____

(NORMAL) ☒

Signature:	<i>[Signature]</i>	Time:	10:00 AM
Printed Name:	Wayne Price	Date:	5/6/79
Company:	15M200		

Signature:	Time:
Printed Name:	Date:
Company:	

[illegible]

*MATRIX - SOIL/TAR SUBSTANCES

2-402 JARS STOPPED ON ICE.

SAMPLE COLLECTED ~ 3' DEEP UNDER

FOUNDATIONS AT 1329 TAsKEA ST.

SEE FIELD PHOTO PICTURES.

A circular library stamp is centered on the page. The stamp features a grid pattern. The text "JUN 1998" is stamped in the center. Below it, "RECEIVED" is stamped in a larger font. At the bottom of the stamp, "Hobbs" and "OGD" are stamped. The stamp is surrounded by a circular border containing numbers 1 through 27.

PLEASE FILL THIS FORM IN COMPLETELY.

4/1/96 AEN Inc.: American Environmental Network (NM), Inc. • 2709-D Pan American Freeway, NE • Albuquerque, New Mexico 87107

DISTRIBUTION: White, Canary - AEN Pink - ORIGINATOR



AMERICAN ENVIRONMENTAL NETWORK
Albuquerque, New Mexico

Interlab Chain of Custody

DATE: _____ PAGE: _____ OF _____

NETWORK PROJECT MANAGER: KIMBERLY D. MCNEILL

COMPANY: AMERICAN ENVIRONMENTAL NETWORK

ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

Kim McNeill

7098-10454

SAMPLE ID DATE TIME MATRIX LAB ID

805331-01 5/6/98 1520 HAZ 01

Metals - TAL

Metals - PP List

X Metals - RCRA Al, Sb, As, Ba
X RCRA Metals by TCLP (1311) Be, Bo
X Cd, Ca, Cr, Co, Cu, Fe
X Pb, Mg, Mn, Mo, Ni, K
X TOX Se, Si, Ag, Na, Ti
X TOC V, Zn

Gen Chemistry

Oil and Grease

BOD

COD

Pesticides/PCB (608/8080)

Herbicides (615/8150)

Base/Neutral Acid Compounds GC/MS (625/82701)

Volatile Organics GC/MS (624/8240)

Polynuclear Aromatics (610/8310)

8240 (TCLP 1311) ZHE

8270 (TCLP 1311)

TO-14

Gross Alpha/Beta

NUMBER OF CONTAINERS

PROJECT INFORMATION

PROJECT NUMBER: 805331

PROJECT NAME: NMCCO

OC LEVEL: STD IV

OC REQUIRED: MS MSD BLANK

TAI: STANDARD RUSHI

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS

INTACT?

RECEIVED GOOD COND/COLD

LAB NUMBER

SAMPLES SENT TO:

CONNECTICUT

ILLINOIS

MASSACHUSETTS

PENNSYLVANIA

PORTLAND

PHOENIX

N. CAROLINA

RELINQUISHED BY:

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Albuquerque

RECEIVED BY:

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____

RELINQUISHED BY:

Signature: _____ Time: _____

Printed Name: _____ Date: _____

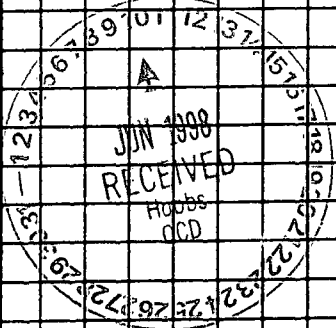
Company: _____

RECEIVED BY: (LAB)

Signature: _____ Time: _____

Printed Name: _____ Date: _____

Company: _____



Passed Lead Screen

5/11/98

DUE DATE: 5/22

RUSH SURCHARGE:

CLIENT DISCOUNT:

SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO

Totals Metals

Client: AEW

AEN Job #: 7098-1045A

Custody Seal: present absent

intact / not intact

Airbill #: FE

Sample #: 01

Field C-O-C present / absent

Locations: $B3$

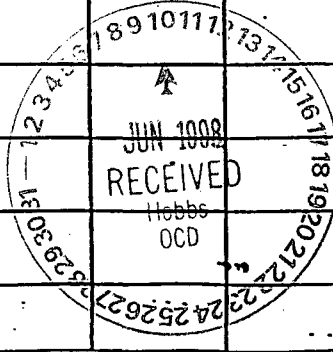
[illegible]

Fraction: BNA Pesticide-PCB/ Herbicide/ O/P Pest/ Other
(Circle One)

CLIENT: N.MJOB NO(S): 1045A

SAMPLE IN (Extractions)					SAMPLE IN (Extractions)				
Sample(s)	Date	Time	Sign.	Location	Sample(s)	Date	Time	Sign.	Location
1	5/21/98	18:00	JW	29					

SAMPLE OUT					SAMPLE IN			
Sample(s)	Date	Time	Code	Sign.	Date	Time	Location	Sign.
1	5/21/98	7A	AN	JW	5/21/98	8A	29	JW
1	05/29/98	1400	AN	CL	05/29/98	1800	29	CL
1	06/01/98	0900	AN	CL	06/01/98	1100	29	CL



Codes: SC = Screening

AN = Analysis

Verified by: M. G. BellDate: 6/2/98

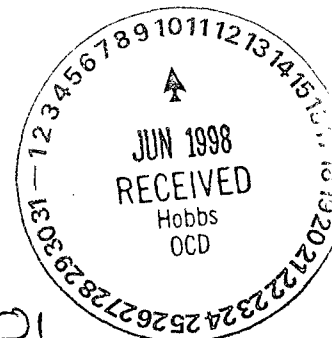
SF 5MF00200.CT



an environmental testing company

200 Monroe Turnpike
 Monroe, Connecticut 06468
 (203) 261-4458
 FAX (203) 268-5346

CHAIN OF CUSTODY
 ATOMIC SPECTROSCOPY DEPARTMENT



Job Number 7098-1045A Sample Numbers 01

WATER - (SOIL) - SLUDGE - EPTOX/TCLP

I confirm that I have performed the preparation below following SOP guidelines and authorize the release of this preparation:

Sample Prep	_____	_____	
	<u>[Signature]</u>	<u>05/26/98</u>	ICP/FLME
	_____	_____	FURN
	_____	_____	MERCURY
	Chemist	Date(s)	

I confirm that I have performed the analysis below following SOP guidelines and authorize the release of all associated data:

Analysis	<u>Diane Jumo</u>	<u>5/27/98</u>	ICP
	_____	_____	FLAME
	_____	_____	FURN
	_____	_____	MERCURY
	Chemist	Date(s)	

I have reviewed and authorize the release of this job:

Complete	<u>Diane Jumo</u>	<u>5/29/98</u>
	Supervisor	Date

Batch Assignment _____

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: IEA/CT

Contract: _____

Lab Code: IEACT

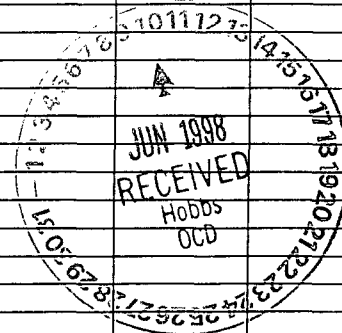
Case No.: 1045A

SAS No.: _____

SDG No.: A1045

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	SBLKMJ	85	80	80	83	84	92			0
02	SBLKMJFMS	83	77	96	83	84	91			0
03	SBLKMJMS	78	74	70	75	80	91			0
04	SBLKMJMSD	78	76	71	74	79	91			0
05	9805061520	420D	0D	0D	100	114	0D			0
06	9805061520RE	445D	129D	84	96	124D	0D			0
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
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22										
23										
24										
25										
26										
27										
28										
29										
30										



QC LIMITS

S1 (NBZ) = Nitrobenzene-d5 (23-120)
 S2 (FBP) = 2-Fluorobiphenyl (30-115)
 S3 (TPH) = Terphenyl-d14 (18-137)
 S4 (PHL) = Phenol-d5 (24-113)
 S5 (2FP) = 2-Fluorophenol (25-121)
 S6 (TBP) = 2,4,6-Tribromophenol (19-122)
 S7 (2CP) = 2-Chlorophenol-d4 (-) (advisory)
 S8 (DCB) = 1,2-Dichlorobenzene-d4 (-) (advisory)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogate diluted out

3D
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA/CT

Contract: _____

Lab Code: IEACT

Case No.: 1045A

SAS No.: _____

SDG No.: A1045

Matrix Spike - EPA Sample No.: SBLKMJ

Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	3300	0	2500	76	26- 90
2-Chlorophenol	3300	0	2800	85	25-102
1,4-Dichlorobenzene	1700	0	1300	76	28-104
N-Nitroso-di-n-prop. (1)	1700	0	1300	76	41-126
1,2,4-Trichlorobenzene	1700	0	1400	82	38-107
4-Chloro-3-methylphenol	3300	0	2700	82	26-103
Acenaphthene	1700	0	1300	76	31-137
4-Nitrophenol	3300	0	3100	94	11-114
2,4-Dinitrotoluene	1700	0	1600	94*	28- 89
Pentachlorophenol	3300	0	2500	76	17-109
Pyrene	1700	0	1200	70	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Phenol	3300	2700	82	8	35	26- 90
2-Chlorophenol	3300	3000	91	7	50	25-102
1,4-Dichlorobenzene	1700	1400	82	8	27	28-104
N-Nitroso-di-n-prop. (1)	1700	1400	82	8	38	41-126
1,2,4-Trichlorobenzene	1700	1500	88	7	23	38-107
4-Chloro-3-methylphenol	3300	2700	82	0	33	26-103
Acenaphthene	1700	1400	82	8	19	31-137
4-Nitrophenol	3300	3300	100	6	50	11-114
2,4-Dinitrotoluene	1700	1800	106*	12	47	28- 89
Pentachlorophenol	3300	2700	82	8	47	17-109
Pyrene	1700	1300	76	8	36	35-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk

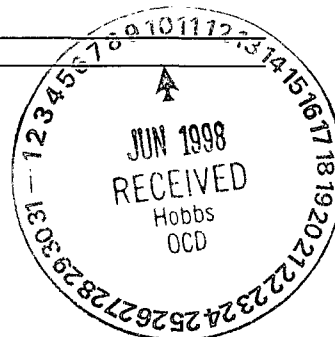
* Values outside of QC limits.

RPD: 0 out of 11 outside limits

Spike Recovery: 2 out of 22 outside limits

COMMENTS: _____

FORM III SV-2



U.S. EPA - CLP

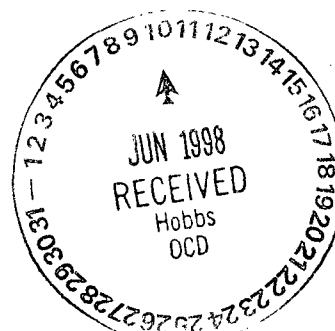
3
BLANKSLab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A1045Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Prepa- ration Blank		
		1	C	2	C	3	C		C	M
Aluminum								40.000U		P
Antimony								12.000U		P
Arsenic								2.000U		P
Barium								40.000U		P
Beryllium	-							1.000U		P
Cadmium								1.000U		P
Calcium								1000.000U		P
Chromium								2.000U		P
Cobalt								10.000U		P
Copper								5.000U		P
Iron								20.000U		P
Lead								0.600U		P
Magnesium								1000.000U		P
Manganese								3.000U		P
Mercury										NR
Nickel								8.000U		P
Potassium								1000.000U		P
Selenium								1.000U		P
Silver								2.000U		P
Sodium								1000.000U		P
Thallium								2.000U		P
Vanadium								10.000U		P
Zinc								4.000U		P
Cyanide										NR
Boron								20.000U		P

FORM III - IN



ILM03.0

3
BLANKS

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG[illegible]

ILM03.0

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

FLOOR-WS

Lab Name: IEA

Contract: _____

Lab Code: IEACase No.: 1045

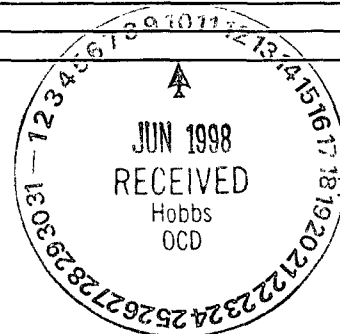
SAS No.: _____

SDG No.: A1045Matrix: SOILLevel (low/med): LOW% Solids for Sample: 85.58Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	1389.5976	921.7118	467.40	100.1		P
Antimony	75-125	123.2856	14.0220 U	116.85	105.5		P
Arsenic	75-125	12.6216	2.3370 U	9.35	135.0		P
Barium	75-125	444.3748	46.7399 U	467.40	95.1		P
Beryllium	75-125	11.7838	1.1685 U	11.68	100.8		P
Cadmium	75-125	1.1685 U	1.1685 U	1.17	100.0		P
Calcium			58241.5985	0.00	0.0		P
Chromium	75-125	45.7343	2.9467	46.74	91.5		P
Cobalt	75-125	111.9831	11.6850 U	116.85	95.8		P
Copper	75-125	62.9035	5.8425 U	58.42	107.7		P
Iron		4928.8969	4645.3050	233.70	121.3		P
Lead	75-125	8.9417	3.5069	4.67	116.3		P
Magnesium			28927.7168	0.00	0.0		P
Manganese	75-125	285.9827	170.2459	116.85	99.0		P
Mercury							NR
Nickel	75-125	105.4343	9.3480 U	116.85	90.2		P
Potassium			1168.4973 U	0.00	0.0		P
Selenium	75-125	2.3623	1.1685 U	2.34	101.1		P
Silver	75-125	12.2936	2.3370 U	11.68	105.2		P
Sodium			1168.4973 U	0.00	0.0		P
Thallium	75-125	9.9435	2.3370 U	11.68	85.1		P
Vanadium	75-125	115.0586	11.6850 U	116.85	98.5		P
Zinc	75-125	139.1227	26.1924	116.85	96.6		P
Cyanide							NR
Boron	75-125	227.3413	23.3699 U	233.70	97.3		P

Comments:

FORM V (PART 1) - IN



ILM03.0

5A
SPIKE SAMPLE RECOVERY

FLOOR-WS

Contract : _____

SAS No. : _____

Level (low/med) : LOW

Concentration Units (ug/L or mg/kg dry weight): MG/KG[illegible]

12345678910111213141516171819202122232425262728293031

↑

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FORM V (PART 1) - IN

ILM03.0

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

FLOOR-WD

Lab Name: IEA

Contract: _____

Lab Code: IEACase No.: 1045

SAS No.: _____

SDG No.: A1045Matrix: SOILLevel (low/med): LOW% Solids for Sample: 85.58% Solids for Duplicate: 85.58Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		921.7118		944.7649		2.5		P
Antimony		14.0220	U	14.0220	U			P
Arsenic		2.3370	U	2.3370	U			P
Barium		46.7399	U	46.7399	U			P
Beryllium		1.1685	U	1.1685	U			P
Cadmium		1.1685	U	1.1685	U			P
Calcium		58241.5985		60419.4438		3.7		P
Chromium	2.3	2.9467		3.0603		3.8		P
Cobalt		11.6850	U	11.6850	U			P
Copper		5.8425	U	5.8425	U			P
Iron	-	4645.3050		4807.9294		3.4		P
Lead		3.5069		3.7586		6.9		P
Magnesium		28927.7168		29748.7030		2.8		P
Manganese		170.2459		175.1850		2.8		P
Mercury								NR
Nickel		9.3480	U	9.3480	U			P
Potassium		1168.4973	U	1168.4973	U			P
Selenium		1.1685	U	1.1685	U			P
Silver		2.3370	U	2.3370	U			P
Sodium		1168.4973	U	1168.4973	U			P
Thallium		2.3370	U	2.3370	U			P
Vanadium		11.6850	U	11.6850	U			P
Zinc		26.1924		27.6836		5.5		P
Cyanide								NR
Boron		23.3699	U	23.3699	U			P

FORM VI - IN



ILM03.0

EPA SAMPLE NO.

FLOOR-WD

Lab Name: IEA

Contract: _____

Lab Code: IEA

Case No. : 1045

SAS No. : _____

SDG No. : A1045

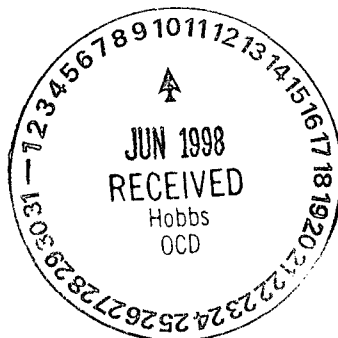
Matrix: SOIL

Level (low/med): LOW

% Solids for Sample: 85.58

% Solids for Duplicate: 85.58

Concentration Units (ug/L or mg/kg dry weight): MG/KG

[illegible]

FORM VI - IN

ILM03.0

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

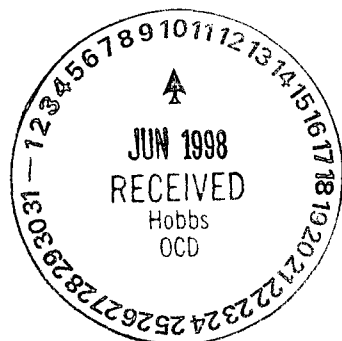
Lab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A1045Solid LCS Source: INORG. VENT.

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum				5510.0	6118.4		3620.0	7400.0
Antimony				93.1	92.2		9.5	177.0
Arsenic				60.6	67.1		43.0	78.2
Barium				3160.0	3774.8		2170.0	4150.0
Beryllium				157.0	179.9		107.0	207.0
Cadmium				78.0	84.6		55.7	100.0
Calcium				1680.0	1975.0		1260.0	2100.0
Chromium				183.0	205.3		134.0	232.0
Cobalt				113.0	130.7		89.7	136.0
Copper				110.0	132.1		85.4	135.0
Iron				10600.0	13120.4		5090.0	16100.0
Lead				85.9	105.2		64.1	108.0
Magnesium				2650.0	2913.9		2080.0	3220.0
Manganese				473.0	530.6		373.0	573.0
Mercury								
Nickel				108.0	121.6		84.9	132.0
Potassium				2630.0	2811.3		1920.0	3340.0
Selenium				75.4	85.0		49.8	101.0
Silver				152.0	188.9		113.0	191.0
Sodium				630.0	848.0	B	389.0	871.0
Thallium				160.0	198.9		91.4	228.0
Vanadium				99.0	116.1		67.6	130.0
Zinc				721.0	768.8		507.0	936.0
Cyanide								
Boron				92.8	102.3		67.7	118.0

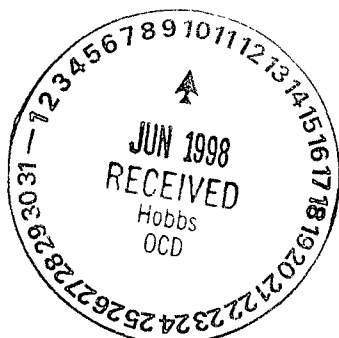


FORM VII - IN

ILM03.0

LABORATORY CONTROL SAMPLE

Aqueous LCS Source: _____

[illegible]

ILM03.0

ADDRESS:

SAMPLE ID					DATE	TIME	MATRIX	LAB ID	Pet	(M)	(M)	Gas	BT	BT	BT	Chl	504	Pol	Vol	Vol	Pes	Her	Bas	Ge	Pri	Tar	RC	RC	Me
9805061520					5/6/98	3:28pm	*	011										X		X		X						X	

24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

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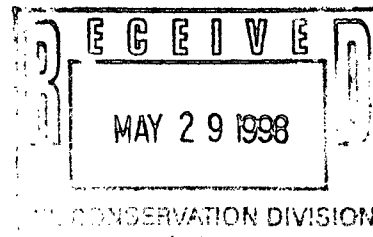
[illegible]

American Environmental Network, Inc.

AEN I.D. 803360

May 27, 1998

NM-OCD
2040 S. PACHEO
SANTA FE, NM 87505



Project Name SHELL-GRIMES
Project Number CASEY

Attention: BILL OLSON

On 3/20/98 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **non-aq** 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.

Silica was performed by American Environmental Network (NC) Inc., Cary NC.

EPA method 8260 was performed by American Environmental Network (NM) Inc., Albuquerque, NM.

All other parameters were performed by American Environmental Network (FL) Inc., Pensacola, FL.

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 "Kim McNeill".

Kimberly D. McNeill
Project Manager

A handwritten signature in black ink, appearing to read "H. Mitchell Rubenstein".

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

Enclosure

American Environmental Network, Inc.

CLIENT	: NM-OCD	AEN I.D.	: 803360
PROJECT #	: CASEY	DATE RECEIVED	: 3/20/98
PROJECT NAME	: SHELL-GRIMES	REPORT DATE	: 5/27/98

AEN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	CASEY SS 1	NON-AQ	3/18/98
02	CASEY SS 2	NON-AQ	3/18/98

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NM OIL CONSERVATION DIVISION
 PROJECT # : CASEY
 PROJECT NAME : SHELL - GRIMES

AEN I.D. : 803360
 DATE RECEIVED : 3/20/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
803360-01	CASEY SS1	NON-AQ	3/18/98	3/25/98	03/25/98	1
PARAMETER	DET. LIMIT		UNITS			

Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	0.5	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
Toluene	0.05	0.07	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	0.23	MG/KG
m&p Xylenes	0.05	0.57	MG/KG
o-Xylene	0.05	0.45	MG/KG
Styrene	0.05	< 0.05	MG/KG
Bromoform	0.05	< 0.05	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.05	MG/KG
1,3-Dichlorobenzene	0.05	< 0.05	MG/KG
1,4-Dichlorobenzene	0.05	< 0.05	MG/KG

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NM OIL CONSERVATION DIVISION
PROJECT # : CASEY
PROJECT NAME : SHELL - GRIMES

AEN I.D. : 803360
DATE RECEIVED : 3/20/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
803360-01	CASEY SS1	NON-AQ	3/18/98	3/25/98	03/25/98	1
PARAMETER	DET. LIMIT		UNITS			
1,2-Dichlorobenzene	0.05	< 0.05	MG/KG			

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	100 (80 - 120)
Toluene-d8	94 (81 - 117)
Bromofluorobenzene	89 (74 - 121)

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NM OIL CONSERVATION DIVISION
 PROJECT # : CASEY
 PROJECT NAME : SHELL - GRIMES

AEN I.D. : 803360
 DATE RECEIVED : 3/20/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
803360-02	CASEY SS2	NON-AQ	3/18/98	3/25/98	03/25/98	1
PARAMETER	DET. LIMIT	UNITS				

Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	< 0.5	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
Toluene	0.05	< 0.05	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	< 0.05	MG/KG
m&p Xylenes	0.05	< 0.05	MG/KG
o-Xylene	0.05	< 0.05	MG/KG
Styrene	0.05	< 0.05	MG/KG
Bromoform	0.05	< 0.05	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.05	MG/KG
1,3-Dichlorobenzene	0.05	< 0.05	MG/KG
1,4-Dichlorobenzene	0.05	< 0.05	MG/KG

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NM OIL CONSERVATION DIVISION
PROJECT # : CASEY
PROJECT NAME : SHELL - GRIMES

AEN I.D. : 803360
DATE RECEIVED : 3/20/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
803360-02	CASEY SS2	NON-AQ	3/18/98	3/25/98	03/25/98	1
PARAMETER	DET. LIMIT		UNITS			
1,2-Dichlorobenzene	0.05	< 0.05	MG/KG			

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	111 (80 - 120)
Toluene-d8	109 (81 - 117)
Bromofluorobenzene	101 (74 - 121)

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NM OIL CONSERVATION DIVISION
 PROJECT # : CASEY
 PROJECT NAME : SHELL - GRIMES

AEN I.D. : 803360

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
REAGENT BLANK	032598	NON-AQ	3/25/98	03/25/98	1

PARAMETER	DET. LIMIT		UNITS
Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	< 0.5	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
Toluene	0.05	< 0.05	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	< 0.05	MG/KG
m&p Xylenes	0.05	< 0.05	MG/KG
o-Xylene	0.05	< 0.05	MG/KG
Styrene	0.05	< 0.05	MG/KG
Bromoform	0.05	< 0.05	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.05	MG/KG
1,3-Dichlorobenzene	0.05	< 0.05	MG/KG
1,4-Dichlorobenzene	0.05	< 0.05	MG/KG

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NM OIL CONSERVATION DIVISION AEN I.D. : 803360
PROJECT # : CASEY
PROJECT NAME : SHELL - GRIMES

SAMPLE	DATE	DATE	DIL.		
ID #	BATCH	MATRIX	EXTRACTED	ANALYZED	FACTOR
REAGENT BLANK	032598	NON-AQ	3/25/98	03/25/98	1

PARAMETER	DET. LIMIT	UNITS
1,2-Dichlorobenzene	0.05	< 0.05

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	119
	(80 - 120)
Toluene-d8	109
	(81 - 117)
Bromofluorobenzene	99
	(74 - 121)

American Environmental Network, Inc.

Spike Recovery and RPD Summary Report - SOIL

Method : C:\HPCHEM\1\METHODS\82600310.M (RTE Integrator)
Title : AEN New Mexico GC/MS
Last Update : Wed Mar 11 12:23:32 1998
Response via : Initial Calibration

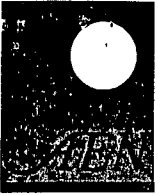
Non-Spiked Sample: 03259802.D

Spike Sample	Spike Duplicate Sample
File ID : 032598S1.D	032598S2.D
Sample : 803360-02 MS	803360-02 MS
Acq Time: 25 Mar 98 1:10 pm	25 Mar 98 1:46 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC RPD	Limits % Rec
1,1-Dichloroethene	0.00	2.50	2.36	2.36	94	94	0	22	59-172
Benzene	0.00	2.50	2.54	2.61	102	104	3	21	66-142
Trichloroethene	0.00	2.50	2.61	2.63	104	105	1	24	62-137
Toluene	0.00	2.50	2.54	2.57	102	103	1	21	59-139
Chlorobenzene	0.00	2.50	2.61	2.63	104	105	1	21	60-133

- Fails Limit Check

82600310.M Fri Mar 27 10:48:34 1998



American Environmental Network, Inc.

11 EAST OLIVE ROAD • PENSACOLA, FL 32514 • (850) 474-1001

SIGNATURE PAGE

Reviewed by:


AEN Project Manager

Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
ALBUQUERQUE, NEW MEXICO

Project Name: NMOCD
Project Number: 803360
Project Location: SHELL-GRIMES
Accession Number: 803347

Project Manager: KIMBERLY D. MCNEILL
Sampled By: N/S

Analysis Report

Analysis: Group of Single Metals

Accession:	803347
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	803360
Project Name:	NMOCD
Project Location:	SHELL-GRIMES
Department:	METALS

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Date 07-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 803347
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 803360
Project Name: NMOCD
Project Location: SHELL-GRIMES
Test: Group of Single Metals
Matrix: SOIL
QC Level: II

Lab Id: 001 Sample Date/Time: 18-MAR-98 1339
Client Sample Id: 803360-01 Received Date: 24-MAR-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
MERCURY (7471)	MG/KG	ND	0.02		M4S019	JL
SILVER (6010A)	MG/KG	ND	1		A6S048	GJ
ALUMINUM (6010A)	MG/KG	2000	6		L6S048	GJ
ARSENIC (6010A)	MG/KG	ND	5		R6S048	GJ
BORON (6010A)	MG/KG	140	9		O6S048	GJ
BARIUM (6010A)	MG/KG	46	1		B6S048	GJ
BERYLLIUM (6010A)	MG/KG	ND	0.4		Y6S048	GJ
CALCIUM (6010A)	MG/KG	1600	100		I6S048	GJ
CADMIUM (6010A)	MG/KG	0.8	0.5		C6S048	GJ
COBALT (6010A)	MG/KG	1.0	1		T6S048	GJ
CHROMIUM (6010A)	MG/KG	5	1		H6S048	GJ
COPPER (6010A)	MG/KG	52	1		F6S048	GJ
IRON (6010A)	MG/KG	2600	2		N6S048	GJ
POTASSIUM (6010A)	MG/KG	1300	200		X6S048	GJ
MAGNESIUM (6010A)	MG/KG	1000	20		J6S048	GJ
MANGANESE (6010A)	MG/KG	46	1		G6S048	GJ
MOLYBDENUM (6010A)	MG/KG	9	1		D6S048	GJ
SODIUM (6010A)	MG/KG	1600	20		16S048	GJ
NICKEL (6010A)	MG/KG	4	2		E6S048	GJ
LEAD (6010A)	MG/KG	340	5		P6S048	GJ
ANTIMONY (6010A)	MG/KG	ND	6		36S048	GJ
SELENIUM (6010A)	MG/KG	ND	10		S6S048	GJ
THALLIUM (6010A)	MG/KG	ND	10		46S048	GJ
VANADIUM (6010A)	MG/KG	4	1		V6S048	GJ
ZINC (6010A)	MG/KG	370	2		56S048	GJ

Comments:

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Date 07-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 803347
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 803360
Project Name: NMOCD
Project Location: SHELL-GRIMES
Test: Group of Single Metals
Matrix: SOIL
QC Level: II

Lab Id: 002 Sample Date/Time: 18-MAR-98 1402
Client Sample Id: 803360-02 Received Date: 24-MAR-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
MERCURY (7471)	MG/KG	ND	0.02		M4S019	JL
SILVER (6010A)	MG/KG	ND	1		A6S048	GJ
ALUMINUM (6010A)	MG/KG	7300	6		L6S048	GJ
ARSENIC (6010A)	MG/KG	ND	5		R6S048	GJ
BORON (6010A)	MG/KG	12	9		O6S048	GJ
BARIUM (6010A)	MG/KG	210	1		B6S048	GJ
BERYLLIUM (6010A)	MG/KG	ND	0.4	+	Y6S048	GJ
CALCIUM (6010A)	MG/KG	100000	500	+	I6S048	GJ
CADMIUM (6010A)	MG/KG	ND	0.5		C6S048	GJ
COBALT (6010A)	MG/KG	3	1		T6S048	GJ
CHROMIUM (6010A)	MG/KG	6	1		H6S048	GJ
COPPER (6010A)	MG/KG	7	1		F6S048	GJ
IRON (6010A)	MG/KG	6100	2		N6S048	GJ
POTASSIUM (6010A)	MG/KG	1900	200		X6S048	GJ
MAGNESIUM (6010A)	MG/KG	2900	20		J6S048	GJ
MANGANESE (6010A)	MG/KG	120	1		G6S048	GJ
MOLYBDENUM (6010A)	MG/KG	ND	1		D6S048	GJ
SODIUM (6010A)	MG/KG	150	20		16S048	GJ
NICKEL (6010A)	MG/KG	7	2		E6S048	GJ
LEAD (6010A)	MG/KG	13	5		P6S048	GJ
ANTIMONY (6010A)	MG/KG	ND	6		36S048	GJ
SELENIUM (6010A)	MG/KG	ND	10		S6S048	GJ
THALLIUM (6010A)	MG/KG	ND	10		46S048	GJ
VANADIUM (6010A)	MG/KG	10	1		V6S048	GJ
ZINC (6010A)	MG/KG	30	2		56S048	GJ

Comments:

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Date 07-Apr-98

"Method Report Summary"

Accession Number: 803347
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 803360
Project Name: NMOCD
Project Location: SHELL-GRIMES
Test: Group of Single Metals

Client Sample Id:	Parameter:	Unit:	Result:
803360-01	ALUMINUM (6010A)	MG/KG	2000
	BORON (6010A)	MG/KG	140
	BARIUM (6010A)	MG/KG	46
	CALCIUM (6010A)	MG/KG	1600
	CADMIUM (6010A)	MG/KG	0.8
	COBALT (6010A)	MG/KG	1.0
	CHROMIUM (6010A)	MG/KG	5
	COPPER (6010A)	MG/KG	52
	IRON (6010A)	MG/KG	2600
	POTASSIUM (6010A)	MG/KG	1300
	MAGNESIUM (6010A)	MG/KG	1000
	MANGANESE (6010A)	MG/KG	46
	MOLYBDENUM (6010A)	MG/KG	9
	SODIUM (6010A)	MG/KG	1600
	NICKEL (6010A)	MG/KG	4
	LEAD (6010A)	MG/KG	340
	VANADIUM (6010A)	MG/KG	4
	ZINC (6010A)	MG/KG	370
803360-02	ALUMINUM (6010A)	MG/KG	7300
	BORON (6010A)	MG/KG	12
	BARIUM (6010A)	MG/KG	210
	CALCIUM (6010A)	MG/KG	100000
	COBALT (6010A)	MG/KG	3
	CHROMIUM (6010A)	MG/KG	6
	COPPER (6010A)	MG/KG	7
	IRON (6010A)	MG/KG	6100
	POTASSIUM (6010A)	MG/KG	1900
	MAGNESIUM (6010A)	MG/KG	2900
	MANGANESE (6010A)	MG/KG	120
	SODIUM (6010A)	MG/KG	150
	NICKEL (6010A)	MG/KG	7
	LEAD (6010A)	MG/KG	13
	VANADIUM (6010A)	MG/KG	10
	ZINC (6010A)	MG/KG	30

Analysis Report

Analysis: ACID & BASE EXTRACTABLES (8270)

Accession:	803347
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	803360
Project Name:	NMOCD
Project Location:	SHELL-GRIMES
Department:	ORGANIC/MS

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Date 08-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 803347
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 803360
 Project Name: NMOCD
 Project Location: SHELL-GRIMES
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id:	001	Sample Date/Time:	18-MAR-98 1339
Client Sample Id:	803360-01	Received Date:	24-MAR-98
Batch: ALS023		Extraction Date:	25-MAR-98
Blank: A	Dry Weight %: 91	Analysis Date:	02-APR-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZOIC ACID	UG/KG	ND	91000	
4-CHLORO-3-METHYLPHENOL	UG/KG	ND	18000	
2-CHLOROPHENOL	UG/KG	ND	18000	
2,4-DICHLOROPHENOL	UG/KG	ND	18000	
2,6-DICHLOROPHENOL	UG/KG	ND	18000	
2,4-DIMETHYLPHENOL	UG/KG	ND	18000	
4,6-DINITRO-2-METHYLPHENOL	UG/KG	ND	91000	
2,4-DINITROPHENOL	UG/KG	ND	91000	
2-METHYLPHENOL	UG/KG	ND	18000	
4-METHYLPHENOL	UG/KG	ND	18000	
2-NITROPHENOL	UG/KG	ND	18000	
4-NITROPHENOL	UG/KG	ND	91000	
PENTACHLOROPHENOL	UG/KG	ND	91000	
PHENOL	UG/KG	ND	18000	
2,3,4,6-TETRACHLOROPHENOL	UG/KG	ND	18000	
2,4,5-TRICHLOROPHENOL	UG/KG	ND	91000	
2,4,6-TRICHLOROPHENOL	UG/KG	ND	18000	
ACENAPHTHENE	UG/KG	ND	18000	
ACENAPHTHYLENE	UG/KG	ND	18000	
ACETOPHENONE	UG/KG	ND	18000	
4-AMINOBIIPHENYL	UG/KG	ND	18000	
ANILINE	UG/KG	ND	18000	
ANTHRACENE	UG/KG	ND	18000	
BENZIDINE	UG/KG	ND	18000	
BENZO (A) ANTHRACENE	UG/KG	ND	18000	
BENZO (A) PYRENE	UG/KG	ND	18000	
BENZO (B) FLUORANTHENE	UG/KG	ND	18000	
BENZO (G,H,I) PERYLENE	UG/KG	ND	18000	
BENZO (K) FLUORANTHENE	UG/KG	ND	18000	
BENZYL ALCOHOL	UG/KG	ND	18000	
BIS (2-CHLOROETHOXY) METHANE	UG/KG	ND	18000	
BIS (2-CHLOROETHYL) ETHER	UG/KG	ND	18000	
BIS (2-CHLOROISOPROPYL) ETHER	UG/KG	ND	18000	
BIS (2-ETHYLHEXYL) PHTHALATE	UG/KG	ND	18000	
4-BROMOPHENYL PHENYL ETHER	UG/KG	ND	18000	
BUTYLBENZYL PHTHALATE	UG/KG	ND	18000	
4-CHLOROANILINE	UG/KG	ND	18000	
1-CHLORONAPHTHALENE	UG/KG	ND	18000	
2-CHLORONAPHTHALENE	UG/KG	ND	18000	
4-CHLOROPHENYL PHENYL ETHER	UG/KG	ND	18000	

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Date 08-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 803347
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 803360
 Project Name: NMOCD
 Project Location: SHELL-GRIMES
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id: 001
 Client Sample Id: 803360-01
 Sample Date/Time: 18-MAR-98 1339
 Received Date: 24-MAR-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
CHRYSENE	UG/KG	ND	18000	
DIBENZ(A,J)ACRIDINE	UG/KG	ND	18000	
DIBENZO(A,H)ANTHRACENE	UG/KG	ND	18000	
DIBENZOFURAN	UG/KG	ND	18000	
1,2-DICHLOROBENZENE	UG/KG	ND	18000	
1,3-DICHLOROBENZENE	UG/KG	ND	18000	
1,4-DICHLOROBENZENE	UG/KG	ND	18000	
3,3'-DICHLOROBENZIDINE	UG/KG	ND	91000	
DIETHYLPHTHALATE	UG/KG	ND	18000	
P-DIMETHYLAMINOAZOBENZENE	UG/KG	ND	18000	
7,12-DIMETHYLBENZ(A)ANTHRACENE	UG/KG	ND	18000	
A-,A-DIMETHYLPHENETHYLAMINE	UG/KG	ND	18000	
DIMETHYLPHTHALATE	UG/KG	ND	18000	
DI-N-BUTYLPHTHALATE	UG/KG	ND	18000	
2,4-DINITROTOLUENE	UG/KG	ND	18000	
2,6-DINITROTOLUENE	UG/KG	ND	18000	
DI-N-OCTYLPHTHALATE	UG/KG	ND	18000	
DIPHENYLAMINE	UG/KG	ND	18000	
1,2-DIPHENYLHYDRAZINE	UG/KG	ND	18000	
FLUORANTHENE	UG/KG	ND	18000	
FLUORENE	UG/KG	ND	18000	
HEXACHLOROBENZENE	UG/KG	ND	18000	
HEXACHLOROBUTADIENE	UG/KG	ND	18000	
HEXACHLOROCYCLOPENTADIENE	UG/KG	ND	18000	
HEXACHLOROETHANE	UG/KG	ND	18000	
INDENO(1,2,3-CD)PYRENE	UG/KG	ND	18000	
ISOPHORONE	UG/KG	ND	18000	
3-METHYLCHOLANTHRENE	UG/KG	ND	18000	
2-METHYLNAPHTHALENE	UG/KG	ND	18000	
NAPHTHALENE	UG/KG	ND	18000	
1-NAPHTHYLAMINE	UG/KG	ND	18000	
2-NAPHTHYLAMINE	UG/KG	ND	18000	
2-NITROANILINE	UG/KG	ND	18000	
3-NITROANILINE	UG/KG	ND	18000	
4-NITROANILINE	UG/KG	ND	18000	
NITROBENZENE	UG/KG	ND	18000	
N-NITROSODIMETHYLAMINE	UG/KG	ND	18000	
N-NITROSODI-N-BUTYLAMINE	UG/KG	ND	18000	
N-NITROSODIPHENYLAMINE	UG/KG	ND	18000	
N-NITROSO-DI-N-PROPYLAMINE	UG/KG	ND	18000	
N-NITROSOPIPERIDINE	UG/KG	ND	18000	
PENTACHLOROBENZENE	UG/KG	ND	18000	
PENTACHLORONITROBENZENE (PCNB)	UG/KG	ND	18000	
PHENACETIN	UG/KG	ND	18000	
PHENANTHRENE	UG/KG	ND	18000	

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Date 08-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 803347
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 803360
Project Name: NMOCD
Project Location: SHELL-GRIMES
Test: ACID & BASE EXTRACTABLES (8270)
Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix: SOIL
QC Level: II

Lab Id: 001 Sample Date/Time: 18-MAR-98 1339
Client Sample Id: 803360-01 Received Date: 24-MAR-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
2-PICOLINE	UG/KG	ND	18000	
PRONAMIDE	UG/KG	ND	18000	
PYRENE	UG/KG	ND	18000	
1,2,4,5-TETRACHLOROBENZENE	UG/KG	ND	18000	
1,2,4 TRICHLOROBENZENE	UG/KG	ND	18000	
2-FLUOROPHENOL	%REC/SURR	D	25-121	
PHENOL-D6	%REC/SURR	D	24-113	
2,4,6-TRIBROMOPHENOL	%REC/SURR	D	19-122	
2-FLUOROBIPHENYL	%REC/SURR	D	30-115	
NITROBENZENE-D5	%REC/SURR	D	23-120	
TERPHENYL-D14	%REC/SURR	D	18-137	
ANALYST	INITIALS	RW		

Comments:

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Date 08-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 803347
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 803360
 Project Name: NMOCD
 Project Location: SHELL-GRIMES
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id:	002	Sample Date/Time:	18-MAR-98 1402
Client Sample Id:	803360-02	Received Date:	24-MAR-98
Batch: ALS023		Extraction Date:	25-MAR-98
Blank: A	Dry Weight %: 90	Analysis Date:	01-APR-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZOIC ACID	UG/KG	ND	1900	
4-CHLORO-3-METHYLPHENOL	UG/KG	ND	370	
2-CHLOROPHENOL	UG/KG	ND	370	
2,4-DICHLOROPHENOL	UG/KG	ND	370	
2,6-DICHLOROPHENOL	UG/KG	ND	370	
2,4-DIMETHYLPHENOL	UG/KG	ND	370	
4,6-DINITRO-2-METHYLPHENOL	UG/KG	ND	1900	
2,4-DINITROPHENOL	UG/KG	ND	1900	
2-METHYLPHENOL	UG/KG	ND	370	
4-METHYLPHENOL	UG/KG	ND	370	
2-NITROPHENOL	UG/KG	ND	370	
4-NITROPHENOL	UG/KG	ND	1900	
PENTACHLOROPHENOL	UG/KG	ND	1900	
PHENOL	UG/KG	ND	370	
2,3,4,6-TETRACHLOROPHENOL	UG/KG	ND	370	
2,4,5-TRICHLOROPHENOL	UG/KG	ND	1900	
2,4,6-TRICHLOROPHENOL	UG/KG	ND	370	
ACENAPHTHENE	UG/KG	ND	370	
ACENAPHTHYLENE	UG/KG	ND	370	
ACETOPHENONE	UG/KG	ND	370	
4-AMINOBIIPHENYL	UG/KG	ND	370	
ANILINE	UG/KG	ND	370	
ANTHRACENE	UG/KG	ND	370	
BENZIDINE	UG/KG	ND	370	
BENZO (A) ANTHRACENE	UG/KG	ND	370	
BENZO (A) PYRENE	UG/KG	ND	370	
BENZO (B) FLUORANTHENE	UG/KG	ND	370	
BENZO (G,H,I) PERYLENE	UG/KG	ND	370	
BENZO (K) FLUORANTHENE	UG/KG	ND	370	
BENZYL ALCOHOL	UG/KG	ND	370	
BIS (2-CHLOROETHOXY) METHANE	UG/KG	ND	370	
BIS (2-CHLOROETHYL) ETHER	UG/KG	ND	370	
BIS (2-CHLOROISOPROPYL) ETHER	UG/KG	ND	370	
BIS (2-ETHYLHEXYL) PHTHALATE	UG/KG	ND	370	
4-BROMOPHENYL PHENYL ETHER	UG/KG	ND	370	
BUTYLBENZYL PHTHALATE	UG/KG	ND	370	
4-CHLOROANILINE	UG/KG	ND	370	
1-CHLORONAPHTHALENE	UG/KG	ND	370	
2-CHLORONAPHTHALENE	UG/KG	ND	370	
4-CHLOROPHENYL PHENYL ETHER	UG/KG	ND	370	

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Date 08-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 803347
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 803360
 Project Name: NMOCD
 Project Location: SHELL-GRIMES
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id: 002
 Client Sample Id: 803360-02
 Sample Date/Time: 18-MAR-98 1402
 Received Date: 24-MAR-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
CHRYSENE	UG/KG	ND	370	
DIBENZ (A,J) ACRIDINE	UG/KG	ND	370	
DIBENZO (A,H) ANTHRACENE	UG/KG	ND	370	
DIBENZOFURAN	UG/KG	ND	370	
1,2-DICHLOROBENZENE	UG/KG	ND	370	
1,3-DICHLOROBENZENE	UG/KG	ND	370	
1,4-DICHLOROBENZENE	UG/KG	ND	370	
3,3'-DICHLOROBENZIDINE	UG/KG	ND	1900	
DIETHYLPHTHALATE	UG/KG	ND	370	
P-DIMETHYLAMINOAZOBENZENE	UG/KG	ND	370	
7,12-DIMETHYLBENZ (A) ANTHRACENE	UG/KG	ND	370	
A-,A-DIMETHYLPHENETHYLAMINE	UG/KG	ND	370	
DIMETHYLPHTHALATE	UG/KG	ND	370	
DI-N-BUTYLPHTHALATE	UG/KG	ND	370	
2,4-DINITROTOLUENE	UG/KG	ND	370	
2,6-DINITROTOLUENE	UG/KG	ND	370	
DI-N-OCTYLPHTHALATE	UG/KG	ND	370	
DIPHENYLAMINE	UG/KG	ND	370	
1,2-DIPHENYLHYDRAZINE	UG/KG	ND	370	
FLUORANTHENE	UG/KG	ND	370	
FLUORENE	UG/KG	ND	370	
HEXACHLOROBENZENE	UG/KG	ND	370	
HEXACHLOROBUTADIENE	UG/KG	ND	370	
HEXACHLOROCYCLOPENTADIENE	UG/KG	ND	370	
HEXACHLOROETHANE	UG/KG	ND	370	
INDENO (1,2,3-CD) PYRENE	UG/KG	ND	370	
ISOPHORONE	UG/KG	ND	370	
3-METHYLCHOLANTHRENE	UG/KG	ND	370	
2-METHYLNAPHTHALENE	UG/KG	ND	370	
NAPHTHALENE	UG/KG	ND	370	
1-NAPHTHYLAMINE	UG/KG	ND	370	
2-NAPHTHYLAMINE	UG/KG	ND	370	
2-NITROANILINE	UG/KG	ND	370	
3-NITROANILINE	UG/KG	ND	370	
4-NITROANILINE	UG/KG	ND	370	
NITROBENZENE	UG/KG	ND	370	
N-NITROSODIMETHYLAMINE	UG/KG	ND	370	
N-NITROSODI-N-BUTYLAMINE	UG/KG	ND	370	
N-NITROSODIPHENYLAMINE	UG/KG	ND	370	
N-NITROSO-DI-N-PROPYLAMINE	UG/KG	ND	370	
N-NITROSOPIPERIDINE	UG/KG	ND	370	
PENTACHLOROBENZENE	UG/KG	ND	370	
PENTACHLORONITROBENZENE (PCNB)	UG/KG	ND	370	
PHENACETIN	UG/KG	ND	370	
PHENANTHRENE	UG/KG	ND	370	

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Date 08-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 803347
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 803360
Project Name: NMOCD
Project Location: SHELL-GRIMES
Test: ACID & BASE EXTRACTABLES (8270)
Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix: SOIL
QC Level: II

Lab Id: 002 Sample Date/Time: 18-MAR-98 1402
Client Sample Id: 803360-02 Received Date: 24-MAR-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
2-PICOLINE	UG/KG	ND	370	
PRONAMIDE	UG/KG	ND	370	
PYRENE	UG/KG	ND	370	
1,2,4,5-TETRACHLOROBENZENE	UG/KG	ND	370	
1,2,4 TRICHLOROBENZENE	UG/KG	ND	370	
2-FLUOROPHENOL	%REC/SURR	63	25-121	
PHENOL-D6	%REC/SURR	66	24-113	
2,4,6-TRIBROMOPHENOL	%REC/SURR	44	19-122	
2-FLUOROBIPHENYL	%REC/SURR	59	30-115	
NITROBENZENE-D5	%REC/SURR	63	23-120	
TERPHENYL-D14	%REC/SURR	60	18-137	
ANALYST	INITIALS	RW		

Comments:

Data Qualifiers for Final ReportAEN-Pensacola Inorganic/Organic

@	Adjusted reporting limit due to sample matrix (dilution prior to digestion and/or analysis)
+	Elevated reporting limit due to dilution into calibration range
*	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)
#	Elevated reporting limit due to insufficient sample size
D	Diluted out
J5	The reported value is quantitated as a TIC; therefore, it is estimated
ND = Not Detected	N/S = Not Submitted N/A = Not Applicable

Florida Projects Inorganic/Organic

Y1	Improper preservation, no preservative present in sample upon receipt
Y2	Improper preservation, incorrect preservative present in sample upon receipt
Y3	Improper preservation, sample temperature exceeded EPA temperature limits of 2-6°C upon receipt
Y (FL description)	The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Q	Sample held beyond the accepted holding time
I	The reported value is < Laboratory RL and > laboratory MDL
U1	The reported value is ≤ Laboratory MDL (value for sample result is reported as the MDL)
U (FL description)	Indicates the compound was analyzed for but not detected.
T	The reported value is < Laboratory MDL (value shall not be used for statistical analysis)
V	The analyte was detected in both the sample and the associated method blank.
J1	Surrogate recovery limits have been exceeded
J2	The sample matrix interfered with the ability to make any accurate determinations
J3	The reported value failed to meet the established quality control criteria for either precision or accuracy
J (FL description)	Estimated value; not accurate.

AFCEE Projects (under QAPP) and All Other (AEN-PN) Projects/Sites for Inorganic/Organic Parameters

J4	(For positive results) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$)
J (AFCEE description)	The analyte was positively identified, the quantitation is an estimation
R1	(For nondetects) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$)
R2	Improper preservation, no preservative present in sample upon receipt
R3	Improper preservation, incorrect preservative present in sample upon receipt
R4	Holding time exceeded
R5	Collection requirements not met, improper container used for sample
R (AFCEE description)	The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
F	< RL and > laboratory MDL
F (AFCEE description)	The analyte was positively identified but the associated numerical value is below the AFCEE or lab RL
U2	≤ Laboratory MDL (value for result will be the MDL, never below the MDL)
U (AFCEE description)	The analyte was analyzed for but not detected. The associated numerical value is at or below the MDL
B (AFCEE description)	The analyte was found in the associated blank, as well as in the sample

ICR Projects Inorganic/Organic

A	Acceptable
R6	Rejected

Examples: ICR Flags

R6 = Laboratory extracted the sample but the refrigerator malfunctioned so the extract became warm and client was notified

R6 = Sample arrived in laboratory in good condition; however, the laboratory did not analyze it within EPA's established holding time limit.

CLP and CLP-like Projects

Refer to referenced CLP Statement of Work (SOW) for explanation of data qualifiers

IDL = Laboratory Instrument Detection Limit

MDL = Laboratory Method Detection Limit

RL = Reporting Limit (AFCEE RLs are listed in the AFCEE QAPP)

CLP CRDL = CLP Contract Required Detection Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

CLP CRQL = CLP Contract Required Quantitation Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

Any time a sample arrives at the laboratory improperly preserved (at improper pH or temperature) or after holding time has expired or prepared or analyzed after holding time, client must be notified in writing (i.e. case narrative).

AEN-Pensacola uses the most current promulgated methods contained in the reference manuals.

Quality Control Report

Analysis: Group of Single Metals

Accession:	803347
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	803360
Project Name:	NMOCD
Project Location:	SHELL-GRIMES
Department:	METALS

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Date 07-Apr-98

"Metals Quality Control Report"

Parameter:	MERCURY	SILVER	ALUMINUM	ARSENIC	BORON	BARIUM
Batch Id:	M4S019	A6S048	L6S048	R6S048	O6S048	B6S048
Blank Result:	<0.02	<1	<6	<5	<9	<1
Anal. Method:	7471A	6010A	6010A	6010A	6010A	6010A
Prep. Method:	7471A	3050A	3050A	3050A	3050A	3050A
Analysis Date:	25-MAR-98	02-APR-98	02-APR-98	02-APR-98	02-APR-98	02-APR-98
Prep. Date:	25-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98

Sample Duplication

Sample Dup:	803183-1	803357-4	803357-4	803357-4	803357-4	803357-4
Rept Limit:	<0.02	<1	<6	<5	<9	<1
Sample Result:	0.43	17	2000	240	170	190
Dup Result:	0.46	18	2100	250	190	210
Sample RPD:	7	6	5	4	11	10
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	803183-1	803357-4	803357-4	803357-4	803357-4	803357-4
Rept Limit:	<0.02	<1	<6	<5	<9	<1
Sample Result:	<0.05	<1	2000	58	<9	18
Spiked Result:	0.43	17	2000	240	170	190
Spike Added:	0.42	20	200	200	200	200
% Recovery:	102	85	NC*	91	85	86
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	0.0040	2.5	25	4.9	5.0	4.9
True Result:	0.0040	2.5	25	5.0	5.0	5.0
% Recovery:	100	100	100	98	100	98
% Rec Limits:	90-110	95-105	95-105	95-105	95-105	95-105

LCS

LCS Result:	0.95	48	4300	130	1.90	170
True Result:	1.16	57.0	4810	151	2.0	178
% Recovery:	82	84	89	86	95	96
% Rec Limits:	69-131	74-126	66-134	74-126	80-120	77-123

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Date 07-Apr-98

"Metals Quality Control Report"

Parameter:	BERYLLIUM	CALCIUM	CADMIUM	COBALT	CHROMIUM	COPPER
Batch Id:	Y6S048	I6S048	C6S048	T6S048	H6S048	F6S048
Blank Result:	<0.4	<100	<0.5	<1	<1	<1
Anal. Method:	6010A	6010A	6010A	6010A	6010A	6010A
Prep. Method:	3050A	3050A	3050A	3050A	3050A	3050A
Analysis Date:	02-APR-98	02-APR-98	02-APR-98	02-APR-98	02-APR-98	02-APR-98
Prep. Date:	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98

Sample Duplication

Sample Dup:	803357-4	803357-4	803357-4	803357-4	803357-4	803357-4
Rept Limit:	<0.4	<100	<0.5	<1	<1	<1
Sample Result:	180	3700	170	190	180	180
Dup Result:	190	3900	180	200	200	190
Sample RPD:	5	5	6	5	11	5
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	803357-4	803357-4	803357-4	803357-4	803357-4	803357-4
Rept Limit:	<0.4	<100	<0.5	<1	<1	<1
Sample Result:	<0.4	4200	<0.5	<1	2	2
Spiked Result:	180	5700Q	170	190	180	180
Spike Added:	200	2000	200	200	200	200
% Recovery:	90	75	85	95	89	89
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	2.5	26	4.8	5.0	5.0	5.0
True Result:	2.5	25	5.0	5.0	5.0	5.0
% Recovery:	100	104	96	100	100	100
% Rec Limits:	95-105	95-105	95-105	95-105	95-105	95-105

LCS

LCS Result:	48	1900	120	50	54	53
True Result:	51.6	2140	136	53.4	57.6	60.0
% Recovery:	93	89	88	94	94	88
% Rec Limits:	78-122	75-125	77-123	79-129	77-123	79-121

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Date 07-Apr-98

"Metals Quality Control Report"

Parameter:	IRON	POTASSIUM	MAGNESIUM	MANGANESE	MOLYBDENUM	SODIUM
Batch Id:	N6S048	X6S048	J6S048	G6S048	D6S048	16S048
Blank Result:	<2	<200	<20	<1	<1	<20
Anal. Method:	6010A	6010A	6010A	6010A	6010A	6010A
Prep. Method:	3050A	3050A	3050A	3050A	3050A	3050A
Analysis Date:	02-APR-98	02-APR-98	02-APR-98	02-APR-98	02-APR-98	02-APR-98
Prep. Date:	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98

Sample Duplication

Sample Dup:	803357-4	803357-4	803357-4	803357-4	803357-4	803357-4
Rept Limit:	<2	<200	<20	<1	<1	<20
Sample Result:	620	1900	2100	190	180	1700
Dup Result:	620	2000	2400	210	190	1800
Sample RPD:	0	5	13	10	5	6
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	803357-4	803357-4	803357-4	803357-4	803357-4	803357-4
Rept Limit:	<2	<200	<20	<1	<1	<20
Sample Result:	390	<200	1300	29	<1	27
Spiked Result:	620	1900	3000Q	190	180	1700
Spike Added:	200	2000	2000	200	200	2000
% Recovery:	115	95	85	81	90	84
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	25	26	25	5.0	4.9	25
True Result:	25	25	25	5.0	5.0	25
% Recovery:	100	104	100	100	98	100
% Rec Limits:	95-105	95-105	95-105	95-105	95-105	95-105

LCS

LCS Result:	7200	2600	1600	260	90	680
True Result:	8270	2890	1710	285	94.6	854
% Recovery:	87	90	94	91	95	80
% Rec Limits:	61-139	78-122	81-119	81-119	74-126	68-132

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Date 07-Apr-98

"Metals Quality Control Report"

Parameter:	NICKEL	LEAD	ANTIMONY	SELENIUM	THALLIUM	VANADIUM
Batch Id:	E6S048	P6S048	36S048	S6S048	46S048	V6S048
Blank Result:	<2	<5	<6	<10	<10	<1
Anal. Method:	6010A	6010A	6010A	6010A	6010A	6010A
Prep. Method:	3050A	3050A	3050A	3050A	3050A	3050A
Analysis Date:	02-APR-98	02-APR-98	02-APR-98	02-APR-98	02-APR-98	02-APR-98
Prep. Date:	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98	31-MAR-98

Sample Duplication

Sample Dup:	803357-4	803357-4	803357-4	803357-4	803357-4	803357-4
Rept Limit:	<2	<5	<6	<10	<10	<1
Sample Result:	190	180	160	180	180	190
Dup Result:	200	200	170	190	200	200
Sample RPD:	5	11	6	5	11	5
Max RPD:	20	20	20	20	20	20
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	803357-4	803357-4	803357-4	803357-4	803357-4	803357-4
Rept Limit:	<2	<5	<6	<10	<10	<1
Sample Result:	<2	<5	<6	<10	<10	1
Spiked Result:	190	180	160	180	180	190
Spike Added:	200	200	200	200	200	200
% Recovery:	95	90	80	90	90	95
% Rec Limits:	75-125	75-125	75-125	75-125	75-125	75-125
Dry Weight%	N/A	N/A	N/A	N/A	N/A	N/A

ICV

ICV Result:	5.0	5.0	5.1	5.0	4.8	5.0
True Result:	5.0	5.0	5.0	5.0	5.0	5.0
% Recovery:	100	100	102	100	96	100
% Rec Limits:	95-105	95-105	95-105	95-105	95-105	95-105

LCS

LCS Result:	130	76	17	120	47	140
True Result:	138	84.9	23.2	132	50.8	150
% Recovery:	94	90	73	91	93	93
% Rec Limits:	78-122	45-127	50-150	74-126	57-142	68-132

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Date 07-Apr-98

"Metals Quality Control Report"

Parameter:	ZINC
Batch Id:	56S048
Blank Result:	<2
Anal. Method:	6010A
Prep. Method:	3050A
Analysis Date:	02-APR-98
Prep. Date:	31-MAR-98

Sample Duplication

Sample Dup:	803357-4
Rept Limit:	<2

Sample Result:	200
Dup Result:	230
Sample RPD:	14
Max RPD:	20
Dry Weight%	N/A

Matrix Spike

Sample Spiked:	803357-4
Rept Limit:	<2

Sample Result:	31
Spiked Result:	200
Spike Added:	200
% Recovery:	85
% Rec Limits:	75-125
Dry Weight%	N/A

ICV

ICV Result:	5.0
True Result:	5.0
% Recovery:	100
% Rec Limits:	95-105

LCS

LCS Result:	860
True Result:	986
% Recovery:	87
% Rec Limits:	76-124

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"Quality Control Comments"

Batch Id: Comments:

Batch Id	Comments
M4S019	ANALYST:JL
M4S019	The results reported under 'Sample Duplication' are the MS/MSD.
A6S048	ANALYST:GJ
A6S048	The results reported under 'Sample Duplication' are the MS/MSD.
L6S048	ANALYST:GJ
L6S048	The results reported under 'Sample Duplication' are the MS/MSD.
R6S048	ANALYST:GJ
R6S048	The results reported under 'Sample Duplication' are the MS/MSD.
O6S048	ANALYST:GJ
O6S048	The results reported under 'Sample Duplication' are the MS/MSD.
B6S048	ANALYST:GJ
B6S048	The results reported under 'Sample Duplication' are the MS/MSD.
Y6S048	ANALYST:GJ
Y6S048	The results reported under 'Sample Duplication' are the MS/MSD.
I6S048	ANALYST:GJ
I6S048	The results reported under 'Sample Duplication' are the MS/MSD.
C6S048	ANALYST:GJ
C6S048	The results reported under 'Sample Duplication' are the MS/MSD.
T6S048	ANALYST:GJ
T6S048	The results reported under 'Sample Duplication' are the MS/MSD.
H6S048	ANALYST:GJ
H6S048	The results reported under 'Sample Duplication' are the MS/MSD.
F6S048	ANALYST:GJ
F6S048	The results reported under 'Sample Duplication' are the MS/MSD.
N6S048	ANALYST:GJ
N6S048	The results reported under 'Sample Duplication' are the MS/MSD.
X6S048	ANALYST:GJ
X6S048	The results reported under 'Sample Duplication' are the MS/MSD.
J6S048	ANALYST:GJ
J6S048	The results reported under 'Sample Duplication' are the MS/MSD.
G6S048	ANALYST:GJ
G6S048	The results reported under 'Sample Duplication' are the MS/MSD.
D6S048	ANALYST:GJ
D6S048	The results reported under 'Sample Duplication' are the MS/MSD.
16S048	ANALYST:GJ
16S048	The results reported under 'Sample Duplication' are the MS/MSD.
E6S048	ANALYST:GJ
E6S048	The results reported under 'Sample Duplication' are the MS/MSD.
P6S048	ANALYST:GJ
P6S048	The results reported under 'Sample Duplication' are the MS/MSD.
36S048	ANALYST:GJ
36S048	The results reported under 'Sample Duplication' are the MS/MSD.
S6S048	ANALYST:GJ
S6S048	The results reported under 'Sample Duplication' are the MS/MSD.
46S048	ANALYST:GJ
46S048	The results reported under 'Sample Duplication' are the MS/MSD.
V6S048	ANALYST:GJ
V6S048	The results reported under 'Sample Duplication' are the MS/MSD.
56S048	ANALYST:GJ
56S048	The results reported under 'Sample Duplication' are the MS/MSD.

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

N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW THE REPORTING LIMIT;
THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
N/D = NOT DETECTED.
DISS. OR D = DISSOLVED
T & D = TOTAL AND DISSOLVED
R = REACTIVE
T = TOTAL
G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X THE REPORTING LIMIT AND
THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".
Q = THE ANALYTICAL (POST-DIGESTION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY
BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DIGESTION) SPIKE.
= ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.
+ = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE. (DILUTION PRIOR
TO ANALYSIS)
@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX. (DILUTION PRIOR TO
DIGESTION)
P = ANALYTICAL (POST DIGESTION) SPIKE.
I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
N/C* = NOT CALCULABLE; SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE
ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING
LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER,
THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= THE RELATIVE PERCENT DIFFERENCE (RPD) EXCEEDS THE AEN CONTROL LIMIT
AND IS "OUT OF CONTROL; DUE TO A NON-HOMOGENEOUS SAMPLE MATRIX.
J = (FLORIDA DEP 'J' FLAG) - MATRIX SPIKE AND POST SPIKE RECOVERY IS OUT OF
THE ACCEPTABLE RANGE. SEE OUT OF CONTROL EVENTS FORM.
U = (FLORIDA DEP 'U' FLAG) - THE COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.
S = METHOD OF STANDARD ADDITIONS (MSA) WAS PERFORMED ON THIS SAMPLE.

FROM QUALITY CONTROL REPORT:

RPD= RELATIVE PERCENT DEVIATION.

REPT LIMIT= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.

NOTE: THE UNITS REPORTED ON THE QUALITY CONTROL REPORT ARE REPORTED ON AN AS
RUN BASIS. (NOT ADJUSTED FOR DRY WEIGHT).

SW-846, 3rd Edition, EPA - approved method update.

EPA 600/4-79-020, Revised March 1983.

NIOSH Manual of Analytical Methods, 4th Edition.

Standard Methods For the Examination of Water and Wastewater, 18th Edition, 1992.

Methods For the Determination of Metals in Environmental Samples - Supplement I,
EPA 600/R-94-111, May 1994.

GJ = GARY JACOBS
JLH = JAMES L. HERED

GSP = GARY ST PERE
JL = JANET LECLEAR

Quality Control Report

Analysis: ACID & BASE EXTRACTABLES (8270)

Accession:	803347
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	803360
Project Name:	NMOCD
Project Location:	SHELL-GRIMES
Department:	ORGANIC/MS

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Date 08-Apr-98

"QC Report"

Title: Soil Blank
 Batch: ALS023
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Blank Id: A Date Analyzed: 01-APR-98 Date Extracted: 25-MAR-98

Parameters:	Units:	Results:	Reporting Limits:
P-CHLORO-M-CRESOL	UG/KG	ND	10
2-CHLOROPHENOL	UG/KG	ND	10
O-CRESOL	UG/KG	ND	10
M,P CRESOL	UG/KG	ND	10
2,4-DICHLOROPHENOL	UG/KG	ND	10
2,6-DICHLOROPHENOL	UG/KG	ND	10
2,4-DIMETHYLPHENOL	UG/KG	ND	10
4,6-DINITRO-O-CRESOL	UG/KG	ND	50
2,4-DINITROPHENOL	UG/KG	ND	10
2-NITROPHENOL	UG/KG	ND	10
4-NITROPHENOL	UG/KG	ND	50
PENTACHLOROPHENOL	UG/KG	ND	50
PHENOL	UG/KG	ND	10
2,3,4,6-TETRACHLOROPHENOL	UG/KG	ND	10
2,4,5-TRICHLOROPHENOL	UG/KG	ND	50
2,4,6-TRICHLOROPHENOL	UG/KG	ND	10
ACENAPHTHENE	UG/KG	ND	10
ACENAPHTHYLENE	UG/KG	ND	10
ACETOPHENONE	UG/KG	ND	10
2-ACETYLAMINOFUORENE	UG/KG	ND	10
4-AMINOBIIPHENYL	UG/KG	ND	10
ANILINE	UG/KG	ND	10
ANTHRACENE	UG/KG	ND	10
ARAMITE	UG/KG	ND	10
BENZO (A) ANTHRACENE	UG/KG	ND	10
BENZO (A) PYRENE	UG/KG	ND	10
BENZO (B) FLUORANTHENE	UG/KG	ND	10
BENZO (G,H,I) PERYLENE	UG/KG	ND	10
BENZO (K) FLUORANTHENE	UG/KG	ND	10
BENZYL ALCOHOL	UG/KG	ND	10
BIS(2-CHLORO-1-METHYLETHYL) ETHER	UG/KG	ND	10
BIS(2-CHLOROETHOXY) METHANE	UG/KG	ND	10
BIS(2-CHLOROETHYL) ETHER	UG/KG	ND	10
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	ND	10
4-BROMOPHENYL PHENYL ETHER	UG/KG	ND	10
BUTYLBENZYL PHTHALATE	UG/KG	ND	10
P-CHLOROANILINE	UG/KG	ND	10
CHLOROBENZILATE	UG/KG	ND	10
2-CHLORONAPHTHALENE	UG/KG	ND	10
4-CHLOROPHENYL PHENYL ETHER	UG/KG	ND	10
CHRYSENE	UG/KG	ND	10
DIALATE	UG/KG	ND	10
DIBENZO (A,H) ANTHRACENE	UG/KG	ND	10
DIBENZOFURAN	UG/KG	ND	10
1,2-DICHLOROBENZENE	UG/KG	ND	10
1,3-DICHLOROBENZENE	UG/KG	ND	10

[0] Page 2
Date 08-Apr-98

"QC Report"

Title: Soil Blank
 Batch: ALS023
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Parameters:	Units:	Results:	Reporting Limits:
1,4-DICHLOROBENZENE	UG/KG	ND	10
3,3'-DICHLOROBENZIDINE	UG/KG	ND	50
DIETHYLPHTHALATE	UG/KG	ND	10
DIMETHOATE	UG/KG	ND	10
P-DIMETHYLAMINOAZOBENZENE	UG/KG	ND	10
7,12-DIMETHYLBENZ (A) ANTHRACENE	UG/KG	ND	10
3,3'-DIMETHYLBENZIDINE	UG/KG	ND	10
A,A-DIMETHYLPHENETHYLAMINE	UG/KG	ND	10
DIMETHYLPHTHALATE	UG/KG	ND	10
DI-N-BUTYLPHTHALATE	UG/KG	ND	10
M-DINITROBENZENE	UG/KG	ND	10
2,4-DINITROTOLUENE	UG/KG	ND	10
2,6-DINITROTOLUENE	UG/KG	ND	10
DI-N-OCTYLPHTHALATE	UG/KG	ND	10
DIPHENYLAMINE	UG/KG	ND	10
ETHYL METHANESULFONATE	UG/KG	ND	10
FAMPHUR	UG/KG	ND	10
FLUORANTHENE	UG/KG	ND	10
FLUORENE	UG/KG	ND	10
HEXACHLOROBENZENE	UG/KG	ND	10
HEXACHLOROBUTADIENE	UG/KG	ND	10
HEXACHLOROCYCLOPENTADIENE	UG/KG	ND	10
HEXACHLOROETHANE	UG/KG	ND	10
HEXACHLOROPHENE	UG/KG	ND	10
HEXACHLOROPROPENE	UG/KG	ND	10
INDENO (1,2,3-CD) PYRENE	UG/KG	ND	10
ISODRIN	UG/KG	ND	10
ISOPHORONE	UG/KG	ND	10
ISOSAFROLE	UG/KG	ND	10
KEPONE	UG/KG	ND	10
METHAPYRILENE	UG/KG	ND	10
3-METHYLCHOLANTHRENE	UG/KG	ND	10
METHYL METHANESULFONATE	UG/KG	ND	10
1-METHYLNAPHTHALENE	UG/KG	ND	10
2-METHYLNAPHTHALENE	UG/KG	ND	10
NAPHTHALENE	UG/KG	ND	10
1,4-NAPHTHOQUINONE	UG/KG	ND	10
1-NAPHTHYLAMINE	UG/KG	ND	10
2-NAPHTHYLAMINE	UG/KG	ND	10
2-NITROANILINE	UG/KG	ND	50
3-NITROANILINE	UG/KG	ND	50
4-NITROANILINE	UG/KG	ND	50
NITROBENZENE	UG/KG	ND	10
5-NITRO-O-TOLUIDINE	UG/KG	ND	10
4-NITROQUINOLINE-1-OXIDE	UG/KG	ND	10
N-NITROSODIETHYLAMINE	UG/KG	ND	10
N-NITROSODIMETHYLAMINE	UG/KG	ND	10

[0] Page 3
Date 08-Apr-98

"QC Report"

Title: Soil Blank
 Batch: ALS023
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Parameters:	Units:	Results:	Reporting Limits:
N-NITROSODI-N-BUTYLAMINE	UG/KG	ND	10
N-NITROSODIPHENYLAMINE	UG/KG	ND	10
N-NITROSOMETHYLETHYLAMINE	UG/KG	ND	10
N-NITROSOMORPHOLINE	UG/KG	ND	10
N-NITROSOPIPERIDINE	UG/KG	ND	10
N-NITROSOPYRROLIDINE	UG/KG	ND	10
PARATHION	UG/KG	ND	10
PENTACHLOROBENZENE	UG/KG	ND	10
PENTACHLOROETHANE	UG/KG	ND	10
PENTACHLORONITROBENZENE	UG/KG	ND	10
PHENACETIN	UG/KG	ND	10
PHENANTHRENE	UG/KG	ND	10
2-PICOLINE	UG/KG	ND	10
P-PHENYLENEDIAMINE	UG/KG	ND	10
PRONAMIDE	UG/KG	ND	10
PYRENE	UG/KG	ND	10
PYRIDINE	UG/KG	ND	10
SAFROLE	UG/KG	ND	10
SULFOTEPP	UG/KG	ND	10
1,2,4,5-TETRACHLOROBENZENE	UG/KG	ND	10
THIONAZIN	UG/KG	ND	10
O-TOLUIDINE	UG/KG	ND	10
1,2,4 TRICHLOROBENZENE	UG/KG	ND	10
SYM-TRINITROBENZENE	UG/KG	ND	10
O,O,O-TRIETHYL PHOSPHOROTHIATE	UG/KG	ND	10
BENZIDINE	UG/KG	ND	10
BIS(2-CHLOROISOPROPYL) ETHER	UG/KG	ND	10
2-(SEC BUTYL) 4,6-DINITRO-PHENOL (DINOSEB)	UG/KG	ND	10
N-NITROSO-DI-N-PROPYLAMINE	UG/KG	ND	10
6-METHYL CHRYSENE	UG/KG	ND	20
INDENE	UG/KG	ND	20
QUINOLINE	UG/KG	ND	50
BENZENETHIOL	UG/KG	ND	20
PARATOLIUDINE	UG/KG	ND	50
TOLUENE DIISOCYANATE	UG/KG	ND	50
TOLUENE DIAMINE	UG/KG	ND	50
MONONITROTOLUENE	UG/KG	ND	50
DIETHYLENE GLYCOL MONOBUTYL ETHER	UG/KG	ND	10
2-FLUOROPHENOL	%REC/SURR	74	25-121
PHENOL-D6	%REC/SURR	77	24-113
2,4,6-TRIBROMOPHENOL	%REC/SURR	64	19-122
2-FLUOROBIPHENYL	%REC/SURR	72	30-115
NITROBENZENE-D5	%REC/SURR	73	23-120
TERPHENYL-D14	%REC/SURR	100	18-137
ANALYST	INITIALS	RW	

Comments:

[0] Page 4
Date 08-Apr-98

"QC Report"

Title: Soil LCS
Batch: ALS023
Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

RS Date Analyzed: 01-APR-98

RS Date Extracted: 25-MAR-98

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	Rec Lmts
PHENOL	2500	<330	2300	92	5-112
2-CHLOROPHENOL	2500	<330	2267	91	38-123
1,4-DICHLOROBENZENE	1667	<330	1400	84	50-111
N-NITRO-DI-N-PROPYLAMINE	1667	<330	1467	88	39-121
1,2,4 TRICHLOROBENZENE	1667	<330	1367	82	49-115
4-CHLORO-3-METHYLPHENOL	2500	<330	2200	88	37-128
ACENAPHTHENE	1667	<330	1467	88	53-115
4-NITROPHENOL	2500	<1700	2067	83	32-126
2,4-DINITROTOLUENE	1667	<330	1433	86	56-118
PENTACHLOROPHENOL	2500	<1700	1800	72	31-146
PYRENE	1667	<330	1700	102	52-115

Surrogates:		
NITROBENZENE-D5	84	23-120
2-FLUOROBIPHENYL	77	30-115
TERPHENYL-D14	90	18-137
PHENOL-D6	88	24-113
2-FLUOROPHENOL	86	25-121
2,4,6-TRIBROMOPHENOL	63	19-122

Comments:

Notes:

N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/KG = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE
PROGRAM AND REFERENCED METHOD.

[0] Page 5
Date 08-Apr-98

"QC Report"

Title: Soil Matrix Spike/Matrix Spike Duplicate
 Batch: ALS023
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Dry Weight %: 90
 Sample Spiked: 803347-2

MS Date Analyzed: 07-APR-98
 MSD Date Analyzed: 07-APR-98

MS Date Extracted: 03-APR-98
 MSD Date Extracted: 03-APR-98

Parameters:	Spike Added	Sample Conc	MS Conc	MS %Rec	MSD Conc	MSD %Rec	RPD	RPD Lmts	Rec Lmts
PHENOL	2800	<370	1600	57	1900	68	18	22	40-103
2-CHLOROPHENOL	2800	<370	1700	61	1900	68	11	27	39-104
1,4-DICHLOROBENZENE	1852	<366.7	1037	56	1222	66	16	27	43-109
N-NITRO-DI-N-PROPYLAMINE	1852	<366.7	925.6	50	1186	64	25	27	29-117
1,2,4 TRICHLOROBENZENE	1852	<366.7	1000	54	1148	62	14	21	49-126
4-CHLORO-3-METHYLPHENOL	2800	<370	1600	57	1800	64	12	28	32-117
ACENAPHTHENE	1852	<366.7	1148	62	1259	68	9	20	47-126
4-NITROPHENOL	2800	<1900	1100	39	1400	50	25	42	1-124
2,4-DINITROTOLUENE	1852	<366.7	963.3	52	1148	62	18	23	43-110
PENTACHLOROPHENOL	2800	<1900	1100	39	1400	50	25	33	14-144
PYRENE	1852	<366.7	1111	60	1370	74	21	31	52-115

Surrogates:	MS %Rec	MSD %Rec	Rec Lmts
NITROBENZENE-D5	67	78	23-120
2-FLUOROBIPHENYL	60	71	30-115
TERPHENYL-D14	62	75	18-137
PHENOL-D6	66	77	24-113
2-FLUOROPHENOL	63	74	25-121
2,4,6-TRIBROMOPHENOL	47	48	19-122

Comments:

THIS MATRIX SPIKE/MATRIX SPIKE DUPLICATE IS A RE-EXTRACT OF THE ORIGINAL SAMPLE (EXTRACTED 25-MAR-98). RE-EXTRACTION WAS PERFORMED DUE TO SURROGATE RECOVERY(S) OUTSIDE ACCEPTANCE LIMITS.

Notes:

N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
 UG/KG = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
 * = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
 SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
MG/M3 = MILLIGRAMS PER CUBIC METER.
NG = NANOGRAMS.
UG = MICROGRAMS.
PPBV = PARTS PER BILLION/VOLUME.
< = LESS THAN.
ND = NOT DETECTED ABOVE REPORT LIMIT.
RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.
RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRY WEIGHT BASIS.

DUE TO THE NATURE OF THE SAMPLE MATRIX, MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS CANNOT BE PERFORMED FOR AIR ANALYSIS.

CLP SOW 1991, USEPA CONTRACT LABORATORY PROGRAM, STATEMENT OF WORK FOR ORGANICS ANALYSIS, DOCUMENT NUMBER OLM01.8, AUGUST 1991.

AEN-PN USES THE MOST CURRENT PROMULGATED METHODS CONTAINED IN THE REFERENCE MANUALS.

LP = LEVERNE PETERSON	RW = RITA WINGO
LD = LARRY DILMORE	BDH = BRUCE D. HUNT
DWB = DAVID BOWERS	HB = HEATHER E. BLAIR

American Environmental Network of Florida

PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 803347

Date Received: 3/24/98

- | | |
|---|--|
| <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: AEN-SOP 1055)</p> <p>4. Were all samples properly labeled and identified? <u>Yes</u> No*</p> <p>5. Did samples require splitting? <u>Yes*</u> No
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? (Check pH of all H₂O requiring preservative except VOA vials that require zero headspace)* <u>Yes</u> No* <u>N/A</u></p> <p>9. Is there sufficient volume for analysis requested? <u>Yes</u> No*</p> <p>10. Were samples received within Holding Time? (REFER TO AEN-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. <u>Yes*</u> No <u>N/A</u></p> <p>12. If sent, were matrix spike bottles returned? <u>Yes</u> No* <u>N/A</u></p> <p>13. Was Project Manager notified of problems? (initials: _____) <u>Yes</u> No* <u>N/A</u></p> |
|---|--|

Airbill Number(s): 357 9753 843

Shipped By: FEDEX

Cooler Number(s): THESRS

Shipping Charges: N/A

Cooler Weight(s): 9 #

Cooler Temp(s) (°C): CCK 8 60C

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

(USE BACK OF PSIF FOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: WS Date: 3/24/98 Logged By: [Signature] Date: 24-MAR-98

- * Note all Out-of-Control and/or questionable events on Comment Section of this form.
- * Note who requested the splitting of samples on the Comment Section of this form.
- + 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 (AEN-SOP 938, section 2.2.9).
- * According to EPA, 1/4" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).



Interlab Chain of Custody

DATE: 3/23 PAGE: 1 OF 1

[illegible]

CHAIN OF CUSTODY

DATE: 3-18-98 PAGE: 1 OF 1

AEN(NM) Accession #

803360 / 803347

SHADED AREAS FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: Bill Olson			
COMPANY: NM Oil Conservation Division			
ADDRESS: 2044 S. Pacheco Street			
Santa Fe, NM 87505			
PHONE: (505) 827-7154			
FAX: (505) 827-8177			
BILL TO: NM Oil Conservation Division			
COMPANY: Santa Fe, NM			
ADDRESS: 2044 S. Pacheco			
Santa Fe, NM 87505			
SAMPLE ID	DATE	TIME	LAB ID
Casey SS1	3-18-98	1339	Soil
Casey SS2	3-18-98	1402	Soil
Petroleum Hydrocarbons (418.1) TRPH			
(MOD.8015) Diesel/Direct Inject			
(M8015) Gas/Purge & Trap			
8021 (BTEX)/8015 (Gasoline)			
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)			
Herbicides (615/8151)			
Base/Neutral/Acid Compounds GC/MS (625/8270)			
Polynuclear Aromatics (610/8310)			
General Chemistry:			
Priority Pollutant Metals (13)			
Target Analyte List Metals (23)			
RCRA Metals (8)			
RCRA Metals by TCLP (Method 1311)			
Metals: Method 6010			
Hg and Se by AA			
NUMBER OF CONTAINERS: 2			

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ NO: Casey	(RUSH) ☐ 12hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒	
PROJ NAME: Shell-Grimes	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER		
P.O. NO:	METHANOL PRESERVATION ☐		
SHIPPED VIA:	COMMENTS: FIXED FEE ☐		
SAMPLE RECEIPT:	Preservative Ice		
NO. CONTAINERS:			
CUSTODY SEALS:			
RECEIVED INTACT:			
BLUE ICE/ICE:			
Direct From Field			
RELINQUISHED BY:		RELINQUISHED BY:	
Signature: [Signature]	Time: 1643	Signature: [Signature]	Time: 1645
Printed Name: Willie Ober	Date: 3/20/98	Printed Name: [Signature]	Date: 3/20/98
Company: NM OCS		Company: American Environmental Network (NM), Inc.	
RECEIVED BY: (LAB)		RECEIVED BY: (LAB)	
Signature: [Signature]	Time: 1645	Signature: [Signature]	Time: 1645
Printed Name: [Signature]	Date: 3/20/98	Printed Name: [Signature]	Date: 3/20/98
Company: American Environmental Network (NM), Inc.		Company: American Environmental Network (NM), Inc.	



American Environmental Network

3000 Weston Parkway • Cary, NC 27513 • (919) 677-0090 • Fax (919) 677-0427 • 1-800-444-9919

April 23, 1998

Kim McNeill
American Environmental Network
2709D PanAmerican Freeway NE
Albuquerque, NM 87107

AEN Project No.: 2399-092
AEN Reference No.: L10299
Client Project I.D.: AEN-NM FOR NMOCD

Dear Ms. McNeill:

Transmitted herewith are the results of analyses on two sample(s) submitted to our laboratory.

The sample(s) were received intact.

Analyses were performed according to approved methodologies and meet the requirements of the AEN Quality Assurance Program except where noted. Please see the enclosed reports for your results and a copy of the Chain of Custody documentation.

Thank you for selecting AEN for your sample analysis. Please do not hesitate to call me at 1-919-677-0090 or 1-800-444-9919 should you have any questions regarding this report. We look forward to serving you in the future.

Very truly yours,

AEN, Inc.

Barbara Trulick
Project Management

IEA/AEN-NORTH CAROLINA CERTIFICATIONS

Certifying State	Program Type	Lab ID #
Alabama	DW	40210
Arizona	DW, WW (Radiolog. Only)	AZ0572
California	DW, WW, HW Radiolog.	1768
Connecticut	DW, WW, Radiolog.	PH-0135
Iowa	WW	352
Kansas	DW, HW, WW, Radiolog.	E-10158
Kentucky	DW	90049
Maryland	DW, Radiolog.	259
Massachusetts	DW, WW	M-NC039
New Jersey	DW, WW Radiolog.	67719 67681
New York	Radiolog.	11422
North Carolina	DW WW Radiolog.	DW 37720 WW 84 Rad 37720
South Carolina	DW, WW, HW	99021
Tennessee	DW UST App List	02914
Utah	Radiolog. RCRA	E-206 E-226
Virginia	DW, Radiolog.	00179
West Virginia	DW, Radiolog.	9908C
Wisconsin	WW	998051010

DW=Drinking Water WW=Wastewater HW=Hazardous Waste Radiolog.=Radiological

Industrial & Environmental Analysts, Inc. (IEA)
Level 2 Metals Results Report

IEA Project #: 2399-092

IEA Sample #: L10299-001

Client Name: AEN-NEW MEXICO

Client Proj. I.D.: AEN-NM FOR NMOCD

Sample I.D.: 803360-01

Matrix: SOIL

Date Received: 04/04/98

Date Sampled: 03/18/98

Parameter	Method	Quant Limit	Result (mg/kg)	Date Prepared	Date Analyzed	IEA Analyst	Prep Run	Batch
SILICA	SW846 6010	1.78	1073	04/06/98	04/01/98	RH	R14956	03309802P

Comments:

Industrial & Environmental Analysts, Inc. (IEA)
Level 2 Metals Results Report

IEA Project #: 2399-092

IEA Sample #: L10299-002

Client Name: AEN-NEW MEXICO

Client Proj. I.D.: AEN-NM FOR NMOCD

Sample I.D.: 803360-02

Matrix: SOIL

Date Received: 04/04/98

Date Sampled: 03/18/98

Parameter	Method	Quant Limit	Result (mg/kg)	Date Prepared	Date Analyzed	IEA Analyst	Prep Batch
SILICA	SW846 6010	1.96	1630	04/06/98	04/01/98	RH	R14956 03309802P

Comments:

Industrial & Environmental Analysts, Inc. (IEA)
Level 2 Metals Results Report
PREPARATION BLANKS

IEA Project #: 2399-092

Matrix: SOIL

Client Name: AEN-NEW MEXICO

Client Proj. I.D.: AEN-NM FOR NMOC

Sample Number: PBS 04069801P

Parameter	Method	Quant Limit	Result (mg/kg)	Date Prepared	Date Analyzed	Analyst	IEA Run	Prep Batch
SILICA	SW846 6010	20.0	BQL	04/06/98	04/07/98	RH	R14956	04069801P

Corresponding Samples:
L10299-001

Comments:

Industrial & Environmental Analysts, Inc. (IEA)
Level 2 Metals Results Report
DUPLICATE ANALYSIS

IEA Project #: 2399-001
IEA Sample #: L10285-002
Matrix: SOIL

Parameter	Method	Duplicate Analysis			Date Analyzed	Samp Run	Dup Run	Prep Batch
		Sample (mg/kg)	Duplicate (mg/kg)	RPD %				
SILICA	SW846 6010	2088	1734	185.	04/07/98	R14956	R14956	04069801P

$$\text{RPD} = \frac{\text{S-D}}{(\text{S+D})/2} \times 100$$

Control Limits: +/- 20%

Corresponding Samples:
L10299-001

Comments: * % RPD outside control limits.

Industrial & Environmental Analysts, Inc. (IEA)
Level 2 Metals Results Report
SPIKE RESULTS

IEA Project #: 2399-001
IEA Sample #: L10285-002
Matrix: SOIL

Parameter	Method	Spike Results (mg/kg)				Date Analyzed	Samp Run	Spike Run	Prep Batch
		SA	SR	SSR	%RCY				
SILICA	SW846 6010	102	2088	3005	899.	04/07/98	R14956	R14956	04069801P

$\%R = ((SSR - SR) / SA) * 100$

Control Limits: 75-125%

Corresponding Samples:
L10299-001

Comments: * % Recovery outside control limits.

Industrial & Environmental Analysts, Inc. (IEA)
Level 2 Metals Results Report
SPIKE DUPLICATE RESULTS

IEA Project #: 2399-092
IEA Sample #: L10285-002S
Matrix: SOIL

Parameter	Method	Spike Duplicate Results			Date Analyzed	Samp Run	Dup Run	Prep Batch
		Sample (mg/kg)	Duplicate (mg/kg)	RPD %				
SILICA	SW846 6010	3005	2198	31.0	04/07/98	R14956	R14956	04069801P

$$\text{RPD} = \frac{\text{S-D}}{(\text{S+D})/2} \times 100$$

Control Limits: +/- 20%

Corresponding Samples:
L10299-001

Comments: * % RPD outside control limits.

PROJECT MANAGER: Bill Olson

COMPANY: NM Oil Conservation Division

ADDRESS: 2044 S. Pacheco Street

Santa Fe, NM 87505

PHONE: (505) 827-7154

FAX: (505) 827-8177

BILL TO: NM Oil Conservation Division

COMPANY: Santa Fe, NM 87505

ADDRESS: 2044 S. Pacheco

Santa Fe, NM 87505

SAMPLED DATE TIME MATRIX LAB ID

Casey SS1 3-18-98 1339 Soil -Oil

Casey SS2 3-18-98 1402 Soil -Oil

Petroleum Hydrocarbons (418.1) TRPH
(MOD.8015) Diesel/Direct Inject
(M8015) Gas/Purge & Trap
8021 (BTEX)/8015 (Gasoline)
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)
Herbicides (615/8151)
Base/Neutral/Acid Compounds GC/MS (625/8270)
Polynuclear Aromatics (610/8310)
General Chemistry:

Priority Pollutant Metals (13)
Target Analyte List Metals (23)
RCRA Metals (8)
RCRA Metals by TCLP (Method 1311)

Metals: Method 6010
Hg and Se by AA

NUMBER OF CONTAINERS: 2

PROJECT INFORMATION

PROJ NO: Casey

PROJ NAME: Shell - Grimes

P.O. NO:

SHIPPED VIA:

SAMPLE RECEIPT

NO. CONTAINERS

CUSTOMER SEALING

RECEIVED BY

RECEIVED

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHERMETHANOL PRESERVATION ☐COMMENTS: FIXED FEE ☐

Preservative Ice

RELINQUISHED BY

Signature: Bill Olson

Printed Name: Bill Olson

Date: 3/20/98

Company: NM O&D

RELINQUISHED BY

Signature:

Printed Name:

Date:

Company:

Signature:

Printed Name:

Date:

Company:

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY



American Environmental Network, Inc.

11 EAST OLIVE ROAD • PENSACOLA, FL 32514 • (850) 474-1001

SIGNATURE PAGE

Reviewed by:

Ym Patrick

AEN Project Manager

Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
ALBUQUERQUE, NEW MEXICO

Project Name: NMOCD
Project Number: 803360
Project Location: SHELL-GRIMES
Accession Number: 805360

Project Manager: KIMBERLY D. MCNEILL
Sampled By: N/S

Analysis Report

Analysis: Group of Single Metals

Accession:	805360
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	803360
Project Name:	NMOCD
Project Location:	SHELL-GRIMES
Department:	METALS

[0] Page 1
Date 26-May-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 805360
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 803360
Project Name: NMOCD
Project Location: SHELL-GRIMES
Test: Group of Single Metals
Matrix: SOIL
QC Level: II

Lab Id: 001
Client Sample Id: 803360-01

Sample Date/Time: 18-MAY-98 1339
Received Date: 24-MAR-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
SELENIUM (7740)	MG/KG	ND	0.5		S7S010	GSP

Comments:

[0] Page 2
Date 26-May-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 805360
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 803360
Project Name: NMOCD
Project Location: SHELL-GRIMES
Test: Group of Single Metals
Matrix: SOIL
QC Level: II

Lab Id: 002 Sample Date/Time: 18-MAY-98 1402
Client Sample Id: 803360-02 Received Date: 24-MAR-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
SELENIUM (7740)	MG/KG	ND	1.0	*	S7S010	GSP

Comments:

Quality Control Report

Analysis: Group of Single Metals

Accession:	805360
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	803360
Project Name:	NMOC
Project Location:	SHELL-GRIMES
Department:	METALS

[0] Page 1
Date 26-May-98

"Metals Quality Control Report"

Parameter:	SELENIUM
Batch Id:	S7S010
Blank Result:	<0.5
Anal. Method:	7740
Prep. Method:	3050A
Analysis Date:	20-MAY-98
Prep. Date:	19-MAY-98

Sample Duplication

Sample Dup:	803347-2
Rept Limit:	<1.0*

Sample Result:	2.1
Dup Result:	1.7 G
Sample RPD:	0.4
Max RPD:	1.0*
Dry Weight%	N/A

Matrix Spike

Sample Spiked:	803347-2
Rept Limit:	<1.0*

Sample Result:	<1.0
Spiked Result:	1.9Q
Spike Added:	4.0
% Recovery:	48
% Rec Limits:	75-125
Dry Weight%	N/A

ICV

ICV Result:	0.020
True Result:	0.020
% Recovery:	100
% Rec Limits:	90-110

LCS

LCS Result:	129
True Result:	132
% Recovery:	98
% Rec Limits:	74-126

[0] Page 2
Date 26-May-98

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

N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW THE REPORTING LIMIT;
THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
N/D = NOT DETECTED.
DISS. OR D = DISSOLVED
T & D = TOTAL AND DISSOLVED
R = REACTIVE
T = TOTAL
G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X THE REPORTING LIMIT AND
THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".
Q = THE ANALYTICAL (POST-DIGESTION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY
BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DIGESTION) SPIKE.
= ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.
+ = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE. (DILUTION PRIOR
TO ANALYSIS)
@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX. (DILUTION PRIOR TO
DIGESTION)
P = ANALYTICAL (POST DIGESTION) SPIKE.
I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
N/C* = NOT CALCULABLE; SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE
ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING
LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE AEN REPORTING LIMIT. HOWEVER,
THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= THE RELATIVE PERCENT DIFFERENCE (RPD) EXCEEDS THE AEN CONTROL LIMIT
AND IS "OUT OF CONTROL; DUE TO A NON-HOMOGENEOUS SAMPLE MATRIX.
J = (FLORIDA DEP 'J' FLAG) - MATRIX SPIKE AND POST SPIKE RECOVERY IS OUT OF
THE ACCEPTABLE RANGE. SEE OUT OF CONTROL EVENTS FORM.
U = (FLORIDA DEP 'U' FLAG) - THE COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED.
S = METHOD OF STANDARD ADDITIONS (MSA) WAS PERFORMED ON THIS SAMPLE.

FROM QUALITY CONTROL REPORT:

RPD= RELATIVE PERCENT DEVIATION.

REPT LIMIT= REPORTING LIMIT BASED ON METHOD DETECTION LIMIT STUDIES.

NOTE: ALL RESULTS REPORTED UNDER 'SAMPLE DUPLICATION' ARE THE MS/MSD.

NOTE: THE UNITS REPORTED ON THE QUALITY CONTROL REPORT ARE REPORTED ON AN AS
RUN BASIS. (NOT ADJUSTED FOR DRY WEIGHT).

SW-846, 3rd Edition.

EPA 600/4-79-020, Revised March 1983.

NIOSH Manual of Analytical Methods, 4th Edition.

Standard Methods For the Examination of Water and Wastewater, 18th Edition, 1992.

Methods For the Determination of Metals in Environmental Samples - Supplement I,

EPA 600/R-94-111, May 1994.

GJ = GARY JACOBS

JLH = JAMES L. HERED

GSP = GARY ST PERE

JL = JANET LECLEAR

American Environmental Network of Florida

PROJECT SAMPLE INSPECTION FORM

Lab Accession #:

803347/805360

Date Received:

3/24/98

1. Was there a Chain of Custody? Yes No*

2. Was Chain of Custody properly filled out and relinquished? Yes No*

3. Were samples received cold? (Criteria: 2° - 6°C: AEN-SOP 1055) Yes No* N/A

4. Were all samples properly labeled and identified? Yes No*

5. Did samples require splitting? Yes* No Req By: PM Client Other*

6. Were samples received in proper containers for analysis requested? Yes No*

7. Were all sample containers received intact? Yes No*

8. Were samples checked for preservative? (Check pH of all H₂O requiring preservative except VOA vials that require zero headspace)* Yes No* N/A

9. Is there sufficient volume for analysis requested? Yes No*

10. Were samples received within Holding Time? (REFER TO AEN-SOP 1040) Yes No*

11. Is Headspace visible > 1/4" in diameter in VOA vials? * If any headspace is evident, comment in out-of-control section. Yes* No N/A

12. If sent, were matrix spike bottles returned? Yes No* N/A

13. Was Project Manager notified of problems? (initials:) Yes No* N/A

Airbill Number(s): 357 9753 843

Shipped By: FEDEX

Cooler Number(s): THERS

Shipping Charges: N/A

Cooler Weight(s): 9 #

Cooler Temp(s) (°C): CCK8 6°C

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

(USE BACK OF PSIFOR ADDITIONAL NOTES AND COMMENTS)

Inspected By:

WS

Date:

3/24/98

Logged By:

J. Kitt

Date:

24-MAR-98

- * Note all Out-of-Control and/or questionable events on Comment Section of this form.
- * Note who requested the splitting of samples on the Comment Section of this form.
- * 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 (AEN-SOP 938, section 2.2.9).
- * According to EPA, 1/4" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).



AMERICAN ENVIRONMENTAL NETWORK
Albuquerque, New Mexico

Interlab Chain of Custody

DATE: 3/23 PAGE: 1 OF 1

NETWORK PROJECT MANAGER: KIMBERLY D. MCNEILL

ANALYSIS REQUEST

COMPANY: AMERICAN ENVIRONMENTAL NETWORK
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

Kim McNeill

803360

805360

SAMPLE ID DATE TIME MATRIX LAB ID

803360-01

3/18/98

1339

NAR

1402

1

Metals - TAL

Metals - PP List

Metals - RCRA

RCRA Metals by TCLP (1311) Hg, Se

Al, Sb, As, Ba, Be, B, Cd

Ca, Cr, Co, Cu, Fe, Pb, Mg

TOX Mn, Mo, Ni, K, Se

TOE Si, Ag, Na, V, Zn

Gen Chemistry

Oil and Grease

BOD

COD

Pesticides/PCB (608/8080)

Herbicides (615/8150)

Base/Neutral Acid Compounds GC/MS (625/8270)

Volatile Organics GC/MS (624/8240)

Polynuclear Aromatics (610/8310)

8240 (TCLP 1311) ZHE

8270 (TCLP 1311)

TO-14

Gross Alpha/Beta

NUMBER OF CONTAINERS

PROJECT INFORMATION

SAMPLE RECEIPT

SAMPLES SENT TO:

RELINQUISHED BY:

RELINQUISHED BY:

PROJECT NUMBER: 803360

TOTAL NUMBER OF CONTAINERS

PROJECT NAME: NMDCD

CHAIN OF CUSTODY SEALS

OC LEVEL: STD IV

INTACT?

OC REQUIRED: MS MSD BLANK

RECEIVED GOOD COND./COLD

TAT: STANDARD RUSHI

LAB NUMBER

DUE DATE: 4/2

Hg + Se by AA

RUSH SURCHARGE:

All others + Se again by GC/MS

SPECIAL CERTIFICATION REQUIRED: YES NO

(See done twice!)

Signature: [Signature] Time: 1:00

Printed Name: John G. [Name] Date: 3/23/98

Signature: [Signature] Time: 0812

Printed Name: [Name] Date: 3/24/98

Signature: [Signature] Time: 1.

Printed Name: [Name] Date: 3/24/98

Signature: [Signature] Time: 1.

Printed Name: [Name] Date: 3/24/98

Signature: [Signature] Time: 1.

Printed Name: [Name] Date: 3/24/98

CHAIN OF CUSTODY

AEN(NM) Accession #:

DATE: 3-18-98 PAGE: 1 OF 1

803360

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: Bob Oleson				ANALYSIS REQUEST			
COMPANY: Nat Oil Conservation Division				Petroleum Hydrocarbons (418.1) TRPH			
ADDRESS: 2044 S. Archibald St.				(MOD.8015) Diesel/Direct Inject			
PHONE: (505) 827-7154				(M8015) Gas/Purge & Trap			
FAX: (505) 827-8177				8021 (BTEX)/8015 (Gasoline)			
BILL TO: NM Oil Conservation Division				8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE			
COMPANY: Santa Fe				8021 (TCL)			
ADDRESS: 2044 S. Archibald				8021 (EDX)			
Santa Fe NM 87505				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)			
				Herbicides (615/8151)			
				Base/Neutral/Acid Compounds GC/MS (625/8270)			
				Polynuclear Aromatics (610/8310)			
				General Chemistry:			
				Priority Pollutant Metals (13)			
				Target Analyte List Metals (23)			
				RCRA Metals (8)			
				RCRA Metals by TCLP (Method 1311)			
				Metals: Method 6010			
				Hg and Se. by AA			
				NUMBER OF CONTAINERS			

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS		RELINQUISHED BY:		RELINQUISHED BY:	
PROJ NO: Casey		(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒	Signature: [Signature]	Time: 1643	Signature: [Signature]	Time: [Time]
PROJ NAME: Shell - Grimes		CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER		Printed Name: Willie Davis	Date: 3/23/98	Printed Name: [Name]	Date: [Date]
P.O. NO:		METHANOL PRESERVATION ☐		Company: NM O&D		Company: [Company]	
SHIPPED VIA:		COMMENTS: FIXED FEE ☐		RECEIVED BY: [Signature]	Time: [Time]	RECEIVED BY: (LAB) [Signature]	Time: [Time]
SAMPLE RECEIPT		Preservative Ice		1.		2.	
NO. CONTAINERS	6			Signature: [Signature]	Time: [Time]	Signature: [Signature]	Time: [Time]
CUSTODY SEALS	CM/NA			Printed Name: [Name]	Date: [Date]	Printed Name: [Name]	Date: [Date]
RECEIVED INTACT	Yes			Company: [Company]		Company: American Environmental Network (NM), Inc.	
BLUE/ICE/CE	120						

Direct from Field

American Environmental Network, Inc.

AEN I.D.

804352

May 21, 1998

NM-OCD
2040 S. PACHEO
SANTA FE, NM 87505

RECEIVED

MAY 26 1998

Environmental Bureau
Oil Conservation Division

Project Name SHELL GRIMES
Project Number (none)

Attention: BILL OLSON

On 4/10/98 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **non-aq** 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 418.1 was added per client request.

Metals and EPA method 8270 were analyzed by American Environmental Network (CT) Inc., Monroe, CT.

All other parameters were performed by American Environmental Network (NM) Inc., Albuquerque, NM.

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



Kimberly D. McNeill
Project Manager



H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

Enclosure

American Environmental Network, Inc.

CLIENT	: NM-OCD	AEN I.D.	: 804352
PROJECT #	: (none)	DATE RECEIVED	: 4/10/98
PROJECT NAME	: SHELL GRIMES	REPORT DATE	: 5/21/98
AEN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	9804081345	NON-AQ	4/8/98

American Environmental Network, Inc.

GENERAL CHEMISTRY RESULTS

418.1

CLIENT : NM-OCD AEN I.D. : 804352
PROJECT # : (none) DATE RECEIVED : 4/10/98
PROJECT NAME : SHELL GRIMES

SAMPLE			DATE	DATE	DATE	DIL.
ID. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	9804081345	NON-AQ	4/8/98	4/16/98	4/16/98	100
PARAMETER		DET. LIMIT	UNITS	01		
PETROLEUM HYDROCARBONS, IR		20	MG/KG	7300		

CHEMIST NOTES:

N/A

American Environmental Network, Inc.

GENERAL CHEMISTRY - REAGENT BLANK
418.1

CLIENT	: NM-OCD	AEN I.D.	: 804352
PROJECT #	: (none)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: SHELL GRIMES	UNITS	: MG/KG

PARAMETER	AEN I.D.	SAMPLE RESULT
PETROLEUM HYDROCARBONS	041698	<20

CHEMIST NOTES:
N/A

GENERAL CHEMISTRY - QUALITY CONTROL
418.1

CLIENT	: NM-OCD	AEN I.D.	: 804352
PROJECT #	: (none)	SAMPLE MATRIX	: NON-AQ
PROJECT NAME	: SHELL GRIMES	UNITS	: MG/KG

PARAMETER	AEN I.D.	SAMPLE RESULT	DUP. RESULT	% RPD	SPIKED SAMPLE	SPIKE CONC.	% REC
PETROLEUM HYDROCARBONS	041698A	<20	<20	NA	175	150	117%

CHEMIST NOTES:
N/A

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

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

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NMOCD AEN I.D. : 804352
 PROJECT # : (none) DATE RECEIVED : 4/10/98
 PROJECT NAME : SHELL GRIMES

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
804352-01	9804081345	NON-AQ	4/8/98	4/15/98	04/15/98	1
PARAMETER	DET. LIMIT		UNITS			

Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	0.5	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
Toluene	0.05	< 0.05	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	< 0.05	MG/KG
m&p Xylenes	0.05	< 0.05	MG/KG
o-Xylene	0.05	< 0.05	MG/KG

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NMOCD AEN I.D. : 804352
PROJECT # : (none) DATE RECEIVED : 4/10/98
PROJECT NAME : SHELL GRIMES

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
804352-01	9804081345	NON-AQ	4/8/98	4/15/98	04/15/98	1

PARAMETER	DET. LIMIT		UNITS
Styrene	0.05	< 0.05	MG/KG
Bromoform	0.05	< 0.05	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.05	MG/KG
1,3-Dichlorobenzene	0.05	< 0.05	MG/KG
1,4-Dichlorobenzene	0.05	< 0.05	MG/KG
1,2-Dichlorobenzene	0.05	< 0.05	MG/KG

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	116 (80 - 120)
Toluene-d8	108 (81 - 117)
Bromofluorobenzene	98 (74 - 121)

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NMOCD
 PROJECT # : (none)
 PROJECT NAME : SHELL GRIMES

AEN I.D. : 804352

SAMPLE			DATE	DATE	DIL.
ID #	BATCH	MATRIX	EXTRACTED	ANALYZED	FACTOR
REAGENT BLANK	041598	NON-AQ	4/15/98	04/15/98	1
PARAMETER	DET. LIMIT	UNITS			

Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	< 0.5	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
Toluene	0.05	< 0.05	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	< 0.05	MG/KG
m&p Xylenes	0.05	< 0.05	MG/KG
o-Xylene	0.05	< 0.05	MG/KG

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NMOCD
PROJECT # : (none)
PROJECT NAME : SHELL GRIMES

AEN I.D. : 804352

SAMPLE			DATE	DATE	DIL.
ID #	BATCH	MATRIX	EXTRACTED	ANALYZED	FACTOR
REAGENT BLANK	041598	NON-AQ	4/15/98	04/15/98	1

PARAMETER	DET. LIMIT		UNITS
Styrene	0.05	< 0.05	MG/KG
Bromoform	0.05	< 0.05	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.05	MG/KG
1,3-Dichlorobenzene	0.05	< 0.05	MG/KG
1,4-Dichlorobenzene	0.05	< 0.05	MG/KG
1,2-Dichlorobenzene	0.05	< 0.05	MG/KG

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	118 (80 - 120)
Toluene-d8	111 (81 - 117)
Bromofluorobenzene	100 (74 - 121)

American Environmental Network, Inc.

Spike Recovery and RPD Summary Report - SOIL

Method : C:\HPCHEM\1\METHODS\82600310.M (RTE Integrator)
Title : AEN New Mexico GC/MS
Last Update : Wed Mar 11 12:23:32 1998
Response via : Initial Calibration

Non-Spiked Sample: 041598B2.D

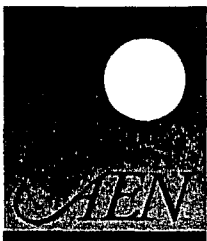
Spike Sample	Spike Duplicate Sample
File ID : 041698S1.D	041698S2.D
Sample : SEBS	SEBSD
Acq Time: 16 Apr 98 11:48 am	16 Apr 98 12:24 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC RPD	Limits % Rec
1,1-Dichloroethene	0.00	2.50	2.28	2.25	91	90	1	22	59-172
Benzene	0.00	2.50	2.41	2.44	96	98	1	21	66-142
Trichloroethene	0.00	2.50	2.29	2.33	92	93	2	24	62-137
Toluene	0.00	2.50	2.21	2.26	88	90	2	21	59-139
Chlorobenzene	0.00	2.50	2.21	2.24	88	90	2	21	60-133

- Fails Limit Check

82600310.M

Thu Apr 16 15:48:09 1998



American Environmental Network

200 Monroe Turnpike • Monroe, CT 06468 • (203) 261-4458 • Fax (203) 268-5346

May 01, 1998

Ms. Kim Mcneill
AEN-NEW MEXICO
2709-D Pan American Freeway, Ne
Albuquerque, NM 87107

Dear Ms. Mcneill :

Please find enclosed the analytical results of 1 sample(s) received at our laboratory on April 14, 1998. This report contains sections addressing the following information at a minimum:

- . sample summary
- . analytical methodology
- . state certifications
- . definition of data qualifiers and terminology
- . analytical results
- . chain-of-custody

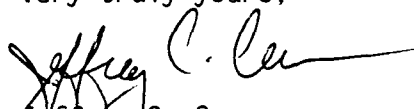
IEA Report #7098-0831A	Purchase Order #804352
Project ID: 804352	

Copies of this analytical report and supporting data are maintained in our files for a minimum of five years unless special arrangements have been made. Unless specifically indicated, all analytical testing was performed at this laboratory location and no portion of the testing was subcontracted.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (203) 261-4458 for any additional information. Thank you for utilizing our services; we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Very truly yours,


Jeffrey C. Curran
Laboratory Manager

JCC

7098-0831A
AEN/NEW MEXICO

Case Narrative

Metals - ICAP metals were determined using a JA61E trace ICAP using guidance provided in SW846 according to the following Methods: ICAP-3050/6010.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

IEC's are electronically employed by the JA61E ICAP. However, the ICSA is utilized as a monitoring device to detect any additional adjustments that may be required. These modifications are calculated and applied manually. They are so noted in the raw data.

Semi-Volatile Organics - Semi-volatile organic samples were extracted and analyzed by capillary GC/MS using guidance provided in Methods 3510B/8270B. The instrumentation used was a Hewlett-Packard Gas Chromatograph interfaced with a Mass Selective Detector.

Sample 804352-01 was analyzed twice at a 1:2 dilution due to results exhibiting suppression of internal standard areas. Both analyses were reported.

Due to sample matrix, sample 804352-01 could only be taken to 5mls.

TABLE SV-1.0
7098-0831A
AEN-NEW MEXICO
TCL SEMI-VOLATILE ORGANICS

Soil
page 1 of 2

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	804352-01	804352-01 RE	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKMI	980831A-01	980831A-01RE	
Method Blank I.D.	SBLKMI	SBLKMI	SBLKMI	
Quant. Factor	1.00	10.3	10.3	
Phenol	U	U	U	330
bis(2-Chloroethyl) ether	U	U	U	330
2-Chlorophenol	U	U	U	330
1,3-Dichlorobenzene	U	U	U	330
1,4-Dichlorobenzene	U	U	U	330
Benzyl alcohol	U	U	U	330
1,2-Dichlorobenzene	U	U	U	330
2-Methylphenol	U	U	U	330
2,2'-oxybis(1-Chloropropane)	U	U	U	330
4-Methylphenol	U	U	190J	330
N-Nitroso-di-n-propylamine	U	U	U	330
Hexachloroethane	U	U	U	330
Nitrobenzene	U	U	U	330
Isophorone	U	U	U	330
2-Nitrophenol	U	U	U	330
2,4-Dimethylphenol	U	U	U	330
Benzoic acid	U	590J	380J	1600
bis(2-Chloroethoxy) methane	U	U	U	330
2,4-Dichlorophenol	U	U	U	330
1,2,4-Trichlorobenzene	U	U	U	330
Naphthalene	U	350J	320J	330
4-Chloroaniline	U	U	U	330
Hexachlorobutadiene	U	U	U	330
4-Chloro-3-methylphenol	U	U	U	330
2-Methylnaphthalene	U	U	U	330
Hexachlorocyclopentadiene	U	U	U	330
2,4,6-Trichlorophenol	U	U	U	330
2,4,5-Trichlorophenol	U	U	U	1600
2-Chloronaphthalene	U	U	U	330
2-Nitroaniline	U	U	U	1600
Dimethylphthalate	U	U	U	330
Acenaphthylene	U	U	U	330
2,6-Dinitrotoluene	U	U	U	330
3-Nitroaniline	U	U	U	1600
Acenaphthene	U	U	U	330
Date Received		04/14/98	04/14/98	
Date Extracted	04/17/98	04/17/98	04/17/98	
Date Analyzed	04/23/98	04/27/98	04/28/98	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE SV-1.0
7098-0831A
AEN-NEW MEXICO
TCL SEMI-VOLATILE ORGANICS

Soil
page 2 of 2

All values are ug/Kg dry weight basis.

Client Sample I.D.	Method Blank	804352-01	804352-01 RE	Quant. Limits with no Dilution
Lab Sample I.D.	SBLKMI	980831A-01	980831A-01RE	
Method Blank I.D.	SBLKMI	SBLKMI	SBLKMI	
Quant. Factor	1.00	10.3	10.3	
2,4-Dinitrophenol	U	U	U	1600
4-Nitrophenol	U	U	U	1600
Dibenzofuran	U	270J	230J	330
2,4-Dinitrotoluene	U	U	U	330
Diethylphthalate	9J	U	U	330
4-Chlorophenyl-phenylether	U	U	U	330
Fluorene	U	U	U	330
4-Nitroaniline	U	U	U	1600
4,6-Dinitro-2-methylphenol	U	U	U	1600
N-Nitrosodiphenylamine (1)	U	U	U	330
4-Bromophenyl-phenylether	U	U	U	330
Hexachlorobenzene	U	U	U	330
Pentachlorophenol	U	U	U	1600
Phenanthrene	U	330J	340J	330
Anthracene	U	U	U	330
Carbazole	U	U	U	330
Di-n-butylphthalate	7J	U	U	330
Fluoranthene	U	U	U	330
Pyrene	U	110J	88J	330
Butylbenzylphthalate	U	U	U	330
3,3'-Dichlorobenzidine	U	U	U	660
Benzo(a)anthracene	U	U	U	330
Chrysene	U	850J	790J	330
bis(2-Ethylhexyl)phthalate	U	U	U	330
Di-n-octylphthalate	U	U	U	330
Benzo(b)fluoranthene	U	U	U	330
Benzo(k)fluoranthene	U	U	U	330
Benzo(a)pyrene	U	740J	700J	330
Indeno(1,2,3-cd)pyrene	U	U	U	330
Dibenzo(a,h)anthracene	U	U	U	330
Benzo(g,h,i)perylene	U	U	U	330
Date Received		04/14/98	04/14/98	
Date Extracted	04/17/98	04/17/98	04/17/98	
Date Analyzed	04/23/98	04/27/98	04/28/98	

See Appendix for qualifier definitions

Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: IEA/CT

Contract: _____

Lab Code: IEACT

Case No.: 0831A

SAS No.: _____

SDG No.: A0831

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	SBLKMI	82	79	107	81	80	74			0
02	SBLKMIMS	87	78	104	85	86	80			0
03	SBLKMIMSD	85	80	97	83	86	80			0
04	SBLKMIFMS	82	81	108	74	75	75			0
05	804352-01	112	131D	113	96	104	98			0
06	804352-01RE	98	125D	99	90	98	94			0
07										
08										
09										
10										
11										
12										
13										
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17										
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21										
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23										
24										
25										
26										
27										
28										
29										
30										

QC LIMITS

S1 (NBZ) = Nitrobenzene-d5 (23-120)
 S2 (FBP) = 2-Fluorobiphenyl (30-115)
 S3 (TPH) = Terphenyl-d14 (18-137)
 S4 (PHL) = Phenol-d5 (24-113)
 S5 (2FP) = 2-Fluorophenol (25-121)
 S6 (TBP) = 2,4,6-Tribromophenol (19-122)
 S7 (2CP) = 2-Chlorophenol-d4 (-) (advisory)
 S8 (DCB) = 1,2-Dichlorobenzene-d4 (-) (advisory)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogate diluted out

3D
SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: IEA/CT

Contract: _____

Lab Code: IEACT

Case No.: 0831A

SAS No.: _____

SDG No.: A0831

Matrix Spike - EPA Sample No.: SBLKMI Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Phenol	3300	0	2700	82	26- 90
2-Chlorophenol	3300	0	3000	91	25-102
1,4-Dichlorobenzene	1700	0	1400	82	28-104
N-Nitroso-di-n-prop. (1)	1700	0	1500	88	41-126
1,2,4-Trichlorobenzene	1700	0	1400	82	38-107
4-Chloro-3-methylphenol	3300	0	2800	85	26-103
Acenaphthene	1700	0	1200	70	31-137
4-Nitrophenol	3300	0	2900	88	11-114
2,4-Dinitrotoluene	1700	0	1500	88	28- 89
Pentachlorophenol	3300	0	2500	76	17-109
Pyrene	1700	0	1300	76	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Phenol	3300	2700	82	0	35	26- 90
2-Chlorophenol	3300	3000	91	0	50	25-102
1,4-Dichlorobenzene	1700	1400	82	0	27	28-104
N-Nitroso-di-n-prop. (1)	1700	1400	82	7	38	41-126
1,2,4-Trichlorobenzene	1700	1500	88	7	23	38-107
4-Chloro-3-methylphenol	3300	2700	82	4	33	26-103
Acenaphthene	1700	1300	76	8	19	31-137
4-Nitrophenol	3300	2700	82	7	50	11-114
2,4-Dinitrotoluene	1700	1500	88	0	47	28- 89
Pentachlorophenol	3300	2500	76	0	47	17-109
Pyrene	1700	1300	76	0	36	35-142

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits.

RPD: 0 _____ out of 11 _____ outside limits

Spike Recovery: 0 _____ out of 22 _____ outside limits

COMMENTS: _____

TABLE AS-1.0
7098-0831A
AEN-NEW MEXICO
MISCELLANEOUS ATOMIC SPECTROSCOPY

Soil

All values are mg/Kg dry weight basis.

Client Sample I.D.	804352-01			
Lab Sample I.D.	980831A-01			
Aluminum	5860			
Antimony	12.6U			
Arsenic	2.4			
Barium	986.U			
Beryllium	1.0U			
Boron	21.0U			
Cadmium	7.1U			
Calcium	14500			
Chromium	21.0U			
Cobalt	10.5U			
Copper	6.8			
Iron	6300			
Lead	105.U			
Magnesium	2300			
Manganese	166.			
Molybdenum	4.2U			
Nickel	8.7			
Potassium	1830			
Selenium	71.3U			
Silicon	719.			
Silver	71.3U			
Sodium	1050U			
Thallium	2.1U			
Vanadium	11.1			
Zinc	31.7			

See Appendix for qualifier definitions

U.S. EPA - CLP

3
BLANKSLab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A0831Preparation Blank Matrix (soil/water): SOILPreparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
		1	C	2	C	3	C			
Aluminum								40.0000	U	P
Antimony								12.0000	U	P
Arsenic								2.0000	U	P
Barium								940.0000	U	P
Beryllium								1.0000	U	P
Boron								20.0000	U	P
Cadmium								6.8000	U	P
Calcium								1000.0000	U	P
Chromium								20.0000	U	P
Cobalt								10.0000	U	P
Copper								5.0000	U	P
Iron								20.0000	U	P
Lead								100.0000	U	P
Magnesium								1000.0000	U	P
Manganese								3.0000	U	P
Molybdenum								4.0000	U	P
Nickel								8.0000	U	P
Potassium								1000.0000	U	P
Selenium								68.0000	U	P
Silicon								0.2000	U	P
Silver								68.0000	U	P
Sodium								1000.0000	U	P
Thallium								2.0000	U	P
Vanadium								10.0000	U	P
Zinc								4.0000	U	P

FORM III - IN

ILM03.0

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

B-30(17-21')S

Lab Name: IEA

Contract: _____

Lab Code: IEA

Case No.: 0831

SAS No.: _____

SDG No.: A0831

Matrix: SOIL

Level (low/med): LOW

% Solids for Sample: 88.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	1758.9456	714.1024	453.00	230.6		P
Antimony	75-125	113.3031	1.0228 B	113.25	99.1		P
Arsenic	75-125	10.1493	0.7870 B	9.06	103.3		P
Barium	75-125	451.3137	4.3444 B	453.00	98.7		P
Beryllium	75-125	11.6704	0.2265 U	11.32	103.0		P
Boron	75-125	224.5493	2.2300 B	226.50	98.2		P
Cadmium	75-125	1.9238	0.8830 B	1.13	91.9		P
Calcium			197.4965 B	0.00	0.0		P
Chromium	75-125	45.9052	1.9919 B	45.30	96.9		P
Cobalt	75-125	109.6258	0.3129 B	113.25	96.5		P
Copper	75-125	61.3973	3.0862 B	56.62	103.0		P
Iron		2387.0238	1947.5735	226.50	194.0		P
Lead	75-125	10.8554	6.6538	4.53	92.8		P
Magnesium			129.1660 B	0.00	0.0		P
Manganese	75-125	143.6876	34.4952	113.25	96.4		P
Molybdenum	75-125	224.8422	0.2265 U	226.50	99.3		P
Nickel	75-125	109.7876	2.1196 B	113.25	95.1		P
Potassium			40.0867 B	0.00	0.0		P
Selenium	75-125	2.5981	0.7108 B	2.26	83.3		P
Silicon							NR
Silver	75-125	11.8334	0.2265 U	11.32	104.5		P
Sodium			117.0677 B	0.00	0.0		P
Thallium	75-125	8.5560	0.6795 U	11.32	75.5		P
Vanadium	75-125	112.3932	2.0268 B	113.25	97.4		P
Zinc	75-125	127.6612	21.5917	113.25	93.6		P

Comments:

FORM V (PART 1) - IN

ILM03.0

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

B-30(17-21')D

Lab Name: IEA

Contract: _____

Lab Code: IEA Case No.: 0831

SAS No.: _____

SDG No.: A0831Matrix: SOILLevel (low/med): LOW% Solids for Sample: 88.3% Solids for Duplicate: 88.3Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		714.1024		720.1411		0.8		P
Antimony		1.0228	B	1.2796	B	22.3		P
Arsenic		0.7870	B	0.8561	B	8.4		P
Barium		4.3444	B	4.3784	B	0.8		P
Beryllium		0.2265	U	0.2265	U			P
Boron		2.2300	B	1.9002	B	16.0		P
Cadmium		0.8830	B	0.9030	B	2.2		P
Calcium		197.4965	B	202.6313	B	2.6		P
Chromium		1.9919	B	2.0312	B	2.0		P
Cobalt		0.3129	B	0.3514	B	11.6		P
Copper		3.0862	B	3.0734	B	0.4		P
Iron		1947.5735		1987.3875		2.0		P
Lead		6.6538		6.7774		1.8		P
Magnesium		129.1660	B	131.2053	B	1.6		P
Manganese		34.4952		35.2431		2.1		P
Molybdenum		0.2265	U	0.2265	U			P
Nickel		2.1196	B	2.1375	B	0.8		P
Potassium		40.0867	B	41.3160	B	3.0		P
Selenium		0.7108	B	0.5608	B	23.6		P
Silicon								NR
Silver		0.2265	U	0.2265	U			P
Sodium		117.0677	B	116.8908	B	0.2		P
Thallium		0.6795	U	0.6795	U			P
Vanadium		2.0268	B	2.0675	B	2.0		P
Zinc	4.5	21.5917		22.8230		5.5		P

FORM VI - IN

ILM03.0

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A0831Solid LCS Source: INORG. VENT.

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum				5510.0	4089.0		3620.0 7400.0	74.2
Antimony				93.1	111.4		9.5 177.0	119.7
Arsenic				60.6	63.4		43.0 78.2	104.7
Barium				3160.0	3098.7		2170.0 4150.0	98.1
Beryllium				157.0	166.4		107.0 207.0	106.0
Boron				92.8	96.4		67.7 118.0	103.9
Cadmium				78.0	78.8		55.7 100.0	101.1
Calcium				1680.0	1717.0		1260.0 2100.0	102.2
Chromium				183.0	187.4		134.0 232.0	102.4
Cobalt				113.0	116.7		89.7 136.0	103.3
Copper				110.0	119.0		85.4 135.0	108.2
Iron				10600.0	9812.2		5090.0 16100.0	92.6
Lead				85.9	100.0	U	64.1 108.0	116.4
Magnesium				2650.0	2735.5		2080.0 3220.0	103.2
Manganese				473.0	449.0		373.0 573.0	94.9
Molybdenum				73.2	74.3		52.3 94.1	101.5
Nickel				108.0	113.4		84.9 132.0	105.1
Potassium				2630.0	2290.4		1920.0 3340.0	87.1
Selenium				75.4	75.5		49.8 101.0	100.2
Silicon				6070.0	1039.3		2730.0 8680.0	17.1
Silver				152.0	168.1		113.0 191.0	110.6
Sodium				630.0	1000.0	U	389.0 871.0	158.7
Thallium				160.0	170.8		91.4 228.0	106.8
Vanadium				99.0	102.0		67.6 130.0	103.1
Zinc				721.0	656.8		507.0 936.0	91.1

FORM VII - IN

ILM03.0

ORGANICS APPENDIX

- U - Indicates that the compound was analyzed for but not detected.
- J - Indicates that the compound was analyzed for and determined to be present in the sample. The mass spectrum of the compound meets the identification criteria of the method. The concentration listed is an estimated value, which is less than the specified minimum detection limit but is greater than zero.
- B - This flag is used when the analyte is found in the blanks as well as the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte.
- N - Indicates that the compound was analyzed for but not requested as an analyte. Value will not be listed on tabular result sheet.
- S - Estimated due to surrogate outliers.
- X - Matrix spike compound.
- (1) - Cannot be separated.
- (2) - Decomposes to azobenzene. Measured and calibrated as azobenzene.
- A - This flag indicates that a TIC is a suspected aldol condensation product.
- E - Indicates that it exceeds calibration curve range.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- C - Confirmed by GC/MS.
- T - Compound present in TCLP blank.
- P - This flag is used for a pesticide/aroclor target analyte when there is a greater than 25 percent difference for detected concentrations between the two GC columns (see Form X).

INORGANICS APPENDIX

C - Concentration qualifiers

- U - Indicates analyte was not detected at method reporting limit.
- B - Indicates analyte result between IDL and contract required detection limit (CRDL)

Q - QC qualifiers

- E - Reported value is estimated because of the presence of interference
- M - Duplicate injection precision not met
- N - Spiked sample recovery not within control limits
- S - The reported value was determined by the method of standard additions (MSA)
- W - Post-digest spike recovery furnace analysis was out of 85-115 percent control limit, while sample absorbance was less than 50 percent of spike absorbance
- * - Duplicate analysis not within control limit
- + - Correlation coefficient for MSA is less than 0.995

M - Method codes

- P - ICP
- A - Flame AA
- F - Furnace AA
- CV - Cold vapor AA (manual)
- C - Cyanide
- NR - Not Required
- NC - Not Calculated as per protocols

STATE CERTIFICATIONS

In some instances it may be necessary for environmental data to be reported to a regulatory authority with reference to a certified laboratory. For your convenience, the laboratory identification numbers for the AEN-Connecticut laboratory are provided in the following table. Many states certify laboratories for specific parameters or tests within a category (i.e. method 325.2 for wastewater). The information in the following table indicates the lab is certified in a general category of testing such as drinking water or wastewater analysis. The laboratory should be contacted directly if parameter-specific certification information is required.

AEN-Connecticut Certification Summary (as of September 1997)

State	Responsible Agency	Certification	Lab Number
Connecticut	Department of Health Services	Drinking Water, Wastewater	PH-0497
Maine	Department of Human Services	Wastewater	CT023
Massachusetts	Department of Environmental Protection	Potable/Non-Potable Water	CT023
New Hampshire	Department of Environmental Services	Drinking Water, Wastewater	2528
New Jersey	Department of Environmental Protection	Drinking Water, Wastewater	46410
New York	Department of Health	CLP, Drinking Water, Wastewater, Solid/Hazardous Waste	10602
North Carolina	Division of Environmental Management	Wastewater Hazardous Waste	388
North Dakota	Department of Health and Consolidated Laboratories	Non-Potable/Potable Hazardous Waste	R-138
Oklahoma	Department of Environmental Quality	General Water Quality/Sludge Testing	9614
Rhode Island	Department of Health	Chemistry...Non-Potable Water and Wastewater	A43
Washington	Department of Ecology	Wastewater Hazardous Waste	4C231
West Virginia	Division of Environmental Protection	Wastewater Hazardous Waste	263
Wisconsin	Department of Natural Resources	Wastewater Hazardous Waste	998355710

7098-0831A
AEN-NEW MEXICO
SAMPLE SUMMARY

CLIENT ID	LAB ID	MATRIX	DATE COLLECTED	DATE RECEIVED
804352-01	980831A-01	SOIL	04/08/98	04/14/98

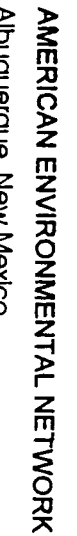
IEA-CT ANALYTICAL SUMMARY

Page:1

Client ID: 804352-01
Job Number: 7098-0831A

Date: 5/1/98

Qty	Matrix	Analysis	Description
1	SOIL	BNA-8270B-TCL	TCL Semi-Volatile Or
1	SOIL	MET-SW846-MISC	Miscellaneous Metals
1	SOIL	SI-SW846	Silicon



Interlab Chain of Custody

DATE: 4/10/94

NETWORK PROJECT MANAGER: KIMBERLY D. MCNEILL				ANALYSIS REQUEST			
COMPANY: AMERICAN ENVIRONMENTAL NETWORK ADDRESS: 2709-D Pan American Freeway, NE Albuquerque, NM 87107				7098-0831A			
CLIENT PROJECT MANAGER: Kim McNeill							
PROJECT INFORMATION		SAMPLE RECEIPT					
PROJECT NUMBER: 804352	TOTAL NUMBER OF CONTAINERS	SAMPLES SENT TO:					
PROJECT NAME: NMOCOD	CHAIN OF CUSTODY SEALS	CONNECTICUT	ILLINOIS				
QC LEVEL: STD: IV	INTACT?	MASSACHUSETTS	PENNSYLVANIA				
QC REQUIRED: MS MSD BLANK	RECEIVED GOOD COND/COLD	PORTLAND	PHOENIX				
TAT: STANDARD RUSH	LAB NUMBER	N. CAROLINA					
DUE DATE: 7/28/98 - 3 weeks		RELINQUISHED BY: 1.					
RUSH SURCHARGE:		Signature: [Signature]					
CLIENT DISCOUNT:		Time: [Time]					
SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO		Date: [Date]					
		Company: [Company]					
		RECEIVED BY: 2.					
		Signature: [Signature]					
		Time: [Time]					
		Date: [Date]					
		Company: [Company]					
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		RECEIVED BY: 2.					
		Signature: [Signature]					
		Time: [Time]					
		Date: [Date]</					

804352

PLEASE FILL THIS FORM IN COMPLETELY.

DISTRIBUTION: White - AEN, Canary - Originator

AL: Connecticut

2/11

intact / not intact

pres

7098-0831A

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01

54

[illegible]

AEN

GC-GC/MS Extract Chain-of-Custody

Fraction:

BNA Pesticide-PCB / Herbicide / O/P Pest / DRO / Other
(Circle one)

CLIENT : AEWJOB NO(s) : 08310

SAMPLE IN (Extractions)					SAMPLE IN (Extractions)				
Sample(s)	Date	Time	Sign.	Location	Sample(s)	Date	Time	Sign.	Location
1	4-22-98	3:00	PS	25					

SAMPLE OUT					SAMPLE IN			
Sample(s)	Date	Time	Code	Sign.	Date	Time	Location	Sign.
1	4/27/98	1:00	AN	JB	4/27/98	2:00	25	JB
1	4/28/98	1:00	AN	JB	4/28/98	11:55A	25	JB

Codes:

SC = Screening

AN = Analysis

Verified by : _____

Date : _____

Form: SMF01201.CT



an environmental testing company

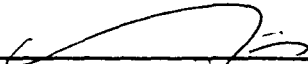
200 Monroe Turnpike
Monroe, Connecticut 06468
(203) 261-4458
FAX (203) 268-5346

CHAIN OF CUSTODY
ATOMIC SPECTROSCOPY DEPARTMENT

Job Number 7098-0831A Sample Numbers 01

WATER - SOIL - SLUDGE - EPTOX/TCLP

I confirm that I have performed the preparation below following SOP guidelines and authorize the release of this preparation:

Sample Prep	_____	_____	
		<u>04/24/98</u>	ICP/FLME
	_____	_____	FURN
	_____	_____	MERCURY
	Chemist	Date(s)	

I confirm that I have performed the analysis below following SOP guidelines and authorize the release of all associated data:

Analysis	<u>Diane Jumo</u>	<u>4/30/98</u>	ICP
	_____	_____	FLAME
	_____	_____	FURN
	_____	_____	MERCURY
	Chemist	Date(s)	

I have reviewed and authorize the release of this job:

Complete	<u>Diane Jumo</u>	<u>5/1/98</u>
	Supervisor	Date

Batch Assignment _____

THE UNIVERSITY OF CHICAGO

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: Bill Olson		ANALYSIS REQUEST	
COMPANY: NMDCD ADDRESS: 2040 S. Pacheco Santa Fe, NM 87505 PHONE: (505) 827-7154 FAX: (505) 827-8177 BILL TO: same COMPANY: same ADDRESS: same		Petroleum Hydrocarbons (418.1) TRPH (MOD.8015) Diesel/Direct Inject (M8015) Gas/Purge & Trap 8021 (BTX)/8015 (Gasoline) 8021 (BTX) ☐ MTBE ☐ TMB ☐ PCE 8021 (TCL) 8021 (EDX) 8021 (HALO) 8021 (CUST) 504.1 EDB ☐ / DBCP ☐ 8240 8260 (TCL) Volatile Organics 8260 (Full) Volatile Organics 8260 (CUST) Volatile Organics 8260 (Landfill) Volatile Organics Pesticides /PCB (608/8081) Herbicides (615/8151) Base/Neutral/Acid Compounds GC/MS (625/8270) Polynuclear Aromatics (610/8310) General Chemistry: 8270 Priority Pollutant Metals (13) Target Analyte List Metals (23) RCRA Metals (8) RCRA Metals by TCLP (Method 1311) Metals: 7.2417 NUMBER OF CONTAINERS	
SAMPLE ID: 9804081345 DATE: 4-8-98 TIME: 1400 MATRIX: Hydrocarbons LAB ID: 30101			
PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ. NO.: PROJ. NAME: Shell firmes P.O. NO.: SHIPPED VIA: SAMPLE RECEIPT NO. CONTAINERS: 2 CUSTODY SEALS: (N) N/A RECEIVED INTACT: YES BLUE ICE: YES	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒ 1 WEEK CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER METHANOL PRESERVATION ☐ COMMENTS: FIXED FEE ☐	RELINQUISHED BY: 1 Signature: [Signature] Printed Name: Bill Olson Date: 4-8-98 Time: 10:10 Company: American Environmental Network (NM), Inc.	
RECEIVED BY: 1 Signature: [Signature] Printed Name: [Name] Date: [Date] Time: [Time] Company: [Company]		RECEIVED BY: (LAB) 2 Signature: [Signature] Printed Name: [Name] Date: 4/10/98 Time: 10:10 Company: American Environmental Network (NM), Inc.	

American Environmental Network, Inc.

AEN I.D. 804372

May 21, 1998

NM-OCD
2040 S. PACHEO
SANTA FE, NM 87505

Project Name 1804 LORENE
Project Number HOBBS RES WATER WELL

Attention: BILL OLSON

On 4/15/98 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA method 8260 was performed by American Environmental Network (NM) Inc., Albuquerque, NM.

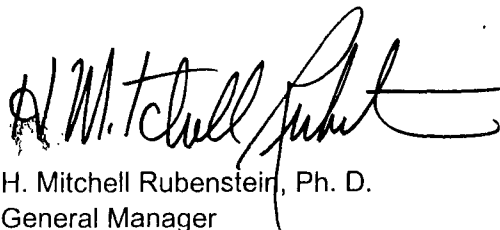
Metals were performed by American Environmental Network (CT) Inc., Monroe, CT.

All other parameters were performed by American Environmental Network (FL) Inc., Pensacola, FL.

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



Kimberly D. McNeill
Project Manager



H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

Enclosure

American Environmental Network, Inc.

CLIENT	: NM-OCD	AEN I.D.	: 804372
PROJECT #	: HOBBS RES WATER WELL	DATE RECEIVED	: 4/15/98
PROJECT NAME	: 1804 LORENE	REPORT DATE	: 5/21/98

AEN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	9804141253-HOBBS RES	AQUEOUS	4/14/98

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD AEN I.D. : 804372
 PROJECT # : HOBBS RES WATER WELL DATE RECEIVED : 4/15/98
 PROJECT NAME : 1804 LORENE

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
804372-01	9804141253 - HOBBS RES	AQUEOUS	4/14/98	N/A	04/15/98	1
PARAMETER	DET. LIMIT		UNITS			

Dichlorodifluoromethane	1.0	< 1.0	ug/L
Chloromethane	1.0	< 1.0	ug/L
Vinyl Chloride	1.0	< 1.0	ug/L
Bromomethane	1.0	< 1.0	ug/L
Chloroethane	1.0	< 1.0	ug/L
Trichlorofluoromethane	1.0	< 1.0	ug/L
Acetone	10	< 10	ug/L
Acrolein	5.0	< 5.0	ug/L
1,1-Dichloroethene	1.0	< 1.0	ug/L
Iodomethane	1.0	< 1.0	ug/L
Methylene Chloride	1.0	< 1.0	ug/L
Acrylonitrile	5.0	< 5.0	ug/L
cis-1,2-Dichloroethene	1.0	< 1.0	ug/L
Methyl-t-butyl Ether	1.0	< 1.0	ug/L
1,1,2,1,2,2-Trichlorotrifluoroethane	1.0	< 1.0	ug/L
1,1-Dichloroethane	1.0	< 1.0	ug/L
trans-1,2-Dichloroethene	1.0	< 1.0	ug/L
2-Butanone	10	< 10	ug/L
Carbon Disulfide	1.0	< 1.0	ug/L
Bromochloromethane	1.0	< 1.0	ug/L
Chloroform	1.0	< 1.0	ug/L
2,2-Dichloropropane	1.0	< 1.0	ug/L
1,2-Dichloroethane	1.0	< 1.0	ug/L
Vinyl Acetate	1.0	< 1.0	ug/L
1,1,1-Trichloroethane	1.0	< 1.0	ug/L
1,1-Dichloropropene	1.0	< 1.0	ug/L
Carbon Tetrachloride	1.0	< 1.0	ug/L
Benzene	1.0	< 1.0	ug/L
1,2-Dichloropropane	1.0	< 1.0	ug/L
Trichloroethene	1.0	< 1.0	ug/L
Bromodichloromethane	1.0	< 1.0	ug/L
2-Chloroethyl Vinyl Ether	10	< 10	ug/L
cis-1,3-Dichloropropene	1.0	< 1.0	ug/L
trans-1,3-Dichloropropene	1.0	< 1.0	ug/L
1,1,2-Trichloroethane	1.0	< 1.0	ug/L
1,3-Dichloropropane	1.0	< 1.0	ug/L
Dibromomethane	1.0	< 1.0	ug/L
Toluene	1.0	< 1.0	ug/L

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD AEN I.D. : 804372
 PROJECT # : HOBBS RES WATER WELL DATE RECEIVED : 4/15/98
 PROJECT NAME : 1804 LORENE

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
804372-01	9804141253 - HOBBS RES	AQUEOUS	4/14/98	N/A	04/15/98	1
PARAMETER	DET. LIMIT		UNITS			
1,2-Dibromoethane	1.0	< 1.0	ug/L			
4-Methyl-2-Pentanone	10	< 10	ug/L			
2-Hexanone	10	< 10	ug/L			
Dibromochloromethane	1.0	< 1.0	ug/L			
Tetrachloroethene	1.0	< 1.0	ug/L			
Chlorobenzene	1.0	< 1.0	ug/L			
Ethylbenzene	1.0	< 1.0	ug/L			
1,1,1,2-Tetrachloroethane	1.0	< 1.0	ug/L			
m&p Xylenes	1.0	< 1.0	ug/L			
o-Xylene	1.0	< 1.0	ug/L			
Styrene	1.0	< 1.0	ug/L			
Bromoform	1.0	< 1.0	ug/L			
1,1,2,2-Tetrachloroethane	1.0	< 1.0	ug/L			
1,2,3-Trichloropropane	1.0	< 1.0	ug/L			
Isopropyl Benzene	1.0	< 1.0	ug/L			
Bromobenzene	1.0	< 1.0	ug/L			
trans-1,4-Dichloro-2-Butene	1.0	< 1.0	ug/L			
n-Propylbenzene	1.0	< 1.0	ug/L			
2-Chlorotoluene	1.0	< 1.0	ug/L			
4-Chlorotoluene	1.0	< 1.0	ug/L			
1,3,5-Trimethylbenzene	1.0	< 1.0	ug/L			
tert-Butylbenzene	1.0	< 1.0	ug/L			
1,2,4-Trimethylbenzene	1.0	< 1.0	ug/L			
sec-Butylbenzene	1.0	< 1.0	ug/L			
1,3-Dichlorobenzene	1.0	< 1.0	ug/L			
1,4-Dichlorobenzene	1.0	< 1.0	ug/L			
p-Isopropyltoluene	1.0	< 1.0	ug/L			
1,2-Dichlorobenzene	1.0	< 1.0	ug/L			
n-Butylbenzene	1.0	< 1.0	ug/L			
1,2-Dibromomo-3-chloropropane	1.0	< 1.0	ug/L			
1,2,4-Trichlorobenzene	1.0	< 1.0	ug/L			
Naphthalene	1.0	< 1.0	ug/L			
Hexachlorobutadiene	1.0	< 1.0	ug/L			
1,2,3-Trichlorobenzene	1.0	< 1.0	ug/L			

SURROGATE % RECOVERY

1,2-Dichloroethane-d4 98
 (80 - 120)
 Toluene-d8 94
 (88 - 110)
 Bromofluorobenzene 94
 (86 - 115)

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : HOBBS RES WATER WELL
 PROJECT NAME : 1804 LORENE

AEN I.D. : 804372

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
REAGENT BLANK	041598	AQUEOUS	N/A	04/15/98	1
PARAMETER	DET. LIMIT	UNITS			

Dichlorodifluoromethane	1.0	< 1.0	ug/L
Chloromethane	1.0	< 1.0	ug/L
Vinyl Chloride	1.0	< 1.0	ug/L
Bromomethane	1.0	< 1.0	ug/L
Chloroethane	1.0	< 1.0	ug/L
Trichlorofluoromethane	1.0	< 1.0	ug/L
Acetone	10	< 10	ug/L
Acrolein	5.0	< 5.0	ug/L
1,1-Dichloroethene	1.0	< 1.0	ug/L
Iodomethane	1.0	< 1.0	ug/L
Methylene Chloride	1.0	< 1.0	ug/L
Acrylonitrile	5.0	< 5.0	ug/L
cis-1,2-Dichloroethene	1.0	< 1.0	ug/L
Methyl-t-butyl Ether	1.0	< 1.0	ug/L
1,1,2,1,2,2-Trichlorotrifluoroethane	1.0	< 1.0	ug/L
1,1-Dichloroethane	1.0	< 1.0	ug/L
trans-1,2-Dichloroethene	1.0	< 1.0	ug/L
2-Butanone	10	< 10	ug/L
Carbon Disulfide	1.0	< 1.0	ug/L
Bromochloromethane	1.0	< 1.0	ug/L
Chloroform	1.0	< 1.0	ug/L
2,2-Dichloropropane	1.0	< 1.0	ug/L
1,2-Dichloroethane	1.0	< 1.0	ug/L
Vinyl Acetate	1.0	< 1.0	ug/L
1,1,1-Trichloroethane	1.0	< 1.0	ug/L
1,1-Dichloropropene	1.0	< 1.0	ug/L
Carbon Tetrachloride	1.0	< 1.0	ug/L
Benzene	1.0	< 1.0	ug/L
1,2-Dichloropropane	1.0	< 1.0	ug/L
Trichloroethene	1.0	< 1.0	ug/L
Bromodichloromethane	1.0	< 1.0	ug/L
2-Chloroethyl Vinyl Ether	10	< 10	ug/L
cis-1,3-Dichloropropene	1.0	< 1.0	ug/L
trans-1,3-Dichloropropene	1.0	< 1.0	ug/L
1,1,2-Trichloroethane	1.0	< 1.0	ug/L
1,3-Dichloropropane	1.0	< 1.0	ug/L
Dibromomethane	1.0	< 1.0	ug/L
Toluene	1.0	< 1.0	ug/L

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : HOBBS RES WATER WELL
 PROJECT NAME : 1804 LORENE

AEN I.D. : 804372

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
REAGENT BLANK	041598	AQUEOUS	N/A	04/15/98	1

PARAMETER	DET. LIMIT	UNITS
1,2-Dibromoethane	1.0 < 1.0	ug/L
4-Methyl-2-Pentanone	10 < 10	ug/L
2-Hexanone	10 < 10	ug/L
Dibromochloromethane	1.0 < 1.0	ug/L
Tetrachloroethene	1.0 < 1.0	ug/L
Chlorobenzene	1.0 < 1.0	ug/L
Ethylbenzene	1.0 < 1.0	ug/L
1,1,1,2-Tetrachloroethane	1.0 < 1.0	ug/L
m&p Xylenes	1.0 < 1.0	ug/L
o-Xylene	1.0 < 1.0	ug/L
Styrene	1.0 < 1.0	ug/L
Bromoform	1.0 < 1.0	ug/L
1,1,2,2-Tetrachloroethane	1.0 < 1.0	ug/L
1,2,3-Trichloropropane	1.0 < 1.0	ug/L
Isopropyl Benzene	1.0 < 1.0	ug/L
Bromobenzene	1.0 < 1.0	ug/L
trans-1,4-Dichloro-2-Butene	1.0 < 1.0	ug/L
n-Propylbenzene	1.0 < 1.0	ug/L
2-Chlorotoluene	1.0 < 1.0	ug/L
4-Chlorotoluene	1.0 < 1.0	ug/L
1,3,5-Trimethylbenzene	1.0 < 1.0	ug/L
tert-Butylbenzene	1.0 < 1.0	ug/L
1,2,4-Trimethylbenzene	1.0 < 1.0	ug/L
sec-Butylbenzene	1.0 < 1.0	ug/L
1,3-Dichlorobenzene	1.0 < 1.0	ug/L
1,4-Dichlorobenzene	1.0 < 1.0	ug/L
p-Isopropyltoluene	1.0 < 1.0	ug/L
1,2-Dichlorobenzene	1.0 < 1.0	ug/L
n-Butylbenzene	1.0 < 1.0	ug/L
1,2-Dibromomo-3-chloropropane	1.0 < 1.0	ug/L
1,2,4-Trichlorobenzene	1.0 < 1.0	ug/L
Naphthalene	1.0 < 1.0	ug/L
Hexachlorobutadiene	1.0 < 1.0	ug/L
1,2,3-Trichlorobenzene	1.0 < 1.0	ug/L

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	100 (80 - 120)
Toluene-d8	95 (88 - 110)
Bromofluorobenzene	94 (86 - 115)

American Environmental Network, Inc.

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\82600310.M (RTE Integrator)
Title : AEN New Mexico GC/MS
Last Update : Wed Mar 11 12:23:32 1998
Response via : Initial Calibration

Non-Spiked Sample: 041598B1.D

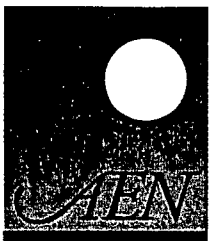
Spike Sample	Spike Duplicate Sample
File ID : 041598S3.D	041598S4.D
Sample : BS	BS
Acq Time: 15 Apr 98 6:52 pm	15 Apr 98 7:28 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC RPD	Limits % Rec
1,1-Dichloroethene	0.0	50	45	45	91	90	1	14	61-145
Benzene	0.0	50	51	51	101	102	0	11	76-127
Trichloroethene	0.0	50	50	51	100	103	2	14	71-120
Toluene	0.0	50	50	49	99	98	1	13	76-125
Chlorobenzene	0.0	50	50	50	99	100	1	13	75-130

- Fails Limit Check

82600310.M

Thu Apr 16 15:19:22 1998



American Environmental Network

200 Monroe Turnpike • Monroe, CT 06468 • (203) 261-4458 • Fax (203) 268-5346

May 01, 1998

Ms. Kim Mcneill
AEN-NEW MEXICO
2709-D Pan American Freeway, Ne
Albuquerque, NM 87107

Dear Ms. Mcneill :

Please find enclosed the analytical results of 1 sample(s) received at our laboratory on April 16, 1998. This report contains sections addressing the following information at a minimum:

- . sample summary
- . analytical methodology
- . state certifications
- . definition of data qualifiers and terminology
- . analytical results
- . chain-of-custody

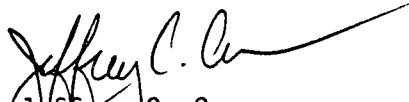
IEA Report #7098-0857A	Purchase Order #804371/804372
Project ID: ICAP METALS	

Copies of this analytical report and supporting data are maintained in our files for a minimum of five years unless special arrangements have been made. Unless specifically indicated, all analytical testing was performed at this laboratory location and no portion of the testing was subcontracted.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (203) 261-4458 for any additional information. Thank you for utilizing our services; we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Very truly yours,


Jeffrey C. Curran
Laboratory Manager

JCC

7098-0857A
AEN/NEW MEXICO

Case Narrative

Metals - ICAP metals were determined using a JA61E trace ICAP using guidance provided in SW846 according to the following Methods: ICAP-3010/6010.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

IEC's are electronically employed by the JA61E ICAP. However, the ICSA is utilized as a monitoring device to detect any additional adjustments that may be required. These modifications are calculated and applied manually. They are so noted in the raw data.

TABLE AS-1.0
7098-0857A
AEN-NEW MEXICO
MISCELLANEOUS ATOMIC SPECTROSCOPY

Aqueous

All values are ug/L.

Client Sample I.D.	804372	11.15		
Lab Sample I.D.	980857A-01			
Aluminum	200.U			
Antimony	60.0U			
Arsenic	12.6			
Barium	200.U			
Beryllium	5.0U			
Boron	294.	750		
Cadmium	5.0U			
Calcium	95800			
Chromium	10.0U			
Cobalt	50.0U			
Copper	25.0U			
Iron	2440			
Lead	3.0U			
Magnesium	15600			
Manganese	56.3			
Molybdenum	20.0U			
Nickel	40.0U			
Potassium	5000U			
Selenium	5.0U			
Silicon	23700			
Silver	10.0U			
Sodium	90300			
Thallium	10.0U			
Vanadium	50.0U			
Zinc	105.			

See Appendix for qualifier definitions

INORGANICS APPENDIX

C - Concentration qualifiers

- U - Indicates analyte was not detected at method reporting limit.
- B - Indicates analyte result between IDL and contract required detection limit (CRDL)

Q - QC qualifiers

- E - Reported value is estimated because of the presence of interference
- M - Duplicate injection precision not met
- N - Spiked sample recovery not within control limits
- S - The reported value was determined by the method of standard additions (MSA)
- W - Post-digest spike recovery furnace analysis was out of 85-115 percent control limit, while sample absorbance was less than 50 percent of spike absorbance
- * - Duplicate analysis not within control limit
- + - Correlation coefficient for MSA is less than 0.995

M - Method codes

- P - ICP
- A - Flame AA
- F - Furnace AA
- CV - Cold vapor AA (manual)
- C - Cyanide
- NR - Not Required
- NC - Not Calculated as per protocols

U.S. EPA - CLP

3
BLANKSLab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A0857Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
		1	C	2	C	3	C			
Aluminum								200.0000	U	P
Antimony								60.0000	U	P
Arsenic								10.0000	U	P
Barium								200.0000	U	P
Beryllium								5.0000	U	P
Boron								100.0000	U	P
Cadmium								5.0000	U	P
Calcium								5000.0000	U	P
Chromium								10.0000	U	P
Cobalt								50.0000	U	P
Copper								25.0000	U	P
Iron								100.0000	U	P
Lead								3.0000	U	P
Magnesium								5000.0000	U	P
Manganese								15.0000	U	P
Molybdenum								20.0000	U	P
Nickel								40.0000	U	P
Potassium								5000.0000	U	P
Selenium								5.0000	U	P
Silicon								200.0000	U	P
Silver								10.0000	U	P
Sodium								5000.0000	U	P
Thallium								10.0000	U	P
Vanadium								50.0000	U	P
Zinc								20.0000	U	P

FORM III - IN

ILM03.0

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

CW-6DS

Lab Name: IEA

Contract: _____

Lab Code: IEA Case No.: 0857

SAS No.: _____

SDG No.: A0857Matrix: WATERLevel (low/med): LOW% Solids for Sample: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2675.7080	604.8850	2000.00	103.5		P
Antimony	75-125	537.1699	60.0000 U	500.00	107.4		P
Arsenic	75-125	49.1876	10.0000 U	40.00	123.0		P
Barium	75-125	1983.8400	200.0000 U	2000.00	99.2		P
Beryllium	75-125	57.9067	5.0000 U	50.00	115.8		P
Boron	75-125	1080.4400	100.0000 U	1000.00	108.0		P
Cadmium	75-125	11.5033	6.0572	5.00	108.9		P
Calcium	75-125	40577.8500	18203.4200	20000.00	111.9		P
Chromium	75-125	198.3554	10.0000 U	200.00	99.2		P
Cobalt	75-125	503.2714	50.0000 U	500.00	100.6		P
Copper	75-125	253.5893	25.0000 U	250.00	101.4		P
Iron	75-125	1517.1890	436.0872	1000.00	108.1		P
Lead	75-125	23.8922	3.0000 U	20.00	119.5		P
Magnesium	75-125	23909.5600	5000.0000 U	20000.00	119.5		P
Manganese	75-125	552.5635	54.6491	500.00	99.6		P
Molybdenum	75-125	1044.6570	20.0000 U	1000.00	104.5		P
Nickel	75-125	504.9686	40.0000 U	500.00	101.0		P
Potassium			5000.0000 U	0.00	0.0		P
Selenium	75-125	13.6573	5.0000 U	10.00	136.6		P
Silicon							NR
Silver	75-125	54.3397	10.0000 U	50.00	108.7		P
Sodium	75-125	31498.3400	8463.1960	20000.00	115.2		P
Thallium	75-125	44.7167	10.0000 U	50.00	89.4		P
Vanadium	75-125	498.0627	50.0000 U	500.00	99.6		P
Zinc	75-125	556.9888	20.0000 U	500.00	111.4		P

Comments:

Total Metals

FORM V (PART 1) - IN

ILM03.0

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

CW-6DD

Lab Name: IEA

Contract: _____

Lab Code: IEACase No.: 0857

SAS No.: _____

SDG No.: A0857Matrix: WATERLevel (low/med): LOW% Solids for Sample: 0.0% Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	.0	604.8850		598.2759		1.1		P
Antimony		60.0000	U	60.0000	U			P
Arsenic		10.0000	U	10.0000	U			P
Barium		200.0000	U	200.0000	U			P
Beryllium		5.0000	U	5.0000	U			P
Boron		100.0000	U	100.0000	U			P
Cadmium	.0	6.0572		6.1164		1.0		P
Calcium	.0	18203.4200		18709.1700		2.7		P
Chromium		10.0000	U	10.0000	U			P
Cobalt		50.0000	U	50.0000	U			P
Copper		25.0000	U	25.0000	U			P
Iron	.0	436.0872		426.0395		2.3		P
Lead		3.0000	U	3.0000	U			P
Magnesium		5000.0000	U	5000.0000	U			P
Manganese	.0	54.6491		54.9532		0.6		P
Molybdenum		20.0000	U	20.0000	U			P
Nickel		40.0000	U	40.0000	U			P
Potassium		5000.0000	U	5000.0000	U			P
Selenium		5.0000	U	5.0000	U			P
Silicon								NR
Silver		10.0000	U	10.0000	U			P
Sodium	.0	8463.1960		8404.1890		0.7		P
Thallium		10.0000	U	10.0000	U			P
Vanadium		50.0000	U	50.0000	U			P
Zinc		20.0000	U	20.0000	U			P

Total Metals

FORM VI - IN

ILM03.0

U.S. EPA - CLP

7
LABORATORY CONTROL SAMPLELab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A0857

Solid LCS Source: _____

Aqueous LCS Source: INORG. VENT.

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	500.0	481.91	96.4					
Antimony	500.0	490.24	98.0					
Arsenic	500.0	493.15	98.6					
Barium	500.0	466.03	93.2					
Beryllium	200.0	210.77	105.4					
Boron								
Cadmium	250.0	250.87	100.4					
Calcium	20000.0	21518.70	107.6					
Chromium	500.0	475.23	95.0					
Cobalt	500.0	487.67	97.5					
Copper	500.0	465.28	93.0					
Iron	500.0	523.25	104.6					
Lead	500.0	489.72	97.9					
Magnesium	20000.0	20328.02	101.6					
Manganese	500.0	459.73	91.9					
Molybdenum								
Nickel	500.0	478.93	95.8					
Potassium	20000.0	17493.02	87.5					
Selenium	500.0	511.95	102.4					
Silicon	225.0	200.00	88.9					
Silver	100.0	84.09	84.1					
Sodium	20000.0	21099.36	105.5					
Thallium	500.0	510.94	102.2					
Vanadium	500.0	487.19	97.4					
Zinc	500.0	496.45	99.3					

FORM VII - IN

ILM03.0

STATE CERTIFICATIONS

In some instances it may be necessary for environmental data to be reported to a regulatory authority with reference to a certified laboratory. For your convenience, the laboratory identification numbers for the AEN-Connecticut laboratory are provided in the following table. Many states certify laboratories for specific parameters or tests within a category (i.e. method 325.2 for wastewater). The information in the following table indicates the lab is certified in a general category of testing such as drinking water or wastewater analysis. The laboratory should be contacted directly if parameter-specific certification information is required.

AEN-Connecticut Certification Summary (as of September 1997)

State	Responsible Agency	Certification	Lab Number
Connecticut	Department of Health Services	Drinking Water, Wastewater	PH-0497
Maine	Department of Human Services	Wastewater	CT023
Massachusetts	Department of Environmental Protection	Potable/Non-Potable Water	CT023
New Hampshire	Department of Environmental Services	Drinking Water, Wastewater	2528
New Jersey	Department of Environmental Protection	Drinking Water, Wastewater	46410
New York	Department of Health	CLP, Drinking Water, Wastewater, Solid/ Hazardous Waste	10602
North Carolina	Division of Environmental Management	Wastewater Hazardous Waste	388
North Dakota	Department of Health and Consolidated Laboratories	Non-Potable/Potable Hazardous Waste	R-138
Oklahoma	Department of Environmental Quality	General Water Quality/ Sludge Testing	9614
Rhode Island	Department of Health	Chemistry...Non- Potable Water and Wastewater	A43
Washington	Department of Ecology	Wastewater/ Hazardous Waste	SC231
West Virginia	Division of Environmental Protection	Wastewater/ Hazardous Waste	263
Wisconsin	Department of Natural Resources	Wastewater/ Hazardous Waste	998355710

7098-0857A
AEN-NEW MEXICO
SAMPLE SUMMARY

CLIENT ID	LAB ID	MATRIX	DATE COLLECTED	DATE RECEIVED
804372	980857A-01	WATER	04/14/98	04/16/98

Client ID: 804372
Job Number: 7098-0857A

Date: 5/1/98

Qty	Matrix	Analysis	Description
1	WATER	MET-SW846-MISC	Miscellaneous Metals
1	WATER	SI-SW846	Silicon

Interlab Chain of Custody

NETWORK PROJECT MANAGER: **KIMBERLY D. MCNEILL**

ANALYSIS REQUEST

COMPANY: **AMERICAN ENVIRONMENTAL NETWORK**
 ADDRESS: **2709-D Pan American Freeway, NE**
Albuquerque, NM 87107

7098-0857A

CLIENT PROJECT MANAGER:

Kim McNeill

SAMPLE ID DATE TIME MATRIX LAB ID

804372-01 **4/14/98** **1258** **AQ** **01**

Metals - TAL	
X Metals - PP List Al, Sb, As, Ba, Be	
X Metals - RCRA Co, Cd, Cr, Cu, Pb	
X RCRA Metals by TCLP (1311) Ca, Fe, Pb	
X Mg, Mn, Mo, Ni, K, Se, Si	
X Ag, Na, Ti, V, Zn	
TOX	
TOC	
Gen Chemistry	
Oil and Grease	
BOD	
COD	
Pesticides/PCB (608/8080)	
Herbicides (615/8150)	
Base/Neutral Acid Compounds GC/MS (625/8270)	
Volatile Organics GC/MS (624/8240)	
Polynuclear Aromatics (610/8310)	
8240 (TCLP 1311) ZHE	
8270 (TCLP 1311)	
TO-14	
Gross Alpha/Beta	
NUMBER OF CONTAINERS	

PROJECT INFORMATION SAMPLE RECEIPT

PROJECT NUMBER: **804372** TOTAL NUMBER OF CONTAINERS

PROJECT NAME: **NMCCD** CHAIN OF CUSTODY SEALS

QC LEVEL: **STD** IV INTACT?

QC REQUIRED: **MS** MSD BLANK RECEIVED GOOD COND./COLD

TAT: **STANDARD** RUSH! LAB NUMBER

DUE DATE: **4/28/98**

RUSH SURCHARGE:

SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO

SAMPLES SENT TO:

CONNECTICUT **X**

ILLINOIS

MASSACHUSETTS

PENSACOLA

PORTLAND

PHOENIX

N. CAROLINA

RELINQUISHED BY:

Signature: **Kim McNeill** Time: **1:00**

Printed Name: **Kim McNeill** Date: **4/15/98**

Abbuquerque

RECEIVED BY:

Signature: **[Signature]** Time: **1.**

Printed Name: **[Name]** Date: **[Date]**

Company: **[Company]**

RELINQUISHED BY:

Signature: **[Signature]** Time: **[Time]**

Printed Name: **[Name]** Date: **[Date]**

Company: **[Company]**

RECEIVED BY: (LAB)

Signature: **[Signature]** Time: **[Time]**

Printed Name: **[Name]** Date: **[Date]**

Company: **[Company]**

CHAIN OF CUSTODY

DATE: 4-14-98 PAGE: 1 OF 1

AEN(NM) Accession #

804372

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:		ANALYSIS REQUEST	
COMPANY:	NMOC D	Petroleum Hydrocarbons (418.1) TRPH	
ADDRESS:	P.O. 1980 HOBBS NM 88241	(MOD.8015) Diesel/Direct Inject	
PHONE:	505-373-6161	(M8015) Gas/Purge & Trap	
FAX:		8021 (BTEX)/8015 (Gasoline)	
BILL TO:	S.A.B.	8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE	
COMPANY:		8021 (TCL)	
ADDRESS:		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)	
		Herbicides (615/8151)	
		Base/Neutral/Acid Compounds GC/MS (625/8270)	
		Polynuclear Aromatics (610/8310)	
		General Chemistry:	
		NITRATES - NO ₃	
		Priority Pollutant Metals (13)	
		Target Analyte List Metals (23)	
		RCRA Metals (8)	
		RCRA Metals by TCLP (Method 1311)	
		Metals: - TOTAL	
		NUMBER OF CONTAINERS	

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ NO:	HOBBS RES WATER WELL	(RUSH) ☐ 12hr ☐ 14hr ☐ 17hr ☐ 1 WEEK	(NORMAL) ☒
PROJ NAME:	1804 LORENE	CERTIFICATION REQUIRED:	☒ NM ☐ SDWA ☐ OTHER
P.O. NO.:	HOBBS NM 88240	METHANOL PRESERVATION ☐	
SHIPPED VIA:	FED EX	COMMENTS: FIXED FEE ☐	
SAMPLE RECEIPT		NITRATES TO AEN FLORIDA	
NO. CONTAINERS:	6	SHAWED DIRECT	
CUSTODY SEALS:	DN/NA	(1) 8310 Be He Brake in Shipping	
RECEIVED INTACT:	YES	TO AEN - NM	
BLUE/ICE/CE:	YES		

RELINQUISHED BY:		RELINQUISHED BY:	
Signature:	<i>[Signature]</i>	Signature:	<i>[Signature]</i>
Printed Name:	Michelle Price	Printed Name:	Michelle Price
Date:	4-14-98	Date:	4-14-98
Company:	NMOC D	Company:	NMOC D
RECEIVED BY:	1.	RECEIVED BY: (LAB)	2.
Signature:	<i>[Signature]</i>	Signature:	<i>[Signature]</i>
Printed Name:		Printed Name:	
Date:		Date:	
Company:		Company:	



an environmental testing company

200 Monroe Turnpike
 Monroe, Connecticut 06468
 (203) 261-4458
 FAX (203) 268-5346

CHAIN OF CUSTODY
 ATOMIC SPECTROSCOPY DEPARTMENT

Job Number 7098-0857A Sample Numbers 01

WATER - SOIL - SLUDGE - EPTOX/TCLP

I confirm that I have performed the preparation below following SOP guidelines and authorize the release of this preparation:

Sample Prep	<u>[Signature]</u>	<u>04/22/98</u>	ICP/FLME
			FURN
			MERCURY
	Chemist	Date(s)	

I confirm that I have performed the analysis below following SOP guidelines and authorize the release of all associated data:

Analysis	<u>[Signature]</u>	<u>4/30/98</u> <u>4/24-25/98</u>	ICP
			FLAME
			FURN
			MERCURY
	Chemist	Date(s)	

I have reviewed and authorize the release of this job:

Complete	<u>[Signature]</u>	<u>5/1/98</u>
	Supervisor	Date

Batch Assignment _____



American Environmental Network, Inc.

11 EAST OLIVE ROAD • PENSACOLA, FL 32514 • (850) 474-1001

SIGNATURE PAGE

Reviewed by:

A handwritten signature in cursive script, appearing to read "M. Patrick", written over a horizontal line.

AEN Project Manager

Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
ALBUQUERQUE, NEW MEXICO

Project Name: HOBBS RES. WATER WELL
Project Number: 804372
Project Location: 1804 LORENE, HOBBS, NM
Accession Number: 804185

Project Manager: KIMBERLY D. MCNEILL
Sampled By: N/S

Analysis Report

Analysis: NITRATE, NITROGEN (353.2-354.1)

Accession:	804185
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804372
Project Name:	HOBBS RES. WATER WELL
Project Location:	1804 LORENE, HOBBS, NM
Department:	WET CHEM

[0] Page 1
Date 29-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 804185
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804372
Project Name: HOBBS RES. WATER WELL
Project Location: 1804 LORENE, HOBBS, NM
Test: NITRATE, NITROGEN (353.2-354.1)
Matrix: WATER
QC Level: II

Lab ID: 001
Client Sample Id: 804372-01
Sample Date/Time: 14-APR-98 1302
Received Date: 15-APR-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
NITRITE, NITROGEN (354.1/4500-NO2B)	MG/L	ND	0.1		N2W047	RB
NITRITE-NITRATE, NITROGEN (353.2)	MG/L	1.9 ✓	0.1		N3W26B	WH
NITRATE, NITROGEN (353.2- 354.1)	MG/L	1.9 ✓	0.1		NONE	DPH

Comments:

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Date 29-Apr-98

"Method Report Summary"

Accession Number: 804185
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804372
Project Name: HOBBS RES. WATER WELL
Project Location: 1804 LORENE, HOBBS, NM
Test: NITRATE, NITROGEN (353.2-354.1)

Client Sample Id:	Parameter:	Unit:	Result:
804372-01	NITRITE-NITRATE, NITROGEN (353.2)	MG/L	1.9
	NITRATE, NITROGEN (353.2- 354.1)	MG/L	1.9

Analysis Report

Analysis: Group of Single Wetchem

Accession:	804185
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804372
Project Name:	HOBBS RES. WATER WELL
Project Location:	1804 LORENE, HOBBS, NM
Department:	WET CHEM

[0] Page 1
Date 29-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 804185
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804372
Project Name: HOBBS RES. WATER WELL
Project Location: 1804 LORENE, HOBBS, NM
Test: Group of Single Wetchem
Matrix: WATER
QC Level: II

Lab ID: 001
Client Sample Id: 804372-01

Sample Date/Time: 14-APR-98 1302
Received Date: 15-APR-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
CONDUCTIVITY (120.1/2510 B)	UMH/CM	1100	1		CDW009	ED
SULFATE (375.4)	MG/L	130	50	+	SEW041	BE
TOTAL DISSOLVED SOLIDS (160.1)	MG/L	640	5		TDW019	ED

Comments:

[0) Page 2
Date 29-Apr-98

"Method Report Summary"

Accession Number: 804185
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804372
Project Name: HOBBS RES. WATER WELL
Project Location: 1804 LORENE, HOBBS, NM
Test: Group of Single Wetchem

Client Sample Id:	Parameter:	Unit:	Result:
804372-01	CONDUCTIVITY (120.1/2510 B)	UMH/CM	1100 ✓
	SULFATE (375.4)	MG/L	130
	TOTAL DISSOLVED SOLIDS (160.1)	MG/L	640

Analysis Report

Analysis: POLYNUCLEAR AROMATICS BY 8310

Accession:	804185
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804372
Project Name:	HOBBS RES. WATER WELL
Project Location:	1804 LORENE, HOBBS, NM
Department:	SEMI-VOLATILE FUELS

[0] Page 1
Date 23-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 804185
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804372
Project Name: HOBBS RES. WATER WELL
Project Location: 1804 LORENE, HOBBS, NM
Test: POLYNUCLEAR AROMATICS BY 8310
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix: WATER
QC Level: II

Lab Id: 001 Sample Date/Time: 14-APR-98 1302
Client Sample Id: 804372-01 Received Date: 15-APR-98

Batch: PAW082 Extraction Date: 17-APR-98
Blank: A Dry Weight %: N/A Analysis Date: 22-APR-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
ACENAPHTHENE	UG/L	ND ✓	1	
ACENAPHTHYLENE	UG/L	ND	1	
ANTHRACENE	UG/L	ND	1	
BENZO(a)ANTHRACENE	UG/L	ND	1	
BENZO(a)PYRENE	UG/L	ND	1	
BENZO(b)FLUORANTHENE	UG/L	ND	1	
BENZO(g,h,i)PERYLENE	UG/L	ND	1	
BENZO(k)FLUORANTHENE	UG/L	ND	1	
CHRYSENE	UG/L	ND	1	
DIBENZO(a,h)ANTHRACENE	UG/L	ND	1	
FLUORANTHENE	UG/L	ND	1	
FLUORENE	UG/L	ND	1	
INDENO(1,2,3-cd)PYRENE	UG/L	ND	1	
NAPHTHALENE	UG/L	ND	1	
PHENANTHRENE	UG/L	ND	1	
PYRENE	UG/L	ND	1	
1-METHYLNAPHTHALENE	UG/L	ND	1	
2-METHYLNAPHTHALENE	UG/L	ND	1	
2-CHLOROANTHRACENE	%REC/SURR	106	28-138	
ANALYST	INITIALS	LB		

Comments:

Data Qualifiers for Final ReportAEN-Pensacola Inorganic/Organic

@	Adjusted reporting limit due to sample matrix (dilution prior to digestion and/or analysis)
+	Elevated reporting limit due to dilution into calibration range
*	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)
#	Elevated reporting limit due to insufficient sample size
D	Diluted out
J5	The reported value is quantitated as a TIC; therefore, it is estimated
ND = Not Detected	N/S = Not Submitted N/A = Not Applicable

Florida Projects Inorganic/Organic

Y1	Improper preservation, no preservative present in sample upon receipt
Y2	Improper preservation, incorrect preservative present in sample upon receipt
Y3	Improper preservation, sample temperature exceeded EPA temperature limits of 2-6°C upon receipt
Y (FL description)	The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Q	Sample held beyond the accepted holding time
I	The reported value is < Laboratory RL and > laboratory MDL
U1	The reported value is ≤ Laboratory MDL (value for sample result is reported as the MDL)
U (FL description)	Indicates the compound was analyzed for but not detected.
T	The reported value is < Laboratory MDL (value shall not be used for statistical analysis)
V	The analyte was detected in both the sample and the associated method blank.
J1	Surrogate recovery limits have been exceeded
J2	The sample matrix interfered with the ability to make any accurate determinations
J3	The reported value failed to meet the established quality control criteria for either precision or accuracy
J (FL description)	Estimated value; not accurate.

AFCEE Projects (under QAPP) and All Other (AEN-PN) Projects/Sites for Inorganic/Organic Parameters

J4	(For positive results) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$)
J (AFCEE description)	The analyte was positively identified, the quantitation is an estimation
R1	(For nondetects) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$)
R2	Improper preservation, no preservative present in sample upon receipt
R3	Improper preservation, incorrect preservative present in sample upon receipt
R4	Holding time exceeded
R5	Collection requirements not met, improper container used for sample
R (AFCEE description)	The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
F	< RL and > laboratory MDL
F (AFCEE description)	The analyte was positively identified but the associated numerical value is below the AFCEE or lab RL
U2	≤ Laboratory MDL (value for result will be the MDL, never below the MDL)
U (AFCEE description)	The analyte was analyzed for but not detected. The associated numerical value is at or below the MDL
B (AFCEE description)	The analyte was found in the associated blank, as well as in the sample

ICR Projects Inorganic/Organic

A	Acceptable
R6	Rejected

Examples: ICR Flags

R6 = Laboratory extracted the sample but the refrigerator malfunctioned so the extract became warm and client was notified

R6 = Sample arrived in laboratory in good condition; however, the laboratory did not analyze it within EPA's established holding time limit.

CLP and CLP-like Projects

Refer to referenced CLP Statement of Work (SOW) for explanation of data qualifiers

IDL = Laboratory Instrument Detection Limit

MDL = Laboratory Method Detection Limit

RL = Reporting Limit (AFCEE RLs are listed in the AFCEE QAPP)

CLP CRDL = CLP Contract Required Detection Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

CLP CRQL = CLP Contract Required Quantitation Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

Any time a sample arrives at the laboratory improperly preserved (at improper pH or temperature) or after holding time has expired or prepared or analyzed after holding time, client must be notified in writing (i.e. case narrative).

AEN-Pensacola uses the most current promulgated methods contained in the reference manuals.

Quality Control Report

Analysis: NITRATE, NITROGEN (353.2-354.1)

Accession:	804185
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804372
Project Name:	HOBBS RES. WATER WELL
Project Location:	1804 LORENE, HOBBS, NM
Department:	WET CHEM

[0] Page 1
Date 29-Apr-98

"WetChem Quality Control Report"

Parameter:	NO2	NO2NO3
Batch Id:	N2W047	N3W26B
Blank Result:	<0.1	<0.1
Anal. Method:	354.1	353.2
Prep. Method:	N/A	N/A
Analysis Date:	14-APR-98	22-APR-98
Prep. Date:	14-APR-98	21-APR-98

Sample Duplication

Sample Dup:	804167-1	804183-1
Rept Limit:	<0.1	<0.1
Sample Result:	<0.1	0.24
Dup Result:	<0.1	0.24
Sample RPD:	N/C	0 G
Max RPD:	0.1	0.1
Dry Weight%	N/A	N/A

Matrix Spike

Sample Spiked:	804167-1	804183-1
Rept Limit:	<0.1	<0.1
Sample Result:	<0.1	0.24
Spiked Result:	0.20	1.21
Spike Added:	0.20	1.00
% Recovery:	100	97
% Rec Limits:	85-117	70-127
Dry Weight%	N/A	N/A

ICV

ICV Result:	0.20	2.02
True Result:	0.20	2.00
% Recovery:	100	101
% Rec Limits:	90-110	90-110

LCS

LCS Result:		
True Result:		
% Recovery:		
% Rec Limits:		

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Date 29-Apr-98

"Quality Control Comments"

Batch Id: Comments:

N2W047	804183-1,2; 804084-1; 8904185-1 and 804193-1,2,3,4,5 were
N2W047	all added onto batch on 15-APR-98.

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Date 29-Apr-98

----- Common Footnotes WetChem -----

N/A = NOT APPLICABLE.
N/S = NOT SUBMITTED.
N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW AEN REPORTING LIMIT;
THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
N/D = NOT DETECTED.
R = REACTIVE
T = TOTAL
G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND
THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".
Q = THE ANALYTICAL (POST-DISTILLATION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY
BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DISTILLATION) SPIKE.
= ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.
+ = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE (DILUTION PRIOR DIGESTION
AND/OR ANALYSIS).
@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX (DILUTION PRIOR TO DIGESTION
AND/OR ANALYSIS).
P = ANALYTICAL (POST DIGESTION) SPIKE.
I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE
ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING
LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER,
THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT
AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN
REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
SAMPLE IS NON-HOMOGENEOUS.
(*) = REPORTING LIMITS RAISED DUE TO CLP METHOD NOT REQUIRING A CONCENTRATION STEP FOR CN.
(CA) = SEE CORRECTIVE ACTIONS FORM.
**= MATRIX INTERFERENCE
SW-846, 3rd Edition, latest EPA-approved edition.
EPA 600/4-79-020, Revised March 1983.
STANDARD METHODS, For the Examination of Water and Wastewater, latest EPA-approved edition.
NIOSH Manual of Analytical Methods, 4th Edition.
ANNUAL BOOK OF ASTM STANDARDS, VOLUMES 11.01 and 11.02, latest EPA-approved edition.
METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES,
EPA600/R-93/100, AUGUST 1993
METHODS FOR SOIL ANALYSIS, PART 2, CHEMICAL AND MICROBIOLOGICAL PROPERTIES, 2ND EDITION.
AEN-PN USES THE MOST CURRENT PROMULGATED METHODS FROM THE REFERENCES LISTED ABOVE.

1. COLIFORM. COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN
THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES.
2. PH. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE
SAMPLE AND DUPLICATE ANALYSIS.
3. FLASHPOINT. FLASHPOINT PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN
THE SAMPLE AND DUPLICATE ANALYSIS.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION).
RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG RB = REBECCA BROWN WH = WENDY HAGGARD
ED = ESTHER DANTIN CR = CYNTHIA ROBERTS AB = AMY BRADLEY
BE = BETTY EVERTON PLD = PAULA L. DOUGHTY JTZ = JONATHAN T. ZIENTARSKI
RH = RICKY HAGENDORFER

Quality Control Report

Analysis: Group of Single Wetchem

Accession:	804185
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804372
Project Name:	HOBBS RES. WATER WELL
Project Location:	1804 LORENE, HOBBS, NM
Department:	WET CHEM

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Date 29-Apr-98

"WetChem Quality Control Report"

Parameter:	CONDUCT'Y	SULFATE	TDS
Batch Id:	CDW009	SEW041	TDW019
Blank Result:	<1	<10	<5
Anal. Method:	120.1	375.4	160.1
Prep. Method:	N/A	N/A	N/A
Analysis Date:	28-APR-98	22-APR-98	22-APR-98
Prep. Date:	28-APR-98	22-APR-98	21-APR-98

Sample Duplication

Sample Dup:	804184-1	804025-21	804235-3
Rept Limit:	<1	<10	<5

Sample Result:	1178	<10	960
Dup Result:	1176	<10	956
Sample RPD:	0	N/C	0
Max RPD:	2	10	15
Dry Weight%	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	N/A	804025-21	N/A
Rept Limit:	N/A	<10	N/A

Sample Result:	<10	
Spiked Result:	22	
Spike Added:	20	
% Recovery:	110	
% Rec Limits:	64-150	
Dry Weight%	N/A	

ICV

ICV Result:	22	
True Result:	20	
% Recovery:	110	
% Rec Limits:	90-110	

LCS

LCS Result:	1430	300
True Result:	1412	293
% Recovery:	101	102
% Rec Limits:	98-102	77-122

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Date 29-Apr-98

----- Common Footnotes WetChem -----

N/A = NOT APPLICABLE.
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THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
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T = TOTAL
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THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
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BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DISTILLATION) SPIKE.
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+ = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
* = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE (DILUTION PRIOR DIGESTION
AND/OR ANALYSIS).
@ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX (DILUTION PRIOR TO DIGESTION
AND/OR ANALYSIS).
P = ANALYTICAL (POST DIGESTION) SPIKE.
I = DUPLICATE INJECTION.
& = AUTOMATED
F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
N/C+ = NOT CALCULABLE
H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE
ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING
LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER,
THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT
AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN
REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
SAMPLE IS NON-HOMOGENEOUS.
(*) = REPORTING LIMITS RAISED DUE TO CLP METHOD NOT REQUIRING A CONCENTRATION STEP FOR CN.
(CA) = SEE CORRECTIVE ACTIONS FORM.
**= MATRIX INTERFERENCE
SW-846, 3rd Edition, latest EPA-approved edition.
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NIOSH Manual of Analytical Methods, 4th Edition.
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EPA600/R-93/100, AUGUST 1993
METHODS FOR SOIL ANALYSIS, PART 2, CHEMICAL AND MICROBIOLOGICAL PROPERTIES, 2ND EDITION.
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1. COLIFORM. COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN
THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES.
2. PH. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE
SAMPLE AND DUPLICATE ANALYSIS.
3. FLASHPOINT. FLASHPOINT PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN
THE SAMPLE AND DUPLICATE ANALYSIS.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION).
RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG RB = REBECCA BROWN WH = WENDY HAGGARD
ED = ESTHER DANTIN CR = CYNTHIA ROBERTS AB = AMY BRADLEY
BE = BETTY EVERTON PLD = PAULA L. DOUGHTY JTZ = JONATHAN T. ZIENTARSKI
RH = RICKY HAGENDORFER

Quality Control Report

Analysis: POLYNUCLEAR AROMATICS BY 8310

Accession:	804185
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804372
Project Name:	HOBBS RES. WATER WELL
Project Location:	1804 LORENE, HOBBS, NM
Department:	SEMI-VOLATILE FUELS

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Date 23-Apr-98

"QC Report"

Title: Water Blank
Batch: PAW082
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Blank Id: A Date Analyzed: 21-APR-98 Date Extracted: 17-APR-98

Parameters:	Units:	Results:	Reporting Limits:
ACENAPHTHENE	UG/L	ND	1
ACENAPHTHYLENE	UG/L	ND	1
ANTHRACENE	UG/L	ND	1
BENZO (a) ANTHRACENE	UG/L	ND	1
BENZO (a) PYRENE	UG/L	ND	1
BENZO (b) FLUORANTHENE	UG/L	ND	1
BENZO (g, h, i) PERYLENE	UG/L	ND	1
BENZO (k) FLUORANTHENE	UG/L	ND	1
CHRYSENE	UG/L	ND	1
DIBENZO (a, h) ANTHRACENE	UG/L	ND	1
FLUORANTHENE	UG/L	ND	1
FLUORENE	UG/L	ND	1
INDENO (1, 2, 3-cd) PYRENE	UG/L	ND	1
NAPHTHALENE	UG/L	ND	1
PHENANTHRENE	UG/L	ND	1
PYRENE	UG/L	ND	1
1-METHYLNAPHTHALENE	UG/L	ND	1
2-METHYLNAPHTHALENE	UG/L	ND	1
2-CHLOROANTHRACENE	%REC/SURR	101	28-138
ANALYST	INITIALS	LB	

Comments:

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Date 23-Apr-98

"QC Report"

Title: Water LCS
Batch: PAW082
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

RS Date Analyzed: 21-APR-98

RS Date Extracted: 17-APR-98

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	Rec Lmts
ACENAPHTHYLENE	10.0	<1	8.3	83	45-127
BENZO (k) FLUORANTHENE	10.2	<1	13.0	127	68-131
CHRYSENE	10.3	<1	13.2	128	69-131
PHENANTHRENE	10.2	<1	12.9	126*	63-124
PYRENE	11.4	<1	14.4	126	61-126

Surrogates:
2-CHLOROANTHRACENE 120 28-138

Comments:

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

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Date 23-Apr-98

"QC Report"

Title: Water Matrix Spike/Matrix Spike Duplicate
Batch: PAW082
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Dry Weight %:	MS Date Analyzed:	MS Date Extracted:						
Sample Spiked:	MSD Date Analyzed:	MSD Date Extracted:						
Parameters:	Spike Added	Sample Conc	MS Conc	MS %Rec	MSD Conc	MSD %Rec	RPD RPD	Rec Lmts
ACENAPHTHYLENE								51 18-146
BENZO(k) FLUORANTHENE								40 26-137
CHRYSENE								69 16-156
PHENANTHRENE								36 30-145
PYRENE								41 39-137
Surrogates:								
2-CHLOROANTHRACENE								28-138

Comments:
NOT ENOUGH SAMPLE SUBMITTED TO EXTRACT MATRIX SPIKE/MATRIX SPIKE DUPLICATE.

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

Common Notation for Organic Reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
UG = MICROGRAMS
UG/L = PARTS PER BILLION
UG/KG = PARTS PER BILLION
MG/M3 = MILLIGRAM PER CUBIC METER
PPMV = PART PER MILLION BY VOLUME
MG/KG = PARTS PER MILLION
MG/L = PARTS PER MILLION
< = LESS THAN
ND = NOT DETECTED

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

AEN/GC/FID
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

AEN/GC/FIX
AEN GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

AEN/GC/FPD
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

AEN/GC/PID
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

AEN/GC/TCD
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

SW-846 METHOD 9020
PARTICULATE MATTER IS REMOVED BY ALLOWING PARTICULATES TO SETTLE IN THE SAMPLE CONTAINER AND DECANTING THE SUPERNATANT LIQUID. EXCESSIVE PARTICULATES ARE REMOVED BY FILTRATION OF THE SUPERNATANT LIQUID.

RSK 175
SAMPLE PREPARATION AND CALCULATIONS FOR DISSOLVED GAS ANALYSIS IN WATER SAMPLES USING A GC HEADSPACE EQUILIBRATION TECHNIQUE, RSK SOP-175, ROBERT S. KERR ENVIRONMENTAL RESEARCH LABORATORY, USEPA, AUGUST 11, 1994.

AEN-PN USES THE MOST CURRENT PROMULGATED METHODS CONTAINED IN THE REFERENCE MANUALS.

SW = STEVE WILHITE
RW = ROBERT WOLFE
KS = KENDALL SMITH
LB = LISA BIZZELL
JO = JENNIFER O'NEAL
LP = LEVERNE PETERSON
PLD = PAULA DOUGHTY
JL = JANET LECLEAR
RC = RON CALI
DK = DARLENE KINCHEN
BT = BECKY TREMMEL

American Environmental Network of Florida

PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 804185

Date Received: 15-Apr-98

- | | |
|---|---|
| <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: AEN-SOP 1055)</p> <p>4. Were all samples properly labeled and identified? <u>Yes</u> No*</p> <p>5. Did samples require splitting? 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 except VOA vials that require zero headspace)*</p> <p>9. Is there sufficient volume for analysis requested? <u>Yes</u> No*</p> <p>10. Were samples received within Holding Time? <u>Yes</u> No*
(REFER TO AEN-SOP 1040)</p> <p>11. Is Headspace visible > ¼" 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: _____) Yes No* <u>N/A</u></p> |
|---|---|

Airbill Number(s): 801920396330

Shipped By: FEDEX

Cooler Number(s): client cooler

Shipping Charges: N/A

Cooler Weight(s): N/A

Cooler Temp(s) (°C): 3.0°C - OK1

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

4/15/98: John Caldwell gave us Project Number 804372 for their Accession # JE

(USE BACK OF PSIFOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: PLC Date: 4/15/98 Logged By: PLC Date: 4/15/98

- * Note all Out-of-Control and/or questionable events on Comment Section of this form.
- * Note who requested the splitting of samples on the Comment Section of this form.
- + 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 (AEN-SOP 938, section 2.2.9).
- * According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).

Interlab Chain of Custody

DATE: 4/14/98 PAGE: 1 OF 1

NETWORK PROJECT MANAGER: KIMBERLY D. McNEILL

COMPANY: AMERICAN ENVIRONMENTAL NETWORK
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

804185

CLIENT PROJECT MANAGER:

Kim McNeill

SAMPLE ID DATE TIME MATRIX LAB ID

804372-01 4/14/98 1253 HQ 1

Metals - TAL
Metals - PP List
Metals - RCRA
RCRA Metals by TCLP (1311)
TOX
TOC
Gen Chemistry
X TDS, SO₄, EC
X NO₃ (Already in FI)
Oil and Grease
BOD
COD
Pesticides/PCB (608/8080)
Herbicides (615/8150)
Base/Neutral Acid Compounds GC/MS (625/8270)
Volatile Organics GC/MS (624/8240)
X Polynuclear Aromatics (610/8310)
8240 (TCLP 1311) ZHE
8270 (TCLP 1311)

TO-14
Gross Alpha/Beta

NUMBER OF CONTAINERS

PROJECT INFORMATION

SAMPLE RECEIPT

PROJECT NUMBER: 804372

PROJECT NAME: NMOCID

OC LEVEL: STD IV

OC REQUIRED: MS MSD BLANK

TAT: STANDARD RUSH

DUE DATE: 4/28

RUSH SURCHARGE:

SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO

SAMPLES SENT TO:

CONNECTICUT
ILLINOIS
MASSACHUSETTS
PENSACOLA
PORTLAND
PHOENIX
N. CAROLINA

RELINQUISHED BY:

RELINQUISHED BY:

Signature: [Signature]
Printed Name: [Name]
Date: 4/15/98

Signature: [Signature]
Printed Name: [Name]
Date: 4/16/98

RECEIVED BY:

RECEIVED BY: (LAB)

Company:

Company: AEN-FL

PAGE: 1 OF 1

AEN(NM) Accessión # 804372

1990

PLEASE FILL THIS FORM IN COMPLETELY.

DISTRIBUTION: White - AEN, Canary - Originator

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:

COMPANY: NMOC
ADDRESS: P.O. 1980
Hobbs NM 88241
PHONE: 505-393-6161
FAX:
BILL TO: S.A.B.
COMPANY:
ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	
9804141253-Hobbs RES 4/14/98	12:53 PM	24hr	-01		Petroleum Hydrocarbons (418.1) TRPH
9804141253-Hobbs RES	"	12:56 PM	-01		(MOD.8015) Diesel/Direct Inject
"	"	12:58 PM	-01		(M8015) Gas/Purge & Trap
"	"	1:00 PM	-01		8021 (BTEX)/8015 (Gasoline)
"	"	1:02 PM	-01		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)
					Herbicides (615/8151)
					Base/Neutral/Acid Compounds GC/MS (625/8270)
					Polynuclear Aromatics (610/8310)
					General Chemistry:
					NITRATES - NO ₃
					Priority Pollutant Metals (13)
					Target Analyte List Metals (23)
					RCRA Metals (8)
					RCRA Metals by TCLP (Method 1311)
					Metals: - TOTAL
					NUMBER OF CONTAINERS: 1

PROJECT INFORMATION

PROJ. NO: Hobbs RES 24hr 24hr
PROJ. NAME: 1804 LORENE
PO. NO: Hobbs NM 88240
SHIPPED VIA: FEDEX

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒
CERTIFICATION REQUIRED: ☒ NM ☐ SDWA ☐ OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐
NITRATES TO AEN FLORIDA
SHIMMO DIRECT
(1) 8310 Be the broke in shipping to AEN-NM

RELINQUISHED BY:

Signature: [Signature]
Printed Name: AMOC
Date: 4-14-98

RELINQUISHED BY:

Signature:
Printed Name:
Date:

SAMPLE RECEIPT

RECEIVED BY: [Signature]
DATE: 4/14/98
TIME: 10:55 AM

RECEIVED BY:

Signature:
Printed Name:
Date:

RECEIVED BY:

Signature: [Signature]
Printed Name: [Signature]
Date: 4/14/98

American Environmental Network, Inc.

AEN I.D.

804371

May 21, 1998

NM-OCD
2040 S. PACHEO
SANTA FE, NM 87505

Project Name 1722 LORENE
Project Number SPALDING WATER WELL

Attention: BILL OLSON

On 4/15/98 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA method 8260 was performed by American Environmental Network (NM) Inc., Albuquerque, NM.

Metals were performed by American Environmental Network (CT) Inc., Monroe, CT.

All other parameters were performed by American Environmental Network (FL) Inc., Pensacola, FL.

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



Kimberly D. McNeill
Project Manager



H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

Enclosure

American Environmental Network, Inc.

CLIENT	: NM-OCD	AEN I.D.	: 804371
PROJECT #	: SPALDING WATER WELL	DATE RECEIVED	: 4/15/98
PROJECT NAME	: 1722 LORENE	REPORT DATE	: 5/12/98
AEN			DATE
ID. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	9804141140-SPALDING	AQUEOUS	4/14/98

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : SPALDING WATER WELL
 PROJECT NAME : 1722 LORENE

AEN I.D. : 804371
 DATE RECEIVED : 4/15/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
804371-01	9804141140 - SPALDING	AQUEOUS	4/14/98	N/A	04/15/98	1
PARAMETER	DET. LIMIT	UNITS				

Dichlorodifluoromethane	1.0	< 1.0	ug/L
Chloromethane	1.0	< 1.0	ug/L
Vinyl Chloride	1.0	< 1.0	ug/L
Bromomethane	1.0	< 1.0	ug/L
Chloroethane	1.0	< 1.0	ug/L
Trichlorofluoromethane	1.0	< 1.0	ug/L
Acetone	10	< 10	ug/L
Acrolein	5.0	< 5.0	ug/L
1,1-Dichloroethene	1.0	< 1.0	ug/L
Iodomethane	1.0	< 1.0	ug/L
Methylene Chloride	1.0	< 1.0	ug/L
Acrylonitrile	5.0	< 5.0	ug/L
cis-1,2-Dichloroethene	1.0	< 1.0	ug/L
Methyl-t-butyl Ether	1.0	< 1.0	ug/L
1,1,2,1,2,2-Trichlorotrifluoroethane	1.0	< 1.0	ug/L
1,1-Dichloroethane	1.0	< 1.0	ug/L
trans-1,2-Dichloroethene	1.0	< 1.0	ug/L
2-Butanone	10	< 10	ug/L
Carbon Disulfide	1.0	< 1.0	ug/L
Bromochloromethane	1.0	< 1.0	ug/L
Chloroform	1.0	< 1.0	ug/L
2,2-Dichloropropane	1.0	< 1.0	ug/L
1,2-Dichloroethane	1.0	< 1.0	ug/L
Vinyl Acetate	1.0	< 1.0	ug/L
1,1,1-Trichloroethane	1.0	< 1.0	ug/L
1,1-Dichloropropene	1.0	< 1.0	ug/L
Carbon Tetrachloride	1.0	< 1.0	ug/L
Benzene	1.0	< 1.0	ug/L
1,2-Dichloropropane	1.0	< 1.0	ug/L
Trichloroethene	1.0	< 1.0	ug/L
Bromodichloromethane	1.0	< 1.0	ug/L
2-Chloroethyl Vinyl Ether	10	< 10	ug/L
cis-1,3-Dichloropropene	1.0	< 1.0	ug/L
trans-1,3-Dichloropropene	1.0	< 1.0	ug/L
1,1,2-Trichloroethane	1.0	< 1.0	ug/L
1,3-Dichloropropane	1.0	< 1.0	ug/L
Dibromomethane	1.0	< 1.0	ug/L
Toluene	1.0	< 1.0	ug/L
1,2-Dibromoethane	1.0	< 1.0	ug/L
4-Methyl-2-Pentanone	10	< 10	ug/L
2-Hexanone	10	< 10	ug/L
Dibromochloromethane	1.0	< 1.0	ug/L
Tetrachloroethene	1.0	< 1.0	ug/L
Chlorobenzene	1.0	< 1.0	ug/L
Ethylbenzene	1.0	< 1.0	ug/L
1,1,1,2-Tetrachloroethane	1.0	< 1.0	ug/L

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : SPALDING WATER WELL
 PROJECT NAME : 1722 LORENE

AEN I.D. : 804371
 DATE RECEIVED : 4/15/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
804371-01	9804141140 - SPALDING	AQUEOUS	4/14/98	N/A	04/15/98	1

PARAMETER	DET. LIMIT	UNITS
m&p Xylenes	1.0 < 1.0	ug/L
o-Xylene	1.0 < 1.0	ug/L
Styrene	1.0 < 1.0	ug/L
Bromoform	1.0 < 1.0	ug/L
1,1,2,2-Tetrachloroethane	1.0 < 1.0	ug/L
1,2,3-Trichloropropane	1.0 < 1.0	ug/L
Isopropyl Benzene	1.0 < 1.0	ug/L
Bromobenzene	1.0 < 1.0	ug/L
trans-1,4-Dichloro-2-Butene	1.0 < 1.0	ug/L
n-Propylbenzene	1.0 < 1.0	ug/L
2-Chlorotoluene	1.0 < 1.0	ug/L
4-Chlorotoluene	1.0 < 1.0	ug/L
1,3,5-Trimethylbenzene	1.0 < 1.0	ug/L
tert-Butylbenzene	1.0 < 1.0	ug/L
1,2,4-Trimethylbenzene	1.0 < 1.0	ug/L
sec-Butylbenzene	1.0 < 1.0	ug/L
1,3-Dichlorobenzene	1.0 < 1.0	ug/L
1,4-Dichlorobenzene	1.0 < 1.0	ug/L
p-Isopropyltoluene	1.0 < 1.0	ug/L
1,2-Dichlorobenzene	1.0 < 1.0	ug/L
n-Butylbenzene	1.0 < 1.0	ug/L
1,2-Dibromomo-3-chloropropane	1.0 < 1.0	ug/L
1,2,4-Trichlorobenzene	1.0 < 1.0	ug/L
Naphthalene	1.0 < 1.0	ug/L
Hexachlorobutadiene	1.0 < 1.0	ug/L
1,2,3-Trichlorobenzene	1.0 < 1.0	ug/L

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	102 (80 - 120)
Toluene-d8	99 (88 - 110)
Bromofluorobenzene	96 (86 - 115)

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : SPALDING WATER WELL
 PROJECT NAME : 1722 LORENE

AEN I.D. : 804371

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
REAGENT BLANK	041598	AQUEOUS	N/A	04/15/98	1

PARAMETER	DET. LIMIT		UNITS
Dichlorodifluoromethane	1.0	< 1.0	ug/L
Chloromethane	1.0	< 1.0	ug/L
Vinyl Chloride	1.0	< 1.0	ug/L
Bromomethane	1.0	< 1.0	ug/L
Chloroethane	1.0	< 1.0	ug/L
Trichlorofluoromethane	1.0	< 1.0	ug/L
Acetone	10	< 10	ug/L
Acrolein	5.0	< 5.0	ug/L
1,1-Dichloroethene	1.0	< 1.0	ug/L
Iodomethane	1.0	< 1.0	ug/L
Methylene Chloride	1.0	< 1.0	ug/L
Acrylonitrile	5.0	< 5.0	ug/L
cis-1,2-Dichloroethene	1.0	< 1.0	ug/L
Methyl-t-butyl Ether	1.0	< 1.0	ug/L
1,1,2,1,2,2-Trichlorotrifluoroethane	1.0	< 1.0	ug/L
1,1-Dichloroethane	1.0	< 1.0	ug/L
trans-1,2-Dichloroethene	1.0	< 1.0	ug/L
2-Butanone	10	< 10	ug/L
Carbon Disulfide	1.0	< 1.0	ug/L
Bromochloromethane	1.0	< 1.0	ug/L
Chloroform	1.0	< 1.0	ug/L
2,2-Dichloropropane	1.0	< 1.0	ug/L
1,2-Dichloroethane	1.0	< 1.0	ug/L
Vinyl Acetate	1.0	< 1.0	ug/L
1,1,1-Trichloroethane	1.0	< 1.0	ug/L
1,1-Dichloropropene	1.0	< 1.0	ug/L
Carbon Tetrachloride	1.0	< 1.0	ug/L
Benzene	1.0	< 1.0	ug/L
1,2-Dichloropropane	1.0	< 1.0	ug/L
Trichloroethene	1.0	< 1.0	ug/L
Bromodichloromethane	1.0	< 1.0	ug/L
2-Chloroethyl Vinyl Ether	10	< 10	ug/L
cis-1,3-Dichloropropene	1.0	< 1.0	ug/L
trans-1,3-Dichloropropene	1.0	< 1.0	ug/L
1,1,2-Trichloroethane	1.0	< 1.0	ug/L
1,3-Dichloropropane	1.0	< 1.0	ug/L
Dibromomethane	1.0	< 1.0	ug/L
Toluene	1.0	< 1.0	ug/L
1,2-Dibromoethane	1.0	< 1.0	ug/L
4-Methyl-2-Pentanone	10	< 10	ug/L
2-Hexanone	10	< 10	ug/L
Dibromochloromethane	1.0	< 1.0	ug/L
Tetrachloroethene	1.0	< 1.0	ug/L
Chlorobenzene	1.0	< 1.0	ug/L
Ethylbenzene	1.0	< 1.0	ug/L

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260
 CLIENT : NMOCD
 PROJECT # : SPALDING WATER WELL
 PROJECT NAME : 1722 LORENE

AEN I.D. : 804371

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
REAGENT BLANK	041598	AQUEOUS	N/A	04/15/98	1
PARAMETER	DET. LIMIT	UNITS			
1,1,1,2-Tetrachloroethane	1.0	< 1.0	ug/L		
m&p Xylenes	1.0	< 1.0	ug/L		
o-Xylene	1.0	< 1.0	ug/L		
Styrene	1.0	< 1.0	ug/L		
Bromoform	1.0	< 1.0	ug/L		
1,1,2,2-Tetrachloroethane	1.0	< 1.0	ug/L		
1,2,3-Trichloropropane	1.0	< 1.0	ug/L		
Isopropyl Benzene	1.0	< 1.0	ug/L		
Bromobenzene	1.0	< 1.0	ug/L		
trans-1,4-Dichloro-2-Butene	1.0	< 1.0	ug/L		
n-Propylbenzene	1.0	< 1.0	ug/L		
2-Chlorotoluene	1.0	< 1.0	ug/L		
4-Chlorotoluene	1.0	< 1.0	ug/L		
1,3,5-Trimethylbenzene	1.0	< 1.0	ug/L		
tert-Butylbenzene	1.0	< 1.0	ug/L		
1,2,4-Trimethylbenzene	1.0	< 1.0	ug/L		
sec-Butylbenzene	1.0	< 1.0	ug/L		
1,3-Dichlorobenzene	1.0	< 1.0	ug/L		
1,4-Dichlorobenzene	1.0	< 1.0	ug/L		
p-Isopropyltoluene	1.0	< 1.0	ug/L		
1,2-Dichlorobenzene	1.0	< 1.0	ug/L		
n-Butylbenzene	1.0	< 1.0	ug/L		
1,2-Dibromomo-3-chloropropane	1.0	< 1.0	ug/L		
1,2,4-Trichlorobenzene	1.0	< 1.0	ug/L		
Naphthalene	1.0	< 1.0	ug/L		
Hexachlorobutadiene	1.0	< 1.0	ug/L		
1,2,3-Trichlorobenzene	1.0	< 1.0	ug/L		

SURROGATE % RECOVERY

1,2-Dichloroethane-d4 100
 (80 - 120)
 Toluene-d8 95
 (88 - 110)
 Bromofluorobenzene 94
 (86 - 115)

American Environmental Network, Inc.

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\82600310.M (RTE Integrator)
Title : AEN New Mexico GC/MS
Last Update : Wed Mar 11 12:23:32 1998
Response via : Initial Calibration

Non-Spiked Sample: 041598B1.D

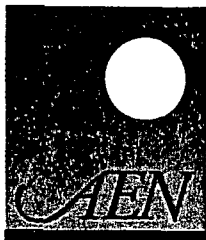
Spike Sample	Spike Duplicate Sample
File ID : 041598S3.D	041598S4.D
Sample : BS	BS
Acq Time: 15 Apr 98 6:52 pm	15 Apr 98 7:28 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC RPD	Limits % Rec
1,1-Dichloroethene	0.0	50	45	45	91	90	1	14	61-145
Benzene	0.0	50	51	51	101	102	0	11	76-127
Trichloroethene	0.0	50	50	51	100	103	2	14	71-120
Toluene	0.0	50	50	49	99	98	1	13	76-125
Chlorobenzene	0.0	50	50	50	99	100	1	13	75-130

- Fails Limit Check

82600310.M

Thu Apr 16 15:19:22 1998



American Environmental Network

200 Monroe Turnpike • Monroe, CT 06468 • (203) 261-4458 • Fax (203) 268-5346

May 01, 1998

Ms. Kim Mcneill
AEN-NEW MEXICO
2709-D Pan American Freeway, Ne
Albuquerque, NM 87107

Dear Ms. Mcneill :

Please find enclosed the analytical results of 1 sample(s) received at our laboratory on April 16, 1998. This report contains sections addressing the following information at a minimum:

- . sample summary
- . analytical methodology
- . state certifications
- . definition of data qualifiers and terminology
- . analytical results
- . chain-of-custody

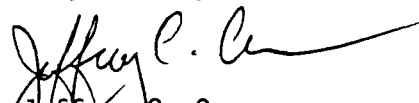
IEA Report #7098-0858A	Purchase Order #804371/804372
Project ID: ICAP METALS	

Copies of this analytical report and supporting data are maintained in our files for a minimum of five years unless special arrangements have been made. Unless specifically indicated, all analytical testing was performed at this laboratory location and no portion of the testing was subcontracted.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (203) 261-4458 for any additional information. Thank you for utilizing our services; we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Very truly yours,


Jeffrey C. Curran
Laboratory Manager

JCC

7098-0858A
AEN/NEW MEXICO

Case Narrative

Metals - ICAP metals were determined using a JA61E trace ICAP using guidance provided in SW846 according to the following Methods: ICAP-3010/6010.

No problems occurred during analysis. All appropriate protocols were employed. All data appears to be consistent.

IEC's are electronically employed by the JA61E ICAP. However, the ICSA is utilized as a monitoring device to detect any additional adjustments that may be required. These modifications are calculated and applied manually. They are so noted in the raw data.

TABLE AS-1.0
7098-0858A
AEN-NEW MEXICO
MISCELLANEOUS ATOMIC SPECTROSCOPY

Aqueous

All values are ug/L.

Client Sample I.D.	804371	WICE		
Lab Sample I.D.	980858A-01			
Aluminum	200.U			
Antimony	60.0U			
Arsenic	12.2			
Barium	200.U			
Beryllium	5.0U			
Boron	370.			
Cadmium	5.0U			
Calcium	118000			
Chromium	10.0U			
Cobalt	50.0U			
Copper	25.0U			
Iron	100.U			
Lead	3.0U			
Magnesium	20000			
Manganese	15.0U			
Molybdenum	20.0U			
Nickel	40.0U			
Potassium	5000U			
Selenium	5.6			
Silicon	26100			
Silver	10.0U			
Sodium	87300			
Thallium	10.0U			
Vanadium	50.0U			
Zinc	20.0U			

See Appendix for qualifier definitions

INORGANICS APPENDIX

C - Concentration qualifiers

- U - Indicates analyte was not detected at method reporting limit.
- B - Indicates analyte result between IDL and contract required detection limit (CRDL)

Q - QC qualifiers

- E - Reported value is estimated because of the presence of interference
- M - Duplicate injection precision not met
- N - Spiked sample recovery not within control limits
- S - The reported value was determined by the method of standard additions (MSA)
- W - Post-digest spike recovery furnace analysis was out of 85-115 percent control limit, while sample absorbance was less than 50 percent of spike absorbance
- * - Duplicate analysis not within control limit
- + - Correlation coefficient for MSA is less than 0.995

M - Method codes

- P - ICP
- A - Flame AA
- F - Furnace AA
- CV - Cold vapor AA (manual)
- C - Cyanide
- NR - Not Required
- NC - Not Calculated as per protocols

STATE CERTIFICATIONS

In some instances it may be necessary for environmental data to be reported to a regulatory authority with reference to a certified laboratory. For your convenience, the laboratory identification numbers for the ARN-Connecticut laboratory are provided in the following table. Many states certify laboratories for specific parameters or tests within a category (i.e. method 325.2 for wastewater). The information in the following table indicates the lab is certified in a general category of testing such as drinking water or wastewater analysis. The laboratory should be contacted directly if parameter-specific certification information is required.

ARN-Connecticut Certification Summary (as of September 1997)

State	Responsible Agency	Certification	Lab Number
Connecticut	Department of Health Services	Drinking Water, Wastewater	PH-0497
Maine	Department of Human Services	Wastewater	CT023
Massachusetts	Department of Environmental Protection	Potable/Non-Potable Water	CT023
New Hampshire	Department of Environmental Services	Drinking Water, Wastewater	2528
New Jersey	Department of Environmental Protection	Drinking Water, Wastewater	46410
New York	Department of Health	CLP, Drinking Water, Wastewater, Solid/ Hazardous Waste	10602
North Carolina	Division of Environmental Management	Wastewater Hazardous Waste	388
North Dakota	Department of Health and Consolidated Laboratories	Non-Potable/Potable Hazardous Waste	R-138
Oklahoma	Department of Environmental Quality	General Water Quality/ Sludge Testing	9614
Rhode Island	Department of Health	Chemistry...Non- Potable Water and Wastewater	A43
Washington	Department of Ecology	Wastewater/ Hazardous Waste	6C231
West Virginia	Division of Environmental Protection	Wastewater/ Hazardous Waste	263
Wisconsin	Department of Natural Resources	Wastewater/ Hazardous Waste	998355710

7098-0858A
AEN-NEW MEXICO
SAMPLE SUMMARY

CLIENT ID	LAB ID	MATRIX	DATE COLLECTED	DATE RECEIVED
804371	980858A-01	WATER	04/14/98	04/16/98

U.S. EPA - CLP

3
BLANKSLab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A0858Preparation Blank Matrix (soil/water): WATERPreparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calibration Blank (ug/L)	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
		1	C	2	C	3	C			
Aluminum								200.000U		P
Antimony								60.000U		P
Arsenic								10.000U		P
Barium								200.000U		P
Beryllium								5.000U		P
Boron								100.000U		P
Cadmium								5.000U		P
Calcium								5000.000U		P
Chromium								10.000U		P
Cobalt								50.000U		P
Copper								25.000U		P
Iron								100.000U		P
Lead								3.000U		P
Magnesium								5000.000U		P
Manganese								15.000U		P
Molybdenum								20.000U		P
Nickel								40.000U		P
Potassium								5000.000U		P
Selenium								5.000U		P
Silicon								200.000U		P
Silver								10.000U		P
Sodium								5000.000U		P
Thallium								10.000U		P
Vanadium								50.000U		P
Zinc								20.000U		P

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

CW-6DS

Lab Name: IEA

Contract: _____

Lab Code: IEACase No.: 0858

SAS No.: _____

SDG No.: A0858Matrix: WATERLevel (low/med): LOW% Solids for Sample: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2675.7080	604.8850	2000.00	103.5		P
Antimony	75-125	537.1699	60.0000 U	500.00	107.4		P
Arsenic	75-125	49.1876	10.0000 U	40.00	123.0		P
Barium	75-125	1983.8400	200.0000 U	2000.00	99.2		P
Beryllium	75-125	57.9067	5.0000 U	50.00	115.8		P
Boron	75-125	1080.4400	100.0000 U	1000.00	108.0		P
Cadmium	75-125	11.5033	6.0572	5.00	108.9		P
Calcium	75-125	40577.8500	18203.4200	20000.00	111.9		P
Chromium	75-125	198.3554	10.0000 U	200.00	99.2		P
Cobalt	75-125	503.2714	50.0000 U	500.00	100.6		P
Copper	75-125	253.5893	25.0000 U	250.00	101.4		P
Iron	75-125	1517.1890	436.0872	1000.00	108.1		P
Lead	75-125	23.8922	3.0000 U	20.00	119.5		P
Magnesium	75-125	23909.5600	5000.0000 U	20000.00	119.5		P
Manganese	75-125	552.5635	54.6491	500.00	99.6		P
Molybdenum	75-125	1044.6570	20.0000 U	1000.00	104.5		P
Nickel	75-125	504.9686	40.0000 U	500.00	101.0		P
Potassium			5000.0000 U	0.00	0.0		P
Selenium	75-125	13.6573	5.0000 U	10.00	136.6		P
Silicon							NR
Silver	75-125	54.3397	10.0000 U	50.00	108.7		P
Sodium	75-125	31498.3400	8463.1960	20000.00	115.2		P
Thallium	75-125	44.7167	10.0000 U	50.00	89.4		P
Vanadium	75-125	498.0627	50.0000 U	500.00	99.6		P
Zinc	75-125	556.9888	20.0000 U	500.00	111.4		P

Comments:

Total Metals

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.

CW-6DD

Lab Name: IEA

Contract: _____

Lab Code: IEACase No.: 0858

SAS No.: _____

SDG No.: A0858Matrix: WATERLevel (low/med): LOW% Solids for Sample: 0.0% Solids for Duplicate: 0.0Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	.0	604.8850		598.2759		1.1		P
Antimony		60.0000	U	60.0000	U			P
Arsenic		10.0000	U	10.0000	U			P
Barium		200.0000	U	200.0000	U			P
Beryllium		5.0000	U	5.0000	U			P
Boron		100.0000	U	100.0000	U			P
Cadmium	.0	6.0572		6.1164		1.0		P
Calcium	.0	18203.4200		18709.1700		2.7		P
Chromium		10.0000	U	10.0000	U			P
Cobalt		50.0000	U	50.0000	U			P
Copper		25.0000	U	25.0000	U			P
Iron	.0	436.0872		426.0395		2.3		P
Lead		3.0000	U	3.0000	U			P
Magnesium		5000.0000	U	5000.0000	U			P
Manganese	.0	54.6491		54.9532		0.6		P
Molybdenum		20.0000	U	20.0000	U			P
Nickel		40.0000	U	40.0000	U			P
Potassium		5000.0000	U	5000.0000	U			P
Selenium		5.0000	U	5.0000	U			P
Silicon								NR
Silver		10.0000	U	10.0000	U			P
Sodium	.0	8463.1960		8404.1890		0.7		P
Thallium		10.0000	U	10.0000	U			P
Vanadium		50.0000	U	50.0000	U			P
Zinc		20.0000	U	20.0000	U			P

Total Metals

FORM VI - IN

ILM03.0

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: IEA

Contract: _____

Lab Code: IEA Case No.: _____SAS No.: _____ SDG No.: A0858

Solid LCS Source: _____

Aqueous LCS Source: INORG. VENT.

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	500.0	481.91	96.4					
Antimony	500.0	490.24	98.0					
Arsenic	500.0	493.15	98.6					
Barium	500.0	466.03	93.2					
Beryllium	200.0	210.77	105.4					
Boron								
Cadmium	250.0	250.87	100.4					
Calcium	20000.0	21518.70	107.6					
Chromium	500.0	475.23	95.0					
Cobalt	500.0	487.67	97.5					
Copper	500.0	465.28	93.0					
Iron	500.0	523.25	104.6					
Lead	500.0	489.72	97.9					
Magnesium	20000.0	20328.02	101.6					
Manganese	500.0	459.73	91.9					
Molybdenum								
Nickel	500.0	478.93	95.8					
Potassium	20000.0	17493.02	87.5					
Selenium	500.0	511.95	102.4					
Silicon	225.0	200.00	88.9					
Silver	100.0	84.09	84.1					
Sodium	20000.0	21099.36	105.5					
Thallium	500.0	510.94	102.2					
Vanadium	500.0	487.19	97.4					
Zinc	500.0	496.45	99.3					

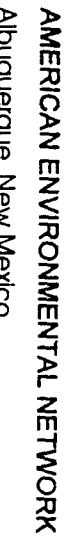
IEA-CT ANALYTICAL SUMMARY

Page:1

Client ID: 804371
Job Number: 7098-0858A

Date: 5/1/98

Qty	Matrix	Analysis	Description
1	WATER	MET-SW846-MISC	Miscellaneous Metals
1	WATER	SI-SW846	Silicon



DATE: 9/15/98 PAGE: 1 OF 1

[illegible]



an environmental testing company

200 Monroe Turnpike
 Monroe, Connecticut 06468
 (203) 261-4458
 FAX (203) 268-5346

CHAIN OF CUSTODY
 ATOMIC SPECTROSCOPY DEPARTMENT

Job Number 7092-0858A Sample Numbers 01

WATER - SOIL - SLUDGE - EPTOX/TCLP

I confirm that I have performed the preparation below following SOP guidelines and authorize the release of this preparation:

Sample Prep	_____	_____	
	<u>[Signature]</u>	<u>04/22/98</u>	ICP/FLME
	_____	_____	FURN
	_____	_____	MERCURY
	Chemist	Date(s)	

I confirm that I have performed the analysis below following SOP guidelines and authorize the release of all associated data:

Analysis	<u>Diane Sumo</u>	<u>4/25/98</u>	ICP
	_____	_____	FLAME
	_____	_____	FURN
	_____	_____	MERCURY
	Chemist	Date(s)	

I have reviewed and authorize the release of this job:

Complete	<u>Diane Sumo</u>	<u>5/1/98</u>
	Supervisor	Date

Batch Assignment _____



American Environmental Network, Inc.

SIGNATURE PAGE

11 EAST OLIVE ROAD • PENSACOLA, FL 32514 • (850) 474-1001

Reviewed by:

AEN Project Manager

Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
ALBUQUERQUE, NEW MEXICO

Project Name: SPALDING WATER WELL
Project Number: 804371
Project Location: 1722 LORENE, HOBBS, NM
Accession Number: 804184

Project Manager: KIMBERLY D. MCNEILL
Sampled By: N/S

Analysis Report

Analysis: Group of Single Wetchem

Accession:	804184
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804371
Project Name:	SPALDING WATER WELL
Project Location:	1722 LORENE, HOBBS, NM
Department:	WET CHEM

[0] Page 1
Date 29-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 804184
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804371
Project Name: SPALDING WATER WELL
Project Location: 1722 LORENE, HOBBS, NM
Test: Group of Single Wetchem
Matrix: WATER
QC Level: II

Lab ID: 001
Client Sample Id: 804371-01

Sample Date/Time: 14-APR-98 1159
Received Date: 15-APR-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
CONDUCTIVITY (120.1/2510 B)	UMH/CM	1200	1		CDW009	ED
SULFATE (375.4)	MG/L	160 :	130	+	SEW041	BE
TOTAL DISSOLVED SOLIDS (160.1)	MG/L	740	5		TDW018	ED

Comments:

[0] Page 2
Date 29-Apr-98

"Method Report Summary"

Accession Number: 804184
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804371
Project Name: SPALDING WATER WELL
Project Location: 1722 LORENE, HOBBS, NM
Test: Group of Single Wetchem

Client Sample Id:	Parameter:	Unit:	Result:
804371-01	CONDUCTIVITY (120.1/2510 B)	UMH/CM	1200
	SULFATE (375.4)	MG/L	160
	TOTAL DISSOLVED SOLIDS (160.1)	MG/L	740

Analysis Report

Analysis: NITRATE, NITROGEN (353.2-354.1)

Accession:	804184
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804371
Project Name:	SPALDING WATER WELL
Project Location:	1722 LORENE, HOBBS, NM
Department:	WET CHEM

[0] Page 1
Date 29-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 804184
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804371
Project Name: SPALDING WATER WELL
Project Location: 1722 LORENE, HOBBS, NM
Test: NITRATE, NITROGEN (353.2-354.1)
Matrix: WATER
QC Level: II

Lab ID: 001
Client Sample Id: 804371-01
Sample Date/Time: 14-APR-98 1159
Received Date: 15-APR-98

Parameters:	Units:	Results:	Rpt Lmts:	Q:	Batch:	Analyst:
NITRITE, NITROGEN (354.1/4500-NO2B)	MG/L	ND	0.1		N2W047	RB
NITRITE-NITRATE, NITROGEN (353.2)	MG/L	1.3	0.1		N3W26B	WH
NITRATE, NITROGEN (353.2- 354.1)	MG/L	1.3	0.1		NONE	DPH

Comments:

[0] Page 2
Date 29-Apr-98

"Method Report Summary"

Accession Number: 804184
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804371
Project Name: SPALDING WATER WELL
Project Location: 1722 LORENE, HOBBS, NM
Test: NITRATE, NITROGEN (353.2-354.1)

Client Sample Id:	Parameter:	Unit:	Result:
804371-01	NITRITE-NITRATE, NITROGEN (353.2)	MG/L	1.3 ✓
	NITRATE, NITROGEN (353.2- 354.1)	MG/L	1.3 ✓

Analysis Report

Analysis: POLYNUCLEAR AROMATICS BY 8310

Accession:	804184
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804371
Project Name:	SPALDING WATER WELL
Project Location:	1722 LORENE, HOBBS, NM
Department:	SEMI-VOLATILE FUELS

[0] Page 1
Date 23-Apr-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 804184
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 804371
Project Name: SPALDING WATER WELL
Project Location: 1722 LORENE, HOBBS, NM
Test: POLYNUCLEAR AROMATICS BY 8310 ✓
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix: WATER
QC Level: II

Lab Id: 001 Sample Date/Time: 14-APR-98 1159
Client Sample Id: 804371-01 Received Date: 15-APR-98
Batch: PAW082 Extraction Date: 17-APR-98
Blank: A Dry Weight %: N/A Analysis Date: 22-APR-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
ACENAPHTHENE	UG/L	ND	1	
ACENAPHTHYLENE	UG/L	ND	1	
ANTHRACENE	UG/L	ND	1	
BENZO(a)ANTHRACENE	UG/L	ND	1	
BENZO(a)PYRENE	UG/L	ND	1	
BENZO(b)FLUORANTHENE	UG/L	ND	1	
BENZO(g,h,i)PERYLENE	UG/L	ND	1	
BENZO(k)FLUORANTHENE	UG/L	ND	1	
CHRYSENE	UG/L	ND	1	
DIBENZO(a,h)ANTHRACENE	UG/L	ND	1	
FLUORANTHENE	UG/L	ND	1	
FLUORENE	UG/L	ND	1	
INDENO(1,2,3-cd)PYRENE	UG/L	ND	1	
NAPHTHALENE	UG/L	ND	1	
PHENANTHRENE	UG/L	ND	1	
PYRENE	UG/L	ND	1	
1-METHYLNAPHTHALENE	UG/L	ND	1	
2-METHYLNAPHTHALENE	UG/L	ND	1	
2-CHLOROANTHRACENE	%REC/SURR	84	28-138	
ANALYST	INITIALS	LB		

Comments:

Data Qualifiers for Final Report

AEN-Pensacola Inorganic/Organic

@	Adjusted reporting limit due to sample matrix (dilution prior to digestion and/or analysis)
+	Elevated reporting limit due to dilution into calibration range
*	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)
#	Elevated reporting limit due to insufficient sample size
D	Diluted out
J5	The reported value is quantitated as a TIC; therefore, it is estimated
ND = Not Detected	N/S = Not Submitted N/A = Not Applicable

Florida Projects Inorganic/Organic

Y1	Improper preservation, no preservative present in sample upon receipt
Y2	Improper preservation, incorrect preservative present in sample upon receipt
Y3	Improper preservation, sample temperature exceeded EPA temperature limits of 2-6°C upon receipt
Y (FL description)	The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Q	Sample held beyond the accepted holding time
I	The reported value is < Laboratory RL and > laboratory MDL
U1	The reported value is ≤ Laboratory MDL (value for sample result is reported as the MDL)
U (FL description)	Indicates the compound was analyzed for but not detected.
T	The reported value is < Laboratory MDL (value shall not be used for statistical analysis)
V	The analyte was detected in both the sample and the associated method blank.
J1	Surrogate recovery limits have been exceeded
J2	The sample matrix interfered with the ability to make any accurate determinations
J3	The reported value failed to meet the established quality control criteria for either precision or accuracy
J (FL description)	Estimated value; not accurate.

AFCEE Projects (under QAPP) and All Other (AEN-PN) Projects/Sites for Inorganic/Organic Parameters

J4	(For positive results) Temperature limits exceeded (≤2°C or ≥ 6°C)
J (AFCEE description)	The analyte was positively identified, the quantitation is an estimation
R1	(For nondetects) Temperature limits exceeded (≤2°C or ≥ 6°C)
R2	Improper preservation, no preservative present in sample upon receipt
R3	Improper preservation, incorrect preservative present in sample upon receipt
R4	Holding time exceeded
R5	Collection requirements not met, improper container used for sample
R (AFCEE description)	The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
F	< RL and > laboratory MDL
F (AFCEE description)	The analyte was positively identified but the associated numerical value is below the AFCEE or lab RL
U2	≤ Laboratory MDL (value for result will be the MDL, never below the MDL)
U (AFCEE description)	The analyte was analyzed for but not detected. The associated numerical value is at or below the MDL
B (AFCEE description)	The analyte was found in the associated blank, as well as in the sample

ICR Projects Inorganic/Organic

A	Acceptable
R6	Rejected

Examples: ICR Flags

R6 = Laboratory extracted the sample but the refrigerator malfunctioned so the extract became warm and client was notified

R6 = Sample arrived in laboratory in good condition; however, the laboratory did not analyze it within EPA's established holding time limit.

CLP and CLP-like Projects

Refer to referenced CLP Statement of Work (SOW) for explanation of data qualifiers

IDL = Laboratory Instrument Detection Limit

MDL = Laboratory Method Detection Limit

RL = Reporting Limit (AFCEE RLs are listed in the AFCEE QAPP)

CLP CRDL = CLP Contract Required Detection Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

CLP CRQL = CLP Contract Required Quantitation Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

Any time a sample arrives at the laboratory improperly preserved (at improper pH or temperature) or after holding time has expired or prepared or analyzed after holding time, client must be notified in writing (i.e. case narrative).

AEN-Pensacola uses the most current promulgated methods contained in the reference manuals.

Quality Control Report

Analysis: Group of Single Wetchem

Accession:	804184
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804371
Project Name:	SPALDING WATER WELL
Project Location:	1722 LORENE, HOBBS, NM
Department:	WET CHEM

[0] Page 1
Date 29-Apr-98

"WetChem Quality Control Report"

Parameter:	CONDUCT'Y	SULFATE	TDS
Batch Id:	CDW009	SEW041	TDW018
Blank Result:	<1	<10	<5
Anal. Method:	120.1	375.4	160.1
Prep. Method:	N/A	N/A	N/A
Analysis Date:	28-APR-98	22-APR-98	16-APR-98
Prep. Date:	28-APR-98	22-APR-98	15-APR-98

Sample Duplication

Sample Dup:	804184-1	804025-21	804195-1
Rept Limit:	<1	<10	<5
Sample Result:	1178	<10	1524
Dup Result:	1176	<10	1522
Sample RPD:	0	N/C	0
Max RPD:	2	10	15
Dry Weight%	N/A	N/A	N/A

Matrix Spike

Sample Spiked:	N/A	804025-21	N/A
Rept Limit:	N/A	<10	N/A
Sample Result:		<10	
Spiked Result:		22	
Spike Added:		20	
% Recovery:		110	
% Rec Limits:		64-150	
Dry Weight%		N/A	

ICV

ICV Result:	22	
True Result:	20	
% Recovery:	110	
% Rec Limits:	90-110	

LCS

LCS Result:	1430	268
True Result:	1412	293
% Recovery:	101	91
% Rec Limits:	98-102	77-122

[0] Page 2
Date 29-Apr-98

"Quality Control Comments"

Batch Id: Comments:

TDW018	804195-1,2,3,4,5,6; 804167-1,2,3,4; 804183-1,2 AND 804184-1
TDW018	WERE ADDED TO BATCH ON 17-APR-98.

[0] Page 3
Date 29-Apr-98

----- Common Footnotes WetChem -----

N/A = NOT APPLICABLE.
 N/S = NOT SUBMITTED.
 N/C = SAMPLE AND DUPLICATE RESULTS ARE AT OR BELOW AEN REPORTING LIMIT;
 THEREFORE, THE RPD IS "NOT CALCULABLE" AND NO CONTROL LIMITS APPLY.
 N/D = NOT DETECTED.
 R = REACTIVE
 T = TOTAL
 G = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND
 THE ABSOLUTE DIFFERENCE BETWEEN THE SAMPLE AND DUPLICATE RESULT IS AT
 OR BELOW AEN REPORTING LIMIT; THEREFORE, THE RESULTS ARE "IN CONTROL".
 Q = THE ANALYTICAL (POST-DISTILLATION) SPIKE IS REPORTED DUE TO PERCENT RECOVERY
 BEING OUTSIDE ACCEPTANCE LIMITS ON THE MATRIX (PRE-DISTILLATION) SPIKE.
 # = ELEVATED REPORTING LIMIT DUE TO INSUFFICIENT SAMPLE.
 + = ELEVATED REPORTING LIMIT DUE TO DILUTION INTO CALIBRATION RANGE.
 * = ELEVATED REPORTING LIMIT DUE TO MATRIX INTERFERENCE (DILUTION PRIOR DIGESTION
 AND/OR ANALYSIS).
 @ = ADJUSTED REPORTING LIMIT DUE TO SAMPLE MATRIX (DILUTION PRIOR TO DIGESTION
 AND/OR ANALYSIS).
 P = ANALYTICAL (POST DIGESTION) SPIKE.
 I = DUPLICATE INJECTION.
 & = AUTOMATED
 F = SAMPLE SPIKED > 4 X SPIKE CONCENTRATION.
 N/C+ = NOT CALCULABLE
 H = SAMPLE AND/OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT AND THE
 ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN REPORTING
 LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
 A = SAMPLE AND DUPLICATE RESULTS ARE "OUT OF CONTROL".
 Z = THE SAMPLE RESULT FOR THE SPIKE IS BELOW THE REPORTING LIMIT. HOWEVER,
 THIS RESULT IS REPORTED FOR ACCURATE QC CALCULATIONS.
 NH= SAMPLE AND / OR DUPLICATE RESULT IS BELOW 5 X AEN REPORTING LIMIT
 AND THE ABSOLUTE DIFFERENCE BETWEEN THE RESULTS EXCEEDS THE AEN
 REPORTING LIMIT; THEREFORE, THE RESULTS ARE "OUT OF CONTROL".
 SAMPLE IS NON-HOMOGENEOUS.
 (*) = REPORTING LIMITS RAISED DUE TO CLP METHOD NOT REQUIRING A CONCENTRATION STEP FOR CN.
 (CA) = SEE CORRECTIVE ACTIONS FORM.
 **= MATRIX INTERFERENCE
 SW-846, 3rd Edition, latest EPA-approved edition.
 EPA 600/4-79-020, Revised March 1983.
 STANDARD METHODS, For the Examination of Water and Wastewater, latest EPA-approved edition.
 NIOSH Manual of Analytical Methods, 4th Edition.
 ANNUAL BOOK OF ASTM STANDARDS, VOLUMES 11.01 and 11.02, latest EPA-approved edition.
 METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES,
 EPA600/R-93/100, AUGUST 1993
 METHODS FOR SOIL ANALYSIS, PART 2, CHEMICAL AND MICROBIOLOGICAL PROPERTIES, 2ND EDITION.
 AEN-PN USES THE MOST CURRENT PROMULGATED METHODS FROM THE REFERENCES LISTED ABOVE.

1. COLIFORM. COLIFORM PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN
 THE LOGARITHM OF COLONIES PER 100 MLS OF SAMPLE ON DUPLICATE PLATES.
2. PH. PH PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN THE
 SAMPLE AND DUPLICATE ANALYSIS.
3. FLASHPOINT. FLASHPOINT PRECISION IS MEASURED BY THE ABSOLUTE DIFFERENCE BETWEEN
 THE SAMPLE AND DUPLICATE ANALYSIS.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION).
 RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG RB = REBECCA BROWN WH = WENDY HAGGARD
 ED = ESTHER DANTIN CR = CYNTHIA ROBERTS AB = AMY BRADLEY
 BE = BETTY EVERTON PLD = PAULA L. DOUGHTY JTZ = JONATHAN T. ZIENTARSKI
 RH = RICKY HAGENDORFER

Quality Control Report

Analysis: NITRATE, NITROGEN (353.2-354.1)

Accession:	804184
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804371
Project Name:	SPALDING WATER WELL
Project Location:	1722 LORENE, HOBBS, NM
Department:	WET CHEM

[0] Page 1
Date 29-Apr-98

"WetChem Quality Control Report"

Parameter:	NO2	NO2NO3
Batch Id:	N2W047	N3W26B
Blank Result:	<0.1	<0.1
Anal. Method:	354.1	353.2
Prep. Method:	N/A	N/A
Analysis Date:	14-APR-98	22-APR-98
Prep. Date:	14-APR-98	21-APR-98

Sample Duplication

Sample Dup:	804167-1	804183-1
Rept Limit:	<0.1	<0.1
Sample Result:	<0.1	0.24
Dup Result:	<0.1	0.24
Sample RPD:	N/C	0 G
Max RPD:	0.1	0.1
Dry Weight%	N/A	N/A

Matrix Spike

Sample Spiked:	804167-1	804183-1
Rept Limit:	<0.1	<0.1
Sample Result:	<0.1	0.24
Spiked Result:	0.20	1.21
Spike Added:	0.20	1.00
% Recovery:	100	97
% Rec Limits:	85-117	70-127
Dry Weight%	N/A	N/A

ICV

ICV Result:	0.20	2.02
True Result:	0.20	2.00
% Recovery:	100	101
% Rec Limits:	90-110	90-110

LCS

LCS Result:		
True Result:		
% Recovery:		
% Rec Limits:		

[0] Page 2
Date 29-Apr-98

"Quality Control Comments"

Batch Id: Comments:

N2W047	804183-1,2; 804084-1; 8904185-1 and 804193-1,2,3,4,5 were
N2W047	all added onto batch on 15-APR-98.

[0] Page 3
Date 29-Apr-98

----- Common Footnotes WetChem -----

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**= MATRIX INTERFERENCE
SW-846, 3rd Edition, latest EPA-approved edition.
EPA 600/4-79-020, Revised March 1983.
STANDARD METHODS, For the Examination of Water and Wastewater, latest EPA-approved edition.
NIOSH Manual of Analytical Methods, 4th Edition.
ANNUAL BOOK OF ASTM STANDARDS, VOLUMES 11.01 and 11.02, latest EPA-approved edition.
METHODS FOR THE DETERMINATION OF INORGANIC SUBSTANCES IN ENVIRONMENTAL SAMPLES,
EPA600/R-93/100, AUGUST 1993
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RPT LMITS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

DPH = DOLLY P. HWANG RB = REBECCA BROWN WH = WENDY HAGGARD
ED = ESTHER DANTIN CR = CYNTHIA ROBERTS AB = AMY BRADLEY
BE = BETTY EVERTON PLD = PAULA L. DOUGHTY JTZ = JONATHAN T. ZIENTARSKI
RH = RICKY HAGENDORFER

Quality Control Report

Analysis: POLYNUCLEAR AROMATICS BY 8310

Accession:	804184
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	804371
Project Name:	SPALDING WATER WELL
Project Location:	1722 LORENE, HOBBS, NM
Department:	SEMI-VOLATILE FUELS

[0] Page 1
Date 23-Apr-98

"QC Report"

Title: Water Blank
Batch: PAW082
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Blank Id: A Date Analyzed: 21-APR-98 Date Extracted: 17-APR-98

Parameters:	Units:	Results:	Reporting Limits:
ACENAPHTHENE	UG/L	ND	1
ACENAPHTHYLENE	UG/L	ND	1
ANTHRACENE	UG/L	ND	1
BENZO (a) ANTHRACENE	UG/L	ND	1
BENZO (a) PYRENE	UG/L	ND	1
BENZO (b) FLUORANTHENE	UG/L	ND	1
BENZO (g, h, i) PERYLENE	UG/L	ND	1
BENZO (k) FLUORANTHENE	UG/L	ND	1
CHRYSENE	UG/L	ND	1
DIBENZO (a, h) ANTHRACENE	UG/L	ND	1
FLUORANTHENE	UG/L	ND	1
FLUORENE	UG/L	ND	1
INDENO (1, 2, 3-cd) PYRENE	UG/L	ND	1
NAPHTHALENE	UG/L	ND	1
PHENANTHRENE	UG/L	ND	1
PYRENE	UG/L	ND	1
1-METHYLNAPHTHALENE	UG/L	ND	1
2-METHYLNAPHTHALENE	UG/L	ND	1
2-CHLOROANTHRACENE	%REC/SURR	101	28-138
ANALYST	INITIALS	LB	

Comments:

[0] Page 2
Date 23-Apr-98

"QC Report"

Title: Water LCS
Batch: PAW082
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

RS Date Analyzed: 21-APR-98

RS Date Extracted: 17-APR-98

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	Rec Lmts
ACENAPHTHYLENE	10.0	<1	8.3	83	45-127
BENZO(k) FLUORANTHENE	10.2	<1	13.0	127	68-131
CHRYSENE	10.3	<1	13.2	128	69-131
PHENANTHRENE	10.2	<1	12.9	126*	63-124
PYRENE	11.4	<1	14.4	126	61-126

Surrogates:
2-CHLOROANTHRACENE 120 28-138

Comments:

Notes:

N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

[0] Page 3
Date 23-Apr-98

"QC Report"

Title: Water Matrix Spike/Matrix Spike Duplicate
Batch: PAW082
Analysis Method: 8310/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3510/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Dry Weight %:	MS Date Analyzed:	MS Date Extracted:							
Sample Spiked:	MSD Date Analyzed:	MSD Date Extracted:							
Parameters:	Spike Added	Sample Conc	MS Conc	MS %Rec	MSD Conc	MSD %Rec	RPD	Rec Lmts	Rec Lmts
ACENAPHTHYLENE							51	18-146	
BENZO (k) FLUORANTHENE							40	26-137	
CHRYSENE							69	16-156	
PHENANTHRENE							36	30-145	
PYRENE							41	39-137	
Surrogates:									
2-CHLOROANTHRACENE									28-138

Comments:
NOT ENOUGH SAMPLE SUBMITTED TO EXTRACT MATRIX SPIKE/MATRIX SPIKE DUPLICATE.

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

Common Notation for Organic Reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
UG = MICROGRAMS
UG/L = PARTS PER BILLION
UG/KG = PARTS PER BILLION
MG/M3 = MILLIGRAM PER CUBIC METER
PPMV = PART PER MILLION BY VOLUME
MG/KG = PARTS PER MILLION
MG/L = PARTS PER MILLION
< = LESS THAN
ND = NOT DETECTED

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

AEN/GC/FID
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

AEN/GC/FIX
AEN GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

AEN/GC/FPD
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

AEN/GC/PID
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

AEN/GC/TCD
AEN GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

SW-846 METHOD 9020
PARTICULATE MATTER IS REMOVED BY ALLOWING PARTICULATES TO SETTLE IN THE SAMPLE CONTAINER AND DECANTING THE SUPERNATANT LIQUID. EXCESSIVE PARTICULATES ARE REMOVED BY FILTRATION OF THE SUPERNATANT LIQUID.

RSK 175
SAMPLE PREPARATION AND CALCULATIONS FOR DISSOLVED GAS ANALYSIS IN WATER SAMPLES USING A GC HEADSPACE EQUILIBRATION TECHNIQUE, RSK SOP-175, ROBERT S. KERR ENVIRONMENTAL RESEARCH LABORATORY, USEPA, AUGUST 11, 1994.

AEN-PN USES THE MOST CURRENT PROMULGATED METHODS CONTAINED IN THE REFERENCE MANUALS.

SW = STEVE WILHITE
RW = ROBERT WOLFE
KS = KENDALL SMITH
LB = LISA BIZZELL
JO = JENNIFER O'NEAL
LP = LEVERNE PETERSON
PLD = PAULA DOUGHTY
JL = JANET LECLEAR
RC = RON CALI
DK = DARLENE KINCHEN
BT = BECKY TREMMEL

American Environmental Network of Florida

PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 804124

Date Received: 15-apr-98

- | | |
|---|--|
| <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: AEN-SOP 1055)</p> <p>4. Were all samples properly labeled and identified? <u>Yes</u> No*</p> <p>5. Did samples require splitting? 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 except VOA vials that require zero headspace)*</p> <p>9. Is there sufficient volume for analysis requested? <u>Yes</u> No*</p> <p>10. Were samples received within Holding Time? <u>Yes</u> No* (REFER TO AEN-SOP 1040)</p> <p>11. Is Headspace visible > ¼" 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: _____) Yes No* <u>N/A</u></p> |
|---|--|

Airbik Number(s): 801920396330

Shipped By: FEDEX

Cooler Number(s): Client Cooler

Shipping Charges: N/A

Cooler Weight(s): N/A

Cooler Temp(s) (°C): 3.0°C - CCH1

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

4/15/98: John Caldwell called with project # 804371 for their Accession number. Jc

(USE BACK OF PSIFOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: Pfc Date: 4/15/98 Logged By: Pfc Date: 4/15/98

- * Note all Out-of-Control and/or questionable events on Comment Section of this form.
- * Note who requested the splitting of samples on the Comment Section of this form.
- + 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 (AEN-SOP 938, section 2.2.9).
- * According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).



AMERICAN ENVIRONMENTAL NETWORK
Albuquerque, New Mexico

Interlab Chain of Custody

DATE: 4/15 PAGE: 1 OF 1

NETWORK PROJECT MANAGER: KIMBERLY D. McNEILL

COMPANY: AMERICAN ENVIRONMENTAL NETWORK
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

204184

CLIENT PROJECT MANAGER:

Kim McNeill

SAMPLE ID DATE TIME MATRIX LAB ID

804371-01 4/14/98 1140 A40 1

Metals - TAL
Metals - PP List
Metals - RCRA
RCRA Metals by TCLP (1311)

TOX
TOC
Gen Chemistry

X TDS, SO₄, EC
X NO₃ (Already in FI)

Oil and Grease
BOD
COD
Pesticides/PCB (608/8080)
Herbicides (615/8150)
Base/Neutral Acid Compounds GC/MS (625/8270)
Volatile Organics GC/MS (624/8240)
Polynuclear Aromatics (610/8310)

8240 (TCLP 1311) ZHE
8270 (TCLP 1311)

TO-14
Gross Alpha/Beta

NUMBER OF CONTAINERS

PROJECT INFORMATION

SAMPLE RECEIPT

SAMPLES SENT TO:

RELINQUISHED BY:

RELINQUISHED BY:

PROJECT NUMBER: 804371

TOTAL NUMBER OF CONTAINERS

CONNECTICUT

Signature: [Signature] Time: 11:00

Signature: [Signature] Time: 4/16/98

PROJECT NAME: NMECD

CHAIN OF CUSTODY SEALS

ILLINOIS

Printed Name: [Signature] Date: 4/15/98

Printed Name: [Signature] Date: 4/16/98

OC LEVEL: STD IV

INTEGRITY

MASSACHUSETTS

Signature: [Signature] Time: 4/15/98

Signature: [Signature] Time: 4/16/98

OC REQUIRED: MS MSD BLANK

RECEIVED GOOD COND/COLD

PENSACOLA

Albuquerque

Signature: [Signature] Time: 4/16/98

TAT: STANDARD RUSH

LAB NUMBER

PORTLAND

RECEIVED BY: [Signature] Time: 4/15/98

RECEIVED BY: (LAB) [Signature] Time: 4/16/98

DUE DATE: 4/28

LAB NUMBER

PHOENIX

Signature: [Signature] Time: 4/15/98

Signature: [Signature] Time: 4/16/98

RUSH SURCHARGE:

LAB NUMBER

N. CAROLINA

Signature: [Signature] Time: 4/15/98

Signature: [Signature] Time: 4/16/98

CLIENT DISCOUNT:

LAB NUMBER

Company:

Signature: [Signature] Time: 4/15/98

Signature: [Signature] Time: 4/16/98

SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO

LAB NUMBER

Company:

Signature: [Signature] Time: 4/15/98

Signature: [Signature] Time: 4/16/98

Company: AEN-FL

PLEASE FILL THIS FORM IN COMPLETELY.

SECRET

PROJECT MANAGER:				ANALYSIS REQUIRED			
COMPANY:	NMOCD			PETROLEUM HYDROCARBONS (418.1) TRPH (MOD.8015) Diesel/Direct Inject (M8015) Gas/Purge & Trap 8021 (BTX)/8015 (Gasoline) 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) Herbicides (615/8151) Base/Neutral/Acid Compounds GC/MS (625/8270) Polynuclear Aromatics (610/8310) General Chemistry: METALS NO3 Priority Pollutant Metals (13) Target Analyte List Metals (23) RCRA Metals (8) RCRA Metals by TCLP (Method 1311) Metals: - TOTAL			
ADDRESS:	R.O. 1980						
PHONE:	Hq0805, NM 8824-1						
FAX:	505-393-6161						
BILL TO:	S.A.B						
COMPANY:	804184						
ADDRESS:							
DATE:	7-11-98	TIME:	11:49 AM	LAB ID:	C11		
780414/1140-SHAHINQ	7-11-98	11:49 AM	241184	C11			
"	7-14-98	11:50 AM	"	C11			
"	"	11:55 AM	"	C11			
"	"	11:55 AM	"	C11			
"	"	11:57 AM	"	C11			

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ. NO.	SPALDING 207722 2064	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒
PROJ. NAME	1722 LORENE	CERTIFICATION REQUIRED: ☒ NM ☐ SDWA ☐ OTHER	
P.O. NO.	H6085 NM	METHANOL PRESERVATION ☐	
SHIPPED VIA	FED EX	COMMENTS: FIXED FEE ☐	
NITRATES TO NEW FLORIDA SHIPPED DIRECT!			
Signature: _____ Time: 2:00 PM		Signature: _____ Time: _____	
Printed Name: _____ Date: 4-14-98		Printed Name: _____ Date: _____	
Company: NMOC0		Company: _____	

PROJECT MANAGER:

COMPANY: MMCCB

ADDRESS: RD. 1980

HOBAS, NM 88241

505-393-6161

FAX:

BILL TO:

5. A-B

COMPANY:

ADDRESS:

SAMPLE ID

DATE _____

TIME

MATRIX

LAB 1.0

Petroleum Hydrocarbons (418.1) TRPH

(MOD.8015) Diesel/Direct Inject

(M8015) Gas/Purge & Trap

8021 (BTEX)/8015 (Gasoline)

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)

Herbicides (615/8151)

Base/Neutral/Acid Compounds GC/MS (625/8270)

Polynuclear Aromatics (610/8310)

General Chemistry:

NUMERATES NO3

Priority Pollutant Metals (13)

Target Analyte List Metals (23)

RCRA Metals (8)

RCRA Metals by TCLP (Method 1311)

Metals: - TOTAL

NUMBER OF CONTAINERS

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

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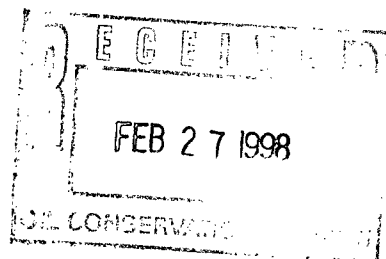
PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS		RELINQUISHED BY		RELINQUISHED BY	
PROJ. NO.: SPALDING 2 AFTER 20614	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒			Signature: <i>Allyson Price</i> Time: 2:00 PM		Signature: Time:	
PROJ. NAME: 1722 LORENE	CERTIFICATION REQUIRED: ☒ NM ☐ SDWA ☐ OTHER			Printed Name: Allyson Price Date: 4-14-98		Printed Name: Date:	
PO. NO.: H6085, NM	METHANOL PRESERVATION ☐			Company: NMOCN		Company:	
SHIPPED VIA: FEDEX	COMMENTS: FIXED FEE ☐			RECEIVED BY: <i>Allyson Price</i> Time: 4-14-98		RECEIVED BY: <i>Allyson Price</i> Time: 4-14-98	
SAMPLE RECEIPT				Signature: Time:		Signature: Time:	
NO. CONTAINERS: 7				Printed Name: Date:		Printed Name: Date:	
QUANTITY SET: 20 NM				Company: NMOCN		Company:	
RECEIVED IN: 405				RECEIVED BY: <i>Allyson Price</i> Time: 4-14-98		RECEIVED BY: <i>Allyson Price</i> Time: 4-14-98	
QUANTITY: 405				Signature: Time:		Signature: Time:	
RECEIVED IN: 405				Printed Name: Date:		Printed Name: Date:	
QUANTITY: 405				Company: NMOCN		Company:	

American Environmental Network, Inc.

AEN I.D. 801352

February 19, 1998

NM-OCD
PO Box 1980
Hobbs, NM 88241



Project Name TASKER ST-HOBBS
Project Number SHELL OIL CO.

Attention: WAYNE PRICE

On 1/21/98 American Environmental Network (NM), Inc. (ADHS License No. AZ0015), received a request to analyze **non-aq** 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 8240 was analyzed by American Environmental Network (NM) Inc., Albuquerque, NM.

Silicon was analyzed by American Environmental Network (AZ) Inc., Phoenix, AZ.

All other metals were analyzed by American Environmental Network (OR) Inc., Portland, OR.

All other parameters were analyzed by American Environmental Network (FL) Inc., Pensacola, FL.

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

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: mt

Record
Page
100

American Environmental Network, Inc.

CLIENT	: NM-OCD	AEN I.D.	: 801352
PROJECT #	: SHELL OIL CO.	DATE RECEIVED	: 1/21/98
PROJECT NAME	: TASKER ST-HOBBS	REPORT DATE	: 2/19/98

AEN ID. #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SS-1 2-3' DEEP 9801201049	NA	1/20/98
02	SS-1 5' DEEP 9801201127	NA	1/20/98
03	SS-2 2-3' DEEP 9801201157	NA	1/20/98
04	SS-2 6' DEEP 9801201208	NA	1/20/98

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American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NMOCD AEN I.D. : 801352
 PROJECT # : SHELL OIL CO. DATE RECEIVED : 1/21/98
 PROJECT NAME : TASKER ST - HOBBS

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
801352-01	SS-1 2-3' DEEP 9801201049	NON-AQ	1/20/98	1/26/98	01/26/98	5
PARAMETER	DET. LIMIT	UNITS				

Dichlorodifluoromethane	0.05	< 0.25	MG/KG
Chloromethane	0.05	< 0.25	MG/KG
Vinyl Chloride	0.05	< 0.25	MG/KG
Bromomethane	0.05	< 0.25	MG/KG
Chloroethane	0.05	< 0.25	MG/KG
Trichlorofluoromethane	0.05	< 0.25	MG/KG
Acetone	0.5	< 2.5	MG/KG
1,1-Dichloroethene	0.05	< 0.25	MG/KG
Iodomethane	0.05	< 0.25	MG/KG
Methylene Chloride	0.05	< 0.25	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.25	MG/KG
1,1-Dichloroethane	0.05	< 0.25	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.25	MG/KG
2-Butanone	0.5	< 2.5	MG/KG
Carbon Disulfide	0.05	< 0.25	MG/KG
Chloroform	0.05	< 0.25	MG/KG
1,2-Dichloroethane	0.05	< 0.25	MG/KG
Vinyl Acetate	0.05	< 0.25	MG/KG
1,1,1-Trichloroethane	0.05	< 0.25	MG/KG
Carbon Tetrachloride	0.05	< 0.25	MG/KG
Benzene	0.05	< 0.25	MG/KG
1,2-Dichloropropane	0.05	< 0.25	MG/KG
Trichloroethene	0.05	< 0.25	MG/KG
Bromodichloromethane	0.05	< 0.25	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 2.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.25	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.25	MG/KG
1,1,2-Trichloroethane	0.05	< 0.25	MG/KG
Toluene	0.05	< 0.25	MG/KG
1,2-Dibromoethane	0.05	< 0.25	MG/KG
4-Methyl-2-Pentanone	0.5	< 2.5	MG/KG
2-Hexanone	0.5	< 2.5	MG/KG
Dibromochloromethane	0.05	< 0.25	MG/KG
Tetrachloroethene	0.05	< 0.25	MG/KG
Chlorobenzene	0.05	< 0.25	MG/KG
Ethylbenzene	0.05	< 0.25	MG/KG
m&p Xylenes	0.05	< 0.25	MG/KG
o-Xylene	0.05	< 0.25	MG/KG
Styrene	0.05	< 0.25	MG/KG
Bromoform	0.05	< 0.25	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.25	MG/KG
1,3-Dichlorobenzene	0.05	< 0.25	MG/KG
1,4-Dichlorobenzene	0.05	< 0.25	MG/KG

Recd.

American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NMOCD AEN I.D. : 801352
PROJECT # : SHELL OIL CO. DATE RECEIVED : 1/21/98
PROJECT NAME : TASKER ST - HOBBS

SAMPLE	DATE	DATE	DATE	DIL.		
ID #	CLIENT ID	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
801352-01	SS-1 2-3' DEEP 9801201049	NON-AQ	1/20/98	1/26/98	01/26/98	5
PARAMETER	DET. LIMIT	UNITS				
1,2-Dichlorobenzene	0.05	< 0.25	MG/KG			

BECAUSE OF THE HIGH CONCENTRATIONS OF HEAVY HYDROCARBONS PRESENT,
FURTHER ANALYSIS AT LOWER DILUTION IS NOT POSSIBLE

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	86 (80 - 120)
Toluene-d8	86 (81 - 117)
Bromofluorobenzene	94 (74 - 121)

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American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NMOC
 PROJECT # : SHELL OIL CO.
 PROJECT NAME : TASKER ST - HOBBS

AEN I.D. : 801352
 DATE RECEIVED : 1/21/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
801352-02	SS-1 5' DEEP 9801201127	NON-AQ	1/20/98	1/26/98	01/26/98	1

PARAMETER	DET. LIMIT		UNITS
Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	< 0.5	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
Toluene	0.05	< 0.05	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	< 0.05	MG/KG
m&p Xylenes	0.05	< 0.05	MG/KG
o-Xylene	0.05	< 0.05	MG/KG
Styrene	0.05	< 0.05	MG/KG
Bromoform	0.05	< 0.05	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.05	MG/KG
1,3-Dichlorobenzene	0.05	< 0.05	MG/KG
1,4-Dichlorobenzene	0.05	< 0.05	MG/KG

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GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NMOCD AEN I.D. : 801352
PROJECT # : SHELL OIL CO. DATE RECEIVED : 1/21/98
PROJECT NAME : TASKER ST - HOBBS

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
801352-02	SS-1 5' DEEP 9801201127	NON-AQ	1/20/98	1/26/98	01/26/98	1
PARAMETER	DET. LIMIT		UNITS			
1,2-Dichlorobenzene	0.05	< 0.05	MG/KG			

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	109 (80 - 120)
Toluene-d8	102 (81 - 117)
Bromofluorobenzene	105 (74 - 121)

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American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NMOCD AEN I.D. : 801352
 PROJECT # : SHELL OIL CO. DATE RECEIVED : 1/21/98
 PROJECT NAME : TASKER ST - HOBBS

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
801352-03	SS-2 2-3' DEEP 9801201157	NON-AQ	1/20/98	1/26/98	01/26/98	5
PARAMETER	DET. LIMIT		UNITS			

Dichlorodifluoromethane	0.05	< 0.25	MG/KG
Chloromethane	0.05	< 0.25	MG/KG
Vinyl Chloride	0.05	< 0.25	MG/KG
Bromomethane	0.05	< 0.25	MG/KG
Chloroethane	0.05	< 0.25	MG/KG
Trichlorofluoromethane	0.05	< 0.25	MG/KG
Acetone	0.50	< 2.5	MG/KG
1,1-Dichloroethene	0.05	< 0.25	MG/KG
Iodomethane	0.05	< 0.25	MG/KG
Methylene Chloride	0.05	< 0.25	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.25	MG/KG
1,1-Dichloroethane	0.05	< 0.25	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.25	MG/KG
2-Butanone	0.50	< 2.5	MG/KG
Carbon Disulfide	0.05	< 0.25	MG/KG
Chloroform	0.05	< 0.25	MG/KG
1,2-Dichloroethane	0.05	< 0.25	MG/KG
Vinyl Acetate	0.05	< 0.25	MG/KG
1,1,1-Trichloroethane	0.05	< 0.25	MG/KG
Carbon Tetrachloride	0.05	< 0.25	MG/KG
Benzene	0.05	< 0.25	MG/KG
1,2-Dichloropropane	0.05	< 0.25	MG/KG
Trichloroethene	0.05	< 0.25	MG/KG
Bromodichloromethane	0.05	< 0.25	MG/KG
2-Chloroethyl Vinyl Ether	0.50	< 2.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.25	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.25	MG/KG
1,1,2-Trichloroethane	0.05	< 0.25	MG/KG
Toluene	0.05	< 0.25	MG/KG
1,2-Dibromoethane	0.05	< 0.25	MG/KG
4-Methyl-2-Pentanone	0.50	< 2.5	MG/KG
2-Hexanone	0.50	< 2.5	MG/KG
Dibromochloromethane	0.05	< 0.25	MG/KG
Tetrachloroethene	0.05	< 0.25	MG/KG
Chlorobenzene	0.05	< 0.25	MG/KG
Ethylbenzene	0.05	12	MG/KG
m&p Xylenes	0.05	58	MG/KG
o-Xylene	0.05	< 0.25	MG/KG
Styrene	0.05	< 0.25	MG/KG
Bromoform	0.05	< 0.25	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.25	MG/KG
1,3-Dichlorobenzene	0.05	< 0.25	MG/KG
1,4-Dichlorobenzene	0.05	< 0.25	MG/KG

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GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NMOCD
PROJECT # : SHELL OIL CO.
PROJECT NAME : TASKER ST - HOBBS

AEN I.D. : 801352
DATE RECEIVED : 1/21/98

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
801352-03	SS-2 2-3' DEEP 9801201157	NON-AQ	1/20/98	1/26/98	01/26/98	5
PARAMETER	DET. LIMIT		UNITS			
1,2-Dichlorobenzene	0.05	< 0.25	MG/KG			

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	90 (80 - 120)
Toluene-d8	98 (81 - 117)
Bromofluorobenzene	105 (74 - 121)

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GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NMOCD AEN I.D. : 801352
 PROJECT # : SHELL OIL CO. DATE RECEIVED : 1/21/98
 PROJECT NAME : TASKER ST - HOBBS

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
801352-04	SS-2 6' DEEP 9801201208	NON-AQ	1/20/98	1/26/98	01/26/98	1

PARAMETER	DET. LIMIT		UNITS
Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	0.9	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
Toluene	0.05	< 0.05	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	15 (D 20)	MG/KG
m&p Xylenes	0.05	57 (D 20)	MG/KG
o-Xylene	0.05	< 0.05	MG/KG
Styrene	0.05	< 0.05	MG/KG
Bromoform	0.05	< 0.05	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.05	MG/KG
1,3-Dichlorobenzene	0.05	< 0.05	MG/KG
1,4-Dichlorobenzene	0.05	< 0.05	MG/KG

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GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NMOCB AEN I.D. : 801352
PROJECT # : SHELL OIL CO. DATE RECEIVED : 1/21/98
PROJECT NAME : TASKER ST - HOBBS

SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
801352-04	SS-2 6' DEEP 9801201208	NON-AQ	1/20/98	1/26/98	01/26/98	1

PARAMETER	DET. LIMIT	UNITS
1,2-Dichlorobenzene	0.05	< 0.05 MG/KG

(D 20) = 20X DILUTION, ANALYZED ON 1/26/98

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	109 (80 - 120)
Toluene-d8	106 (81 - 117)
Bromofluorobenzene	99 (74 - 121)

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American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
 CLIENT : NMOCD AEN I.D. : 801352
 PROJECT # : SHELL OIL CO.
 PROJECT NAME : TASKER ST - HOBBS

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
EXTRACTION BLANK	012698	NON-AQ	1/26/98	01/26/98	1

PARAMETER	DET. LIMIT		UNITS
Dichlorodifluoromethane	0.05	< 0.05	MG/KG
Chloromethane	0.05	< 0.05	MG/KG
Vinyl Chloride	0.05	< 0.05	MG/KG
Bromomethane	0.05	< 0.05	MG/KG
Chloroethane	0.05	< 0.05	MG/KG
Trichlorofluoromethane	0.05	< 0.05	MG/KG
Acetone	0.5	< 0.5	MG/KG
1,1-Dichloroethene	0.05	< 0.05	MG/KG
Iodomethane	0.05	< 0.05	MG/KG
Methylene Chloride	0.05	< 0.05	MG/KG
cis-1,2-Dichloroethene	0.05	< 0.05	MG/KG
1,1-Dichloroethane	0.05	< 0.05	MG/KG
trans-1,2-Dichloroethene	0.05	< 0.05	MG/KG
2-Butanone	0.5	< 0.5	MG/KG
Carbon Disulfide	0.05	< 0.05	MG/KG
Chloroform	0.05	< 0.05	MG/KG
1,2-Dichloroethane	0.05	< 0.05	MG/KG
Vinyl Acetate	0.05	< 0.05	MG/KG
1,1,1-Trichloroethane	0.05	< 0.05	MG/KG
Carbon Tetrachloride	0.05	< 0.05	MG/KG
Benzene	0.05	< 0.05	MG/KG
1,2-Dichloropropane	0.05	< 0.05	MG/KG
Trichloroethene	0.05	< 0.05	MG/KG
Bromodichloromethane	0.05	< 0.05	MG/KG
2-Chloroethyl Vinyl Ether	0.5	< 0.5	MG/KG
cis-1,3-Dichloropropene	0.05	< 0.05	MG/KG
trans-1,3-Dichloropropene	0.05	< 0.05	MG/KG
1,1,2-Trichloroethane	0.05	< 0.05	MG/KG
Toluene	0.05	< 0.05	MG/KG
1,2-Dibromoethane	0.05	< 0.05	MG/KG
4-Methyl-2-Pentanone	0.5	< 0.5	MG/KG
2-Hexanone	0.5	< 0.5	MG/KG
Dibromochloromethane	0.05	< 0.05	MG/KG
Tetrachloroethene	0.05	< 0.05	MG/KG
Chlorobenzene	0.05	< 0.05	MG/KG
Ethylbenzene	0.05	< 0.05	MG/KG
m&p Xylenes	0.05	< 0.05	MG/KG
o-Xylene	0.05	< 0.05	MG/KG
Styrene	0.05	< 0.05	MG/KG
Bromoform	0.05	< 0.05	MG/KG
1,1,2,2-Tetrachloroethane	0.05	< 0.05	MG/KG
1,3-Dichlorobenzene	0.05	< 0.05	MG/KG
1,4-Dichlorobenzene	0.05	< 0.05	MG/KG

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American Environmental Network, Inc.

GC/MS RESULTS

TEST : VOLATILE ORGANICS EPA METHOD 8260-TCL
CLIENT : NMOCD
PROJECT # : SHELL OIL CO.
PROJECT NAME : TASKER ST - HOBBS

AEN I.D. : 801352

SAMPLE ID #	BATCH	MATRIX	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
EXTRACTION BLANK	012698	NON-AQ	1/26/98	01/26/98	1
PARAMETER	DET. LIMIT	UNITS			
1,2-Dichlorobenzene	0.05	< 0.05	MG/KG		

SURROGATE % RECOVERY

1,2-Dichloroethane-d4	118 (80 - 120)
Toluene-d8	112 (81 - 117)
Bromofluorobenzene	112 (74 - 121)

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Spike Recovery and RPD Summary Report - SOIL

Method : C:\HPCHEM\1\METHODS\82600112.M (RTE Integrator)
Title : AEN New Mexico GC/MS
Last Update : Mon Jan 12 16:13:23 1998
Response via : Initial Calibration

Non-Spiked Sample: 012698B2.D

Spike Sample	Spike Duplicate Sample
File ID : 012698S1.D	012698S2.D
Sample : SEBS 012698	SEBSD 012698
Acq Time: 26 Jan 98 3:02 pm	26 Jan 98 3:40 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	0.00	2.5	3.04	2.84	122	114	7	22	59-172
Benzene	0.00	2.5	3.08	3.00	123	120	3	21	66-142
Trichloroethene	0.00	2.5	2.85	2.73	114	109	4	24	62-137
Toluene	0.00	2.5	2.83	2.79	113	112	1	21	59-139
Chlorobenzene	0.00	2.5	2.73	2.64	109	106	3	21	60-133

- Fails Limit Check

82600112.M

Mon Jan 26 16:22:17 1998

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261

AEN I.D. 802022

February 18, 1998

American Environmental Network-NM
2709-D Pan American Frwy, NE
Albuquerque, NM 87107

Project Name/Number: NM OCD /801352

- Attention: Kimberly D. McNeill

On 1/31/98, American Environmental Network (Arizona), Inc., received a request to analyze non-aqueous sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

The spike percent recovery was out of control limits due to sample matrix interference. However, the laboratory control sample was acceptable at 85%, which validates the digestion and analytical process.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.



Marcia A. Smith
Project Manager
MS/acc
Enclosure

ADHS License No. AZ0061
Alan Kleinschmidt, Regional General Manager

11/11/00
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CLIENT : AMERICAN ENV. NETWORK OF NM, INC.
PROJECT # : 801352
PROJECT NAME : NMOCD

DATE RECEIVED : 01/31/98

REPORT DATE : 02/18/98

ATI I.D. : 802022

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	801352-01	NON-AQUEOUS	01/20/98
02	801352-02	NON-AQUEOUS	01/20/98
03	801352-03	NON-AQUEOUS	01/20/98
04	801352-04	NON-AQUEOUS	01/20/98

----- TOTALS -----

MATRIX	# SAMPLES
NON-AQUEOUS	4

ATI STANDARD DISPOSAL PRACTICE

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



METALS RESULTS

ATI I.D. : 802022

CLIENT : AMERICAN ENV. NETWORK OF NM, INC.
 PROJECT # : 801352
 PROJECT NAME : NMOCD

DATE RECEIVED : 01/31/98

REPORT DATE : 02/18/98

PARAMETER	UNITS	01	02	03	04
SILICON (EPA 6010)	MG/KG	98	86	75	149

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METALS - QUALITY CONTROL

CLIENT : AMERICAN ENV. NETWORK OF NM, INC.
 PROJECT # : 801352
 PROJECT NAME : NMOCD

ATI I.D. : 802022

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
SILICON	MG/KG	80299934	1130	1220	8	2040	500	182*

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

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

* Result out of limits due to sample matrix interference

4
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DATE OF ANALYSIS REPORT**AEN ID: 802022***18-Feb-98*

METHOD	SAMPLE #	DATE	ANALYST
SILICON (EPA 6010)	01	02/15/98	JACKIE L. CLEMENT
	02	02/15/98	JACKIE L. CLEMENT
	03	02/15/98	JACKIE L. CLEMENT
	04	02/15/98	JACKIE L. CLEMENT

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW 846, 3rd Ed. (9/86), including Updates I (7/92), II (9/94), and III (12/96)

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PLEASE FILL THIS FORM IN COMPLETELY.

FIELD AREA SAMPLE

Environmental Network (NM), Inc.
 Astoria • Portland • Pleasant Hills • Columbia

CHAIN OF CUSTODY

DATE: 1/20/98 PAGE: 1 OF 1

PROJECT MANAGER: 2494E PRICE

COMPANY: NMCO

ADDRESS: P.O. 1980

PHONE: HOBAS NM 88241

FAX: 505-393-6161

BILL TO: NMCO-ATTN: PETER ANDERSON

COMPANY: NMCO

ADDRESS: 2040 S PACIFIC

SMITH FC, NM 87505

ANALYST	DATE	TIME	DEPTH	ANALYST	DATE	TIME	DEPTH
58-1 2-3' DEEP							
980120 1049	1-20-98	10:49	SOIL				
58-1 5' DEEP							
980120 1127	1-20-98	11:27	SOIL				
55-2 2-3' DEEP							
980120 1157	1-20-98	11:57	SOIL				
55-2 6' DEEP							
980120 1208	1-20-98	12:08	SOIL				

Petroleum Hydrocarbons (418.1) TRPH

(MOD.8015) Diesel/Direct/Inject

(M8015) Gas/Purge & Trap

Gasoline/BTEX & MTBE (M8015/8020)

BTXE/MTBE (8020)

BTEX & Chlorinated Aromatics (602/8020)

BTEX/MTBE/EDC & EDB (8020/8010/Short)

Chlorinated Hydrocarbons (601/8010)

504 EDB ☐ / DBCP ☐

Polynuclear Aromatics (610/8310)

Volatile Organics (624/8240) GC/MS

Volatile Organics (8260) GC/MS

Pesticides/PCB (608/8080)

Herbicides (615/8150)

Base/Neutral/Acid Compounds GC/MS (626/8270)

General Chemistry:

Priority Pollutant Metals (13)

Target Analyte List Metals (23)

RCRA Metals (8)

RCRA Metals by TCLP (Method 1311)

Metals: +CR, Hg, Se

PROJECT INFORMATION

PROJ. NO.: SHELL OIL CO.

PROJ. NAME: TAKE ST-HOBAS

P.O. NO.:

SHIPPED VIA: Fedex

REGIONAL THORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK

(NORMAL) ☒

CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE

TAKE ST

1331

TAKE ST

TAKE ST

TAKE ST

TAKE ST

SIGNATURE: 2494E PRICE TIME: 2:39 PM

PRINTED NAME: 2494E PRICE DATE: 1/20/98

COMPANY: NMCO

SIGNATURE: _____ TIME: _____

PRINTED NAME: _____ DATE: _____

COMPANY: _____

SIGNATURE: _____ TIME: _____

PRINTED NAME: _____ DATE: _____

COMPANY: _____

COMPANY: _____

DISTRIBUTION: White, Canary - AEN Print - ORIGINATOR



American Environmental Network, Inc.

17400 SW Upper Boones Ferry Road • Suite 270 • Portland, OR 97224 • (503) 684-0447

Kim McNeill
AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

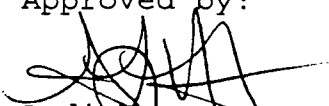
Date: 01/29/1998
AEN Account No.: 90147
AEN Job Number: 98.00120

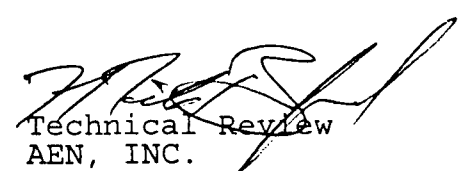
Project: Tasker St-Hobbs/NM-OCD
Location: Shell Oil Co./801352

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Sample Number	Sample Description	Matrix Type	Date Taken	Date Received
89612	9801201049 (801352-01)	SOIL	01/20/1998	01/22/1998
89613	9801201127 (801352-02)	SOIL	01/20/1998	01/22/1998
89614	9801201157 (801352-03)	SOIL	01/20/1998	01/22/1998
89615	9801201208 (801352-04)	SOIL	01/20/1998	01/22/1998

Approved by:


Andi Hoevet
Project Manager
AEN, INC.


Technical Review
AEN, INC.

The results from these samples relate only to the items tested. This report shall not be reproduced, except in full, without the written approval of the laboratory.

ANALYTICAL SERVICES FOR THE ENVIRONMENT

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ANALYTICAL REPORT

Kim McNeill
AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

01/29/1998
Job No.: 98.00120

Page: 2

Project Name: Tasker St-Hobbs/NM-OCD
Date Received: 01/22/1998

Sample Number Sample Description
89612 9801201049 (801352-01)

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
ICP/AA Digestion - Soil	ICP	-	-		01/27/1998	
Aluminum, ICP	6010	2900	10	mg/Kg	01/28/1998	
Antimony, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Arsenic, ICP	6010	1.9	1.0	mg/Kg	01/28/1998	
Barium, ICP	6010	100	1.0	mg/Kg	01/28/1998	
Beryllium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Boron, ICP	6010	10	10	mg/Kg	01/28/1998	
Cadmium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Calcium, ICP	6010	20000	10	mg/Kg	01/28/1998	
Chromium, ICP	6010	3.6	1.0	mg/Kg	01/28/1998	
Cobalt, ICP	6010	1.4	1.0	mg/Kg	01/28/1998	
Copper, ICP	6010	13	1.0	mg/Kg	01/28/1998	
Iron, ICP	6010	6300	2.0	mg/Kg	01/28/1998	
Lead, ICP	6010	10	1.0	mg/kg	01/28/1998	
Magnesium, ICP	6010	1300	10	mg/Kg	01/28/1998	
Manganese, ICP	6010	71	1.0	mg/Kg	01/28/1998	
Mercury Prep (S)	7471	-			01/27/1998	
Mercury, CVAA (S)	7471	ND	0.10	mg/Kg	01/27/1998	
Molybdenum, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Nickel, ICP	6010	8.2	1.0	mg/Kg	01/28/1998	
Potassium, ICP	6010	1100	5.0	mg/Kg	01/28/1998	
Selenium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Silver, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Sodium, ICP	6010	1100	50	mg/Kg	01/28/1998	
Thallium, ICP	6010	ND	2.0	mg/Kg	01/28/1998	
Vanadium, ICP	6010	11	1.0	mg/Kg	01/28/1998	
Zinc, ICP	6010	120	1.0	mg/Kg	01/28/1998	

Sample Number Sample Description
89613 9801201127 (801352-02)

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
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A sample result of ND indicates the parameter was Not Detected at the reporting limit.

American Environmental Network, Inc. (503) 684-0447 (503) 620-0393 FAX
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ANALYTICAL REPORT

Kim McNeill
AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

01/29/1998
Job No.: 98.00120

Page: 3

Project Name: Tasker St-Hobbs/NM-OCD
Date Received: 01/22/1998

Sample Number Sample Description
89613 9801201127 (801352-02)

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
ICP/AA Digestion - Soil	ICP	-	-		01/27/1998	
Aluminum, ICP	6010	2800	10	mg/Kg	01/28/1998	
Antimony, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Arsenic, ICP	6010	4.3	1.0	mg/Kg	01/28/1998	
Barium, ICP	6010	640	1.0	mg/Kg	01/28/1998	
Beryllium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Boron, ICP	6010	14	10	mg/Kg	01/28/1998	
Cadmium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Calcium, ICP	6010	230000	1000	mg/Kg	01/28/1998	DIL,Q
Chromium, ICP	6010	2.5	1.0	mg/Kg	01/28/1998	
Cobalt, ICP	6010	1.5	1.0	mg/Kg	01/28/1998	
Copper, ICP	6010	1.6	1.0	mg/Kg	01/28/1998	
Iron, ICP	6010	1800	2.0	mg/Kg	01/28/1998	
Lead, ICP	6010	1.6	1.0	mg/kg	01/28/1998	
Magnesium, ICP	6010	7100	10	mg/Kg	01/28/1998	
Manganese, ICP	6010	18	1.0	mg/Kg	01/28/1998	
Mercury Prep (S)	7471	-			01/27/1998	
Mercury, CVAA (S)	7471	ND	0.10	mg/Kg	01/27/1998	
Molybdenum, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Nickel, ICP	6010	4.5	1.0	mg/Kg	01/28/1998	
Potassium, ICP	6010	710	5.0	mg/Kg	01/28/1998	
Selenium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Silver, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Sodium, ICP	6010	800	50	mg/Kg	01/28/1998	
Thallium, ICP	6010	ND	2.0	mg/Kg	01/28/1998	
Vanadium, ICP	6010	17	1.0	mg/Kg	01/28/1998	
Zinc, ICP	6010	22	1.0	mg/Kg	01/28/1998	

Sample Number Sample Description
89614 9801201157 (801352-03)

PARAMETERS	METHODS	RESULTS	REPORT LIMIT	UNITS	DATE ANALYZED	FLAG
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A sample result of ND indicates the parameter was Not Detected at the reporting limit.

American Environmental Network, Inc. (503) 684-0447 (503) 620-0393 FAX
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ANALYTICAL REPORT

Kim McNeill
AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

01/29/1998
Job No.: 98.00120

Page: 4

Project Name: Tasker St-Hobbs/NM-OCD
Date Received: 01/22/1998

Sample Number Sample Description
89614 9801201157 (801352-03)

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
ICP/AA Digestion - Soil	ICP	-	-		01/27/1998	
Aluminum, ICP	6010	990	10	mg/Kg	01/28/1998	
Antimony, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Arsenic, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Barium, ICP	6010	52	1.0	mg/Kg	01/28/1998	
Beryllium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Boron, ICP	6010	7.9	10	mg/Kg	01/28/1998	
Cadmium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Calcium, ICP	6010	9200	10	mg/Kg	01/28/1998	
Chromium, ICP	6010	1.7	1.0	mg/Kg	01/28/1998	
Cobalt, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Copper, ICP	6010	1.7	1.0	mg/Kg	01/28/1998	
Iron, ICP	6010	960	2.0	mg/Kg	01/28/1998	
Lead, ICP	6010	1.4	1.0	mg/kg	01/28/1998	
Magnesium, ICP	6010	490	10	mg/Kg	01/28/1998	
Manganese, ICP	6010	30	1.0	mg/Kg	01/28/1998	
Mercury Prep (S)	7471	-			01/27/1998	
Mercury, CVAA (S)	7471	ND	0.10	mg/Kg	01/27/1998	
Molybdenum, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Nickel, ICP	6010	3.2	1.0	mg/Kg	01/28/1998	
Potassium, ICP	6010	410	5.0	mg/Kg	01/28/1998	
Selenium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Silver, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Sodium, ICP	6010	570	50	mg/Kg	01/28/1998	
Thallium, ICP	6010	ND	2.0	mg/Kg	01/28/1998	
Vanadium, ICP	6010	6.8	1.0	mg/Kg	01/28/1998	
Zinc, ICP	6010	21	1.0	mg/Kg	01/28/1998	

Sample Number Sample Description
89615 9801201208 (801352-04)

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
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A sample result of ND indicates the parameter was Not Detected at the reporting limit.

American Environmental Network, Inc. (503) 684-0447 (503) 620-0393 FAX
17400 SW Upper Boones Ferry Rd., Suite 270, Portland, OR 97224

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ANALYTICAL REPORT

Kim McNeill
AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

01/29/1998
Job No.: 98.00120

Page: 5

Project Name: Tasker St-Hobbs/NM-OCD
Date Received: 01/22/1998

Sample Number Sample Description
89615 9801201208 (801352-04)

<u>PARAMETERS</u>	<u>METHODS</u>	<u>RESULTS</u>	<u>REPORT LIMIT</u>	<u>UNITS</u>	<u>DATE ANALYZED</u>	<u>FLAG</u>
ICP/AA Digestion - Soil	ICP	-	-		01/27/1998	
Aluminum, ICP	6010	3500	10	mg/Kg	01/28/1998	
Antimony, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Arsenic, ICP	6010	4.9	1.0	mg/Kg	01/28/1998	
Barium, ICP	6010	630	1.0	mg/Kg	01/28/1998	
Beryllium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Boron, ICP	6010	16	10	mg/Kg	01/28/1998	
Cadmium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Calcium, ICP	6010	63000	10	mg/Kg	01/28/1998	
Chromium, ICP	6010	3.0	1.0	mg/Kg	01/28/1998	
Cobalt, ICP	6010	1.7	1.0	mg/Kg	01/28/1998	
Copper, ICP	6010	4.2	1.0	mg/Kg	01/28/1998	
Iron, ICP	6010	2200	2.0	mg/Kg	01/28/1998	
Lead, ICP	6010	1.4	1.0	mg/kg	01/28/1998	
Magnesium, ICP	6010	20000	10	mg/Kg	01/28/1998	
Manganese, ICP	6010	22	1.0	mg/Kg	01/28/1998	
Mercury Prep (S)	7471	-			01/27/1998	
Mercury, CVAA (S)	7471	ND	0.10	mg/Kg	01/27/1998	
Molybdenum, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Nickel, ICP	6010	7.0	1.0	mg/Kg	01/28/1998	
Potassium, ICP	6010	1100	5.0	mg/Kg	01/28/1998	
Selenium, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Silver, ICP	6010	ND	1.0	mg/Kg	01/28/1998	
Sodium, ICP	6010	1500	50	mg/Kg	01/28/1998	
Thallium, ICP	6010	ND	2.0	mg/Kg	01/28/1998	
Vanadium, ICP	6010	21	1.0	mg/Kg	01/28/1998	
Zinc, ICP	6010	25	1.0	mg/Kg	01/28/1998	

A sample result of ND indicates the parameter was Not Detected at the reporting limit.

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17400 SW Upper Boones Ferry Rd., Suite 270, Portland, OR 97224

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QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

Date: 01/29/1998

Job Number: 98.00120

Contact: Kim McNeill
Project: Tasker St-Hobbs/NM-OCD

Analyte	CCV			
	True Concentration	Concentration Found	Percent Recovery	Date Analyzed
Aluminum, ICP	25.0	23.3	93.2	01/28/1998
Antimony, ICP	0.500	0.490	98.0	01/28/1998
Arsenic, ICP	0.500	0.486	97.2	01/28/1998
Barium, ICP	0.500	0.497	99.4	01/28/1998
Beryllium, ICP	0.500	0.509	101.8	01/28/1998
Boron, ICP	0.500	0.543	108.6	01/28/1998
Cadmium, ICP	0.500	0.495	99.0	01/28/1998
Calcium, ICP	25.0	23.7	94.8	01/28/1998
Chromium, ICP	0.500	0.510	102.0	01/28/1998
Cobalt, ICP	0.500	0.489	97.8	01/28/1998
Copper, ICP	0.500	0.502	100.4	01/28/1998
Iron, ICP	0.500	0.503	100.6	01/28/1998
Lead, ICP	0.500	0.489	97.8	01/28/1998
Magnesium, ICP	25.0	23.2	92.8	01/28/1998
Manganese, ICP	0.500	0.500	100.0	01/28/1998
Mercury, CVAA (S)	1.00	1.02	102.0	01/27/1998
Molybdenum, ICP	0.500	0.499	99.8	01/28/1998
Nickel, ICP	0.500	0.508	101.6	01/28/1998
Potassium, ICP	5.00	5.03	100.6	01/28/1998
Selenium, ICP	0.500	0.496	99.2	01/28/1998
Silver, ICP	0.500	0.498	99.6	01/28/1998
Sodium, ICP	5.00	4.78	95.6	01/28/1998
Thallium, ICP	0.500	0.500	100.0	01/28/1998
Vanadium, ICP	0.500	0.499	99.8	01/28/1998
Zinc, ICP	0.500	0.507	101.4	01/28/1998

CCV - Continuing Calibration Verification

American Environmental Network, Inc. (503) 684-0447 (503) 620-0393 FAX
17400 SW Upper Boones Ferry Rd., Suite 270, Portland, OR 97224

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QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

Date: 01/29/1998

Job Number: 98.00120

Contact: Kim McNeill
Project: Tasker St-Hobbs/NM-OCD

Analyte	LCS	Concentration Found	LCS % Recovery	Flags	Date Analyzed
	True Concentration				
Aluminum, ICP	50.0	48.2	96.4		01/28/1998
Antimony, ICP	50.0	49.0	98.0		01/28/1998
Arsenic, ICP	50.0	48.2	96.4		01/28/1998
Barium, ICP	50.0	50.7	101.4		01/28/1998
Beryllium, ICP	50.0	50.8	101.6		01/28/1998
Boron, ICP	50	52.2	104.4		01/28/1998
Cadmium, ICP	50.0	48.2	96.4		01/28/1998
Calcium, ICP	500	491	98.2		01/28/1998
Chromium, ICP	50.0	50.9	101.8		01/28/1998
Cobalt, ICP	50.0	48.8	97.6		01/28/1998
Copper, ICP	50.0	50.9	101.8		01/28/1998
Iron, ICP	250	212	84.8		01/28/1998
Lead, ICP	50.0	49.4	98.8		01/28/1998
Magnesium, ICP	500	504	100.8		01/28/1998
Manganese, ICP	50.0	50.6	101.2		01/28/1998
Mercury, CVAA (S)	0.500	0.469	93.8		01/27/1998
Molybdenum, ICP	50.0	49.8	99.6		01/28/1998
Nickel, ICP	50.0	49.1	98.2		01/28/1998
Potassium, ICP	500	488	97.6		01/28/1998
Selenium, ICP	50.0	47.0	94.0		01/28/1998
Silver, ICP	50.0	50.5	101.0		01/28/1998
Sodium, ICP	500	481	96.2		01/28/1998
Thallium, ICP	50.0	48.9	97.8		01/28/1998
Vanadium, ICP	50.0	51.0	102.0		01/28/1998
Zinc, ICP	50.0	49.5	99.0		01/28/1998

LCS - Laboratory Control Standard

American Environmental Network, Inc. (503) 684-0447 (503) 620-0393 FAX
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OCD

QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

Date: 01/29/1998
Job Number: 98.00120

Contact: Kim McNeill
Project: Tasker St-Hobbs/NM-OCD

Analyte	Matrix	Sample	Spike	Units	Percent	MSD	MSD	Units	Percent	MS/MSD	Flags
	Spike						Spike				
	Result	Result	Amount		Recovery	Result	Amount		Recovery	RPD	
Aluminum, ICP		9800	500	mg/Kg			500	mg/Kg			MD
Antimony, ICP	22.2	ND	50.0	mg/Kg	44.4	20.0	50.0	mg/Kg	40.0	10.4	M, P
Arsenic, ICP	45.1	2.5	50.0	mg/Kg	85.2	44.3	50.0	mg/Kg	83.6	1.9	
Barium, ICP	179	140	50.0	mg/Kg	78.0	183	50.0	mg/Kg	86.0	9.8	M, P
Beryllium, ICP	46.9	ND	50.0	mg/Kg	93.8	46.3	50.0	mg/Kg	92.6	1.3	
Boron, ICP	52.0	7.2	50	mg/Kg	89.6	52.6	50	mg/Kg	90.8	1.3	
Cadmium, ICP	43.4	ND	50.0	mg/Kg	86.8	43.0	50.0	mg/Kg	86.0	0.9	
Calcium, ICP		3800	500	mg/Kg			500	mg/Kg			MD
Chromium, ICP	60.5	13	50.0	mg/Kg	95.0	62.1	50.0	mg/Kg	98.2	3.3	
Cobalt, ICP	55.1	12	50.0	mg/Kg	86.2	55.0	50.0	mg/Kg	86.0	0.2	
Copper, ICP	68.1	21	50.0	mg/Kg	94.2	72.5	50.0	mg/Kg	103.0	8.8	
Iron, ICP		23000	250	mg/Kg			250	mg/Kg			MD, DIL
Lead, ICP	54.1	11	50.0	mg/kg	86.2	61.7	50.0	mg/kg	101.4	16.1	
Magnesium, ICP		2100	500	mg/Kg			500	mg/Kg			MD
Manganese, ICP		530	50.0	mg/Kg			50.0	mg/Kg			MD
Mercury, CVAA (S)	.979	ND	1.00	mg/Kg	97.9	.894	1.00	mg/Kg	89.4	9.1	
Molybdenum, ICP	43.8	ND	50.0	mg/Kg	87.6	43.0	50.0	mg/Kg	86.0	1.8	
Nickel, ICP	54.1	8.7	50.0	mg/Kg	90.8	53.7	50.0	mg/Kg	90.0	0.9	
Potassium, ICP	1300	710	200	mg/Kg	295.0	1220	200	mg/Kg	255.0	14.5	M, P
Selenium, ICP	40.0	ND	50.0	mg/Kg	80.0	39.7	50.0	mg/Kg	79.4	0.8	M, P
Silver, ICP	46.3	ND	50.0	mg/Kg	92.6	46.4	50.0	mg/Kg	92.8	0.2	
QC Sample:											
89699											

NOTE: Matrix Spike Samples may not be samples from this job.

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
dil. = Diluted Out

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QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

Date: 01/29/1998
Job Number: 98.00120

Contact: Kim McNeill
Project: Tasker St-Hobbs/NM-OCD

Analyte	Matrix	Sample	Spike	Units	Percent	MSD	MSD	Units	Percent	MS/MSD	Flags
	Spike						Spike				
	Result	Result	Amount		Recovery	Result	Amount		Recovery	RPD	
Thallium, ICP	42.9	ND	50.00	mg/Kg	85.8	42.3	50.0	mg/Kg	84.6	1.4	
Vanadium, ICP	115	59	50.0	mg/Kg	112.0	110	50.0	mg/Kg	102.0	9.3	
Zinc, ICP	125	77	50.0	mg/Kg	96.0	126	50.0	mg/Kg	98.0	2.1	

QC Sample:

NOTE: Matrix Spike Samples may not be samples from this job.

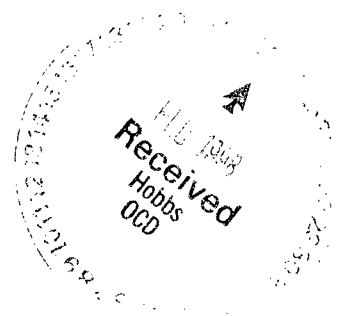
MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

dil. = Diluted Out

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QUALITY CONTROL REPORT BLANKS

AEN - Albuquerque
2709-D Pan American Fwy NE
Albuquerque, NM 87107

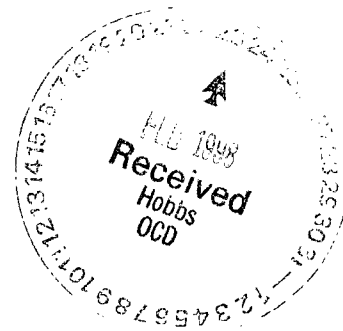
Date: 01/29/1998

Job Number: 98.00120

Contact: Kim McNeill
Project: Tasker St-Hobbs/NM-OCD
Location: Shell Oil Co./801352

Analyte	Blank Analysis	Report Limit	Units	Date Analyzed
Aluminum, ICP	ND	10	mg/Kg	01/28/1998
Antimony, ICP	ND	1.0	mg/Kg	01/28/1998
Arsenic, ICP	ND	1.0	mg/Kg	01/28/1998
Barium, ICP	ND	1.0	mg/Kg	01/28/1998
Beryllium, ICP	ND	1.0	mg/Kg	01/28/1998
Boron, ICP	ND	10	mg/Kg	01/28/1998
Cadmium, ICP	ND	1.0	mg/Kg	01/28/1998
Calcium, ICP	ND	10	mg/Kg	01/28/1998
Chromium, ICP	ND	1.0	mg/Kg	01/28/1998
Cobalt, ICP	ND	1.0	mg/Kg	01/28/1998
Copper, ICP	ND	1.0	mg/Kg	01/28/1998
Iron, ICP	ND	2.0	mg/Kg	01/28/1998
Lead, ICP	ND	1.0	mg/kg	01/28/1998
Magnesium, ICP	ND	10	mg/Kg	01/28/1998
Manganese, ICP	ND	1.0	mg/Kg	01/28/1998
Mercury, CVAA (S)	ND	0.10	mg/Kg	01/27/1998
Molybdenum, ICP	ND	1.0	mg/Kg	01/28/1998
Nickel, ICP	ND	1.0	mg/Kg	01/28/1998
Potassium, ICP	ND	5.0	mg/Kg	01/28/1998
Selenium, ICP	ND	1.0	mg/Kg	01/28/1998
Silver, ICP	ND	1.0	mg/Kg	01/28/1998
Sodium, ICP	ND	50	mg/Kg	01/28/1998
Thallium, ICP	ND	2.0	mg/Kg	01/28/1998
Vanadium, ICP	ND	1.0	mg/Kg	01/28/1998
Zinc, ICP	ND	1.0	mg/Kg	01/28/1998

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FLAG GLOSSARY

A	This sample does not have a typical gasoline pattern.
B1	This sample does not have a typical diesel pattern.
B	Analyte found in the associated blank as well as the sample.
C	The sample contains a lighter hydrocarbon than gasoline.
CN	See case narrative
CS	Outside control limits or unusual matrix; see case narrative.
D	The sample extends to a heavier hydrocarbon range than gasoline.
d	Results on a dry weight basis
DIL	Result was calculated from dilution.
E	The sample extends to a lighter hydrocarbon range than diesel.
F	The sample extends to a heavier hydrocarbon range than diesel.
G	The positive result for gasoline is due to single component contamination.
I	The oil pattern for this sample is not typical.
J	The result for this compound is an estimated concentration.
L	The LCS recovery exceeded control limits. See the LCS page of this report.
LM	The LCS recovery exceeded control limits; the MS/MSD were in control validating the batch.
M	MS and/or MSD percent recovery exceeds control limits.
MD	Unable to calculate MS/MSD recovery due to high amount of analyte; greater than 4 times spike level.
MR	The MS/MSD RPD is greater than method criteria. The sample was re-extracted and re-analyzed with similar results indicating a non-homogeneous sample.
MM	The Matrix Spike exceeded control limits; LCS/LCS-D were in control validating the batch.
MI	Outside control limits due to matrix interference.
N	Manual integration performed on sample for quantification.
N/A	Not Applicable.
NC	Not calculable.
NO	Not Analyzed.
P	A post digestion spike was analyzed, and recoveries were within control limits.
Q	Detection limits elevated due to sample matrix.
Q1	Detection limits elevated due to high levels of non-target compounds. Sample(s) run at a dilution.
R	The duplicate RPD was greater than 20%. The sample was re-extracted and re-analyzed with similar results. This indicates a matrix interference in the sample, likely a non-homogeneity of the sample.
RD	RPD not applicable for results less than five times the reporting limit.
RP	MS/MSD RPD is greater than 20%
SR	Surrogate recovery outside control limits. See the surrogate page of the report.
SD	Unable to quantitate surrogate due to sample dilution.
SC	Sample not provided to laboratory in proper sampling container.
V	Volatile analysis was requested, sample container received with headspace.
X1	The duplicate RPD was greater than 20%. Due to insufficient sample, re-analysis was not possible.
X	Sample was analyzed outside recommended holding times.
Y	The result for this parameter was greater than the TCLP regulatory limit.
Z	The pattern seen for the parameter being analyzed is not typical.

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Interlab Chain of Custody

DATE: 1-21-98 PAGE: 1 OF 1

NETWORK PROJECT MANAGER: KIMBERLY D. MCNEILL

COMPANY: American Environmental Network
ADDRESS: 2709-D Pan American Freeway, NE
 Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

Kim McNeill

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals - TAL	Metals - PP List	Metals - RCRA	RCRA Metals by TCLP (1311)	Oil and Grease	BOD	COD	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)	8240 (TCLP 1311) ZHE	8270 (TCLP 1311)	TO-14	Gross Alpha/Beta	NUMBER OF CONTAINERS
801352	-01	1-20-98	10:47	NA	891012																
	-02		11:27		891013																
	-03		11:57		891014																
	-04		12:08		891015																

PROJECT INFORMATION

SAMPLE RECEIPT

SAMPLES SENT TO:

RELINQUISHED BY:

RELINQUISHED BY:

PROJECT NUMBER: 801352 TOTAL NUMBER OF CONTAINERS

PROJECT NAME: NM-DCO CHAIN OF CUSTODY SEALS

OC LEVEL: STD IV INTACT?

OC REQUIRED: MS MSD BLANK RECEIVED GOOD COND/COLD

TAT: STANDARD RUSH LAB NUMBER 98,10120

DUE DATE: 1-3-98

RUSH SURCHARGE: _____

CLIENT DISCOUNT: _____

SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO

SAN DIEGO
 Paragon

RENTON

PENSACOLA

PORTLAND

PHOENIX

Signature: [Signature] Time: 1700
 Printed Name: Brenda Rie Date: 1-21-98

Albuquerque
 RECEIVED BY: NM

Signature: [Signature] Time: 10:00
 Printed Name: Jeanne Gorman Date: 1/22/98

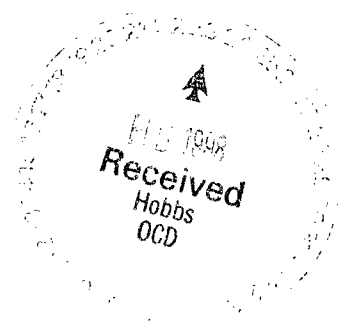
Company: ACN-OR

Signature: _____ Time: _____
 Printed Name: _____ Date: _____

Company: _____

Signature: _____ Time: _____
 Printed Name: _____ Date: _____

Company: _____



AEN 1010

PLEASE FILL THIS FORM IN COMPLETELY.

SHADED AREAS ARE FOR LAB USE ONLY

PROJECT MANAGER: <u>24TYPE PRICE</u>		ANALYSIS REQUEST	
COMPANY: <u>NMCO</u>		Petroleum Hydrocarbons (418.1) TRPH	
ADDRESS: <u>P.O. 1980</u>		(MOD.8015) Diesel/Direct/Inject	
PHONE: <u>505-393-6161</u>		(M8015) Gas/Purge & Trap	
FAX: <u></u>		Gasoline/BTEX & MTBE (M8015/8020)	
BILL TO: <u>NMCO-Alt. Ref. Andersen</u>		BTX/MTBE (8020)	
COMPANY: <u>NMCO</u>		BTEX & Chlorinated Aromatics (602/8020)	
ADDRESS: <u>2040 S. Pacific</u>		BTEX/MTBE/EDC & EDB (8020/8010/Short)	
<u>SAUTH FC, NM 87505</u>		Chlorinated Hydrocarbons (601/8010)	
SAMPLE ID: <u>58-1 2-3 DEEP</u>		504 EDB ☐ / DBCP ☐	
DATE: <u>1-20-98</u> TIME: <u>10:47 AM</u> LAB ID: <u>58-1</u>		Polynuclear Aromatics (610/8310)	
58-1 5' DEEP		Volatile Organics (624/8240) GC/MS	
9801201127		Volatile Organics (8260) GC/MS	
9801201157		Pesticides/PCB (608/8080)	
9801201208		Herbicides (615/8150)	
		Base/Neutral/Acid Compounds GC/MS (626/8270)	
		General Chemistry:	
		Priority Pollutant Metals (13)	
		Target Analyte List Metals (23)	
		RCRA Metals (8)	
		RCRA Metals by TCLP (Method 1311)	
		Metals: <u>+CR, Hg, Se</u>	
		NUMBER OF SPS: <u>3</u>	

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR PUSH PROJECTS	
PROJ NO: <u>SHELL OIL CO.</u>	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒	
PROJ NAME: <u>TASKER ST-HOOPS</u>	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER		
P.O. NO: <u></u>	METHANOL PRESERVATION ☐		
SHIPPED VIA: <u>Fedex</u>	COMMENTS: <u>FIXED FEE</u> ☐		
RECEIVED BY: <u>NMCO</u> Signature: <u></u> Time: <u>1/20/98</u> PRINTED NAME: <u>24TYPE PRICE</u> Date: <u>1/20/98</u>		RELINQUISHED BY: <u></u> Signature: <u></u> Time: <u></u> PRINTED NAME: <u></u> Date: <u></u>	





American Environmental Network, Inc.

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SIGNATURE PAGE

Reviewed by:


AEN Project Manager

Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
ALBUQUERQUE, NEW MEXICO

Project Name: N.M.-O.C.D.
Project Number: 801352
Project Location: SHELL OIL CO. & ASKER ST-HOBBS
Accession Number: 801523

Project Manager: KIMBERLY D. MCNEILL
Sampled By: N/S



Analysis Report

Analysis: ACID & BASE EXTRACTABLES (8270)

Accession:	801523
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	801352
Project Name:	N.M.-O.C.D.
Project Location:	SHELL OIL CO. & ASKER ST-HOBBS
Department:	ORGANIC/MS



[0] Page 1
Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 801352
 Project Name: N.M.-O.C.D.
 Project Location: SHELL OIL CO. & ASKER ST-HOBBS
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id:	001	Sample Date/Time:	21-JAN-98 1047
Client Sample Id:	801352-01	Received Date:	22-JAN-98
Batch: ALS006		Extraction Date:	28-JAN-98
Blank: A	Dry Weight %: 93	Analysis Date:	03-FEB-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZOIC ACID	UG/KG	ND	89000	
4-CHLORO-3-METHYLPHENOL	UG/KG	ND	18000	
2-CHLOROPHENOL	UG/KG	ND	18000	
2,4-DICHLOROPHENOL	UG/KG	ND	18000	
2,6-DICHLOROPHENOL	UG/KG	ND	18000	
2,4-DIMETHYLPHENOL	UG/KG	ND	18000	
4,6-DINITRO-2-METHYLPHENOL	UG/KG	ND	89000	
2,4-DINITROPHENOL	UG/KG	ND	89000	
2-METHYLPHENOL	UG/KG	ND	18000	
4-METHYLPHENOL	UG/KG	ND	18000	
2-NITROPHENOL	UG/KG	ND	18000	
4-NITROPHENOL	UG/KG	ND	89000	
PENTACHLOROPHENOL	UG/KG	ND	89000	
PHENOL	UG/KG	ND	18000	
2,3,4,6-TETRACHLOROPHENOL	UG/KG	ND	18000	
2,4,5-TRICHLOROPHENOL	UG/KG	ND	89000	
2,4,6-TRICHLOROPHENOL	UG/KG	ND	18000	
ACENAPHTHENE	UG/KG	ND	18000	
ACENAPHTHYLENE	UG/KG	ND	18000	
ACETOPHENONE	UG/KG	ND	18000	
4-AMINOBIIPHENYL	UG/KG	ND	18000	
ANILINE	UG/KG	ND	18000	
ANTHRACENE	UG/KG	ND	18000	
BENZIDINE	UG/KG	ND	18000	
BENZO (A) ANTHRACENE	UG/KG	ND	18000	
BENZO (A) PYRENE	UG/KG	ND	18000	
BENZO (B) FLUORANTHENE	UG/KG	ND	18000	
BENZO (G,H,I) PERYLENE	UG/KG	ND	18000	
BENZO (K) FLUORANTHENE	UG/KG	ND	18000	
BENZYL ALCOHOL	UG/KG	ND	18000	
BIS (2-CHLOROETHOXY) METHANE	UG/KG	ND	18000	
BIS (2-CHLOROETHYL) ETHER	UG/KG	ND	18000	
BIS (2-CHLOROISOPROPYL) ETHER	UG/KG	ND	18000	
BIS (2-ETHYLHEXYL) PHTHALATE	UG/KG	ND	18000	
4-BROMOPHENYL PHENYL ETHER	UG/KG	ND	18000	
BUTYLBENZYL PHTHALATE	UG/KG	ND	18000	
4-CHLOROANILINE	UG/KG	ND	18000	
1-CHLORONAPHTHALENE	UG/KG	ND	18000	
2-CHLORONAPHTHALENE	UG/KG	ND	18000	
4-CHLOROPHENYL PHENYL ETHER	UG/KG	ND	18000	

4
11-1002
Received
Hobbs
OCD
131415161718192021222324252627282930

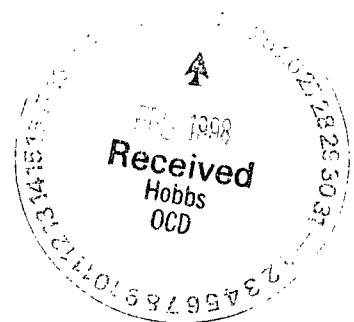
[0] Page 2
Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 801352
 Project Name: N.M.-O.C.D.
 Project Location: SHELL OIL CO. & ASKER ST-HOBBS
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id: 001
 Client Sample Id: 801352-01
 Sample Date/Time: 21-JAN-98 1047
 Received Date: 22-JAN-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
CHRYSENE	UG/KG	ND	18000	
DIBENZ (A, J) ACRIDINE	UG/KG	ND	18000	
DIBENZO (A, H) ANTHRACENE	UG/KG	ND	18000	
DIBENZOFURAN	UG/KG	ND	18000	
1,2-DICHLOROBENZENE	UG/KG	ND	18000	
1,3-DICHLOROBENZENE	UG/KG	ND	18000	
1,4-DICHLOROBENZENE	UG/KG	ND	18000	
3,3'-DICHLOROBENZIDINE	UG/KG	ND	89000	
DIETHYLPHTHALATE	UG/KG	ND	18000	
P-DIMETHYLAMINOAZOBENZENE	UG/KG	ND	18000	
7,12-DIMETHYLBENZ (A) ANTHRACENE	UG/KG	ND	18000	
A-,A-DIMETHYLPHENETHYLAMINE	UG/KG	ND	18000	
DIMETHYLPHTHALATE	UG/KG	ND	18000	
DI-N-BUTYLPHTHALATE	UG/KG	ND	18000	
2,4-DINITROTOLUENE	UG/KG	ND	18000	
2,6-DINITROTOLUENE	UG/KG	ND	18000	
DI-N-OCTYLPHTHALATE	UG/KG	ND	18000	
DIPHENYLAMINE	UG/KG	ND	18000	
1,2-DIPHENYLHYDRAZINE	UG/KG	ND	18000	
FLUORANTHENE	UG/KG	ND	18000	
FLUORENE	UG/KG	ND	18000	
HEXACHLOROBENZENE	UG/KG	ND	18000	
HEXACHLOROBUTADIENE	UG/KG	ND	18000	
HEXACHLOROCYCLOPENTADIENE	UG/KG	ND	18000	
HEXACHLOROETHANE	UG/KG	ND	18000	
INDENO (1,2,3-CD) PYRENE	UG/KG	ND	18000	
ISOPHORONE	UG/KG	ND	18000	
3-METHYLCHOLANTHRENE	UG/KG	ND	18000	
2-METHYLNAPHTHALENE	UG/KG	ND	18000	
NAPHTHALENE	UG/KG	ND	18000	
1-NAPHTHYLAMINE	UG/KG	ND	18000	
2-NAPHTHYLAMINE	UG/KG	ND	18000	
2-NITROANILINE	UG/KG	ND	18000	
3-NITROANILINE	UG/KG	ND	18000	
4-NITROANILINE	UG/KG	ND	18000	
NITROBENZENE	UG/KG	ND	18000	
N-NITROSODIMETHYLAMINE	UG/KG	ND	18000	
N-NITROSODI-N-BUTYLAMINE	UG/KG	ND	18000	
N-NITROSODIPHENYLAMINE	UG/KG	ND	18000	
N-NITROSO-DI-N-PROPYLAMINE	UG/KG	ND	18000	
N-NITROSOPIPERIDINE	UG/KG	ND	18000	
PENTACHLOROBENZENE	UG/KG	ND	18000	
PENTACHLORONITROBENZENE (PCNB)	UG/KG	ND	18000	
PHENACETIN	UG/KG	ND	18000	
PHENANTHRENE	UG/KG	ND	18000	



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Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 801352
Project Name: N.M.-O.C.D.
Project Location: SHELL OIL CO. & ASKER ST-HOBBS
Test: ACID & BASE EXTRACTABLES (8270)
Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix: SOIL
QC Level: II

Lab Id: 001 Sample Date/Time: 21-JAN-98 1047
Client Sample Id: 801352-01 Received Date: 22-JAN-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
2-PICOLINE	UG/KG	ND	18000	
PRONAMIDE	UG/KG	ND	18000	
PYRENE	UG/KG	ND	18000	
1,2,4,5-TETRACHLOROBENZENE	UG/KG	ND	18000	
1,2,4 TRICHLOROBENZENE	UG/KG	ND	18000	
2-FLUOROPHENOL	%REC/SURR	D	25-121	
PHENOL-D6	%REC/SURR	D	24-113	
2,4,6-TRIBROMOPHENOL	%REC/SURR	D	19-122	
2-FLUOROBIPHENYL	%REC/SURR	D	30-115	
NITROBENZENE-D5	%REC/SURR	D	23-120	
TERPHENYL-D14	%REC/SURR	D	18-137	
ANALYST	INITIALS	RW		

Comments:



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Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 801352
 Project Name: N.M.-O.C.D.
 Project Location: SHELL OIL CO. & ASKER ST-HOBBS
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id:	002	Sample Date/Time:	21-JAN-98 1127
Client Sample Id:	801352-02	Received Date:	22-JAN-98
Batch: ALS006		Extraction Date:	28-JAN-98
Blank: A	Dry Weight %: 91	Analysis Date:	03-FEB-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZOIC ACID	UG/KG	ND	18000	
4-CHLORO-3-METHYLPHENOL	UG/KG	ND	3600	
2-CHLOROPHENOL	UG/KG	ND	3600	
2,4-DICHLOROPHENOL	UG/KG	ND	3600	
2,6-DICHLOROPHENOL	UG/KG	ND	3600	
2,4-DIMETHYLPHENOL	UG/KG	ND	3600	
4,6-DINITRO-2-METHYLPHENOL	UG/KG	ND	18000	
2,4-DINITROPHENOL	UG/KG	ND	18000	
2-METHYLPHENOL	UG/KG	ND	3600	
4-METHYLPHENOL	UG/KG	ND	3600	
2-NITROPHENOL	UG/KG	ND	3600	
4-NITROPHENOL	UG/KG	ND	18000	
PENTACHLOROPHENOL	UG/KG	ND	18000	
PHENOL	UG/KG	ND	3600	
2,3,4,6-TETRACHLOROPHENOL	UG/KG	ND	3600	
2,4,5-TRICHLOROPHENOL	UG/KG	ND	18000	
2,4,6-TRICHLOROPHENOL	UG/KG	ND	3600	
ACENAPHTHENE	UG/KG	ND	3600	
ACENAPHTHYLENE	UG/KG	ND	3600	
ACETOPHENONE	UG/KG	ND	3600	
4-AMINOBIIPHENYL	UG/KG	ND	3600	
ANILINE	UG/KG	ND	3600	
ANTHRACENE	UG/KG	ND	3600	
BENZIDINE	UG/KG	ND	3600	
BENZO (A) ANTHRACENE	UG/KG	ND	3600	
BENZO (A) PYRENE	UG/KG	ND	3600	
BENZO (B) FLUORANTHENE	UG/KG	ND	3600	
BENZO (G,H,I) PERYLENE	UG/KG	ND	3600	
BENZO (K) FLUORANTHENE	UG/KG	ND	3600	
BENZYL ALCOHOL	UG/KG	ND	3600	
BIS(2-CHLOROETHOXY) METHANE	UG/KG	ND	3600	
BIS(2-CHLOROETHYL) ETHER	UG/KG	ND	3600	
BIS(2-CHLOROISOPROPYL) ETHER	UG/KG	ND	3600	
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	ND	3600	
4-BROMOPHENYL PHENYL ETHER	UG/KG	ND	3600	
BUTYLBENZYL PHTHALATE	UG/KG	ND	3600	
4-CHLOROANILINE	UG/KG	ND	3600	
1-CHLORONAPHTHALENE	UG/KG	ND	3600	
2-CHLORONAPHTHALENE	UG/KG	ND	3600	
4-CHLOROPHENYL PHENYL ETHER	UG/KG	ND	3600	



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Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 801352
 Project Name: N.M.-O.C.D.
 Project Location: SHELL OIL CO. & ASKER ST-HOBBS
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id: 002
 Client Sample Id: 801352-02
 Sample Date/Time: 21-JAN-98 1127
 Received Date: 22-JAN-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
CHRYSENE	UG/KG	ND	3600	
DIBENZ (A, J) ACRIDINE	UG/KG	ND	3600	
DIBENZO (A, H) ANTHRACENE	UG/KG	ND	3600	
DIBENZOFURAN	UG/KG	ND	3600	
1,2-DICHLOROBENZENE	UG/KG	ND	3600	
1,3-DICHLOROBENZENE	UG/KG	ND	3600	
1,4-DICHLOROBENZENE	UG/KG	ND	3600	
3,3'-DICHLOROBENZIDINE	UG/KG	ND	18000	
DIETHYLPHTHALATE	UG/KG	ND	3600	
P-DIMETHYLAMINOAZOBENZENE	UG/KG	ND	3600	
7,12-DIMETHYLBENZ (A) ANTHRACENE	UG/KG	ND	3600	
A-,A-DIMETHYLPHENETHYLAMINE	UG/KG	ND	3600	
DIMETHYLPHTHALATE	UG/KG	ND	3600	
DI-N-BUTYLPHTHALATE	UG/KG	ND	3600	
2,4-DINITROTOLUENE	UG/KG	ND	3600	
2,6-DINITROTOLUENE	UG/KG	ND	3600	
DI-N-OCTYLPHTHALATE	UG/KG	ND	3600	
DIPHENYLAMINE	UG/KG	ND	3600	
1,2-DIPHENYLHYDRAZINE	UG/KG	ND	3600	
FLUORANTHENE	UG/KG	ND	3600	
FLUORENE	UG/KG	ND	3600	
HEXACHLOROBENZENE	UG/KG	ND	3600	
HEXACHLOROBUTADIENE	UG/KG	ND	3600	
HEXACHLOROCYCLOPENTADIENE	UG/KG	ND	3600	
HEXACHLOROETHANE	UG/KG	ND	3600	
INDENO (1,2,3-CD) PYRENE	UG/KG	ND	3600	
ISOPHORONE	UG/KG	ND	3600	
3-METHYLCHOLANTHRENE	UG/KG	ND	3600	
2-METHYLNAPHTHALENE	UG/KG	ND	3600	
NAPHTHALENE	UG/KG	ND	3600	
1-NAPHTHYLAMINE	UG/KG	ND	3600	
2-NAPHTHYLAMINE	UG/KG	ND	3600	
2-NITROANILINE	UG/KG	ND	3600	
3-NITROANILINE	UG/KG	ND	3600	
4-NITROANILINE	UG/KG	ND	3600	
NITROBENZENE	UG/KG	ND	3600	
N-NITROSODIMETHYLAMINE	UG/KG	ND	3600	
N-NITROSODI-N-BUTYLAMINE	UG/KG	ND	3600	
N-NITROSODIPHENYLAMINE	UG/KG	ND	3600	
N-NITROSO-DI-N-PROPYLAMINE	UG/KG	ND	3600	
N-NITROSOPIPERIDINE	UG/KG	ND	3600	
PENTACHLOROBENZENE	UG/KG	ND	3600	
PENTACHLORONITROBENZENE (PCNB)	UG/KG	ND	3600	
PHENACETIN	UG/KG	ND	3600	
PHENANTHRENE	UG/KG	ND	3600	



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Date 06-Feb-98

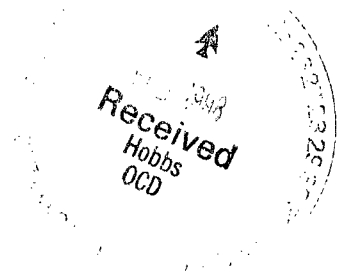
"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 801352
Project Name: N.M.-O.C.D.
Project Location: SHELL OIL CO. & ASKER ST-HOBBS
Test: ACID & BASE EXTRACTABLES (8270)
Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix: SOIL
QC Level: II

Lab Id: 002 Sample Date/Time: 21-JAN-98 1127
Client Sample Id: 801352-02 Received Date: 22-JAN-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
2-PICOLINE	UG/KG	ND	3600	
PRONAMIDE	UG/KG	ND	3600	
PYRENE	UG/KG	ND	3600	
1,2,4,5-TETRACHLOROBENZENE	UG/KG	ND	3600	
1,2,4 TRICHLOROBENZENE	UG/KG	ND	3600	
2-FLUOROPHENOL	%REC/SURR	39	25-121	
PHENOL-D6	%REC/SURR	39	24-113	
2,4,6-TRIBROMOPHENOL	%REC/SURR	31	19-122	
2-FLUOROBIPHENYL	%REC/SURR	71	30-115	
NITROBENZENE-D5	%REC/SURR	41	23-120	
TERPHENYL-D14	%REC/SURR	88	18-137	
ANALYST	INITIALS	RW		

Comments:



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Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 801352
 Project Name: N.M.-O.C.D.
 Project Location: SHELL OIL CO. & ASKER ST-HOBBS
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id: 003 Sample Date/Time: 21-JAN-98 1157
 Client Sample Id: 801352-03 Received Date: 22-JAN-98
 Batch: ALS006 Extraction Date: 28-JAN-98
 Blank: A Dry Weight %: 94 Analysis Date: 03-FEB-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZOIC ACID	UG/KG	ND	170000	
4-CHLORO-3-METHYLPHENOL	UG/KG	ND	35000	
2-CHLOROPHENOL	UG/KG	ND	35000	
2,4-DICHLOROPHENOL	UG/KG	ND	35000	
2,6-DICHLOROPHENOL	UG/KG	ND	35000	
2,4-DIMETHYLPHENOL	UG/KG	ND	35000	
4,6-DINITRO-2-METHYLPHENOL	UG/KG	ND	170000	
2,4-DINITROPHENOL	UG/KG	ND	170000	
2-METHYLPHENOL	UG/KG	ND	35000	
4-METHYLPHENOL	UG/KG	ND	35000	
2-NITROPHENOL	UG/KG	ND	35000	
4-NITROPHENOL	UG/KG	ND	170000	
PENTACHLOROPHENOL	UG/KG	ND	170000	
PHENOL	UG/KG	ND	35000	
2,3,4,6-TETRACHLOROPHENOL	UG/KG	ND	35000	
2,4,5-TRICHLOROPHENOL	UG/KG	ND	170000	
2,4,6-TRICHLOROPHENOL	UG/KG	ND	35000	
ACENAPHTHENE	UG/KG	ND	35000	
ACENAPHTHYLENE	UG/KG	ND	35000	
ACETOPHENONE	UG/KG	ND	35000	
4-AMINOBIIPHENYL	UG/KG	ND	35000	
ANILINE	UG/KG	ND	35000	
ANTHRACENE	UG/KG	ND	35000	
BENZIDINE	UG/KG	ND	35000	
BENZO (A) ANTHRACENE	UG/KG	ND	35000	
BENZO (A) PYRENE	UG/KG	ND	35000	
BENZO (B) FLUORANTHENE	UG/KG	ND	35000	
BENZO (G,H,I) PERYLENE	UG/KG	ND	35000	
BENZO (K) FLUORANTHENE	UG/KG	ND	35000	
BENZYL ALCOHOL	UG/KG	ND	35000	
BIS (2-CHLOROETHOXY) METHANE	UG/KG	ND	35000	
BIS (2-CHLOROETHYL) ETHER	UG/KG	ND	35000	
BIS (2-CHLOROISOPROPYL) ETHER	UG/KG	ND	35000	
BIS (2-ETHYLHEXYL) PHTHALATE	UG/KG	ND	35000	
4-BROMOPHENYL PHENYL ETHER	UG/KG	ND	35000	
BUTYLBENZYL PHTHALATE	UG/KG	ND	35000	
4-CHLOROANILINE	UG/KG	ND	35000	
1-CHLORONAPHTHALENE	UG/KG	ND	35000	
2-CHLORONAPHTHALENE	UG/KG	ND	35000	
4-CHLOROPHENYL PHENYL ETHER	UG/KG	ND	35000	



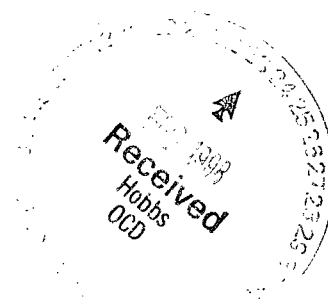
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Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 801352
 Project Name: N.M.-O.C.D.
 Project Location: SHELL OIL CO. & ASKER ST-HOBBS
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id: 003
 Client Sample Id: 801352-03
 Sample Date/Time: 21-JAN-98 1157
 Received Date: 22-JAN-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
CHRYSENE	UG/KG	ND	35000	
DIBENZ (A, J) ACRIDINE	UG/KG	ND	35000	
DIBENZO (A, H) ANTHRACENE	UG/KG	ND	35000	
DIBENZOFURAN	UG/KG	ND	35000	
1, 2-DICHLOROBENZENE	UG/KG	ND	35000	
1, 3-DICHLOROBENZENE	UG/KG	ND	35000	
1, 4-DICHLOROBENZENE	UG/KG	ND	35000	
3, 3'-DICHLOROBENZIDINE	UG/KG	ND	170000	
DIETHYLPHTHALATE	UG/KG	ND	35000	
P-DIMETHYLAMINOAZOBENZENE	UG/KG	ND	35000	
7, 12-DIMETHYLBENZ (A) ANTHRACENE	UG/KG	ND	35000	
A-, A-DIMETHYLPHENETHYLAMINE	UG/KG	ND	35000	
DIMETHYLPHTHALATE	UG/KG	ND	35000	
DI-N-BUTYLPHTHALATE	UG/KG	ND	35000	
2, 4-DINITROTOLUENE	UG/KG	ND	35000	
2, 6-DINITROTOLUENE	UG/KG	ND	35000	
DI-N-OCTYLPHTHALATE	UG/KG	ND	35000	
DIPHENYLAMINE	UG/KG	ND	35000	
1, 2-DIPHENYLHYDRAZINE	UG/KG	ND	35000	
FLUORANTHENE	UG/KG	ND	35000	
FLUORENE	UG/KG	ND	35000	
HEXACHLOROBENZENE	UG/KG	ND	35000	
HEXACHLOROBUTADIENE	UG/KG	ND	35000	
HEXACHLOROCYCLOPENTADIENE	UG/KG	ND	35000	
HEXACHLOROETHANE	UG/KG	ND	35000	
INDENO (1, 2, 3-CD) PYRENE	UG/KG	ND	35000	
ISOPHORONE	UG/KG	ND	35000	
3-METHYLCHOLANTHRENE	UG/KG	ND	35000	
2-METHYLNAPHTHALENE	UG/KG	88000	35000	
NAPHTHALENE	UG/KG	ND	35000	
1-NAPHTHYLAMINE	UG/KG	ND	35000	
2-NAPHTHYLAMINE	UG/KG	ND	35000	
2-NITROANILINE	UG/KG	ND	35000	
3-NITROANILINE	UG/KG	ND	35000	
4-NITROANILINE	UG/KG	ND	35000	
NITROBENZENE	UG/KG	ND	35000	
N-NITROSODIMETHYLAMINE	UG/KG	ND	35000	
N-NITROSODI-N-BUTYLAMINE	UG/KG	ND	35000	
N-NITROSODIPHENYLAMINE	UG/KG	ND	35000	
N-NITROSO-DI-N-PROPYLAMINE	UG/KG	ND	35000	
N-NITROSOPIPERIDINE	UG/KG	ND	35000	
PENTACHLOROBENZENE	UG/KG	ND	35000	
PENTACHLORONITROBENZENE (PCNB)	UG/KG	ND	35000	
PHENACETIN	UG/KG	ND	35000	
PHENANTHRENE	UG/KG	ND	35000	



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Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 801352
Project Name: N.M.-O.C.D.
Project Location: SHELL OIL CO. & ASKER ST-HOBBS
Test: ACID & BASE EXTRACTABLES (8270)
Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix: SOIL
QC Level: II

Lab Id: 003 Sample Date/Time: 21-JAN-98 1157
Client Sample Id: 801352-03 Received Date: 22-JAN-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
2-PICOLINE	UG/KG	ND	35000	
PRONAMIDE	UG/KG	ND	35000	
PYRENE	UG/KG	ND	35000	
1,2,4,5-TETRACHLOROBENZENE	UG/KG	ND	35000	
1,2,4 TRICHLOROBENZENE	UG/KG	ND	35000	
2-FLUOROPHENOL	%REC/SURR	D	25-121	
PHENOL-D6	%REC/SURR	D	24-113	
2,4,6-TRIBROMOPHENOL	%REC/SURR	D	19-122	
2-FLUOROBIPHENYL	%REC/SURR	D	30-115	
NITROBENZENE-D5	%REC/SURR	D	23-120	
TERPHENYL-D14	%REC/SURR	D	18-137	
ANALYST	INITIALS	RW		

Comments:

111 1099
Received
Hobbs
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10/11/2008

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Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 801352
 Project Name: N.M.-O.C.D.
 Project Location: SHELL OIL CO. & ASKER ST-HOBBS
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id: 004 Sample Date/Time: 21-JAN-98 1208
 Client Sample Id: 801352-04 Received Date: 22-JAN-98
 Batch: ALS006 Extraction Date: 28-JAN-98
 Blank: A Dry Weight %: 90 Analysis Date: 03-FEB-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZOIC ACID	UG/KG	ND	37000	
4-CHLORO-3-METHYLPHENOL	UG/KG	ND	7300	
2-CHLOROPHENOL	UG/KG	ND	7300	
2,4-DICHLOROPHENOL	UG/KG	ND	7300	
2,6-DICHLOROPHENOL	UG/KG	ND	7300	
2,4-DIMETHYLPHENOL	UG/KG	ND	7300	
4,6-DINITRO-2-METHYLPHENOL	UG/KG	ND	37000	
2,4-DINITROPHENOL	UG/KG	ND	37000	
2-METHYLPHENOL	UG/KG	ND	7300	
4-METHYLPHENOL	UG/KG	ND	7300	
2-NITROPHENOL	UG/KG	ND	7300	
4-NITROPHENOL	UG/KG	ND	37000	
PENTACHLOROPHENOL	UG/KG	ND	37000	
PHENOL	UG/KG	ND	7300	
2,3,4,6-TETRACHLOROPHENOL	UG/KG	ND	7300	
2,4,5-TRICHLOROPHENOL	UG/KG	ND	37000	
2,4,6-TRICHLOROPHENOL	UG/KG	ND	7300	
ACENAPHTHENE	UG/KG	ND	7300	
ACENAPHTHYLENE	UG/KG	ND	7300	
ACETOPHENONE	UG/KG	ND	7300	
4-AMINOBIIPHENYL	UG/KG	ND	7300	
ANILINE	UG/KG	ND	7300	
ANTHRACENE	UG/KG	ND	7300	
BENZIDINE	UG/KG	ND	7300	
BENZO (A) ANTHRACENE	UG/KG	ND	7300	
BENZO (A) PYRENE	UG/KG	ND	7300	
BENZO (B) FLUORANTHENE	UG/KG	ND	7300	
BENZO (G,H,I) PERYLENE	UG/KG	ND	7300	
BENZO (K) FLUORANTHENE	UG/KG	ND	7300	
BENZYL ALCOHOL	UG/KG	ND	7300	
BIS (2-CHLOROETHOXY) METHANE	UG/KG	ND	7300	
BIS (2-CHLOROETHYL) ETHER	UG/KG	ND	7300	
BIS (2-CHLOROISOPROPYL) ETHER	UG/KG	ND	7300	
BIS (2-ETHYLHEXYL) PHTHALATE	UG/KG	ND	7300	
4-BROMOPHENYL PHENYL ETHER	UG/KG	ND	7300	
BUTYLBENZYL PHTHALATE	UG/KG	ND	7300	
4-CHLOROANILINE	UG/KG	ND	7300	
1-CHLORONAPHTHALENE	UG/KG	ND	7300	
2-CHLORONAPHTHALENE	UG/KG	ND	7300	
4-CHLOROPHENYL PHENYL ETHER	UG/KG	ND	7300	



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Date 06-Feb-98

"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
 Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
 Project Number: 801352
 Project Name: N.M.-O.C.D.
 Project Location: SHELL OIL CO. & ASKER ST-HOBBS
 Test: ACID & BASE EXTRACTABLES (8270)
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Matrix: SOIL
 QC Level: II

Lab Id: 004
 Client Sample Id: 801352-04
 Sample Date/Time: 21-JAN-98 1208
 Received Date: 22-JAN-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
CHRYSENE	UG/KG	ND	7300	
DIBENZ(A,J)ACRIDINE	UG/KG	ND	7300	
DIBENZO(A,H)ANTHRACENE	UG/KG	ND	7300	
DIBENZOFURAN	UG/KG	ND	7300	
1,2-DICHLOROBENZENE	UG/KG	ND	7300	
1,3-DICHLOROBENZENE	UG/KG	ND	7300	
1,4-DICHLOROBENZENE	UG/KG	ND	7300	
3,3'-DICHLOROBENZIDINE	UG/KG	ND	37000	
DIETHYLPHTHALATE	UG/KG	ND	7300	
P-DIMETHYLAMINOAZOBENZENE	UG/KG	ND	7300	
7,12-DIMETHYLBENZ(A)ANTHRACENE	UG/KG	ND	7300	
A-,A-DIMETHYLPHENETHYLAMINE	UG/KG	ND	7300	
DIMETHYLPHTHALATE	UG/KG	ND	7300	
DI-N-BUTYLPHTHALATE	UG/KG	ND	7300	
2,4-DINITROTOLUENE	UG/KG	ND	7300	
2,6-DINITROTOLUENE	UG/KG	ND	7300	
DI-N-OCTYLPHTHALATE	UG/KG	ND	7300	
DIPHENYLAMINE	UG/KG	ND	7300	
1,2-DIPHENYLHYDRAZINE	UG/KG	ND	7300	
FLUORANTHENE	UG/KG	ND	7300	
FLUORENE	UG/KG	ND	7300	
HEXACHLOROBENZENE	UG/KG	ND	7300	
HEXACHLOROBUTADIENE	UG/KG	ND	7300	
HEXACHLOROCYCLOPENTADIENE	UG/KG	ND	7300	
HEXACHLOROETHANE	UG/KG	ND	7300	
INDENO(1,2,3-CD)PYRENE	UG/KG	ND	7300	
ISOPHORONE	UG/KG	ND	7300	
3-METHYLCHOLANTHRENE	UG/KG	ND	7300	
2-METHYLNAPHTHALENE	UG/KG	36000	7300	
NAPHTHALENE	UG/KG	13000	7300	
1-NAPHTHYLAMINE	UG/KG	ND	7300	
2-NAPHTHYLAMINE	UG/KG	ND	7300	
2-NITROANILINE	UG/KG	ND	7300	
3-NITROANILINE	UG/KG	ND	7300	
4-NITROANILINE	UG/KG	ND	7300	
NITROBENZENE	UG/KG	ND	7300	
N-NITROSODIMETHYLAMINE	UG/KG	ND	7300	
N-NITROSODI-N-BUTYLAMINE	UG/KG	ND	7300	
N-NITROSODIPHENYLAMINE	UG/KG	ND	7300	
N-NITROSO-DI-N-PROPYLAMINE	UG/KG	ND	7300	
N-NITROSOPIPERIDINE	UG/KG	ND	7300	
PENTACHLOROBENZENE	UG/KG	ND	7300	
PENTACHLORONITROBENZENE(PCNB)	UG/KG	ND	7300	
PHENACETIN	UG/KG	ND	7300	
PHENANTHRENE	UG/KG	8200	7300	



[0] Page 12
Date 06-Feb-98

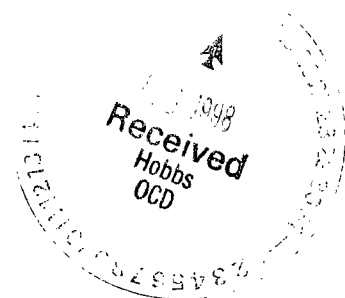
"FINAL REPORT FORMAT - SINGLE"

Accession: 801523
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 801352
Project Name: N.M.-O.C.D.
Project Location: SHELL OIL CO. & ASKER ST-HOBBS
Test: ACID & BASE EXTRACTABLES (8270)
Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Matrix: SOIL
QC Level: II

Lab Id: 004 Sample Date/Time: 21-JAN-98 1208
Client Sample Id: 801352-04 Received Date: 22-JAN-98

Parameter:	Units:	Results:	Rpt Lmts:	Q:
2-PICOLINE	UG/KG	ND	7300	
PRONAMIDE	UG/KG	ND	7300	
PYRENE	UG/KG	ND	7300	
1,2,4,5-TETRACHLOROBENZENE	UG/KG	ND	7300	
1,2,4 TRICHLOROBENZENE	UG/KG	ND	7300	
2-FLUOROPHENOL	%REC/SURR	27	25-121	
PHENOL-D6	%REC/SURR	53	24-113	
2,4,6-TRIBROMOPHENOL	%REC/SURR	57	19-122	
2-FLUOROBIPHENYL	%REC/SURR	85	30-115	
NITROBENZENE-D5	%REC/SURR	90	23-120	
TERPHENYL-D14	%REC/SURR	115	18-137	
ANALYST	INITIALS	RW		

Comments:



[0] Page 13
Date 06-Feb-98

"Method Report Summary"

Accession Number: 801523
Client: AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number: 801352
Project Name: N.M.-O.C.D.
Project Location: SHELL OIL CO. & ASKER ST-HOBBS
Test: ACID & BASE EXTRACTABLES (8270)

Client Sample Id:	Parameter:	Unit:	Result:
801352-03	2-METHYLNAPHTHALENE	UG/KG	88000
801352-04	2-METHYLNAPHTHALENE	UG/KG	36000
	NAPHTHALENE	UG/KG	13000
	PHENANTHRENE	UG/KG	8200



Data Qualifiers for Final ReportAEN-Pensacola Inorganic/Organic

@	Adjusted reporting limit due to sample matrix (dilution prior to digestion and/or analysis)
+	Elevated reporting limit due to dilution into calibration range
*	Elevated reporting limit due to matrix interference (dilution prior to digestion and/or analysis)
#	Elevated reporting limit due to insufficient sample size
D	Diluted out
J5	The reported value is quantitated as a TIC; therefore, it is estimated
ND = Not Detected	N/S = Not Submitted N/A = Not Applicable

Florida Projects Inorganic/Organic

Y1	Improper preservation, no preservative present in sample upon receipt
Y2	Improper preservation, incorrect preservative present in sample upon receipt
Y3	Improper preservation, sample temperature exceeded EPA temperature limits of 2-6°C upon receipt
Y (FL description)	The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Q	Sample held beyond the accepted holding time
I	The reported value is < Laboratory RL and > laboratory MDL
U1	The reported value is ≤ Laboratory MDL (value for sample result is reported as the MDL)
U (FL description)	Indicates the compound was analyzed for but not detected.
T	The reported value is < Laboratory MDL (value shall not be used for statistical analysis)
V	The analyte was detected in both the sample and the associated method blank.
J1	Surrogate recovery limits have been exceeded
J2	The sample matrix interfered with the ability to make any accurate determinations
J3	The reported value failed to meet the established quality control criteria for either precision or accuracy
J (FL description)	Estimated value; not accurate.

AFCEE Projects (under QAPP) and All Other (AEN-PN) Projects/Sites for Inorganic/Organic Parameters

J4	(For positive results) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$)
J (AFCEE description)	The analyte was positively identified, the quantitation is an estimation
R1	(For nondetects) Temperature limits exceeded ($\leq 2^{\circ}\text{C}$ or $\geq 6^{\circ}\text{C}$)
R2	Improper preservation, no preservative present in sample upon receipt
R3	Improper preservation, incorrect preservative present in sample upon receipt
R4	Holding time exceeded
R5	Collection requirements not met, improper container used for sample
R (AFCEE description)	The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria
F	< RL and > laboratory MDL
F (AFCEE description)	The analyte was positively identified but the associated numerical value is below the AFCEE or lab RL
U2	≤ Laboratory MDL (value for result will be the MDL, never below the MDL)
U (AFCEE description)	The analyte was analyzed for but not detected. The associated numerical value is at or below the MDL
B (AFCEE description)	The analyte was found in the associated blank, as well as in the sample

ICR Projects Inorganic/Organic

A	Acceptable
R6	Rejected

Examples: ICR Flags

R6 = Laboratory extracted the sample but the refrigerator malfunctioned so the extract became warm and client was notified

R6 = Sample arrived in laboratory in good condition; however, the laboratory did not analyze it within EPA's established holding time limit.

CLP and CLP-like Projects

Refer to referenced CLP Statement of Work (SOW) for explanation of data qualifiers

IDL = Laboratory Instrument Detection Limit

MDL = Laboratory Method Detection Limit

RL = Reporting Limit (AFCEE RLs are listed in the AFCEE QAPP)

CLP CRDL = CLP Contract Required Detection Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

CLP CRQL = CLP Contract Required Quantitation Limit (these limits are listed in the EPA CLP Statement of Work or SOW)

Any time a sample arrives at the laboratory improperly preserved (at improper pH or temperature) or after holding time has expired or prepared or analyzed after holding time, client must be notified in writing (i.e. case narrative).

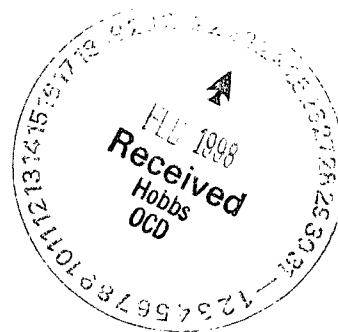
AEN-Pensacola uses the most current promulgated methods contained in the reference manuals.



Quality Control Report

Analysis: ACID & BASE EXTRACTABLES (8270)

Accession:	801523
Client:	AMERICAN ENVIRONMENTAL NETWORK (NEW MEXICO) INC.
Project Number:	801352
Project Name:	N.M.-O.C.D.
Project Location:	SHELL OIL CO. & ASKER ST-HOBBS
Department:	ORGANIC/MS



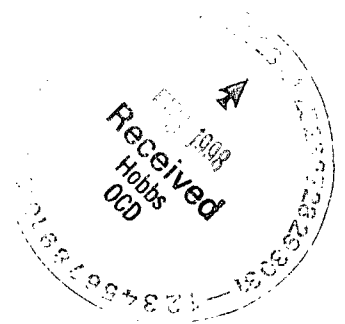
[0] Page 1
Date 06-Feb-98

"QC Report"

Title: Soil Blank
 Batch: ALS006
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Blank Id: A Date Analyzed: 01-FEB-98 Date Extracted: 28-JAN-98

Parameters:	Units:	Results:	Reporting Limits:
P-CHLORO-M-CRESOL	UG/L	ND	10
2-CHLOROPHENOL	UG/L	ND	10
O-CRESOL	UG/L	ND	10
M, P CRESOL	UG/L	ND	10
2,4-DICHLOROPHENOL	UG/L	ND	10
2,6-DICHLOROPHENOL	UG/L	ND	10
2,4-DIMETHYLPHENOL	UG/L	ND	10
4,6-DINITRO-O-CRESOL	UG/L	ND	50
2,4-DINITROPHENOL	UG/L	ND	10
2-NITROPHENOL	UG/L	ND	10
4-NITROPHENOL	UG/L	ND	50
PENTACHLOROPHENOL	UG/L	ND	50
PHENOL	UG/L	ND	10
2,3,4,6-TETRACHLOROPHENOL	UG/L	ND	10
2,4,5-TRICHLOROPHENOL	UG/L	ND	50
2,4,6-TRICHLOROPHENOL	UG/L	ND	10
ACENAPHTHENE	UG/L	ND	10
ACENAPHTHYLENE	UG/L	ND	10
ACETOPHENONE	UG/L	ND	10
2-ACETYLAMINOFLUORENE	UG/L	ND	10
4-AMINOBIIPHENYL	UG/L	ND	10
ANILINE	UG/L	ND	10
ANTHRACENE	UG/L	ND	10
ARAMITE	UG/L	ND	10
BENZO (A) ANTHRACENE	UG/L	ND	10
BENZO (A) PYRENE	UG/L	ND	10
BENZO (B) FLUORANTHENE	UG/L	ND	10
BENZO (G,H,I) PERYLENE	UG/L	ND	10
BENZO (K) FLUORANTHENE	UG/L	ND	10
BENZYL ALCOHOL	UG/L	ND	10
BIS (2-CHLORO-1-METHYLETHYL) ETHER	UG/L	ND	10
BIS (2-CHLOROETHOXY) METHANE	UG/L	ND	10
BIS (2-CHLOROETHYL) ETHER	UG/L	ND	10
BIS (2-ETHYLHEXYL) PHTHALATE	UG/L	ND	10
4-BROMOPHENYL PHENYL ETHER	UG/L	ND	10
BUTYLBENZYL PHTHALATE	UG/L	ND	10
P-CHLOROANILINE	UG/L	ND	10
CHLOROBENZILATE	UG/L	ND	10
2-CHLORONAPHTHALENE	UG/L	ND	10
4-CHLOROPHENYL PHENYL ETHER	UG/L	ND	10
CHRYSENE	UG/L	ND	10
DIALATE	UG/L	ND	10
DIBENZO (A,H) ANTHRACENE	UG/L	ND	10
DIBENZOFURAN	UG/L	ND	10
1,2-DICHLOROBENZENE	UG/L	ND	10
1,3-DICHLOROBENZENE	UG/L	ND	10



[0] Page 2
Date 06-Feb-98

"QC Report"

Title: Soil Blank
 Batch: ALS006
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Parameters:	Units:	Results:	Reporting Limits:
1,4-DICHLOROBENZENE	UG/L	ND	10
3,3'-DICHLOROBENZIDINE	UG/L	ND	50
DIETHYLPHTHALATE	UG/L	ND	10
DIMETHOATE	UG/L	ND	10
P-DIMETHYLAMINOAZOBENZENE	UG/L	ND	10
7,12-DIMETHYLBENZ(A) ANTHRACENE	UG/L	ND	10
3,3'-DIMETHYLBENZIDINE	UG/L	ND	10
A,A-DIMETHYLPHENETHYLAMINE	UG/L	ND	10
DIMETHYLPHTHALATE	UG/L	ND	10
DI-N-BUTYLPHTHALATE	UG/L	ND	10
M-DINITROBENZENE	UG/L	ND	10
2,4-DINITROTOLUENE	UG/L	ND	10
2,6-DINITROTOLUENE	UG/L	ND	10
DI-N-OCTYLPHTHALATE	UG/L	ND	10
DIPHENYLAMINE	UG/L	ND	10
ETHYL METHANESULFONATE	UG/L	ND	10
FAMPHUR	UG/L	ND	10
FLUORANTHENE	UG/L	ND	10
FLUORENE	UG/L	ND	10
HEXACHLOROBENZENE	UG/L	ND	10
HEXACHLOROBUTADIENE	UG/L	ND	10
HEXACHLOROCYCLOPENTADIENE	UG/L	ND	10
HEXACHLOROETHANE	UG/L	ND	10
HEXACHLOROPHENE	UG/L	ND	10
HEXACHLOROPROPENE	UG/L	ND	10
INDENO (1,2,3-CD) PYRENE	UG/L	ND	10
ISODRIN	UG/L	ND	10
ISOPHORONE	UG/L	ND	10
ISOSAFROLE	UG/L	ND	10
KEPONE	UG/L	ND	10
METHAPYRILENE	UG/L	ND	10
3-METHYLCHOLANTHRENE	UG/L	ND	10
METHYL METHANESULFONATE	UG/L	ND	10
1-METHYLNAPHTHALENE	UG/L	ND	10
2-METHYLNAPHTHALENE	UG/L	ND	10
NAPHTHALENE	UG/L	ND	10
1,4-NAPHTHOQUINONE	UG/L	ND	10
1-NAPHTHYLAMINE	UG/L	ND	10
2-NAPHTHYLAMINE	UG/L	ND	10
2-NITROANILINE	UG/L	ND	50
3-NITROANILINE	UG/L	ND	50
4-NITROANILINE	UG/L	ND	50
NITROBENZENE	UG/L	ND	10
5-NITRO-O-TOLUIDINE	UG/L	ND	10
4-NITROQUINOLINE-1-OXIDE	UG/L	ND	10
N-NITROSODIETHYLAMINE	UG/L	ND	10
N-NITROSODIMETHYLAMINE	UG/L	ND	10



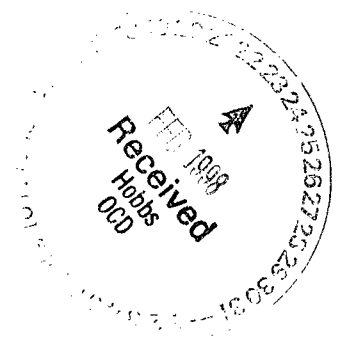
[0] Page 3
Date 06-Feb-98

"QC Report"

Title: Soil Blank
 Batch: ALS006
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Parameters:	Units:	Results:	Reporting Limits:
N-NITROSODI-N-BUTYLAMINE	UG/L	ND	10
N-NITROSODIPHENYLAMINE	UG/L	ND	10
N-NITROSOMETHYLETHYLAMINE	UG/L	ND	10
N-NITROSOMORPHOLINE	UG/L	ND	10
N-NITROSOPIPERIDINE	UG/L	ND	10
N-NITROSOPYRROLIDINE	UG/L	ND	10
PARATHION	UG/L	ND	10
PENTACHLOROBENZENE	UG/L	ND	10
PENTACHLOROETHANE	UG/L	ND	10
PENTACHLORONITROBENZENE	UG/L	ND	10
PHENACETIN	UG/L	ND	10
PHENANTHRENE	UG/L	ND	10
2-PICOLINE	UG/L	ND	10
P-PHENYLENEDIAMINE	UG/L	ND	10
PRONAMIDE	UG/L	ND	10
PYRENE	UG/L	ND	10
PYRIDINE	UG/L	ND	10
SAFROLE	UG/L	ND	10
SULFOTEPP	UG/L	ND	10
1,2,4,5-TETRACHLOROBENZENE	UG/L	ND	10
THIONAZIN	UG/L	ND	10
O-TOLUIDINE	UG/L	ND	10
1,2,4 TRICHLOROBENZENE	UG/L	ND	10
SYM-TRINITROBENZENE	UG/L	ND	10
O,O,O-TRIETHYL PHOSPHOROTHIAE	UG/L	ND	10
BENZIDINE	UG/L	ND	10
BIS(2-CHLOROISOPROPYL) ETHER	UG/L	ND	10
2-(SEC BUTYL) 4,6-DINITRO-PHENOL (DINOSEB)	UG/L	ND	10
O-NITROSO-DI-N-PROPYLAMINE	UG/L	ND	10
6-METHYL CHRYSENE	UG/L	ND	20
INDENE	UG/L	ND	20
QUINOLINE	UG/L	ND	50
BENZENETHIOL	UG/L	ND	20
PARATOLIUDINE	UG/L	ND	50
TOLUENE DIISOCYANATE	UG/L	ND	50
TOLUENE DIAMINE	UG/L	ND	50
MONONITROTOLUENE	UG/L	ND	50
DIETHYLENE GLYCOL MONOBUTYL ETHER	UG/L	ND	10
2-FLUOROPHENOL	%REC/SURR	66	21-100
PHENOL-D6	%REC/SURR	60	10-100
2,4,6-TRIBROMOPHENOL	%REC/SURR	59	10-123
2-FLUOROBIPHENYL	%REC/SURR	63	43-116
NITROBENZENE-D5	%REC/SURR	46	35-114
TERPHENYL-D14	%REC/SURR	83	33-124
ANALYST	INITIALS	RW	

Comments:



[0] Page 4
Date 06-Feb-98

"QC Report"

Title: Soil LCS
Batch: ALS006
Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

RS Date Analyzed: 01-FEB-98

RS Date Extracted: 28-JAN-98

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	Rec Lmts
PHENOL	2500	<330	1667	67	5-112
2-CHLOROPHENOL	2500	<330	1700	68	38-123
1,4-DICHLOROBENZENE	1667	<330	1200	72	50-111
N-NITRO-DI-N-PROPYLAMINE	1667	<330	1067	64	39-121
1,2,4 TRICHLOROBENZENE	1667	<330	1133	68	49-115
4-CHLORO-3-METHYLPHENOL	2500	<330	1700	68	37-128
ACENAPHTHENE	1667	<330	1267	76	53-115
4-NITROPHENOL	2500	<1700	1133	45	32-126
2,4-DINITROTOLUENE	1667	<330	1133	68	56-118
PENTACHLOROPHENOL	2500	<1700	1633	65	31-146
PYRENE	1667	<330	1100	66	52-115

Surrogates:		
NITROBENZENE-D5	58	23-120
2-FLUOROBIPHENYL	73	30-115
TERPHENYL-D14	93	18-137
PHENOL-D6	71	24-113
2-FLUOROPHENOL	69	25-121
2,4,6-TRIBROMOPHENOL	81	19-122

Comments:

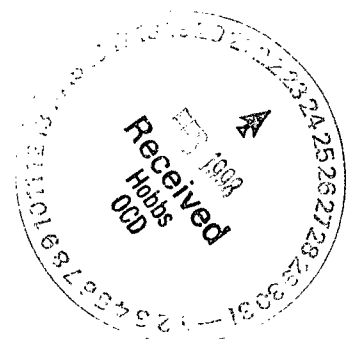
Notes:

N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT

UG/KG = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.

* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.



[0] Page 5
Date 06-Feb-98

"QC Report"

Title: Soil Matrix Spike/Matrix Spike Duplicate
 Batch: ALS006
 Analysis Method: 8270/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.
 Extraction Method: 3550/Test Methods for Evaluating Solid and Haz Waste, SW-846, 3rd Ed.

Dry Weight %: 90
 Sample Spiked: 801523-4

MS Date Analyzed: 03-FEB-98
 MSD Date Analyzed: 03-FEB-98

MS Date Extracted: 28-JAN-98
 MSD Date Extracted: 28-JAN-98

Parameters:	Spike Added	Sample Conc	MS Conc	MS %Rec	MSD Conc	MSD %Rec	RPD	RPD Lmts	Rec Lmts
PHENOL	2800	<370	1300	46	1400	50	8	22	40-103
2-CHLOROPHENOL	2800	<370	1400	50	1700	61	20	27	39-104
1,4-DICHLOROBENZENE	1852	<366.7	1083	58	1352	73	23	27	43-109
N-NITRO-DI-N-PROPYLAMINE	1852	<366.7	6297	340*	7277	393*	14	27	29-117
1,2,4 TRICHLOROBENZENE	1852	<366.7	1426	77	1714	93	19	21	49-126
4-CHLORO-3-METHYLPHENOL	2800	<370	1600	57	1600	57	0	28	32-117
ACENAPHTHENE	1852	403.3	2193	97	2114	92	5	20	47-126
4-NITROPHENOL	2800	<1900	2600	93	2700	96	3	42	1-124
2,4-DINITROTOLUENE	1852	<366.7	1268	68	1323	71	4	23	43-110
PENTACHLOROPHENOL	2800	<1900	1000	36	1300	46	24	33	14-144
PYRENE	1852	<366.7	1936	105	2238	121*	14	31	52-115

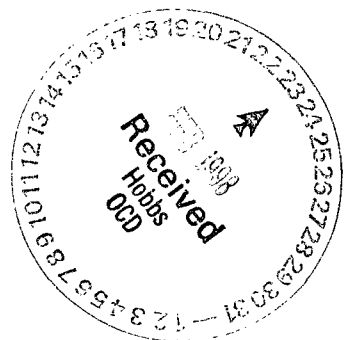
Surrogates:	MS %Rec	MSD %Rec	Rec Lmts
NITROBENZENE-D5	111	96	23-120
2-FLUOROBIPHENYL	103	100	30-115
TERPHENYL-D14	115	112	18-137
PHENOL-D6	58	74	24-113
2-FLUOROPHENOL	39	53	25-121
2,4,6-TRIBROMOPHENOL	52	61	19-122

Comments:

* MATRIX SPIKE/MATRIX SPIKE DUPLICATE HAD RECOVERY(S), RPD'S AND/OR SURROGATE(S) OUTSIDE ACCEPTANCE LIMITS DUE TO MATRIX INTERFERENCE. SEE LCS DATA.

Notes:

N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
 UG/KG = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
 * = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
 SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.



Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
MG/M3 = MILLIGRAMS PER CUBIC METER.
NG = NANOGRAMS.
UG = MICROGRAMS.
PPBV = PARTS PER BILLION/VOLUME.
< = LESS THAN.
ND = NOT DETECTED ABOVE REPORT LIMIT.
RPT LMTS = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.
RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

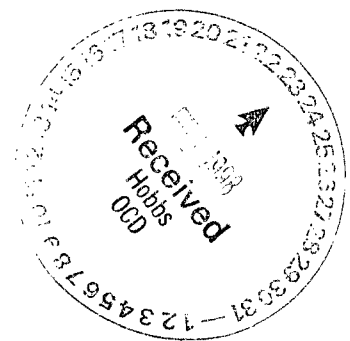
ORGANIC SOILS ARE REPORTED ON A DRY WEIGHT BASIS.

DUE TO THE NATURE OF THE SAMPLE MATRIX, MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS CANNOT BE PERFORMED FOR AIR ANALYSIS.

CLP SOW 1991, USEPA CONTRACT LABORATORY PROGRAM, STATEMENT OF WORK FOR ORGANICS ANALYSIS, DOCUMENT NUMBER OLM01.8, AUGUST 1991.

AEN-PN USES THE MOST CURRENT PROMULGATED METHODS CONTAINED IN THE REFERENCE MANUALS.

LP = LEVERNE PETERSON	RW = RITA WINGO
LD = LARRY DILMORE	LL = LANCE LARSON
DWB = DAVID BOWERS	HB = HEATHER E. BLAIR



American Environmental Network of Florida
PROJECT SAMPLE INSPECTION FORM

Lab Accession #: 801523

Date Received: 1/22/98

- | | |
|--|--|
| 1. Was there a Chain of Custody? ☒ Yes ☐ No* | 8. Were samples checked for preservative? (Check pH of all H ₂ O requiring preservative except VOA vials that require zero headspace)* ☐ Yes ☐ No* ☒ N/A |
| 2. Was Chain of Custody properly filled out and relinquished? ☒ Yes ☐ No* | 9. Is there sufficient volume for analysis requested? ☒ Yes ☐ No* |
| 3. Were samples received cold? (Criteria: 2° - 6°C: AEN-SOP 1055) ☒ Yes ☐ No* N/A | 10. Were samples received within Holding Time? (REFER TO AEN-SOP 1040) ☒ Yes ☐ No* |
| 4. Were all samples properly labeled and identified? ☒ Yes ☐ No* | 11. Is Headspace visible > ¼" in diameter in VOA vials?* If any headspace is evident, comment in out-of-control section. ☐ Yes* ☐ No ☒ N/A |
| 5. Did samples require splitting? Req By: PM Client Other* ☐ Yes* ☒ No | 12. If sent, were matrix spike bottles returned? ☐ Yes ☐ No* ☒ N/A |
| 6. Were samples received in proper containers for analysis requested? ☒ Yes ☐ No* | 13. Was Project Manager notified of problems? (initials: _____) ☐ Yes ☒ No* ☐ N/A |
| 7. Were all sample containers received intact? ☒ Yes ☐ No* | |

Airbill Number(s): 339 9768461

Shipped By: FED EX

Cooler Number(s): THURS

Shipping Charges: N/A

Cooler Weight(s): 49#

Cooler Temp(s) (°C): Cck3 3°C

(LIST THERMOMETER NUMBER(S) FOR VERIFICATION)

Out of Control Events and Inspection Comments:

PER BRIAN PRICE RUN PAH'S ONLY ON 8270. 4/1/23

(USE BACK OF PSIFOR ADDITIONAL NOTES AND COMMENTS)

Inspected By: WS Date: 1/22/98 Logged By: PJE Date: 1/22/98

- * Note all Out-of-Control and/or questionable events on Comment Section of this form.
- * Note who requested the splitting of samples on the Comment Section of this form.
- + 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 (AEN-SOP 938, section 2.2.9).
- * According to EPA, ¼" of headspace is allowed in 40 ml vials requiring volatile analysis, however, AEN makes it policy to record any headspace as out-of-control (AEN-SOP 938, section 2.2.12).





American Environmental Network
Albuquerque, New Mexico

Interlab Chain of Custody

801523

DATE: 1-21-98 PAGE: 1 OF 1

NETWORK PROJECT MANAGER: KIMBERLY D. MCNEILL

COMPANY: American Environmental Network
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER:

Kim McNeill

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
801352-01	1-20-98	10:47	NA	1
-02		11:27		2
-03		11:57		3
-04		12:08		4

Metals - TAL	
Metals - PP List	
Metals - RCRA	
RCRA Metals by TCLP (1311)	
TOX	
TOC	
Gen Chemistry	
Oil and Grease	
BOD	
COD	
Pesticides/PCB (608/8080)	
Herbicides (615/8150)	
Base/Neutral Acid Compounds GC/MS (625/8270)	
Volatile Organics GC/MS (624/8240)	
Polynuclear Aromatics (610/8310)	
8240 (TCLP 1311) ZHE	
8270 (TCLP 1311) BP	
TO-14	
Gross Alpha/Beta	
NUMBER OF CONTAINERS	

PROJECT INFORMATION

SAMPLE RECEIPT

SAMPLES SENT TO:

RELINQUISHED BY:

1.

RELINQUISHED BY:

2.

PROJECT NUMBER: 801352

TOTAL NUMBER OF CONTAINERS

SAN DIEGO

Signature: *E.L.* Time: 1700

Signature: *1/22/98* Time: *1/22/98*

PROJECT NAME: NM-0C1

CHAIN OF CUSTODY SEALS

RENTON

Printed Name: *Brian Rice* Date: 1-21-98

Printed Name: *1/22/98* Date: *1/22/98*

OC LEVEL: STD IV

INTACT?

PENSACOLA

Signature: *1/22/98* Time: *1/22/98*

Signature: *1/22/98* Time: *1/22/98*

OC REQUIRED: MS MSD BLANK

RECEIVED GOOD COND/COLD

PORTLAND

Abuquerque *MM*

Signature: *1/22/98* Time: *1/22/98*

2.

TAT: STANDARD RUSHI

LAB NUMBER

PHOENIX

Abuquerque *MM*

Signature: *1/22/98* Time: *1/22/98*

2.

DUE DATE: 1-3-98

Client interested in poly nuclear

Abuquerque

Signature: *1/22/98* Time: *1/22/98*

Signature: *1/22/98* Time: *1/22/98*

2.

RUSH SURCHARGE:

Abuquerque Hydrocarbon + we need

Abuquerque

Signature: *1/22/98* Time: *1/22/98*

Signature: *1/22/98* Time: *1/22/98*

2.

CLIENT DISCOUNT:

Abuquerque + 2 Methyl Naphthalene

Abuquerque

Signature: *1/22/98* Time: *1/22/98*

Signature: *1/22/98* Time: *1/22/98*

2.

SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO

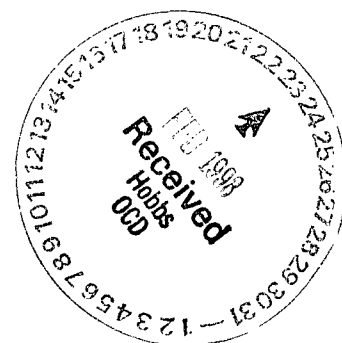
Abuquerque

Abuquerque

Signature: *1/22/98* Time: *1/22/98*

Signature: *1/22/98* Time: *1/22/98*

2.



CHAIN OF CUSTODY

DATE: 1/20/98 PAGE: 1 OF 1

AEN LAB ID: 591352

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: <u>2899E PRICE</u>		ANALYSIS REQUEST	
COMPANY: <u>NMCO</u>		Petroleum Hydrocarbons (418.1) TRPH	
ADDRESS: <u>P.O. 1980</u>		(MOD.8015) Diesel/Direct/Inject	
PHONE: <u>505-393-6161</u>		(M8015) Gas/Purge & Trap	
FAX: <u>505-393-6161</u>		Gasoline/BTEX & MTBE (M8015/8020)	
BILL TO: <u>NMCO-ATTN: ROGER ANDERSON</u>		BTXE/MTBE (8020)	
COMPANY: <u>NMCO</u>		BTEX & Chlorinated Aromatics (602/8020)	
ADDRESS: <u>20405 PACIFIC</u>		BTEX/MTBE/EDC & EDB (8020/8010/Short)	
<u>SANTA FE, NM 87505</u>		Chlorinated Hydrocarbons (601/8010)	
SAMPLE ID: <u>SB-1 2-3 DEEP</u>		504 EDB ☐ / DBCP ☐	
DATE: <u>1-20-98</u>		Polynuclear Aromatics (610/8310)	
TIME: <u>10:49 AM</u>		Volatile Organics (624/8240) GC/MS	
MATRIX: <u>SOIL</u>		Volatile Organics (8260) GC/MS	
LAB ID: <u>591352</u>		Pesticides/PCB (608/8080)	
		Herbicides (615/8150)	
		Base/Neutral/Acid Compounds GC/MS (626/8270)	
		General Chemistry:	
		Priority Pollutant Metals (13)	
		Target Analyte List Metals (23)	
		RCRA Metals (8)	
		RCRA Metals by TCLP (Method 1311)	
		Metals: <u>+CR, Hg, Se</u>	
NUMBER OF CONTAINERS: <u>3</u>			

PROJECT INFORMATION		PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	
PROJ. NO.: <u>5SHELL OIL CO.</u>	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK	(NORMAL) ☒	
PROJ. NAME: <u>TRUCK ST-HOBBAS</u>	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER		
P.O. NO.: <u></u>	METHANOL PRESERVATION ☐		
SHIPPED VIA: <u>Fedex</u>	COMMENTS: <u>FIXED FEE</u> ☐		
SAMPLE RECEIPT	<u>55-3</u>	<u>TRUCK ST</u>	
	<u>1331</u>	<u>SMALL'S</u>	
	<u>55-2</u>	<u>or I.e.g.</u>	
	<u>55-1</u>		
	<u>55-2</u>		

RELINQUISHED BY:		RELINQUISHED BY:	
Signature: <u>Price</u>	Time: <u>2:39 PM</u>	Signature: <u></u>	Time: <u></u>
Printed Name: <u>Price</u>	Date: <u>1/20/98</u>	Printed Name: <u></u>	Date: <u></u>
Company: <u>NMCO</u>		Company: <u></u>	
Signature: <u></u>	Time: <u></u>	Signature: <u></u>	Time: <u></u>
Printed Name: <u></u>	Date: <u></u>	Printed Name: <u></u>	Date: <u></u>
Company: <u></u>		Company: <u></u>	



891352

891352

891352

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PLEASE FILL THIS FORM IN COMPLETELY.

[illegible]

PROJECT INFORMATION		PRIORITY AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS		REUNQUISHED BY: 1		REUNQUISHED BY: 2	
PROJ. NO.: SHELL OIL CO.	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒			Signature: <i>Debra L. ...</i> Time: <i>2:39 PM</i>		Signature: Time:	
PROJ. NAME: TASKER ST-H0005	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER			Printed Name: Date: <i>1/20/98</i>		Printed Name: Date:	
P.O. NO.:	METHANOL PRESERVATION ☐			Company: <i>NMPCO</i>		Company:	
SHIPPED VIA: <i>Fedex</i>	COMMENTS: FIXED FEE ☐ <i>55-3</i> <i>TASKER ST</i>			RECEIVED BY: <i>...</i> Time: <i>...</i>		RECEIVED BY: (LAB) <i>...</i> Time: <i>...</i>	
COPIES: 12	ANALYSIS: 12			Signature: Time: <i>1/24/98</i>		Signature: Time: <i>1/24/98</i>	
ANALYSIS: 12	ANALYSIS: 12			Printed Name: Date: <i>1/24/98</i>		Printed Name: Date: <i>1/24/98</i>	
ANALYSIS: 12	ANALYSIS: 12			Company: <i>...</i>		Company: <i>...</i>	



DATE: 2/6/98 PAGES (including cover): 12TO: Wayne Hamilton | Bill Olson | Wayne Price

COMPANY: _____

FAX #: 713 245-7813 | 505 807-8177 PHONE #: _____
505 393-0720

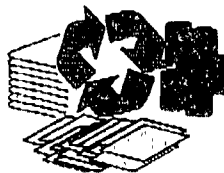
FROM:

SHARON HALL, OPERATIONS MANAGER

7904 INTERSTATE 20 WEST, MIDLAND, TX 79706

TELEPHONE:(915) 563-0118 FAX (915) 563-9526

MESSAGE:

Ra 226 and 228 analytical results. This completes
the analytical data set.Sharon Hall

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8067941296;

05 Feb 5:08PM; Job 955; Page 1

02/04/1998 17:37

5049276822

ARS WWW.AMRAD.COM

PAGE 00



1728 Woodchase Court • Baton Rouge, Louisiana 70806
 1 (800) 401-4277 • Fax (504) 827-8822

ARS Tracking Number: ARS-98-0068

P.O. Number:

Proj. 1R906

Client I.D.: 89559

ARS Sample I.D.:

ARS-98-0211

Date Sampled: N/A

Date Received:

1/22/98

Time Sampled: N/A

Time Received:

1214

Type of Sample: Solid

Date of Report

2/4/98

Analysis Description	Analysis Result	Analysis Error %	Analysis Units	Analysis Range	Analysis Error %	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.03	N/A	pCi/gm	<0.038	N/A	Bq/gm	EPA 901.1M	1/30/98 1409	cl
Ra-228	<0.185	N/A	pCi/gm	<0.007	N/A	Bq/gm	EPA 901.1M	1/30/98 1409	cl
Notes:									

Quality Assurance Review

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PAGE 05



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1 (800) 401-4277 • Fax (504) 827-8822

ARS Tracking Number: ARS-98-0068

P.O. Number: Proj 18906

Client I.D.: 89561

ARS Sample I.D.: ARS-98-0213

Date Sampled: N/A

Date Received: 1/22/98

Time Sampled: N/A

Time Received: 1214

Type of Sample: Solid

Date of Report: 2/4/98

Analysis Description	Analysis Result	Analysis Error	Analysis Unit	Analysis Result	Analysis Error	Analysis Unit	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.17	1.84	pCi/gm	0.080	0.068	Bq/gm	EPA 901.1M	2/2/98 1227	JE
Ra-228	<0.16	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	2/2/98 1227	JE
Notes:									

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PAGE 04



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ARS Tracking Number: ARS-98-0068

P.O. Number: Proj 18906

Client ID.: 89560

ARS Sample ID.: ARS-98-0212

Date Sampled: N/A

Date Received: 1/22/98

Time Sampled: N/A

Time Received: 1214

Type of Sample: Solid

Date of Report: 2/4/98

Analysis Description	Analysis Result	Analysis Inter-Val	Analysis Unit	Analysis Model	Analysis Error	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Re-Z26	<1.85	N/A	pCi/gm	<0.068	N/A	Bq/gm	EPA 901.1M	2/2/98 1121	ti
Re-Z28	<0.23	N/A	pCi/gm	<0.009	N/A	Bq/gm	EPA 901.1M	2/2/98 1121	ti
Notes:									

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PAGE 01.



1728 Woodlake Court • Baton Rouge, Louisiana 70806

T (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number: ARS-98-0068

P.O. Number:

Proj. 18906

Client ID.: 89562

ARS Sample ID.:

ARS-98-0214

Date Sampled: N/A

Date Received:

1/22/98

Time Sampled: N/A

Time Received

1214

Type of Sample: Solid

Date of Report

2/4/98

Analysis Description	Analysis Result	Analysis Error Rate	Analysis Units	Analysis Method	Analysis Error Rate	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ka-226	<1.47	N/A	pCi/gm	<0.054	N/A	Bq/gm	EPA 901.1M	2/2/98 1405	if
Ra-226	<0.25	N/A	pCi/gm	<0.007	N/A	Bq/gm	EPA 901.1M	2/2/98 1405	if
Notes:									

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5 of 12

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1 (800) 401-4277 - Fax (504) 927-6822

ARS Tracking Number: ARS-98-0068

P.O. Number:

Proj. 18906

Client ID: 89563

ARS Sample ID:

ARS 98-0215

Date Sampled: N/A

Date Received:

1/22/98

Time Sampled: N/A

Time Received:

1214

Type of Sample: Solid

Date of Report

2/4/98

Analysis Description	Analysis Results	Analysis Results	Analysis Units	Analysis Results	Analysis Results	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.02	N/A	pCi/gm	<0.038	N/A	Bq/gm	EPA 901.1M	2/3/98 0951	bl
Ra-228	0.78	0.28	pCi/gm	0.029	0.010	Bq/gm	EPA 901.1M	2/3/98 0951	bl
Notes:									

Quality Assurance Reviewer

Notes:

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ARS Tracking Number:

ARS-98-0068

P.O. Number:

Proj. 18906

Client I.D.:

89564

ARS Sample I.D.:

ARS-98-0216

Date Sampled:

N/A

Date Received:

1/27/98

Time Sampled:

N/A

Time Received:

1214

Type of Sample:

Solid

Date of Report:

2/4/98

Analysis Description	Analysis Result	Analysis Error	Analysis Units	Analysis Result	Analysis Error	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ks-226	<1.67	N/A	pCi/gm	<0.062	N/A	Bq/gm	EPA 901.1M	2/3/98 1028	ks
Ra-228	<0.32	N/A	pCi/gm	<0.012	N/A	Bq/gm	EPA 901.1M	2/3/98 1028	ks
Notice: American Radiation Service, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.									

Quality Assurance Review

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1 (800) 401-4377 • Fax (504) 927-6822

ARS Tracking Number:

ARS-98-0068

P.O. Number:

Proj. 18906

Client ID:

89565

ARS Sample ID:

ARS-98-0217

Date Sampled:

N/A

Date Received:

1/22/98

Time Sampled:

N/A

Time Received:

1214

Type of Sample:

Solid

Date of Report

2/4/98

Sample ID	Analysis Result	Analysis Error	Analysis Units	Analysis Result	Analysis Error	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.72	N/A	pCi/gm	<0.064	N/A	Bq/gm	EPA 901.1M	2/3/98 1111	bl
Ra-228	1.2H	0.46	pCi/gm	0.047	0.017	Bq/gm	EPA 901.1M	2/3/98 1111	bl

Notes:

Anthony Amato

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1728 Woodside Court - Baton Rouge, Louisiana 70804

1 (800) 401-4277 • Fax (504) 827-8822

ARS Tracking Number: ARS-98-0068

F.O. Number: Proj. 18906

Client ID.: 89566

ARS Sample ID.: ARS-98-0218

Date Sampled: N/A

Date Received: 1/22/98

Time Sampled: N/A

Time Received: 1214

Type of Sample: Solid

Date of Report: 2/4/98

Analysis Identification	Analysis Result	Analysis Error %	Analysis Units	Analysis Result	Analysis Error %	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.92	N/A	pCi/gm	<0.071	N/A	Bq/gm	EPA 901.1M	2/3/98 1149	ka
Ra-228	<0.41	N/A	pCi/gm	<0.015	N/A	Bq/gm	EPA 901.1M	2/3/98 1149	ku
Notes:									

Quality Assurance Review

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1726 Woodside Court - Baton Rouge, Louisiana 70808

1 (800) 401-4277 • Fax (504) 927-8322

ARS Tracking Number:	ARS-98-0068	P.O. Number:	Proj. 18906
Client I.D.:	89567	ARS Sample I.D.:	ARS-98-0219
Date Sampled:	N/A	Date Received:	1/22/98
Time Sampled:	N/A	Time Received:	1214
Type of Sample:	Solid	Date of Report:	2/4/98

Analysis Description	Analysis Result	Analysis Error %	Analysis Units	Analysis Result	Analysis Error %	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
1-226	<0.82	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	2/3/98 1226	ks
1-228	0.76	0.31	pCi/gm	0.028	0.011	Bq/gm	EPA 901.1M	2/3/98 1226	ks
Note:									

Quality Assurance Service

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1728 Woodlake Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 827-6822

ARS Tracking Number: ARS-98-0058 P.O. Number: Proj. 18906
Client I.D.: 89568 ARS Sample I.D.: ARS-98-0220
Date Sampled: N/A Date Received: 1/22/98
Time Sampled: N/A Time Received: 1214
Type of Sample: Solid Date of Report: 2/4/98

Sample Description	Analysis Result	Analysis Error %	Analysis Unit	Analysis Result	Analysis Error %	Analysis Unit	Analysis Test Method	Analysis Date & Time	Analysis Technician
1a-226	<1.67	N/A	pCi/gm	<0.062	N/A	Bq/gm	EPA 901.1M	2/3/98 1325	bl
1a-228	<0.34	N/A	pCi/gm	<0.013	N/A	Bq/gm	EPA 901.1M	2/3/98 1325	bl
Notes:									

Quality Assurance Review

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1726 Woodbine Court • Baton Rouge, Louisiana 70806

1 (800) 401-4277 • Fax (504) 977-8822

Notes:**Comments:**

- 1.0) Soil and Sludge analysis are reported on a wet basis or as as received basis unless otherwise indicated.
- 2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
- 3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
- 4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
- 5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
- 7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
- 8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

- 1.0) EPA 600/4-90-012, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
- 2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
- 3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
- 4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
- 5.0) HASL 300

Definitions:

- | | | |
|-------|-----------------|--|
| 1.0) | BDL | Analyte not detected because the value was below the detection limit. |
| 2.0) | ND | Not detected above the detection limit. |
| 3.0) | Detection Limit | The minimum amount of the analyte that ARS can detect utilizing the specific analysis. |
| 4.0) | B | Method Blank |
| 5.0) | D | Method Duplicate |
| 6.0) | MS | Matrix Spike |
| 7.0) | S | Spike |
| 8.0) | RS | Reference Spike |
| 9.0) | *SC | Subcontracted out to another qualified laboratory |
| 10.0) | NR | Not Referenced |

Notice: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided unless done the used of the performed analysis itself. Reproduction of this report in less than full negates the written consent of the client.



DATE: 2/4/98 PAGES (including cover): 12

TO: Wayne Hamilton / Bill Olson

COMPANY: _____

FAX #: (713) 245-7813 / 505 827-8177 PHONE #: _____

FROM:

SHARON HALL, OPERATIONS MANAGER

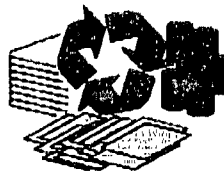
7904 INTERSTATE 20 WEST, MIDLAND, TX 79706

TELEPHONE: (915) 563-0118 FAX (915) 563-9526

MESSAGE:

Lab analysis for Taster Road Site
(Pesticides and remaining inorganics). We are waiting
for results for rad 226 & 238.
All pesticides are below detection limit.

Sharon Hall



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TACAP ANALYTICS INC.

6701 Aberdeen Avenue

Lubbock, Texas 79424

806•794•1296

FAX 806•794•1298

ANALYTICAL RESULTS FOR

PHILIP SERVICES CORPORATION

Attention: Jeff Kindley

7904 1-20 West

Midland, TX 79706

February 03, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No.: 18906 Phase Task 1001.77

Project Location: Hobbs

COC Serial No.: G 3559

Prep Date: 01/26/98

Analysis Date: 01/26/98

Sampling Date: 01/20/98

Sample Condition: Intact & Cool

Sample Received by: VW

Project Name: Shell Hobbs

TA#	Field Code	pH (s.u.)	TDS (mg/kg)	SULFATE (mg/kg)	CHLORIDE (mg/kg)	N03-N (mg/kg)	CYANIDE (mg/kg)	FLUORIDE (mg/kg)
T89559	SS-1 2-3'	8.1	1,600	702	340	0.64	<0.25	0.26
T89560	SS-1 5'	7.9	900	240	220	<0.25	<0.25	8.0
T89561	SS-2 2-3'	8.4	2,600	590	300	<0.25	<0.25	0.77
T89562	SS-2 6"	9.2	2,000	82	350	<0.25	<0.25	11
T89563	SS-3 2-3'	8.2	2,000	350	120	<0.25	<0.25	0.85
T89564	SS-3 5.5'	8.1	2,200	310	79	<0.25	<0.25	3.3
T89565	SS-4 1'	7.8	2,400	880	39	0.40	<0.25	0.92
T89566	SS-4 5'	8.1	3,000	720	59	2.5	<0.25	7.0
T89567	SS-5 2'	7.7	2,800	860	99	<0.25	<0.25	0.66
T89568	SS-5 5'	9.2	1,700	36	260	<0.25	<0.25	11
QC	Quality Control	7.0	—	9.9	503	1.37	0.039	1.01
Reporting Limit		—	—	1.0	0.5	0.25	0.25	0.1
RPD		0	19	4	0	2	3	4
% Extraction Accuracy		—	—	106	99	104	99	102
% Instrument Accuracy		100	—	101	100	103	95	99

METHODS: EPA 150.1, 160.1, 375.4, SM 4500 Cl-B, 353.3, 335.2, 340.2.

CHEMIST: pH/TDS/FLUORIDE: JS SULFATE/CHLORIDE/N03-N/CYANIDE: RC

SULFATE SPIKE: 10 mg/kg SULFATE.

CHLORIDE SPIKE: 500 mg/kg CHLORIDE.

N03-N SPIKE: 1.33 mg/kg N03-N.

CYANIDE SPIKE: 0.04 mg/kg CYANIDE.

FLUORIDE SPIKE: 1.0 mg/kg FLUORIDE.

SULFATE QC: 10 mg/L SULFATE.

CHLORIDE QC: 500 mg/L CHLORIDE.

N03-N QC: 1.33 mg/L N03-N.

CYANIDE QC: 0.04 mg/L CYANIDE.

FLUORIDE QC: 1.0 mg/L FLUORIDE.

2-3-98

Director, Dr. Blair Leftwich

Date

ANALYTICAL REPORT

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296
 4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443
 CLIENT Philip Environmental E-Mail: lab@traceanalysis.com
 210 West Sand Bank Rd.
 P.O. Box 230
 Columbia, IL 62236-0230

806•794•1296 FAX 806•794•1298
 915•585•3443 FAX 915•585•4944
 SAMPLE NO.: 89559
 INVOICE NO.: 22101555
 REPORT DATE: 01-20-98
 REVIEWED BY: *JS*
 PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-1 2-3'
 SAMPLE TYPE: Soil
 SAMPLED BY: J. Kindley
 SUBMITTED BY: V. Windham
 SAMPLE SOURCE: 18906
 ANALYST: K. Costa

AUTHORIZED BY : J. Kindley
 CLIENT P.O. : --
 SAMPLE DATE ...: 01-20-98
 SUBMITTAL DATE : 01-22-98
 EXTRACTION DATE: 01-23-98
 ANALYSIS DATE ..: 01-23-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
 No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<165.	ug/Kg	165.
4,4'-DDE	<170.	ug/Kg	170.
4,4'-DDT	<220.	ug/Kg	220.
Aldrin	<355.	ug/Kg	355.
alpha-BHC	<180.	ug/Kg	180.
beta-BHC	<270.	ug/Kg	270.
delta-BHC	<200.	ug/Kg	200.
Chlordane	<3830.	ug/Kg	3830.
Dieldrin	<95.	ug/Kg	95.
Endosulfan I	<200.	ug/Kg	200.
Endosulfan II	<210.	ug/Kg	210.
Endosulfan sulfate	<280.	ug/Kg	280.
Endrin	<120.	ug/Kg	120.
Endrin aldehyde	<380.	ug/Kg	380.
Heptachlor	<260.	ug/Kg	260.
Heptachlor Epoxide	<190.	ug/Kg	190.
Lindane	<170.	ug/Kg	170.
Methoxychlor	<1720.	ug/Kg	1720.
Toxaphene	<3010.	ug/Kg	3010.

ANALYTICAL RESULTS REPORTED HEREIN APPLY ONLY TO THE SAMPLE(S) TESTED. FURTHERMORE, THIS REPORT CAN ONLY BE COPIED IN ITS ENTIRETY.

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JS
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 210 West Sand Bank Rd.
 P.O. Box 230
 Columbia, IL 62236-0230

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 SAMPLE NO.: 89560
 INVOICE NO.: 22101555
 REPORT DATE: 01-30-98
 REVIEWED BY: *[Signature]*
 PAGE: 1 OF 1

CLIENT SAMPLE ID : SS-1 5'
 SAMPLE TYPE: Soil
 SAMPLED BY: J. Kindley
 SUBMITTED BY: V. Windham
 SAMPLE SOURCE: 18906
 ANALYST: K. Costa

AUTHORIZED BY : J. Kindley
 CLIENT P.O. : --
 SAMPLE DATE ...: 01-20-98
 SUBMITTAL DATE : 01-22-98
 EXTRACTION DATE: 01-23-98
 ANALYSIS DATE ..: 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
 No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<140.	ug/Kg	140.
4,4'-DDE	<140.	ug/Kg	140.
4,4'-DDT	<185.	ug/Kg	185.
Aldrin	<300.	ug/Kg	300.
alpha-BHC	<150.	ug/Kg	150.
beta-BHC	<225.	ug/Kg	225.
delta-BHC	<165.	ug/Kg	165.
Chlordane	<3180.	ug/Kg	3180.
Dieldrin	<80.	ug/Kg	80.
Endosulfan I	<165.	ug/Kg	165.
Endosulfan II	<175.	ug/Kg	175.
Endosulfan sulfate	<230.	ug/Kg	230.
Emerin	<100.	ug/Kg	100.
Emerin aldehyde	<315.	ug/Kg	315.
Heptachlor	<220.	ug/Kg	220.
Heptachlor Epoxide	<160.	ug/Kg	160.
Lindane	<140.	ug/Kg	140.
Methoxychlor	<1430.	ug/Kg	1430.
Toxaphene	<2510.	ug/Kg	2510.

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E-Mail: lab@traceanalysis.com
SAMPLE NO.: 89561
INVOICE NO.: 22101555
REPORT DATE: 01-30-98
REVIEWED BY: *[Signature]*
PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-2 2-3'
SAMPLE TYPE: Soil
SAMPLED BY: J. Kindley
SUBMITTED BY: V. Windham
SAMPLE SOURCE: 18906
ANALYST: K. Costa

AUTHORIZED BY : J. Kindley
CLIENT P.O. : --
SAMPLE DATE ...: 01-20-98
SUBMITTAL DATE : 01-22-98
EXTRACTION DATE: 01-23-98
ANALYSIS DATE ..: 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<165.	ug/Kg	165.
4,4'-DDE	<170.	ug/Kg	170.
4,4'-DDT	<220.	ug/Kg	220.
Aldrin	<355.	ug/Kg	355.
alpha-BHC	<180.	ug/Kg	180.
beta-BHC	<270.	ug/Kg	270.
delta-BHC	<200.	ug/Kg	200.
Chlordane	<3830.	ug/Kg	3830.
Dieldrin	<95.	ug/Kg	95.
Endosulfan I	<200.	ug/Kg	200.
Endosulfan II	<210.	ug/Kg	210.
Endosulfan sulfate	<280.	ug/Kg	280.
Emrin	<120.	ug/Kg	120.
Emrin aldehyde	<380.	ug/Kg	380.
Heptachlor	<260.	ug/Kg	260.
Heptachlor Epoxide	<190.	ug/Kg	190.
Lindane	<170.	ug/Kg	170.
Methoxychlor	<1720.	ug/Kg	1720.
Toxaphene	<3010.	ug/Kg	3010.

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 210 West Sand Bank Rd.
 P.O. Box 230
 Columbia, IL 62236-0230

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SAMPLE NO. : 89562
INVOICE NO. : 22101555
REPORT DATE: 01-30-98
REVIEWED BY: [Signature]
PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-2 6'
SAMPLE TYPE: Soil
SAMPLED BY: J. Kindley
SUBMITTED BY: V. Windham
SAMPLE SOURCE: 18906
ANALYST: K. Costa

AUTHORIZED BY : J. Kindley
CLIENT P.O. : --
SAMPLE DATE ...: 01-20-98
SUBMITTAL DATE : 01-22-98
EXTRACTION DATE: 01-23-98
ANALYSIS DATE .: 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
 No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<140.	ug/Kg	140.
4,4'-DDE	<140.	ug/Kg	140.
4,4'-DDT	<185.	ug/Kg	185.
Aldrin	<300.	ug/Kg	300.
alpha-BHC	<150.	ug/Kg	150.
beta-BHC	<225.	ug/Kg	225.
delta-BHC	<165.	ug/Kg	165.
Chlordane	<3180.	ug/Kg	3180.
Dieldrin	<80.	ug/Kg	80.
Endosulfan I	<165.	ug/Kg	165.
Endosulfan II	<175.	ug/Kg	175.
Endosulfan sulfate	<230.	ug/Kg	230.
Endrin	<100.	ug/Kg	100.
Endrin aldehyde	<315.	ug/Kg	315.
Heptachlor	<220.	ug/Kg	220.
Heptachlor Epoxide	<160.	ug/Kg	160.
Lindane	<140.	ug/Kg	140.
Methoxychlor	<1430.	ug/Kg	1430.
Toxaphene	<2510.	ug/Kg	2510.

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A. Shernick
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CLIENT Philip Environmental
 210 West Sand Bank Rd.
 P.O. Box 230
 Columbia, IL 62236-0230
 E-Mail: lab@traceanalysis.com

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SAMPLE NO. : 89563
INVOICE NO.: 22101555
REPORT DATE: 01-30-98
REVIEWED BY: [Signature]
PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-3 2-3'
SAMPLE TYPE : Soil
SAMPLED BY : J. Kindley
SUBMITTED BY : V. Windham
SAMPLE SOURCE : 18906
ANALYST : K. Costa

AUTHORIZED BY : J. Kindley
CLIENT P.O. : --
SAMPLE DATE : 01-20-98
SUBMITTAL DATE : 01-22-98
EXTRACTION DATE : 01-23-98
ANALYSIS DATE : 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
 No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<205.	ug/Kg	205.
4,4'-DDE	<210.	ug/Kg	210.
4,4'-DDT	<275.	ug/Kg	275.
Aldrin	<440.	ug/Kg	440.
alpha-BHC	<220.	ug/Kg	220.
beta-BHC	<335.	ug/Kg	335.
delta-BHC	<245.	ug/Kg	245.
Chlordane	<4780.	ug/Kg	4780.
Dieldrin	<115.	ug/Kg	115.
Endosulfan I	<245.	ug/Kg	245.
Endosulfan II	<260.	ug/Kg	260.
Endosulfan sulfate	<345.	ug/Kg	345.
Endrin	<150.	ug/Kg	150.
Endrin aldehyde	<470.	ug/Kg	470.
Heptachlor	<325.	ug/Kg	325.
Heptachlor Epoxide	<235.	ug/Kg	235.
Lindane	<210.	ug/Kg	210.
Methoxychlor	<2140.	ug/Kg	2140.
Toxaphene	<3765.	ug/Kg	3765.

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CLIENT Philip Environmental E-Mail: lab@traceanalysis.com
 210 West Sand Bank Rd.
 P.O. Box 230
 Columbia, IL 62236-0230

806-794-1296 FAX 806-794-1298
 915-585-3443 FAX 915-585-4944
SAMPLE NO. : 89564
INVOICE NO. : 22101555
REPORT DATE: 01-20-98
REVIEWED BY: [Signature]
PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-3 5.5'
SAMPLE TYPE: Soil
SAMPLED BY: J. Kindley
SUBMITTED BY: V. Windham
SAMPLE SOURCE: 18906
ANALYST: K. Costa

AUTHORIZED BY : J. Kindley
CLIENT P.O. : --
SAMPLE DATE ...: 01-20-98
SUBMITTAL DATE : 01-22-98
EXTRACTION DATE: 01-23-98
ANALYSIS DATE ..: 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
 No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4'-DDD	<140.	ug/Kg	140.
4'-DDE	<140.	ug/Kg	140.
4'-DDT	<185.	ug/Kg	185.
Aldrin	<300.	ug/Kg	300.
alpha-BHC	<150.	ug/Kg	150.
beta-BHC	<225.	ug/Kg	225.
delta-BHC	<165.	ug/Kg	165.
Chlordane	<3180.	ug/Kg	3180.
Dieldrin	<80.	ug/Kg	80.
Endosulfan I	<165.	ug/Kg	165.
Endosulfan II	<175.	ug/Kg	175.
Endosulfan sulfate	<230.	ug/Kg	230.
Endrin	<100.	ug/Kg	100.
Endrin aldehyde	<315.	ug/Kg	315.
Heptachlor	<220.	ug/Kg	220.
Heptachlor Epoxide	<160.	ug/Kg	160.
Lindane	<140.	ug/Kg	140.
Methoxychlor	<1430.	ug/Kg	1430.
Toxaphene	<2510.	ug/Kg	2510.

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CLIENT Philip Environmental E-Mail: lab@traceanalysis.com
 210 West Sand Bank Rd.
 P.O. Box 230
 Columbia, IL 62236-0230

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SAMPLE NO. : 89565
INVOICE NO. : 22101555
REPORT DATE: 01-30-98
REVIEWED BY: [Signature]
PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-4 1'
SAMPLE TYPE : Soil
SAMPLED BY : J. Kindley
SUBMITTED BY : V. Windham
SAMPLE SOURCE : 18906
ANALYST : K. Costa

AUTHORIZED BY : J. Kindley
CLIENT P.O. : --
SAMPLE DATE : 01-20-98
SUBMITTAL DATE : 01-22-98
EXTRACTION DATE: 01-23-98
ANALYSIS DATE : 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
 No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<205.	ug/Kg	205.
4,4'-DDE	<210.	ug/Kg	210.
4,4'-DDT	<275.	ug/Kg	275.
Aldrin	<440.	ug/Kg	440.
alpha-BHC	<220.	ug/Kg	220.
beta-BHC	<335.	ug/Kg	335.
delta-BHC	<245.	ug/Kg	245.
Chlordane	<4780.	ug/Kg	4780.
Dieldrin	<115.	ug/Kg	115.
Endosulfan I	<245.	ug/Kg	245.
Endosulfan II	<260.	ug/Kg	260.
Endosulfan sulfate	<345.	ug/Kg	345.
Enrin	<150.	ug/Kg	150.
Enrin aldehyde	<470.	ug/Kg	470.
Heptachlor	<325.	ug/Kg	325.
Heptachlor Epoxide	<235.	ug/Kg	235.
Lindane	<210.	ug/Kg	210.
Methoxychlor	<2140.	ug/Kg	2140.
Toxaphene	<3765.	ug/Kg	3765.

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 210 West Sand Bank Rd.
 P.O. Box 230
 Columbia, IL 62236-0230

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 915•585•3443 FAX 915•585•4944
SAMPLE NO. : 89566
INVOICE NO. : 22101555
REPORT DATE: 01-30-98
REVIEWED BY: [Signature]
PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-4 5'
SAMPLE TYPE : Soil
SAMPLED BY : J. Kindley
SUBMITTED BY : V. Windham
SAMPLE SOURCE : 18906
ANALYST : K. Costa

AUTHORIZED BY : J. Kindley
CLIENT P.O. : --
SAMPLE DATE : 01-20-98
SUBMITTAL DATE : 01-22-98
EXTRACTION DATE : 01-23-98
ANALYSIS DATE : 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
 No surrogate or spike recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<205.	ug/Kg	205.
4,4'-DDE	<210.	ug/Kg	210.
4,4'-DDT	<275.	ug/Kg	275.
Alar	<440.	ug/Kg	440.
alpha-BHC	<220.	ug/Kg	220.
beta-BHC	<335.	ug/Kg	335.
delta-BHC	<245.	ug/Kg	245.
Chlordane	<4780.	ug/Kg	4780.
Dieldrin	<115.	ug/Kg	115.
Endosulfan I	<245.	ug/Kg	245.
Endosulfan II	<260.	ug/Kg	260.
Endosulfan sulfate	<345.	ug/Kg	345.
Endrin	<150.	ug/Kg	150.
Endrin aldehyde	<470.	ug/Kg	470.
Heptachlor	<325.	ug/Kg	325.
Heptachlor Epoxide	<235.	ug/Kg	235.
Lindane	<210.	ug/Kg	210.
Methoxychlor	<2140.	ug/Kg	2140.
Toxaphene	<11400.	ug/Kg	11400.

ANALYTICAL RESULT(S) REPORTED HEREIN APPLY ONLY TO THE SAMPLE(S) TESTED. FURTHERMORE, THIS REPORT CAN ONLY BE COPIED IN ITS ENTIRETY.

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[Signature]
 MANAGING DIRECTOR

TRACE ANALYSIS, INC.

ANALYTICAL REPORT

CLIENT Philip Environmental
210 West Sand Bank Rd.
P.O. Box 230
Columbia, IL 62236-0230

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888-588-3443 915-585-3443 FAX 915-585-4944
E-Mail: lab@traceanalysis.com

SAMPLE NO. : 89567
INVOICE NO.: 22101555
REPORT DATE: 01-20-98
REVIEWED BY: *[Signature]*
PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-5 2'
SAMPLE TYPE : Soil
SAMPLED BY : J. Kindley
SUBMITTED BY : V. Windham
SAMPLE SOURCE : 18906
ANALYST : K. Costa

AUTHORIZED BY : J. Kindley
CLIENT P.O. : --
SAMPLE DATE : 01-20-98
SUBMITTAL DATE : 01-22-98
EXTRACTION DATE : 01-23-98
ANALYSIS DATE : 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<165.	ug/Kg	165.
4,4'-DDE	<170.	ug/Kg	170.
4,4'-DDT	<220.	ug/Kg	220.
Aldrin	<355.	ug/Kg	355.
alpha-BHC	<180.	ug/Kg	180.
beta-BHC	<270.	ug/Kg	270.
delta-BHC	<200.	ug/Kg	200.
Chlordane	<3830.	ug/Kg	3830.
Dieldrin	<95.	ug/Kg	95.
Endosulfan I	<200.	ug/Kg	200.
Endosulfan II	<210.	ug/Kg	210.
Endosulfan sulfate	<280.	ug/Kg	280.
Endrin	<120.	ug/Kg	120.
Endrin aldehyde	<380.	ug/Kg	380.
Heptachlor	<260.	ug/Kg	260.
Heptachlor Epoxide	<190.	ug/Kg	190.
Lindane	<170.	ug/Kg	170.
Methoxychlor	<1720.	ug/Kg	1720.
Toxaphene	<3010.	ug/Kg	3010.

ANALYTICAL RESULTS REPORTED HEREIN APPLY ONLY TO THE SAMPLE(S) TESTED. FURTHERMORE, THIS REPORT CAN ONLY BE COPIED IN ITS ENTIRETY.

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MANAGING DIRECTOR

TRACE ANALYSIS, INC.

ANALYTICAL REPORT

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296
 4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443
CLIENT Philip Environmental E-Mail: lab@tracanalysis.com
 210 West Sand Bank Rd.
 P.O. Box 230
 Columbia, IL 62236-0230

806•794•1296 FAX 806•794•1298
 915•585•3443 FAX 915•585•4944
SAMPLE NO. : 89568
INVOICE NO.: 22101555
REPORT DATE: 01-20-98
REVIEWED BY: [Signature]
PAGE : 1 OF 1

CLIENT SAMPLE ID : SS-5 5'
SAMPLE TYPE : Soil
SAMPLED BY : J. Kindley
SUBMITTED BY : V. Windham
SAMPLE SOURCE : 18906
ANALYST : K. Costa

AUTHORIZED BY : J. Kindley
CLIENT P.O. : --
SAMPLE DATE : 01-20-98
SUBMITTAL DATE : 01-22-98
EXTRACTION DATE: 01-23-98
ANALYSIS DATE : 01-26-98

REMARKS -

Detection limits raised because sample was analyzed diluted in order to minimize matrix interferences.
 No surrogate recoveries due to dilutions.

Method 8081A- Pesticides

DATA TABLE

Parameter	Result	Unit	Detection Limit
4,4'-DDD	<140.	ug/Kg	140.
4,4'-DDE	<140.	ug/Kg	140.
4,4'-DDT	<185.	ug/Kg	185.
Aldrin	<300.	ug/Kg	300.
alpha-BHC	<150.	ug/Kg	150.
beta-BHC	<225.	ug/Kg	225.
delta-BHC	<165.	ug/Kg	165.
Chlordane	<3180.	ug/Kg	3180.
Dieldrin	<80.	ug/Kg	80.
Endosulfan I	<165.	ug/Kg	165.
Endosulfan II	<175.	ug/Kg	175.
Endosulfan sulfate	<230.	ug/Kg	230.
Endrin	<100.	ug/Kg	100.
Endrin aldehyde	<315.	ug/Kg	315.
Heptachlor	<220.	ug/Kg	220.
Heptachlor Epoxide	<160.	ug/Kg	160.
Lindane	<140.	ug/Kg	140.
Methoxychlor	<1430.	ug/Kg	1430.
Toxaphene	<2510.	ug/Kg	2510.

ANALYTICAL (RESULTS) REPORTED HEREIN APPLY ONLY TO THE SAMPLE(S) TESTED. FURTHERMORE, THIS REPORT CAN ONLY BE COPIED IN ITS ENTIRETY.

[Signature]
 MANAGING DIRECTOR

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DATE: 1/27/98 PAGES (including cover): 6

TO: Bill Olson

COMPANY: _____

FAX #: 505 827-8177 PHONE #: _____

FROM:

SHARON HALL, OPERATIONS MANAGER

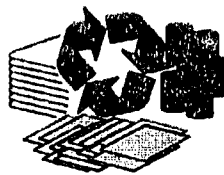
7904 INTERSTATE 20 WEST, MIDLAND, TX 79706

TELEPHONE: (915) 563-0118 FAX (915) 563-9526

MESSAGE:

More analytical on Tasker site.

Sharon Hall



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01/27/98 12:19 618 281 5120

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001

Sent By: TRACANALYSTG;

8067941298;

27 Jan 98 11:11AM; Job 807; Page 1/4

TRACE ANALYSIS, INC.

8711 Alameda Avenue, Suite 9
4725 Hopley Avenue, Suite A

Lubbock, Texas 79424
El Paso, Texas 79972

TEL: 806-794-1298
506-588-3443

806-794-1298
815-515-1443

FAX 806-794-1298
FAX 515-585-4344

E-Mail: info@tracanalysis.com

ANALYTICAL RESULTS FOR PHILIP SERVICES CORPORATION

Attention: Jeff Kindley
7804 I-20 West
Midland, TX 79708

January 27, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18006-1001.77

Project Location: Shell Hobbs

COC# G 3559

Prep Date: 01/21/98

Analysis Date: 01/22/98

Sampling Date: 01/20/98

Sample Condition: Intact & Cool

Sample Received by: VW

Project Name: Shell Hobbs

IA#	FIELD CODE	TOTAL U (mg/kg)	TOTAL Hg (mg/kg)
T89558	SS-1 2-3'	<2.0	<0.25
T89560	SS-1 5'	<2.0	<0.25
T89561	SS-2 2-3'	<2.0	<0.25
T89562	SS-2 6'	<2.0	<0.25
T89563	SS-3 2-3'	<2.0	<0.25
T89564	SS-3 5.5'	<2.0	<0.25
T89565	SS-4 1'	<2.0	<0.25
T89566	SS-4 5'	<2.0	<0.25
T89567	SS-5 2'	<2.0	<0.25
T89568	SS-5 5'	<2.0	<0.25
ICV		4.7	5.1
CCV		5.1	4.9
REPORTING LIMIT		2.0	0.25
RPD		9	13
% Extraction Accuracy		99	90
% Instrument Accuracy		98	100

METHODS: EPA SW 846-3051, 6010B, 7471.

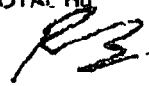
CHEMIST: TOTAL U; RR TOTAL Hg; HC

TOTAL U SPIKE: 200 mg/kg TOTAL U

TOTAL U CV: 5.0 mg/L TOTAL U

TOTAL Hg SPIKE: 2.5 mg/kg TOTAL Hg

TOTAL Hg CV: 5.0 mg/L TOTAL Hg


 Director, Dr. Blair Lettich

 1-27-98
 DATE

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PHILIP COLUMBIA →→→ MIDLAND TX

002

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27 Jan 98 11:11AM; Job 607; Page 2/4



TRACEANALYSIS, INC.



6701 Aberdeen Avenue, Suite B
4775 Ripley Avenue, Suite A

COLUMBIA, Texas 79424 000-370-1298
MIDLAND, Texas 79702 806-794-1298

806-794-1298 FAX 806-794-1298
815-888-3443 FAX 815-888-3443

E-Mail: info@traceanalysis.com

ANALYTICAL RESULTS FOR PHILIP SERVICES CORPORATION

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

January 26, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18908-1001.77

Project Location: Shell Hobbs

COC# G 3559

Prep Date: 01/23/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: Intact & Cool

Sample Received by: VVW

Project Name: Shell Hobbs

TA#	FIELD CODE	TOTAL PCB (mg/kg)
T89561	SS-2 7-3'	<2.5
T89567	SS-5 2'	<2.5
QC	Quality Control	0.37

REPORTING LIMIT

2.5

RPD

1

% Extraction Accuracy

80

% Instrument Accuracy

93

METHODS: EPA SW 846-3550, 8080

CHEMIST: MB

TOTAL PCB SPIKE: 0.5 mg/kg TOTAL PCB

TOTAL PCB QC: 0.5 mg/L TOTAL PCB



Director, Dr. Blair Leftwich

1-26-98

DATE

01/27/98 12:19 618 281 5120

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003

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27 Jan 98 11:11AM; Job 807; Page 3/4



6101 Aberdeen Avenue, Suite A
4725 Hipley Avenue, Suite A

Midland, Texas 79424 800-370-1206
Midland, Texas 79702 800-588-3443
E-Mail: info@tracanalysis.com

806-791-1200 FAX 811-794-1298
815-565-3443 FAX 815-515-0344

ANALYTICAL RESULTS FOR PHILIP SERVICES CORPORATION

Attention: Jeff Kindley
7904 I-20 West
Midland, TX 79706

January 26, 1998
Receiving Date: 01/21/98
Sample Type: Soil
Project No: 18906-1001.77
Project Location: Shell Hobbs
COG# G 3559

Prep Date: 01/23/98
Analysis Date: 01/23/98
Sampling Date: 01/20/98
Sample Condition: Intact & Cool
Sample Received by: VV
Project Name: Shell Hobbs

TA#	FIELD CODE	TOTAL PCB (mg/kg)
T89559	SS-1 2-3'	<5.5
T89563	SS-3 2-3'	<5.6
QC	Quality Control	0.37

REPORTING LIMIT

5.5

RPD
% Extraction Accuracy
% Instrument Accuracy

1
80
93

METHODS: EPA SW 846-3550, 8080
CHEMIST: MB
TOTAL PCB SPIKE: 0.5 mg/kg TOTAL PCB.
TOTAL PCB QC: 0.5 mg/L TOTAL PCB.

BS

Director, Dr. Blair Leftwich

1-26-98

DATE

01/27/98 12:20 618 281 5120

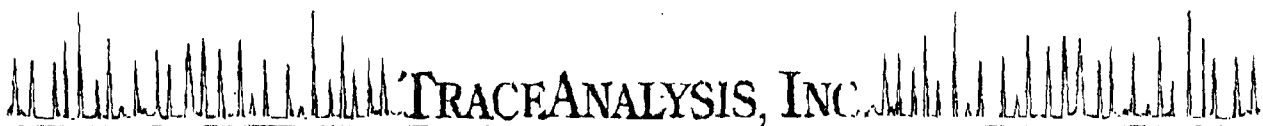
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27 Jan 98 11:12AM; Job 007; Page 4/4

004



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 4725 Ripley Avenue, Suite A El Paso, Texas 79977 868-588-3443 915-515-3443 FAX 915-985-4844
 E-Mail: lab@tracanalysis.com

ANALYTICAL RESULTS FOR
 PHILIP SERVICES CORPORATION
 Attention: Jeff Kindley
 7904 I-20 West
 Midland, TX 79706

January 26, 1998
 Receiving Date: 01/21/98
 Sample Type: Soil
 Project No. 18906-1001.77
 Project Location: Shell Hobbs
 CQC# G 3559

Prep Date: 01/23/98
 Analysis Date: 01/23/98
 Sampling Date: 01/20/98
 Sample Condition: Intact & Cool
 Sample Received by: VW
 Project Name: Shell Hobbs

TAX	FIELD CODE	TOTAL PCB (mg/kg)
T89580	SS-1 5'	<0.25
T89562	SS-2 8'	<0.25
T89584	SS-3 5.5'	<0.25
T89565	SS-4 1'	<0.25
T89568	SS-4 5'	<0.25
T89568	SS-5 5'	<0.25
QC	Quality Control	0.37

REPORTING LIMIT

0.25

RPD

1

% Extraction Accuracy

88

% Instrument Accuracy

93

METHODS: EPA SW 846-3550, 8080

CHEMIST: MB

TOTAL PCB SPIKE: 0.5 mg/kg TOTAL PCB.

TOTAL PCB QC: 0.5 mg/L TOTAL PCB.

Director, Dr. Blair Latwich

1-26-98

DATE

01/27/98 12:20 618 281 5120

PHILIP COLUMBIA --- MIDLAND TX

005

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26 Jan 90 9:22AM; Job 652; Page 1/1

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 TEL 806-794-1296 FAX 806-794-1298
 4725 Hupley Avenue, Suite A El Paso, Texas 79922 TEL 915-585-3443 FAX 915-585-4844
 E-Mail: lub@traceanalysis.com

ANALYTICAL RESULTS FOR
 Philip Environmental
 Attention Jeff Kindley
 7904 I-20 West
 Midland TX 79706

Date: Jan 24, 1998
 Date Recd: 1/21/98
 Project: 18900
 Proj Name: Shell
 Proj Loc: Hobbs, New Mexico

Lab Receiving #: 3901000300
 Sampling Date: 1/20/98
 Sample Condition: Intact and Cool
 Sample Received By: VW

TAN	Field Code	MATRIX	TRPHC (mg/Kg)
T89559	SS-1 2-3'	Soil	24,800
T89560	SS 1 5'	Soil	14,100
T89561	SS-2 2-3'	Soil	200,000
T89562	SS 2 4'	Soil	30,900
T89563	SS-3 2-3'	Soil	134,000
T89564	SS-4 4.5'	Soil	21,000
T89565	SS-4 1'	Soil	2,470
T89566	SS-4 5'	Soil	1,800
T89567	SS-5 2'	Soil	60,200
T89568	SS-5 5'	Soil	50,200
Method Blank			<10.0
Reporting Limit			10
QC			104

RPD
 % Extraction Accuracy
 % Instrument Accuracy

0
 89
 104

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/Kg)
TRPHC	EPA 3350	1/22/98	EPA 410.1	1/22/98	MS	100	250

Director, Dr. Blair Leftwich

Date



DATE: 1/23/98 PAGES (including cover): 11

TO: Bill Olson

COMPANY: _____

FAX #: _____

PHONE #: _____

FROM:

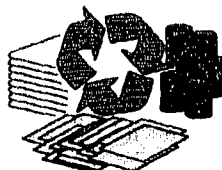
SHARON HALL, OPERATIONS MANAGER

7904 INTERSTATE 20 WEST, MIDLAND, TX 79706

TELEPHONE: (915) 563-0118 FAX (915) 563-9526

MESSAGE:

Bill - attached is the analytical for the Toston Road site. The asphaltic material really messed up the Lab's equipment, and therefore the only organic analysis I have today are verbals for TPH. They are as follows: SS-1,2' 24,800 mg/kg, SS-1,5' 14,100 mg/kg, SS-2,2' 200,000 mg/kg, SS-2,6' 30,900 mg/kg, SS-3,2' 13,400 mg/kg, SS-3,5' 21,900 mg/kg, SS-4,1' 2,930 mg/kg, SS-4,5' 1800 mg/kg, SS-5,0' 68,200 mg/kg and SS-5,5' 50,200. As you know we'll be out there Monday to delineate the horizontal extent of the asphalt. I will provide you a site sketch plot when we finish with these



Sample locations shown.

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8067941296;

23 Jan 4:57PM; Job 646; Page 1

TRACE ANALYSIS, INC.

8701 Alcedo Avenue

Lubbock, Texas 79424

906-794-1235

FAX 562-794-1235

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/96

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89559	SS-12-3'	<0.50	<1.0	<10	<0.05	<10	<0.50	87	11	<2.0	21
ICV		4.8	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT											
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100
REPORTING LIMIT											
RPD		20	10	10	10	10	0.50	0.50	0.50	2.0	0.30

TA#	FIELD CODE	Al (mg/kg)	Fe (mg/kg)	Cu (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89559	SS-12-3'	4,900	7,300	<10	<10	91	13
ICV		5.0	5.0	5.3	4.9	5.0	4.7
CCV		4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT							
RPD		15	2	0	1	5	2
% Extraction Accuracy		104	120	97	95	91	93
% Instrument Accuracy		98	98	104	100	102	98

METHODS: EPA 200.7, 245.1

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag, 1.0 mg/L Ag.

BS

1-23-98

Director, Dr. Blair Leftwich

DATE

TRACEANALYSIS, INC.

6701 Alcedo Avenue

Lubbock, Texas 79424

806-734-1295

FAX 806-734-1295

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89560	SS-1 S'	<0.50	<1.0	<10	<0.05	<10	<0.50	320	6.1	<2.0	9.5
ICV		4.9	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT		0.50	1.0	10	0.05	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Co (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89560	4,700	3,300	<10	<10	38	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT		20	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy	104	120	97	95	91	93
% Instrument Accuracy	98	96	104	100	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag: 1.0 mg/L Ag.

BS

Director Dr. Blair Leftwich

1-23-98

DATE

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8067941296;

23 Jan

4:58PM; Job 646; Page 3/10

TRACEANALYSIS, INC.

5701 Aberdeen Avenue

Midland, Texas 79424

806-794-1296

FAX 806-794-1298

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89561	SS-2 2-3"	<0.50	<1.0	<10	<0.05	<10	<0.50	37	7.6	<2.0	6.7
ICV		4.9	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT											
		0.50	1.0	10	0.05	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Cu (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89561	1,900	1,800	<10	<10	47	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT						
	20	10	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy	104	120	97	95	91	93
% Instrument Accuracy	98	98	104	100	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag 1.0 mg/L Ag.

Director, Dr. Blair Leftwich

DATE

1-22-98

TRACEANALYSIS, INC.

6731 Acerdeen Avenue

Lubbock, Texas 79424

816-794-1298

FAX 806-794-1298

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89562	SS-2 6'	<0.50	<1.0	<10	<10	<0.50	650	8.1	<2.0	6.6
ICV		4.9	5.5	5.1	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT										
		0.50	1.0	10	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Cu (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89562 SS-2 6'	4,100	2,400	<10	<10	20	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT						
	20	10	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy	104	120	97	95	91	93
% Instrument Accuracy	98	98	104	100	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag: 1.0 mg/L Ag.

Director, Dr. Blair Leftwich

DATE

1-23-98

TRACE ANALYSIS, INC.

5701 Abernethy Avenue

Lubbock, Texas 79424

806-754-1235

FAX 806-754-1235

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89563	SS-3 2-3'	<0.50	<1.0	<10	<0.05	<10	<0.50	130	8.9	<2.0	17
ICV		4.9	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT											
		0.50	1.0	10	0.05	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Co (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89563 SS-3 2-3'	5,800	5,900	<10	<10	93	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT						
	20	10	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy	104	120	97	95	91	93
% Instrument Accuracy	98	98	104	100	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag: 1.0 mg/L Ag.

1-23-98

Director, Dr. Blair Leftwich

DATE

Sent By: TRACEANALYSIS;

8067941296;

23 Jan

4:59PM; Job 646; Page 6/10

TRACEANALYSIS, INC.

6701 Alameda Avenue

Lubbock, Texas 79424

806-794-1296

FAX 806-794-1298

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89564	SS-3 5.5'	3.8	1.8	<10	<0.05	<10	<0.50	170	6.0	<2.0	14
ICV		4.9	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT											
		0.50	1.0	10	0.05	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Cp (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89564 SS-3 5.5'	5,700	4,300	<10	<10	51	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT						
	20	10	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy	104	120	97	95	91	93
% Instrument Accuracy	98	98	104	100	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag; 1.0 mg/L Ag.

PR

1-23-98

Director, Dr. Blair Leftwich

DATE

TRACE ANALYSIS, INC.

5701 Aberdeen Avenue

Lubbock, Texas 79424

506-754-1256

FAX 506-754-1233

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89565	SS-4 1'	<0.50	<1.0	<10	0.06	<10	<0.50	95	9.0	<2.0	22
ICV		4.9	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT		0.50	1.0	10	0.05	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Cu (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89565 SS-4 1'	9,200	7,800	<10	<10	120	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT		20	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy	104	120	97	95	91	93
% Instrument Accuracy	98	98	104	100	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag; 1.0 mg/L Ag.

BS

1-23-98

Director: Dr. Blair Leftwich

DATE

Sent By: TRACEANALYSIS;

8067941296;

23 Jan 4:59PM; Job 646; Page 8/10

TRACE ANALYSIS, INC.

5701 Aberdeen Avenue

Houston, Texas 79424

816-794-1296

FAX 816-794-1298

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89566	SS-4 5'	<0.50	<1.0	<10	0.21	<10	<0.50	310	7.7	<2.0	15
ICV		4.9	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT											
		0.50	1.0	10	0.05	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Co (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89566 SS-4 5'	7,500	5,500	<10	<10	60	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT						
	20	10	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy	104	120	97	95	91	93
% Instrument Accuracy	98	98	104	100	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag; 1.0 mg/L Ag.

1-23-98

Director, Dr. Blair Leftwich

DATE

TRACEANALYSIS, INC.

6751 Addicks Avenue

Lubbock, Texas 79424

806-794-1296

FAX 806-794-1298

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 I-20 West

Midland, TX 79706

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89567	SS-5 2'	<0.50	<1.0	<10	0.06	<10	<0.50	73	7.1	<2.0	17
ICV		4.9	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT		0.50	1.0	10	0.05	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Co (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89567 SS-5 2'	7,800	5,800	<10	<10	81	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT		20	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy	104	120	97	95	91	93
% Instrument Accuracy	98	98	104	100	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag; 1.0 mg/L Ag.

1-23-98

Director, Dr. Blair Leftwich

DATE

Sent By: TRACEANALYSIS;

8067941298;

23 Jan 98 5:00PM; Job 646; Page 10/10

TRACE ANALYSIS, INC.

6701 Agosteen Avenue

Lubbock, Texas 79424

806-794-1298

FAX 806-794-1298

January 23, 1998

Receiving Date: 01/21/98

Sample Type: Soil

Project No: 18906-1001.77

Project Location: Shell Hobbs

ANALYTICAL RESULTS FOR

PHILIP ENVIRONMENTAL

Attention: Jeff Kindley

7904 J-20 West

Midland, TX 79706

Prep Date: 01/22/98

Analysis Date: 01/23/98

Sampling Date: 01/20/98

Sample Condition: I & C

Sample Received by: VW

Project Name: Shell Hobbs

TOTAL METALS

TA#	FIELD CODE	As (mg/kg)	Se (mg/kg)	Cr (mg/kg)	Cd (mg/kg)	Pb (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Ni (mg/kg)	Mo (mg/kg)	Zn (mg/kg)
T89568	SS-5 5'	<0.50	<1.0	<10	<0.05	<10	<0.50	73	6.1	<2.0	6.9
ICV		4.9	5.5	5.1	4.9	5.1	1.0	4.8	5.2	5.2	4.9
CCV		4.8	4.8	5.0	5.0	4.7	1.0	5.0	5.0	4.8	5.0
REPORTING LIMIT		0.50	1.0	10	0.05	10	0.50	0.50	0.50	2.0	0.30
RPD		1	2	1	0	1	7	9	1	1	0
% Extraction Accuracy		85	82	93	88	86	97	92	87	94	84
% Instrument Accuracy		98	104	102	100	98	100	98	102	100	100

	Al (mg/kg)	Fe (mg/kg)	Cu (mg/kg)	B (mg/kg)	Mn (mg/kg)	Cu (mg/kg)
T89568	4,200	2,800	<10	<10	19	<10
ICV	5.0	5.0	5.3	4.9	5.0	4.7
CCV	4.8	4.8	5.0	5.0	5.1	5.0
REPORTING LIMIT		20	10	10	0.30	10
RPD	15	2	0	1	5	2
% Extraction Accuracy		104	120	97	91	93
% Instrument Accuracy		98	98	104	102	98

METHODS: EPA 200.7, 245.1.

CHEMIST: RR

TOTAL METALS SPIKE: 200 mg/kg for all metals

TOTAL METALS CV: 5.0 mg/L all metals except Ag: 1.0 mg/L Ag.

PS

1-23-98

Director, Dr. Blair Leftwich

DATE