1R - 280

REPORTS

DATE:

1/2001 -

COOPER RANCH WELL

January 10, 2001

RECEIVED

JAN 11 2002

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Mr. Bill Olson
New Mexico Oil Conservation Division
Environmental Bureau
1220 South Saint Frances
Santa Fe, New Mexico 87505

Re: Jimmy Cooper, Jr.

Dear Mr. Olson,

As per Cutty Cunningham's request, please find the enclosed copy of the package for the above captioned site submitted to Mr. Cunningham on January 10, 2001. Please review and call if you need to discuss.

Sincerely,

Jerry Nickell by Mah

Jerry Nickell

JN/mah

cc: ETGI file, C. Cunningham

Midland, TX ■ P. O. Box 4845, 79704 ■ Office 915-522-1139 ■ Fax 915-520-4310
The Woodlands, TX ■ P. O. Box 131150, 77393 ■ Office 281-362-8571 ■ Fax 281-362-8932
Hobbs, NM ■ 2540 W. Marland, 88240 ■ Office 505-397-4882 ■ Fax 505-397-4701

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

23 January 2002

O. Horton (Cutty) Cunningham
Senior Director, Environmental Compliance Activities
Enron Transportation Services
PO Box 1188
Houston, TX 77251-1188

Ref: Jimmy Cooper, Jr. ETGI Project #EOTT2074C

Dear Mr. Cunningham:

Thank you for the draft lab data and sample location map that we received January 11, 2002 for your recently installed 49 monitoring wells. Bill Olson and I appreciated your January 16, 2002 on-site showing of recovery operations and sampling efforts in the area.

According to our understanding, you will submit more information regarding your assessment work. This information was also to incorporate sampling information from nearby and adjacent sites. Specifically, the information to be submitted involves

- well logs to show depth of screens, to water table, and lithography;
- groundwater gradients;
- locations and ownerships of pipelines and other related structures; and
- QAQC laboratory reports.

This information is to be submitted before February 28, 2002. If you have questions, please email me or call me at 505-476-3493.

Sincerely,

Randolph Bayliss, P.E.
Hydrologist
Environmental Bureau

xc: Chris Williams, OCD Hobbs District
Jerry Nickell, ETGI Midland
Jimmy B. Cooper, Jr

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Carol S. Leach
Acting Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

February 5, 2002

Mr. Wayne Brunette
EOTT Energy Pipeline
PO Box 1660
Midland, Texas 79703

Re: Leaks in or near NE¼ SE¼ Sec 31 T19S R37E
near the Jim B Cooper Ranch, Lea County

Dear Mr. Brunette:

The New Mexico Oil Conservation Division (OCD) is looking into possible sources of crude oil leaks near the Jim B Cooper ranch about a mile WSW of Monument in Lea County. The drinking water well at their ranch was contaminated with crude oil in October 1999.

OCD requests that you research your files and make inquiries to determine if facilities under your operation or control might have been involved in releases of crude oil in this area.

If you have any information about the possible source(s) of this oil, please let us know. OCD encourages email transmissions of letters and documents. If you have any questions, either email me or call me at 505-476-3493. Thanks.

Sincerely,

Randolph Bayliss, P.E.
Hydrologist
Environmental Bureau

[Same letter to Chevron, Rice, and Hess]

September 13, 2001

Mr. William C. Olsen
Hydrologist, Environmental Bureau, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Jim B. Cooper Ranch Contamination

Dear Mr. Olsen:

This letter is in response to your letter dated August 29, 2001, in regard to the site referenced above. Environmental Technology Group, Inc. is currently conducting assessment activities at the site, in an attempt to identify any and all sources of crude oil contamination that have affected Mr. Cooper's domestic well and the groundwater in the area. During a telephone conversation in late July between yourself and Mr. Jerry Nickell of Environmental Technology Group, Inc. it was agreed that a complete Site Assessment Report would be submitted to the New Mexico Oil Conservation Division upon completion of assessment activities. As assessment activities are continuing at this time, we will continue on as expedited a schedule as practicable, and will submit an assessment report for the site to your office no latter than 45 days after completion of assessment activities. It is estimated that the report will be submitted to your office no later than November 23, 2001. If you have any questions or if additional information is needed, please call myself or Mr. Jerry Nickell at (915) 522-1139 or by fax at (915) 520-4310.

Respectfully yours,

Glenn E. Waldrop
Vice-President

cc: Mr. Wayne Brunette (EOTT Energy Corp)
Mr. Cutty Cunningham (Enron)
file

Midland, TX ■ P. O. Box 4845, 79704 ■ Office 915-522-1139 ■ Fax 915-520-4310
The Woodlands, TX ■ P. O. Box 131150, 77393 ■ Office 281-362-8571 ■ Fax 281-362-8932
Hobbs, NM ■ 2540 W. Marland, 88240 ■ Office 505-397-4882 ■ Fax 505-397-4701

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

August 29, 2001

CERTIFIED MAIL
RETURN RECEIPT NO: 5357-7881

Mr. Wayne Brunette
EOTT Energy Pipeline Limited Partnership
P.O. Box 1660
Midland, Texas 79702

RE: JIMMY COOPER RANCH CONTAMINATION

Dear Mr. Brunette:

The New Mexico Oil Conservation Division (OCD) has been informed that EOTT Energy Pipeline Limited Partnership (EOTT) has been drilling a number of monitoring wells to determine the impact of EOTT's operations on ground water on the Jimmy Cooper Ranch in Monument, New Mexico. As you are aware, the former house well on the Cooper Ranch is contaminated with free phase oil. If EOTT has discovered ground water contamination, pursuant to OCD Rule 116, EOTT is required to verbally notify the OCD within 24 hours of the incident and file a written report within 15 days. The OCD has no record of EOTT reporting ground water contamination at the Jimmy Cooper Ranch.

Therefore, the OCD requires that EOTT provide written notification of the investigation actions and of discovery of any ground water contamination. The OCD also requires that EOTT submit all currently available reports on the site investigations. This information shall be submitted to the OCD Santa Fe Office by September 6, 2001 with a copy provided to the OCD Hobbs District Office.

If you have any questions, please contact me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Office
Jimmy Cooper

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

April 24, 2000

Mr. Eddie Seay
601 W. Illinois
Hobbs, New Mexico 88240

RE: WATER WELL SAMPLE ANALYSES
COOPER RANCH

Dear Mr. Seay:

Enclosed you will find a copy of the laboratory analytical results of the water sample from the West Well and the oil sample from the House Well at the Jimmy Cooper Ranch in Monument, New Mexico that the New Mexico Oil Conservation Division (OCD) split with you on February 21, 2000. The OCD is working to determine the sources of ground water contamination of the Jimmy Cooper Ranch and in the Monument area. The OCD will copy you on all OCD correspondence related to the site.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

Enclosure

xc w/ enclosure: Chris Williams, OCD Hobbs District Supervisor

CONCENTRATIONS OF TPH & BTEX IN GROUNDWATER

EOTT Energy Corporation
Jimmie Cooper
Monument, New Mexico
ETGI Project #EOT2074C

All concentrations are in mg/L

SAMPLE DATE	SAMPLE LOCATION	SW 846-8260B					
		BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	BTEX
10/18/2001	MW-48	**0.00364**	<0.001	**0.00607**	**0.0152**	**0.00456**	**0.02947**
10/18/2001	MW-49	**0.00827**	<0.001	**0.00437**	**0.0132**	**0.00313**	**0.02897**

Concentrations in bold indicate results above the normal detection limit.

CONCENTRATIONS OF TPH & BTEX IN GROUNDWATER

EOTT Energy Corporation
Jimmie Cooper
Monument, New Mexico
ETGI Project #EOT2074C

All concentrations are in mg/L

SAMPLE DATE	SAMPLE LOCATION	SW 846-8260B					
		BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	BTEX
08/09/01	MW-24	<0.001	**0.001**	<0.001	**0.019**	**0.010**	**0.03**
08/09/01	MW-25	**0.015**	<0.001	<0.001	**0.003**	<0.001	**0.018**
08/09/01	MW-26	**0.057**	<0.001	**0.029**	**0.081**	**0.007**	**0.174**
08/09/01	MW-27	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
08/09/01	MW-28	**0.003**	<0.001	<0.001	<0.001	<0.001	**0.003**
08/09/01	MW-29	**0.068**	<0.001	<0.001	<0.001	**0.003**	**0.071**
08/09/01	MW-30	**0.290**	**0.005**	**0.146**	**0.336**	**0.016**	**0.793**
08/09/01	MW-31	**0.002**	<0.001	<0.001	**0.001**	<0.001	**0.003**
10/18/2001	MW-32	**0.0131**	<0.001	**0.0174**	**0.0423**	**0.00877**	**0.08157**
10/18/2001	MW-34	**0.0584**	<0.001	**0.00264**	**0.00475**	**0.00174**	**0.06753**
10/18/2001	MW-35	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/18/2001	MW-36	**0.0442**	<0.001	**0.00816**	**0.0212**	<0.001	**0.07356**
10/18/2001	MW-37	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/18/2001	MW-38	**0.00169**	<0.001	**0.0013**	**0.00467**	**0.00107**	**0.00873**
10/18/2001	MW-39	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/18/2001	MW-40	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/18/2001	MW-41	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/18/2001	MW-42	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/18/2001	MW-43	**0.00594**	<0.001	**0.0038**	**0.00942**	**0.00276**	**0.02192**
10/18/2001	MW-44	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/18/2001	MW-47	**0.00459**	<0.001	**0.00114**	**0.0016**	**0.00156**	**0.00889**

Table 1

CONCENTRATIONS OF TPH & BTEX IN GROUNDWATER

EOTT Energy Corporation
Jimmie Cooper
Monument, New Mexico
ETGI Project #EOT2074C

All concentrations are in mg/L

SAMPLE DATE	SAMPLE LOCATION	SW 846-8260B					
		BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	BTEX
04/30/01	MW- 1	<0.005	<0.005	<0.005	**0.010**	**0.005**	**0.015**
08/10/01	MW-2	**0.008**	<0.001	**0.002**	**0.002**	<0.001	**0.012**
04/30/01	MW-3	**0.728**	<0.005	**0.0219**	**0.0814**	**0.831**	**1.6623**
08/10/01		**0.506**	<0.001	**0.029**	**0.076**	**0.018**	**0.629**
04/30/01	MW-4	**0.037**	**0.0051**	**0.0221**	**0.374**	**0.438**	**0.8762**
08/10/01		**0.013**	<0.001	**0.011**	**0.025**	**0.025**	**0.074**
08/10/01	MW-5	**0.002**	<0.001	<0.001	**0.001**	**0.002**	**0.005**
04/30/01	MW-6	**0.0179**	<0.005	<0.005	<0.005	**0.0179**	**0.0358**
08/10/01		**0.005**	<0.001	**0.007**	**0.006**	<0.001	**0.0179**
05/03/01	MW-11	**0.139**	<0.005	**0.0579**	**0.258**	**0.455**	**0.9099**
05/03/01	MW-12	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
08/10/01		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
05/03/01	MW-13	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
08/10/01		**0.002**	<0.001	**0.002**	**0.001**	<0.001	**0.005**
05/030/1	MW-14	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
08/10/01		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
05/03/01	MW-15	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
08/10/01		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
05/03/01	MW-16	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
08/10/01		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
05/03/01	MW-17	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
08/10/01		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
08/09/01	MW-19	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
08/09/01	MW-21	<0.001	<0.001	<0.001	<0.001	**0.001**	**0.001**
08/09/01	MW-23	**0.012**	**0.002**	**0.028**	**0.045**	**0.023**	**0.11**

GROUNDWATER ELEVATION DATA

EOTT Energy Pipeline, LP
Jim B. Cooper
Monument, New Mexico
ETGI Project # EOT2074C

All measurements are recorded in feet.

WELL LOCATION	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-39	10/18/2001	3592.46	ND	19.4	0.00	3573.06
MW-40	10/18/2001	3591.9	ND	21.79	0.00	3570.11
MW-41	10/18/2001	3591.1	ND	21.25	0.00	3569.85
MW-42	10/18/2001	3591.89	ND	21.59	0.00	3570.3
MW-43	10/18/2001	3584.62	ND	21.89	0.00	3562.73
MW-44	10/18/2001	3585.72	ND	21.89	0.00	3563.83
MW-45	10/18/2001	3586.81	20.37	20.45	0.08	3566.43
MW-46	10/18/2001	3584.19	20	20.03	0.03	3564.19
MW-47	10/18/2001	3582.94	ND	19.93	0.00	3563.01
MW-48	10/18/2001	3588.07	ND	19.96	0.00	3568.11
MW-49	10/18/2001	3589.27	ND	19.3	0.00	3569.97

GROUNDWATER ELEVATION DATA

EOTT Energy Pipeline, LP
Jim B. Cooper
Monument, New Mexico
ETGI Project # EOT2074C

All measurements are recorded in feet.

WELL LOCATION	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-19	8/9/2001	3581.42	ND	20.24	0.00	3561.18
MW-20	8/9/2001	3581.18	19.8	19.91	0.11	3561.36
MW-21	8/9/2001	3581.45	ND	19.77	0.00	3561.68
MW-22	8/9/2001	3580.96	19.39	19.86	0.47	3561.50
MW-23	8/9/2001	3581.69	20.02	20.02	DROPLETS	3561.67
MW-24	8/9/2001	3580.75	21.42	21.42	DROPLETS	3559.33
MW-25	8/9/2001	3580.87	ND	20.78	0.00	3560.09
MW-26	8/9/2001	3580.74	20.25	20.25	DROPLETS	3560.49
MW-27	8/9/2001	3580.75	ND	22.05	0.00	3558.7
MW-28	8/9/2001	3580.72	ND	22.05	0.00	3558.67
MW-29	8/9/2001	3580.74	ND	21.05	0.00	3559.69
MW-30	8/9/2001	3580.86	ND	20.74	0.00	3560.12
MW-31	8/9/2001	3580.31	ND	20.59	0.00	3559.72
MW-32	10/18/2001	3584.62	21.14	21.14	DROPLETS	3563.48
MW-33	10/18/2001	3585.6	20.94	21.00	0.06	3564.65
MW-34	10/18/2001	3585.51	ND	18.23	0.00	3567.28
MW-35	10/18/2001	3590.13	ND	19.73	0.00	3570.4
MW-36	10/18/2001	3588.76	ND	19.57	0.00	3569.19
MW-37	10/18/2001	3588.5	ND	20.76	0.00	3567.74
MW-38	10/18/2001	3588.99	20.29	20.29	DROPLETS	3568.7

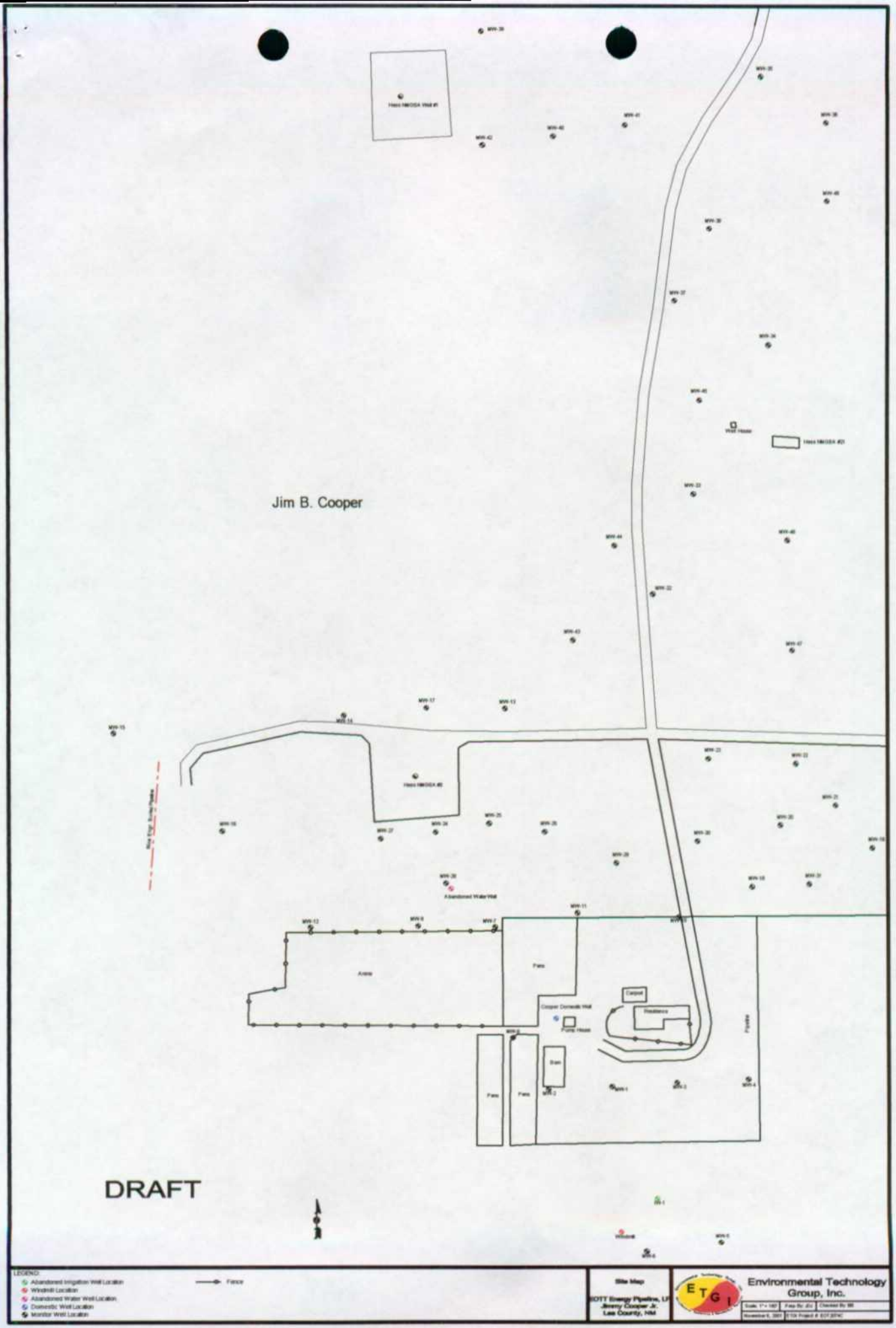
TABLE 2

GROUNDWATER ELEVATION DATA

EOTT Energy Pipeline, LP
Jim B. Cooper
Monument, New Mexico
ETGI Project # EOT2074C

All measurements are recorded in feet.

WELL LOCATION	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-1	8/9/2001	3575.18	17.24	17.68	0.44	3557.87
MW-2	8/9/2001	3575.19	ND	17.85	0.00	3557.34
MW-3	8/9/2001	3575.15	ND	17.42	0.00	3557.73
MW-4	8/9/2001	3574.54	ND	16.93	0.00	3557.61
MW-5	8/9/2001	3573.10	ND	17.46	0.00	3555.64
MW-6	8/9/2001	3573.3	ND	16.59	0.00	3556.71
MW-7	8/9/2001	3576.37	18.1	18.15	0.05	3558.26
MW-8	8/9/2001	3575.64	18.43	18.52	0.09	3557.20
MW-9	8/9/2001	3576.15	18.25	18.68	0.43	3557.84
MW-10	8/9/2001	3577.6	18.4	18.42	0.02	3559.20
MW-11	8/9/2001	3577.32	17.9	18.11	0.21	3559.39
MW-12	8/9/2001	3576.55	ND	20.05	0.00	3556.5
MW-13	8/9/2001	3582.97	ND	22.3	0.00	3560.67
MW-14	8/9/2001	3582.56	ND	22.91	0.00	3559.65
MW-15	8/9/2001	3582.82	ND	26.15	0.00	3556.67
MW-16	8/9/2001	3582.17	ND	25.2	0.00	3556.97
MW-17	8/9/2001	3582.24	ND	22.02	0.00	3560.22
MW-18	8/9/2001	3580.53	20.83	21.34	0.51	3559.62


Jim B. Cooper
DRAFT
Site Map
Environmental Technology Group, Inc.

TRACEANALYSIS, INC.

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

Analytical and Quality Control Report

Bill Olson
OCD
2040 S. Pacheco
Santa Fe, NM 87505

Report Date: 3/6/00

Project Number: N/A
Project Name: Cooper Ranch
Project Location: Jimmy Cooper Ranch

Order ID Number: A00022308

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
141112	0002211750 (West Well)	Water	2/21/00	-	2/23/00

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 19 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Cation-Anion Balance Sheet

Sample # 141112 Date: 3/6/00

Cations

	ppm	meq/L
Calcium	63	3.1437
Magnesium	15	1.23435
Sodium	47	2.0445
Potassium	0	0

Total Cations
6.42255 in meq/L

Anions

	ppm	meq/L
Alkalinity	158	3.16
Sulfate	24	0.49968
Chloride	93	2.62353
Nitrate as N	0	0
Fluoride	1.9	0.100016

Total Anions
6.38323 in meq/L

Percentage Error
0.61416 %
(needs to be <10%)

OTHER INFORMATION

TDS	360				
EC	680				
Measure EC and Cation Sums	642.255	Range should be:	612	to	748
Measure EC and Anion Sums	638.3226	Range should be:	612	to	748
Calculated TDS/Conductivity	0.5294118	Range should be:	0.55	to	0.77
Measure TDS and Cation Sums	0.560525	Range should be:	0.55	to	0.77
Measure TDS and Anion Sums	0.5639782	Range should be:	0.55	to	0.77

TRACE ANALYSIS, INC.

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

ANALYTICAL RESULTS FOR
NM OIL CONSERVATION DIVISION
Attention: Bill Olson
2040 South Pacheco
Santa Fe, NM 87505

March 6, 2000
Receiving Date: 02/23/00
Sample Type: Water
Project No: N/A
Project Name: Cooper Ranch
Project Loc: Jimmy Cooper Ranch

Prep Date: 02/23/00
Analysis Date: 02/23/00
Sampling Date: 02/21/00
Sample Condition: I & C
Sample Received by: VW

TA#	Field Code	TOTAL Ca (mg/L)	TOTAL Mg (mg/L)	TOTAL Na (mg/L)	TOTAL K (mg/L)
T141112	0002211750 (West Wall)	63	15	47	<0.50
ICV		52.6	51.9	47.9	47.0
CCV		53.1	52.2	48.0	46.6
Reporting Limit		0.50	0.50	0.50	0.50
RPD		1	1	1	1
% Extraction Accuracy		101	97	105	99
% Instrument Accuracy		106	104	96	94

METHODS: EPA SW 846-6010B, 3050A
CHEMIST: RR
TOTAL SPIKE: 1000 mg/L Ca, Mg, Na, K
TOTAL CV: 50 mg/L Ca, Mg, Na, K

Director, Dr. Blair Leftwich

03/06/00
Date

Analytical Results Report

Sample Number: 141112
Description: 0002211750 (West Well)

Param	Result	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
8260 (µg/L)									
Bromochloromethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Dichlorodifluoromethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Chloromethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Vinyl Chloride	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Bromomethane	<5.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	5
Chloroethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Trichlorofluoromethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Acetone	<10.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	10
Iodomethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
carbon disulfide	46.26	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Acrylonitrile	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
2-Butanone (MEK)	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
4-methyl-2-pentanone	<10.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	10
2-hexanone	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
trans 1,4-Dichloro-2-butene	<10.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	10
1,1-Dichloroethene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Methylene chloride	<5.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	5
MTBE	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
trans-1,2-Dichloroethene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,1-Dichloroethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
cis-1,2-dichloroethene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
2,2-Dichloropropane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,2-Dichloroethane (EDC)	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Chloroform	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,1,1-Trichloroethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,1-Dichloropropene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Benzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Carbon Tetrachloride	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,2-Dichloropropane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Trichloroethene (TCE)	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Dibromomethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Bromodichloromethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
2-Chloroethyl vinyl ether	<10.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	10
cis-1,3-Dichloropropene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
trans-1,3-Dichloropropene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Toluene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,1,2-Trichloroethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,3-Dichloropropane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Dibromochloromethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,2-Dibromoethane (EDB)	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Tetrachloroethene (PCE)	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Chlorobenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,1,1,2-Tetrachloroethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Ethylbenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
m,p-Xylene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Bromoform	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Styrene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
o-Xylene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2

1,1,2,2-Tetrachloroethane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
2-Chlorotoluene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,2,3-Trichloropropane	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Isopropylbenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Bromobenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
n-Propylbenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,3,5-Trimethylbenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
tert-Butylbenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,2,4-Trimethylbenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,4-Dichlorobenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
sec-Butylbenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,3-Dichlorobenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
p-Isopropyltoluene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
4-Chlorotoluene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,2-Dichlorobenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
n-Butylbenzene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
1,2-Dibromo-3-chloropropane	<5.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	5
1,2,3-Trichlorobenzene	<5.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	5
1,2,4-Trichlorobenzene	<5.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	5
Naphthalene	<2.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	2
Hexachlorobutadiene	<5.00	1	S 8260B	2/28/00	2/28/00	JG	PB00971	QC01178	5

Surrogate (µg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #
Dibromofluoromethane	48.78	1	50	98	80 - 120	JG	PB00971	QC01178
Toluene-d8	49.07	1	50	98	80 - 120	JG	PB00971	QC01178
4-Bromofluorobenzene	52.61	1	50	105	80 - 120	JG	PB00971	QC01178

8270 (mg/L)

Pyridine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
n-Nitrosodimethylamine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2-Picoline	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Methyl methanesulfonate	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Ethyl methanesulfonate	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Phenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Aniline	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
bis (2-chloroethyl) ether	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2-Chlorophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
1,3-Dichlorobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
1,4-Dichlorobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Benzyl alcohol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
1,2-Dichlorobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2-Methylphenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
bis (2-chloroisopropyl) ether	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4-Methylphenol/3-Methylphenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Acetophenone	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
n-Nitrosodi-n-propylamine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Hexachloroethane	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Nitrobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
n-Nitrosopiperidine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Isophorone	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2-Nitrophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,4-Dimethylphenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
bis (2-chloroethoxy) methane	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Benzoic acid	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,4-Dichlorophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
1,2,4-Trichlorobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005

a,a-Dimethylphenethylamine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Naphthalene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4-Chloroaniline	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,6-Dichlorophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Hexachlorobutadiene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
n-Nitroso-di-n-butylamine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4-Chloro-3-methylphenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
1-Methylnaphthalene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2-Methylnaphthalene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
1,2,4,5-Tetrachlorobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Hexachlorocyclopentadiene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,4,6-Trichlorophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,4,5-Trichlorophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2-Chloronaphthalene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
1-Chloronaphthalene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2-Nitroaniline	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Dimethylphthalate	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Acenaphthylene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,6-Dinitrotoluene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
3-Nitroaniline	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Acenaphthene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,4-Dinitrophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Dibenzofuran	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Pentachlorobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4-Nitrophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
1-Napthylamine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,4-Dinitrotoluene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2-Napthylamine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
2,3,4,6-Tetrachlorophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Fluorene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Diethylphthalate	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4-Chlorophenyl-phenylether	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4-Nitroaniline	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4,6-Dinitro-2-methylphenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Diphenylamine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Diphenylhydrazine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4-Bromophenyl-phenylether	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Phenacetin	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Hexachlorobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
4-Aminobiphenyl	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Pentachlorophenol	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Pentachloronitrobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Pronamide	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Phenanthrene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Anthracene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Di-n-butylphthalate	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Fluoranthene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Benzidine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Pyrene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
p-Dimethylaminoazobenzene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Butylbenzylphthalate	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Benzo(a)anthracene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
3,3-Dichlorobenzidine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Chrysene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Bis (2-ethylhexyl) phthalate	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Di-n-octylphthalate	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005

Benzo(b)fluoranthene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
7,12-Dimethylbenz(a)anthracene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Benzo(k)fluoranthene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Benzo(a)pyrene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
3-Methylcholanthrene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Dibenzo(a,j)acridine	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Indeno(1,2,3-cd)pyrene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Dibenzo(a,h)anthracene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005
Benzo(g,h,i)perylene	<0.005	1	S 8270C	2/24/00	2/28/00	LK	PB00931	QC01147	0.005

Surrogate (mg/L)	Result	Dilution	Spike Amount	% Rec.	% Rec. Limit	Analyst	Prep Batch #	QC Batch #	
2-Fluorophenol	22.72	1	80	28	9 - 71	LK	PB00931	QC01147	
Phenol-d5	17.18	1	80	21	4 - 64	LK	PB00931	QC01147	
Nitrobenzene-d5	47.01	1	80	59	44 - 109	LK	PB00931	QC01147	
2-Fluorobiphenyl	49.25	1	80	62	47 - 108	LK	PB00931	QC01147	
2,4,6-Tribromophenol	60.47	1	80	76	51 - 128	LK	PB00931	QC01147	
Terphenyl-d14	51.55	1	80	64	58 - 115	LK	PB00931	QC01147	
Alkalinity (mg/L as CaCo3)									
Hydroxide Alkalinity	<1.0	1	E 310.1	2/25/00	2/25/00	JS	PB00945	QC01143	1
Carbonate Alkalinity	<1.0	1	E 310.1	2/25/00	2/25/00	JS	PB00945	QC01143	1
Bicarbonate Alkalinity	158	1	E 310.1	2/25/00	2/25/00	JS	PB00945	QC01143	1
Total Alkalinity	158	1	E 310.1	2/25/00	2/25/00	JS	PB00945	QC01143	1
Conductivity (uMHOS/cm)									
Specific Conductance	680	1	SM 2510B	2/25/00	2/25/00	JS	PB00944	QC01142	
Hg, Total (mg/L)									
Total Mercury	<0.0002	1	S 7470A	3/1/00	3/2/00	BP	PB01047	QC01263	0.0002
Ion Chromatography (IC) (mg/L)									
CL	93	1	E 300.0	2/23/00	2/23/00	JS	PB00905	QC01100	0.5
Fluoride	1.9	1	E 300.0	2/23/00	2/23/00	JS	PB00905	QC01100	0.2
Nitrate-N	<1.0	1	E 300.0	2/23/00	2/23/00	JS	PB00905	QC01100	0.2
Sulfate	24	1	E 300.0	2/23/00	2/23/00	JS	PB00905	QC01100	0.5
pH (s.u.)									
pH	* 7.5	1	E 150.1	2/23/00	2/23/00	RS	PB01003	QC01213	1
* pH - Sample out of holding time.									
TDS (mg/L)									
Total Dissolved Solids	360	1	E 160.1	2/23/00	2/24/00	JS	PB00906	QC01101	10
Total Metals (mg/L)									
Total Aluminum	.51	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Arsenic	.01	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Barium	.82	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Boron	.25	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Cadmium	<.002	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.002
Total Chromium	.02	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.005
Total Cobalt	<.01	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Copper	<.01	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Iron	11	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Lead	<.01	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Manganese	.26	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Molybdenum	<.01	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Nickel	.11	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01
Total Selenium	<.01	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01

Total Silica	6.2	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.1
Total Silver	<.005	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.005
Total Zinc	.42	1	S 6010B	2/28/00	2/28/00	RR	PB00955	QC01175	0.01

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Bromochloromethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Dichlorodifluoromethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Chloromethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Vinyl Chloride (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Bromomethane (µg/L)		<5.00	5	2/28/00	PB00971	QC01178
Chloroethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Trichlorofluoromethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Acetone (µg/L)		<10.00	10	2/28/00	PB00971	QC01178
Iodomethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
carbon disulfide (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Acrylonitrile (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
2-Butanone (MEK) (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
4-methyl-2-pentanone (µg/L)		<10.00	10	2/28/00	PB00971	QC01178
2-hexanone (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
trans 1,4-Dichloro-2-butene (µg/L)		<10.00	10	2/28/00	PB00971	QC01178
1,1-Dichloroethene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Methylene chloride (µg/L)		<5.00	5	2/28/00	PB00971	QC01178
MTBE (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
trans-1,2-Dichloroethene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,1-Dichloroethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
cis-1,2-dichloroethene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
2,2-Dichloropropane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,2-Dichloroethane (EDC) (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Chloroform (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,1,1-Trichloroethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,1-Dichloropropene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Benzene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Carbon Tetrachloride (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,2-Dichloropropane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Trichloroethene (TCE) (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Dibromomethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Bromodichloromethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
2-Chloroethyl vinyl ether (µg/L)		<10.00	10	2/28/00	PB00971	QC01178
cis-1,3-Dichloropropene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
trans-1,3-Dichloropropene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Toluene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,1,2-Trichloroethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,3-Dichloropropane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Dibromochloromethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,2-Dibromoethane (EDB) (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Tetrachloroethene (PCE) (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Chlorobenzene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
1,1,1,2-Tetrachloroethane (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
Ethylbenzene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178
m,p-Xylene (µg/L)		<2.00	2	2/28/00	PB00971	QC01178

Bromoform (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
Styrene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
o-Xylene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
1,1,2,2-Tetrachloroethane (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
2-Chlorotoluene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
1,2,3-Trichloropropane (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
Isopropylbenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
Bromobenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
n-Propylbenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
1,3,5-Trimethylbenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
tert-Butylbenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
1,2,4-Trimethylbenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
1,4-Dichlorobenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
sec-Butylbenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
1,3-Dichlorobenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
p-Isopropyltoluene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
4-Chlorotoluene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
1,2-Dichlorobenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
n-Butylbenzene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
1,2-Dibromo-3-chloropropane (µg/L)	<5.00	5	2/28/00	PB00971	QC01178
1,2,3-Trichlorobenzene (µg/L)	<5.00	5	2/28/00	PB00971	QC01178
1,2,4-Trichlorobenzene (µg/L)	<5.00	5	2/28/00	PB00971	QC01178
Naphthalene (µg/L)	<2.00	2	2/28/00	PB00971	QC01178
Hexachlorobutadiene (µg/L)	<5.00	5	2/28/00	PB00971	QC01178

Surrogate	Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
Dibromofluoromethane (µg/L)	50.49	50	101	80 - 120	QC01178
Toluene-d8 (µg/L)	48.56	50	97	80 - 120	QC01178
4-Bromofluorobenzene (µg/L)	50.93	50	102	80 - 120	QC01178

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Pyridine (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
n-Nitrosodimethylamine (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
2-Picoline (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
Methyl methanesulfonate (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
Ethyl methanesulfonate (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
Phenol (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
Aniline (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
bis (2-chloroethyl) ether (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
2-Chlorophenol (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
1,3-Dichlorobenzene (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
1,4-Dichlorobenzene (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
Benzyl alcohol (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
1,2-Dichlorobenzene (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
2-Methylphenol (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
bis (2-chloroisopropyl) ether (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
4-Methylphenol/3-Methylphenol (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
Acetophenone (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
n-Nitrosodi-n-propylamine (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147
Hexachloroethane (mg/L)		<0.005	0.005	2/28/00	PB00931	QC01147

Nitrobenzene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
n-Nitrosopiperidine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Isophorone (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2-Nitrophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,4-Dimethylphenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
bis (2-chloroethoxy) methane (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Benzoic acid (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,4-Dichlorophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
1,2,4-Trichlorobenzene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
a,a-Dimethylphenethylamine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Naphthalene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
4-Chloroaniline (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,6-Dichlorophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Hexachlorobutadiene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
n-Nitroso-di-n-butylamine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
4-Chloro-3-methylphenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
1-Methylnaphthalene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2-Methylnaphthalene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
1,2,4,5-Tetrachlorobenzene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Hexachlorocyclopentadiene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,4,6-Trichlorophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,4,5-Trichlorophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2-Chloronaphthalene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
1-Chloronaphthalene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2-Nitroaniline (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Dimethylphthalate (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Acenaphthylene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,6-Dinitrotoluene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
3-Nitroaniline (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Acenaphthene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,4-Dinitrophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Dibenzofuran (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Pentachlorobenzene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
4-Nitrophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
1-Napthylamine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,4-Dinitrotoluene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2-Napthylamine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
2,3,4,6-Tetrachlorophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Fluorene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Diethylphthalate (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
4-Chlorophenyl-phenylether (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
4-Nitroaniline (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
4,6-Dinitro-2-methylphenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Diphenylamine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Diphenylhydrazine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
4-Bromophenyl-phenylether (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Phenacetin (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Hexachlorobenzene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
4-Aminobiphenyl (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Pentachlorophenol (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Pentachloronitrobenzene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147

Pronamide (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Phenanthrene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Anthracene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Di-n-butylphthalate (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Fluoranthene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Benzidine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Pyrene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
p-Dimethylaminoazobenzene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Butylbenzylphthalate (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Benzo(a)anthracene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
3,3-Dichlorobenzidine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Chrysene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Bis (2-ethylhexyl) phthalate (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Di-n-octylphthalate (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Benzo(b)fluoranthene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
7,12-Dimethylbenz(a)anthracene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Benzo(k)fluoranthene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Benzo(a)pyrene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
3-Methylcholanthrene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Dibenzo(a,j)acridine (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Indeno(1,2,3-cd)pyrene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Dibenzo(a,h)anthracene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147
Benzo(g,h,i)perylene (mg/L)	<0.005	0.005	2/28/00	PB00931	QC01147

Surrogate	Result	Spike Amount	% Rec.	% Rec. Limit	QC Batch #
2-Fluorophenol (mg/L)	30.80	80	39	9 - 71	QC01147
Phenol-d5 (mg/L)	22.61	80	28	4 - 64	QC01147
Nitrobenzene-d5 (mg/L)	58.86	80	74	44 - 109	QC01147
2-Fluorobiphenyl (mg/L)	55.22	80	69	47 - 108	QC01147
2,4,6-Tribromophenol (mg/L)	56.32	80	70	51 - 128	QC01147
Terphenyl-d14 (mg/L)	48.33	80	60	58 - 115	QC01147

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Hydroxide Alkalinity (mg/L as CaCo3)		<1.0	1	2/25/00	PB00945	QC01143
Carbonate Alkalinity (mg/L as CaCo3)		<1.0	1	2/25/00	PB00945	QC01143
Bicarbonate Alkalinity (mg/L as CaCo3)		<4.0	1	2/25/00	PB00945	QC01143
Total Alkalinity (mg/L as CaCo3)		<4.0	1	2/25/00	PB00945	QC01143

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Specific Conductance (uMHOS/cm)		2.6		2/25/00	PB00944	QC01142

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Mercury (mg/L)		<0.0002	0.0002	3/2/00	PB01047	QC01263

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
CL (mg/L)		<0.5	0.5	2/23/00	PB00905	QC01100

Fluoride (mg/L)	<0.2	0.2	2/23/00	PB00905	QC01100
Nitrate-N (mg/L)	<0.2	0.2	2/23/00	PB00905	QC01100
Sulfate (mg/L)	<0.5	0.5	2/23/00	PB00905	QC01100

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Dissolved Solids (mg/L)		<10	10	2/24/00	PB00906	QC01101

Param	Flag	Blank Result	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
Total Aluminum (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Arsenic (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Barium (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Boron (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Cadmium (mg/L)		<.002	0.002	2/28/00	PB00955	QC01175
Total Chromium (mg/L)		<.005	0.005	2/28/00	PB00955	QC01175
Total Cobalt (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Copper (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Iron (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Lead (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Manganese (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Molybdenum (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Nickel (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Selenium (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175
Total Silica (mg/L)		<.10	0.1	2/28/00	PB00955	QC01175
Total Silver (mg/L)		<.005	0.005	2/28/00	PB00955	QC01175
Total Zinc (mg/L)		<.01	0.01	2/28/00	PB00955	QC01175

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	CL (mg/L)	110	1	62.5	165.27	88		80 - 120	0 - 20	QC01100
MS	Fluoride (mg/L)	1.2	1	12.5	12.98	94		80 - 120	0 - 20	QC01100
MS	Nitrate-N (mg/L)	2.8	1	25	24.82	88		80 - 120	0 - 20	QC01100
MS	Sulfate (mg/L)	86	1	62.5	145.69	96		80 - 120	0 - 20	QC01100
MSD	CL (mg/L)	110	1	62.5	165.06	88	0	80 - 120	0 - 20	QC01100
MSD	Fluoride (mg/L)	1.2	1	12.5	13.25	96	2	80 - 120	0 - 20	QC01100
MSD	Nitrate-N (mg/L)	2.8	1	25	25.05	89	1	80 - 120	0 - 20	QC01100
MSD	Sulfate (mg/L)	86	1	62.5	143.63	92	4	80 - 120	0 - 20	QC01100

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Aluminum (mg/L)	.51	1	2	2.49	99		75 - 125	0 - 20	QC01175
MS	Total Arsenic (mg/L)	.01	1	2	2.13	106		75 - 125	0 - 20	QC01175
MS	Total Barium (mg/L)	.82	1	2	3.01	110		75 - 125	0 - 20	QC01175
MS	Total Boron (mg/L)	.25	1	2	2.27	101		75 - 125	0 - 20	QC01175
MS	Total Cadmium (mg/L)	<.002	1	2	2.18	109		75 - 125	0 - 20	QC01175
MS	Total Chromium (mg/L)	.02	1	2	2.22	110		75 - 125	0 - 20	QC01175
MS	Total Cobalt (mg/L)	<.01	1	2	2.20	110		75 - 125	0 - 20	QC01175
MS	Total Copper (mg/L)	<.01	1	2	2.12	106		75 - 125	0 - 20	QC01175
MS	Total Iron (mg/L)	11	1	2	13	100		75 - 125	0 - 20	QC01175
MS	Total Lead (mg/L)	<.01	1	2	2.16	108		75 - 125	0 - 20	QC01175
MS	Total Manganese (mg/L)	.26	1	2	2.45	110		75 - 125	0 - 20	QC01175
MS	Total Molybdenum (mg/L)	<.01	1	2	2.17	109		75 - 125	0 - 20	QC01175
MS	Total Nickel (mg/L)	.11	1	2	2.22	106		75 - 125	0 - 20	QC01175
MS	Total Selenium (mg/L)	<.01	1	2	2.04	102		75 - 125	0 - 20	QC01175
MS	Total Silica (mg/L)	6.2	1	2	8.6	120		75 - 125	0 - 20	QC01175
MS	Total Silver (mg/L)	<.005	1	0.4	.42	105		75 - 125	0 - 20	QC01175
MS	Total Zinc (mg/L)	.42	1	2	2.48	103		75 - 125	0 - 20	QC01175
MSD	Total Aluminum (mg/L)	.51	1	2	2.51	100	1	75 - 125	0 - 20	QC01175
MSD	Total Arsenic (mg/L)	.01	1	2	2.15	107	1	75 - 125	0 - 20	QC01175
MSD	Total Barium (mg/L)	.82	1	2	3.03	111	1	75 - 125	0 - 20	QC01175
MSD	Total Boron (mg/L)	.25	1	2	2.30	102	1	75 - 125	0 - 20	QC01175
MSD	Total Cadmium (mg/L)	<.002	1	2	2.20	110	1	75 - 125	0 - 20	QC01175
MSD	Total Chromium (mg/L)	.02	1	2	2.23	111	0	75 - 125	0 - 20	QC01175
MSD	Total Cobalt (mg/L)	<.01	1	2	2.21	111	0	75 - 125	0 - 20	QC01175
MSD	Total Copper (mg/L)	<.01	1	2	2.13	107	0	75 - 125	0 - 20	QC01175
MSD	Total Iron (mg/L)	11	1	2	13	100	0	75 - 125	0 - 20	QC01175
MSD	Total Lead (mg/L)	<.01	1	2	2.17	109	0	75 - 125	0 - 20	QC01175
MSD	Total Manganese (mg/L)	.26	1	2	2.47	111	1	75 - 125	0 - 20	QC01175

MSD	Total Molybdenum (mg/L)	<.01	1	2	2.20	110	1	75 - 125	0 - 20	QC01175
MSD	Total Nickel (mg/L)	.11	1	2	2.23	106	0	75 - 125	0 - 20	QC01175
MSD	Total Selenium (mg/L)	<.01	1	2	2.06	103	1	75 - 125	0 - 20	QC01175
MSD	Total Silica (mg/L)	6.2	1	2	8.6	120	0	75 - 125	0 - 20	QC01175
MSD	Total Silver (mg/L)	<.005	1	0.4	.42	105	0	75 - 125	0 - 20	QC01175
MSD	Total Zinc (mg/L)	.42	1	2	2.50	104	1	75 - 125	0 - 20	QC01175

Standard	Param	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	Total Mercury (mg/L)	<0.0002	1	0.001	0.00107	107		80 - 120	0 - 20	QC01263
MSD	Total Mercury (mg/L)	<0.0002	1	0.001	0.00100	100	7	80 - 120	0 - 20	QC01263

Quality Control Report
Duplicates

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Hydroxide Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC01143
Duplicate	Carbonate Alkalinity (mg/L as CaCo		<1.0	<1.0	1	0	0 - 20	QC01143
Duplicate	Bicarbonate Alkalinity (mg/L as CaC		158	158	1	0	0 - 20	QC01143
Duplicate	Total Alkalinity (mg/L as CaCo3)		158	158	1	0	0 - 20	QC01143

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Specific Conductance (uMHOS/cm)		700	680	1	3	0 - 20	QC01142

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	pH (s.u.)		7.5	7.5	1	0	0 - 20	QC01213

Standard	Param	Flag	Duplicate Result	Sample Result	Dilution	RPD	RPD Limit	QC Batch #
Duplicate	Total Dissolved Solids (mg/L)		628	690	1	9	0 - 20	QC01101

Quality Control Report
Lab Control Spikes and Duplicate Spike

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	1,1-Dichloroethene (ug/L)	<2.00	1	100	88	88		80 - 120	0 - 20	QC01178
LCS	Benzene (ug/L)	<2.00	1	100	115	115		80 - 120	0 - 20	QC01178
LCS	Trichloroethene (TCE) (ug/L)	<2.00	1	100	92	92		80 - 120	0 - 20	QC01178
LCS	Toluene (ug/L)	<2.00	1	100	109	109		80 - 120	0 - 20	QC01178
LCS	Chlorobenzene (ug/L)	<2.00	1	100	99	99		80 - 120	0 - 20	QC01178

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCS	Dibromofluoromethane (µg/L)	1	50	49.93	100	80 - 120	QC01178
LCS	Toluene-d8 (µg/L)	1	50	49.10	98	80 - 120	QC01178
LCS	4-Bromofluorobenzene (µg/L)	1	50	52.15	104	80 - 120	QC01178

LCSD	1,1-Dichloroethene (ug/L)	<2.00	1	100	90	90		80 - 120	0 - 20	QC01178
LCSD	Benzene (ug/L)	<2.00	1	100	117	117		80 - 120	0 - 20	QC01178
LCSD	Trichloroethene (TCE) (ug/L)	<2.00	1	100	93	93		80 - 120	0 - 20	QC01178
LCSD	Toluene (ug/L)	<2.00	1	100	110	110		80 - 120	0 - 20	QC01178
LCSD	Chlorobenzene (ug/L)	<2.00	1	100	100	100		80 - 120	0 - 20	QC01178

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCSD	Dibromofluoromethane (µg/L)	1	50	48.63	97	80 - 120	QC01178
LCSD	Toluene-d8 (µg/L)	1	50	49.13	98	80 - 120	QC01178
LCSD	4-Bromofluorobenzene (µg/L)	1	50	50.8	102	80 - 120	QC01178

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	Phenol (mg/L)	<0.005	1	80	17.58	22		5 - 112	0 - 20	QC01147
LCS	2-Chlorophenol (mg/L)	<0.005	1	80	43.69	55		28 - 110	0 - 20	QC01147
LCS	1,4-Dichlorobenzene (mg/L)	<0.005	1	80	39.32	49		27 - 94	0 - 20	QC01147
LCS	n-Nitrosodi-n-propylamine (mg/L)	<0.005	1	80	56.19	70		Det - 230	0 - 20	QC01147
LCS	1,2,4-Trichlorobenzene (mg/L)	<0.005	1	80	43.32	54		31 - 109	0 - 20	QC01147
LCS	4-Chloro-3-methylphenol (mg/L)	<0.005	1	80	57.67	72		41 - 126	0 - 20	QC01147
LCS	Acenaphthene (mg/L)	<0.005	1	80	53.68	67		46 - 118	0 - 20	QC01147
LCS	4-Nitrophenol (mg/L)	<0.005	1	80	18.07	23		0 - 70	0 - 20	QC01147
LCS	2,4-Dinitrotoluene (mg/L)	<0.005	1	80	62.30	78		50 - 132	0 - 20	QC01147
LCS	Pentachlorophenol (mg/L)	<0.005	1	80	43.53	54		1 - 150	0 - 20	QC01147
LCS	Pyrene (mg/L)	<0.005	1	80	50.17	63		49 - 122	0 - 20	QC01147

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCS	2-Fluorophenol (mg/L)	1	80	25.25	32	9 - 71	QC01147
LCS	Phenol-d5 (mg/L)	1	80	18.84	24	4 - 64	QC01147
LCS	Nitrobenzene-d5 (mg/L)	1	80	47.54	59	44 - 109	QC01147
LCS	2-Fluorobiphenyl (mg/L)	1	80	50.21	63	47 - 108	QC01147
LCS	2,4,6-Tribromophenol (mg/L)	1	80	55.46	69	51 - 128	QC01147
LCS	Terphenyl-d14 (mg/L)	1	80	48.79	61	58 - 115	QC01147

LCSD	Phenol (mg/L)	<0.005	1	80	16.49	21	6	2 - 55	0 - 20	QC01147
LCSD	2-Chlorophenol (mg/L)	<0.005	1	80	40.58	51	7	28 - 110	0 - 20	QC01147
LCSD	1,4-Dichlorobenzene (mg/L)	<0.005	1	80	38.75	48	1	27 - 94	0 - 20	QC01147
LCSD	n-Nitrosodi-n-propylamine (mg/L)	<0.005	1	80	53.09	66	6	Det - 230	0 - 20	QC01147
LCSD	1,2,4-Trichlorobenzene (mg/L)	<0.005	1	80	42.04	53	3	31 - 109	0 - 20	QC01147
LCSD	4-Chloro-3-methylphenol (mg/L)	<0.005	1	80	55.11	69	5	41 - 126	0 - 20	QC01147
LCSD	Acenaphthene (mg/L)	<0.005	1	80	51.24	64	5	46 - 118	0 - 20	QC01147
LCSD	4-Nitrophenol (mg/L)	<0.005	1	80	15.51	19	15	0 - 70	0 - 20	QC01147
LCSD	2,4-Dinitrotoluene (mg/L)	<0.005	1	80	56.96	71	9	50 - 132	0 - 20	QC01147
LCSD	Pentachlorophenol (mg/L)	<0.005	1	80	43.15	54	1	1 - 150	0 - 20	QC01147
LCSD	Pyrene (mg/L)	<0.005	1	80	47.35	59	6	49 - 122	0 - 20	QC01147

Standard	Surrogate	Dil.	Spike Amount	Result	% Rec.	% Rec. Limit	QC Batch #
LCSD	2-Fluorophenol (mg/L)	1	80	24.12	30	9 - 71	QC01147
LCSD	Phenol-d5 (mg/L)	1	80	17.61	22	4 - 64	QC01147
LCSD	Nitrobenzene-d5 (mg/L)	1	80	45.67	57	44 - 109	QC01147
LCSD	2-Fluorobiphenyl (mg/L)	1	80	49.21	62	47 - 108	QC01147
LCSD	2,4,6-Tribromophenol (mg/L)	1	80	51.35	64	51 - 128	QC01147
LCSD	Terphenyl-d14 (mg/L)	1	80	46.16	58	58 - 115	QC01147

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	Total Mercury (mg/L)	<0.0002	1	0.001	.00097	97		80 - 120	0 - 20	QC01263
LCSD	Total Mercury (mg/L)	<0.0002	1	0.001	.00088	88	10	80 - 120	0 - 20	QC01263

	Param	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	Total Aluminum (mg/L)	<.01	1	2	1.97	99		75 - 125	0 - 20	QC01175
LCS	Total Arsenic (mg/L)	<.01	1	2	2.06	103		75 - 125	0 - 20	QC01175
LCS	Total Barium (mg/L)	<.01	1	2	2.31	116		75 - 125	0 - 20	QC01175
LCS	Total Boron (mg/L)	<.01	1	2	2.02	101		75 - 125	0 - 20	QC01175
LCS	Total Cadmium (mg/L)	<.002	1	2	2.21	111		75 - 125	0 - 20	QC01175
LCS	Total Chromium (mg/L)	<.005	1	2	2.24	112		75 - 125	0 - 20	QC01175
LCS	Total Cobalt (mg/L)	<.01	1	2	2.32	116		75 - 125	0 - 20	QC01175
LCS	Total Copper (mg/L)	<.01	1	2	2.23	112		75 - 125	0 - 20	QC01175
LCS	Total Iron (mg/L)	<.01	1	2	2.31	116		75 - 125	0 - 20	QC01175
LCS	Total Lead (mg/L)	<.01	1	2	2.28	114		75 - 125	0 - 20	QC01175
LCS	Total Manganese (mg/L)	<.01	1	2	2.32	116		75 - 125	0 - 20	QC01175
LCS	Total Molybdenum (mg/L)	<.01	1	2	2.32	116		75 - 125	0 - 20	QC01175
LCS	Total Nickel (mg/L)	<.01	1	2	2.23	112		75 - 125	0 - 20	QC01175
LCS	Total Selenium (mg/L)	<.01	1	2	2.07	103		75 - 125	0 - 20	QC01175
LCS	Total Silica (mg/L)	<.10	1	2	2.16	108		75 - 125	0 - 20	QC01175
LCS	Total Silver (mg/L)	<.005	1	0.4	.44	110		75 - 125	0 - 20	QC01175
LCS	Total Zinc (mg/L)	<.01	1	2	2.13	107		75 - 125	0 - 20	QC01175
LCSD	Total Aluminum (mg/L)	<.01	1	2	1.95	98	1	75 - 125	0 - 20	QC01175

LCSD	Total Arsenic (mg/L)	<.01	1	2	2.13	107	3	75 - 125	0 - 20	QC01175
LCSD	Total Barium (mg/L)	<.01	1	2	2.31	116	0	75 - 125	0 - 20	QC01175
LCSD	Total Boron (mg/L)	<.01	1	2	2.01	100	0	75 - 125	0 - 20	QC01175
LCSD	Total Cadmium (mg/L)	<.002	1	2	2.21	111	0	75 - 125	0 - 20	QC01175
LCSD	Total Chromium (mg/L)	<.005	1	2	2.25	113	0	75 - 125	0 - 20	QC01175
LCSD	Total Cobalt (mg/L)	<.01	1	2	2.32	116	0	75 - 125	0 - 20	QC01175
LCSD	Total Copper (mg/L)	<.01	1	2	2.23	112	0	75 - 125	0 - 20	QC01175
LCSD	Total Iron (mg/L)	<.01	1	2	2.30	115	0	75 - 125	0 - 20	QC01175
LCSD	Total Lead (mg/L)	<.01	1	2	2.27	114	0	75 - 125	0 - 20	QC01175
LCSD	Total Manganese (mg/L)	<.01	1	2	2.32	116	0	75 - 125	0 - 20	QC01175
LCSD	Total Molybdenum (mg/L)	<.01	1	2	2.24	112	4	75 - 125	0 - 20	QC01175
LCSD	Total Nickel (mg/L)	<.01	1	2	2.21	111	1	75 - 125	0 - 20	QC01175
LCSD	Total Selenium (mg/L)	<.01	1	2	2.04	102	1	75 - 125	0 - 20	QC01175
LCSD	Total Silica (mg/L)	<.10	1	2	2.15	108	0	75 - 125	0 - 20	QC01175
LCSD	Total Silver (mg/L)	<.005	1	0.4	.44	110	0	75 - 125	0 - 20	QC01175
LCSD	Total Zinc (mg/L)	<.01	1	2	2.11	106	1	75 - 125	0 - 20	QC01175

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV 1	Vinyl Chloride (µg/L)		100	111	111	80 - 120	2/28/00	QC01178
CCV 1	1,1-Dichloroethene (µg/L)		100	91	91	80 - 120	2/28/00	QC01178
CCV 1	Chloroform (µg/L)		100	112	112	80 - 120	2/28/00	QC01178
CCV 1	1,2-Dichloropropane (µg/L)		100	114	114	80 - 120	2/28/00	QC01178
CCV 1	Toluene (µg/L)		100	101	101	80 - 120	2/28/00	QC01178
CCV 1	Chlorobenzene (µg/L)		100	93	93	80 - 120	2/28/00	QC01178
CCV 1	Ethylbenzene (µg/L)		100	96	96	80 - 120	2/28/00	QC01178
CCV 1	Dibromofluoromethane (µg/L)		50	53.95	108	80 - 120	2/28/00	QC01178
CCV 1	Toluene-d8 (µg/L)		50	48.43	97	80 - 120	2/28/00	QC01178
CCV 1	4-Bromofluorobenzene (µg/L)		50	54.02	108	80 - 120	2/28/00	QC01178

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV 1	Phenol (mg/L)		60	60.53	101	80 - 120	2/28/00	QC01147
CCV 1	1,4-Dichlorobenzene (mg/L)		60	59.16	99	27 - 94	2/28/00	QC01147
CCV 1	2-Nitrophenol (mg/L)		60	61.20	102	80 - 120	2/28/00	QC01147
CCV 1	2,4-Dichlorophenol (mg/L)		60	59.85	100	80 - 120	2/28/00	QC01147
CCV 1	Hexachlorobutadiene (mg/L)		60	57.68	96	80 - 120	2/28/00	QC01147
CCV 1	4-Chloro-3-methylphenol (mg/L)		60	61.02	102	41 - 126	2/28/00	QC01147
CCV 1	2,4,6-Trichlorophenol (mg/L)		60	60.93	102	80 - 120	2/28/00	QC01147
CCV 1	Acenaphthene (mg/L)		60	59.11	99	46 - 118	2/28/00	QC01147
CCV 1	Diphenylamine (mg/L)		60	53.63	89	80 - 120	2/28/00	QC01147
CCV 1	Pentachlorophenol (mg/L)		60	66.41	111	1 - 150	2/28/00	QC01147
CCV 1	Fluoranthene (mg/L)		60	61.70	103	80 - 120	2/28/00	QC01147
CCV 1	Di-n-octylphthalate (mg/L)		60	54.03	90	80 - 120	2/28/00	QC01147
CCV 1	Benzo(a)pyrene (mg/L)		60	53.77	90	80 - 120	2/28/00	QC01147
CCV 1	2-Fluorophenol (mg/L)		60	59.04	98	9 - 71	2/28/00	QC01147
CCV 1	Phenol-d5 (mg/L)		60	58.13	97	4 - 64	2/28/00	QC01147
CCV 1	Nitrobenzene-d5 (mg/L)		60	57.50	96	44 - 109	2/28/00	QC01147
CCV 1	2-Fluorobiphenyl (mg/L)		60	58.92	98	47 - 108	2/28/00	QC01147
CCV 1	2,4,6-Tribromophenol (mg/L)		60	66.06	110	51 - 128	2/28/00	QC01147
CCV 1	Terphenyl-d14 (mg/L)		60	56.17	94	58 - 115	2/28/00	QC01147

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	2/25/00	QC01143
ICV	Carbonate Alkalinity (mg/L as CaCo3)		0	222	0	80 - 120	2/25/00	QC01143
ICV	Bicarbonate Alkalinity (mg/L as CaCo3)		0	6	0	80 - 120	2/25/00	QC01143
ICV	Total Alkalinity (mg/L as CaCo3)		236	228	97	80 - 120	2/25/00	QC01143

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
CCV 1	Hydroxide Alkalinity (mg/L as CaCo3)		0	<1.0	0	80 - 120	2/25/00	QC01143
CCV 1	Carbonate Alkalinity (mg/L as CaCo3)		0	216	0	80 - 120	2/25/00	QC01143
CCV 1	Bicarbonate Alkalinity (mg/L as CaCo3)		0	17	0	80 - 120	2/25/00	QC01143
CCV 1	Total Alkalinity (mg/L as CaCo3)		236	233	99	80 - 120	2/25/00	QC01143

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Specific Conductance (uMHOS/cm)		1413	1298	92	80 - 120	2/25/00	QC01142
CCV 1	Specific Conductance (uMHOS/cm)		1413	1298	92	80 - 120	2/25/00	QC01142

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Mercury (mg/L)		0.001	.00105	105	80 - 120	3/2/00	QC01263
CCV 1	Total Mercury (mg/L)		0.001	.00105	105	80 - 120	3/2/00	QC01263

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	CL (mg/L)		12.5	11.80	94	80 - 120	2/23/00	QC01100
ICV	Fluoride (mg/L)		2.5	2.36	94	80 - 120	2/23/00	QC01100
ICV	Nitrate-N (mg/L)		5	4.60	92	80 - 120	2/23/00	QC01100
ICV	Sulfate (mg/L)		12.5	11.88	95	80 - 120	2/23/00	QC01100
CCV 1	CL (mg/L)		12.5	11.77	94	80 - 120	2/23/00	QC01100
CCV 1	Fluoride (mg/L)		2.5	2.27	91	80 - 120	2/23/00	QC01100
CCV 1	Nitrate-N (mg/L)		5	4.63	93	80 - 120	2/23/00	QC01100
CCV 1	Sulfate (mg/L)		12.5	11.98	96	80 - 120	2/23/00	QC01100

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	pH (s.u.)		7	7.0	100	80 - 120	2/23/00	QC01213
CCV 1	pH (s.u.)		7	7.0	100	80 - 120	2/23/00	QC01213

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Dissolved Solids (mg/L)		1000	975	98	80 - 120	2/24/00	QC01101
CCV 1	Total Dissolved Solids (mg/L)		1000	993	99	80 - 120	2/24/00	QC01101

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	Total Aluminum (mg/L)		1	1.01	101	75 - 125	2/28/00	QC01175
ICV	Total Arsenic (mg/L)		1	1.04	104	75 - 125	2/28/00	QC01175
ICV	Total Barium (mg/L)		1	1.07	107	75 - 125	2/28/00	QC01175
ICV	Total Boron (mg/L)		1	1.02	102	75 - 125	2/28/00	QC01175
ICV	Total Cadmium (mg/L)		1	1.08	108	75 - 125	2/28/00	QC01175
ICV	Total Chromium (mg/L)		1	1.07	107	75 - 125	2/28/00	QC01175
ICV	Total Cobalt (mg/L)		1	1.07	107	75 - 125	2/28/00	QC01175
ICV	Total Copper (mg/L)		1	1.02	102	75 - 125	2/28/00	QC01175
ICV	Total Iron (mg/L)		1	1.07	107	75 - 125	2/28/00	QC01175
ICV	Total Lead (mg/L)		1	1.08	108	75 - 125	2/28/00	QC01175
ICV	Total Manganese (mg/L)		1	1.07	107	75 - 125	2/28/00	QC01175
ICV	Total Molybdenum (mg/L)		1	1.08	108	75 - 125	2/28/00	QC01175
ICV	Total Nickel (mg/L)		1	1.06	106	75 - 125	2/28/00	QC01175
ICV	Total Selenium (mg/L)		1	1.03	103	75 - 125	2/28/00	QC01175
ICV	Total Silica (mg/L)		1	1.02	102	75 - 125	2/28/00	QC01175
ICV	Total Silver (mg/L)		0.2	.205	102	75 - 125	2/28/00	QC01175
ICV	Total Zinc (mg/L)		1	1.05	105	75 - 125	2/28/00	QC01175
CCV 1	Total Aluminum (mg/L)		1	1.04	104	75 - 125	2/28/00	QC01175
CCV 1	Total Arsenic (mg/L)		1	1.05	105	75 - 125	2/28/00	QC01175
CCV 1	Total Barium (mg/L)		1	1.10	110	75 - 125	2/28/00	QC01175
CCV 1	Total Boron (mg/L)		1	1.06	106	75 - 125	2/28/00	QC01175
CCV 1	Total Cadmium (mg/L)		1	1.09	109	75 - 125	2/28/00	QC01175
CCV 1	Total Chromium (mg/L)		1	1.09	109	75 - 125	2/28/00	QC01175
CCV 1	Total Cobalt (mg/L)		1	1.10	110	75 - 125	2/28/00	QC01175
CCV 1	Total Copper (mg/L)		1	1.04	104	75 - 125	2/28/00	QC01175
CCV 1	Total Iron (mg/L)		1	1.10	110	75 - 125	2/28/00	QC01175
CCV 1	Total Lead (mg/L)		1	1.09	109	75 - 125	2/28/00	QC01175
CCV 1	Total Manganese (mg/L)		1	1.10	110	75 - 125	2/28/00	QC01175
CCV 1	Total Molybdenum (mg/L)		1	1.09	109	75 - 125	2/28/00	QC01175
CCV 1	Total Nickel (mg/L)		1	1.09	109	75 - 125	2/28/00	QC01175
CCV 1	Total Selenium (mg/L)		1	1.07	107	75 - 125	2/28/00	QC01175
CCV 1	Total Silica (mg/L)		1	1.04	104	75 - 125	2/28/00	QC01175
CCV 1	Total Silver (mg/L)		0.2	.211	106	75 - 125	2/28/00	QC01175
CCV 1	Total Zinc (mg/L)		1	1.08	108	75 - 125	2/28/00	QC01175

141112 -13

Page 1 of 1

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

4725 Ripley Dr., Ste A
El Paso, Texas 79922-1028
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0002230 8

Company Name: NM Oil Conservation Division Phone #: (505) 827-7154

Address: (Street, City, Zip) 2040 South Pacheco Fax #: (505) 827-8177

Contact Person: Bill Olson

Invoice to: (If different from above)

Project #: Project Name: Cooper Ranch

Project Location: Jimmy Cooper Ranch Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	Oil	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	NaHSO4	SAMPLING: DATE	TIME
141112	000221750 (West Well)	2	40ml	X							X		X	2/21/00	1750
	000221750 (West Well)	2	1 liter	X							X			2/21/00	1750
	000221750 (West Well)	1	16 oz	X						X	X			2/21/00	1750
	000221750 (West Well)	1	1 liter	X							X			2/21/00	1750
141113	000222030 (House Well)	2	40ml					X			X			2/22/00	0830

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC-MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	WQCC metals (OCD contact #23)	Cations/anions (OCD contact #24)	Hg by 1631 (OCD contact #20)	product fingerprint	Turn Around Time if different from standard	Hold
										2	2				1	1	1	2		

Relinquished by: Bill Olson Date: 2/22/00 Time: 1455

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received at Laboratory by: Vicki Wmelle Date: 2-23-00 Time: 9:00

LAB USE ONLY

Intact (Y) / N

Headspace Y / (N)

Temp 4° °

Log-in Review gm 3/6

REMARKS:

Carrier # FedEx 8186-6617-4097

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

TraceAnalysis, Inc.
General Terms and Conditions

Article 1: General

1.1 The words "we", "us", and "our" refer to TraceAnalysis. You will deliver samples to us for analysis, accompanied, or preceded by a signed Chain of Custody/Analysis Request defining the scope and timing of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

Article 2: Our General Responsibilities

2.1 We agree to provide the professional services described in this agreement. We will provide you with written reports containing analytical results. In performing our service, we will use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of our profession practicing in the same locality.

2.2 Test and observations will be conducted using test procedures and laboratory protocols as specified in accepted Chain of Custody/Analysis Request. If you direct a manner of making tests that varies from our standard or recommended procedures, you agree to hold us harmless from all claims, damages, and expenses arising out of your direction.

2.3 We will not release information regarding our services for you or any information that we receive from you, except for information that is in the public domain and except as we are required by law.

Article 3: Your General Responsibilities

3.1 On each Chain of Custody/Analysis Request you will designate a representative who has authority to transmit instructions, receive information, and make decisions relative to our work.

3.2 You will respond in a reasonable time to our request for decisions, authorization for changes, additional compensation, or schedule extensions.

3.3 For each Chain of Custody/Analysis Request you will either provide us with the exact methods for analysis of each fraction or you will identify the regulations and agency under which or for which the analysis are to be prepared. If permits, consent orders, work plans, quality assurance plans, or correspondence with regulatory agencies address laboratory requirements, you will provide us with copies of the relevant provisions prior to our initiation of the analyses.

Article 4: Reports and Records

4.1 We will furnish copies of each report to you as specified in the Chain of Custody and Analysis Request. We will retain analytical data for seven years and financial data for three years relating to the services performed following transmittal of our final report.

4.2 If you do not pay for our services as agreed, you agree that we may retain all reports and work not yet delivered to you. You also agree that our work will not be used by you for any purpose unless paid for.

Article 5: Delivery and Acceptance of Samples

5.1 Until we accept delivery of samples by notation on chain of custody documents or otherwise in writing accept the samples, you are responsible for loss of or damage to samples. Until so accepted, we have no responsibility as to samples.

5.2 As to any samples that are suspected of containing hazardous substances or radioactive material, such that it will make special handling required, you will specify the suspected or known substances and level and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of containing hazardous substances.

5.3 Samples accepted by us remain your property while in our custody. We will retain samples for a period of 14 days following the date of submission of our report. We will extend the retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept them.

5.4 Regardless of a prior acceptance, we may refuse acceptance or revoke acceptance of samples if we determine that the samples present a risk to health, safety, or the environment, or that we are not authorized to accept them. If we revoke acceptance of any sample, you will have it removed from our facilities promptly.

Article 6: Changes in Work Orders

6.1 No persons other than the designated representatives for each Chain of Custody/Analysis Request are authorized to act regarding changes to a Chain of Custody/Analysis Request. We will notify you promptly if we identify any activity that we regard as a change to the terms and conditions of a Chain of Custody/Analysis Request. Our notice will include the date, nature, circumstance, and cause of the activity regarded as a change. We will specify the particular elements of project performance for which we may seek an equitable adjustment.

6.2 You will respond to the notice provided for in paragraph 6.1 promptly. Changes may be made to a Chain of Custody/Analysis Request through issuance of an amendment. The amendment will specify the reason for the change and, as appropriate, include any modified budgets, schedules, scope of work, and other necessary provisions.

6.3 Until agreement is reached concerning the proposed change, we may regard the situation as a suspension directed by you.

Article 7: Compensation

7.1 Our pricing for the work is predicated upon your acceptance of the conditions and allocations of risks and responsibilities described in this agreement. You agree to pay for services as stated in our proposal and accepted by you or according to our then current standard pricing documents if there is no other written agreement as to price. An estimate or statement of probable cost is not a firm figure unless stated as such.

7.2 Unless otherwise agreed to elsewhere, you agree to pay invoices within 30 days of receipt unless, within 15 days from receipt of the invoice, you notify us in writing of a particular item that is alleged to be incorrect. You agree to pay the uncontested portions of the invoices within 30 days of receipt. You agree to pay interest on unpaid balances beginning 60 days after receipt of invoice at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law.

7.3 If you direct us to invoice another, we will do so, but you agree to be ultimately responsible for our compensation until you provide us with that third party's written acceptance of all terms of our agreement and until we agree to the substitution.

7.4 You agree to compensate us for our services and expenses if we are required to respond to legal process related to our services for you. Compensable services include hourly charges for all personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, the preparation of the testifier, and appearances related to the legal process.

7.5 If we are delayed by, or the period of performance is materially extended because of, factors beyond our control, or if project condition or the scope or amount of work change, or if the standards or methods of testing change, we will give you timely notice of the change and we will receive an equitable adjustment of our compensation.

Article 8: Risk Allocation, Liability, and Damages

8.1 Neither we nor you will be liable to the other for special, incidental, consequential or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the cost of capital.

8.2 We will not be liable to you for damages unless suit is commenced within two years of injury or loss or within two years of the date of the completion of our services, whichever is earlier. In no event will we be liable to you unless you have notified us of the discovery of the negligent act, error, omission or breach within 30 days of the date of its discovery and unless you have given us an opportunity to investigate and to recommend ways of mitigating your damages.

8.3 In the event you fail to pay us within 60 days following the invoice date, we may consider the default a total breach of our agreement and we may, at our option, terminate all of our duties without liability to you or to others.

8.4 If a claim is made by a third party that we did not complete an acceptable analysis, at your request will seek further review and acceptance of the completed work by the third party and use your best efforts to obtain third party acceptance. We will assist you as directed.

8.5 You and we agree that disputes will be submitted to "Alternative Dispute Resolution" (ADR) as a condition precedent to litigation and other remedies provided by law. Each of us agrees to exercise good faith efforts to resolve disputes through negotiation unless we both agree upon another ADR procedure. All disputes will be governed by the law of the place where our services are rendered, or if our services are rendered in more than one state, you and we agree that the law of the place that services were first rendered will govern.

8.6 In the event either makes a claim against the other as to issues out of the performance of this agreement, the prevailing party will be entitled to recover its reasonable expenses of litigation, including reasonable attorney's fees. If we bring lawsuit against you to collect our invoiced fees and expenses, you agree to pay our reasonable collection expenses including attorney fees.

Article 9: Indemnities

9.1 We will indemnify and hold you harmless from and against demands, damages, and expenses caused by our negligent acts and omissions and breach of contract and by the negligent acts and omissions and breach of contract of [illegible] by us. You will indemnify and hold us harmless from and against demands, damages, and expenses caused by your negligent act and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom you are legally responsible. These indemnities are subject to specific limitations provided for in this agreement.

Article 10: Miscellaneous Provisions

10.1 This agreement constitutes the entire agreement between you and us, and it supersedes all prior agreements. Any term, condition, prior course of dealing, course of performance, usage of trade, understanding, purchase order conditions, or other agreement purporting to modify, vary, supplement or explain any provision of this agreement is of no effect until placed in writing and signed by both parties subsequent to the date of this agreement. In no event will pre-printed terms or conditions stated in a purchase or work order, other than an agreed upon Chain of Custody/Analysis Request, be considered a part of this agreement, even if the document is signed by both of us.

10.2 Neither party will assign this agreement without the express written approval of the other, but we may subcontract laboratory procedures with your approval as we deem necessary to meet our obligations to you.

10.3 If any of the provisions of this agreement are held to be invalid or unenforceable in any respect, the remaining terms will be in full effect and the agreement will be construed as if the invalid or unenforceable matters were never included in it. No waiver of any default will be waiver of any future default.

10.4 Neither you or we will have any liability for nonperformance caused in whole or in part by causes beyond our reasonable control. Such causes include but are not limited to Acts of God, civil unrest and war, labor unrest and strikes, equipment failures, matrix interference, acts of authorities, and failures of subcontractors that could not be reasonably anticipated.

10.5 You may stop our work by giving a written suspension or termination directive, but once work has been suspended, we need not resume work until we agree to change in scope, schedule, and compensation. Upon suspension or termination, we will use reasonable care to preserve samples provided that you agree to compensate us for any additional effort, but we will have no responsibility for meeting holding time limitations after the effective time of a suspension or termination directive. We will be compensated for service rendered and expenses incurred prior to termination that cannot reasonably be avoided.

E C D

RECEIVED

MAR 28 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RESULTS OF WATER SAMPLES
JIMMY COOPER JR. PROPERY

On February 21, 2000, two water samples were take from the ranch of Mr. Jimmy Cooper Jr. by Mr. Eddie Seay of Eddie Seay Consulting. One sample was taken from the house water well and another from the West Water Well near the house. The samples were split with the New Mexico Oil Conservation Division.

Due to a thick layer of oil on the water sample taken from the house, the sample was only analyze for anion and cations. The sample from the West Water Well was analyzed for BTEX (benzene, toluene, ethylbenzene and total xylenes), TPH (total petroleum hydrocarbons) and cations and anions.

The analytical results indicate that both water wells have been impacted by petroleum hydrocarbons. A review of the inorganic constituents reveal low levels of both chloride and bromide anions. Considering the amount of oil present in the house well sample and the rather low level of key anions, it is apparent that the samples have been impacted from a non-production source.

The analytical results are enclosed.

Greg Bybee
ECD Environmental

Hall Environmental
Analysis Laboratory

March 14, 2000

Hall Environmental Analysis Laboratory
4901 Hawkins NE, Ste. A
Albuquerque, NM 87109

ECD Environmental
P. O. Box 9328
Albuquerque, NM 87119

Dear Mr. Bybee:

Enclosed are the results for the analyses that were requested. These were analyzed according to EPA procedures or equivalent.

Detection limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Nancy McDuffie
Assistant Laboratory Manager

Project: 0002121/Jim Cooper J Ranch

Hall Environmental Analysis Laboratory

Client:	ECD Environmental	**Date Collected:**	2/21/00
Project:	Jim Cooper J Ranch	**Date Received:**	2/24/00
Project Manager:	Greg Bybee	**Sample Matrix:**	Aqueous
Project Number:	-	**Extraction Date:**	NA

EPA Method - 8021

Units: PPB (ug/L)

HEAL LAB ID	Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	BFB % Recovery	Dilution Factor	Date Analyzed
0002121-1	JCJW-1	ND	ND	ND	ND	96	1	2/25/00
0002121-3	Trip Blank	ND	ND	ND	ND	97	1	2/25/00
Reag. Blk:	-	ND	ND	ND	ND	98	1	2/25/00

MRL	0.5	0.5	0.5	0.5

Hall Environmental Analysis Laboratory

Client:	ECD Environmental	**Date Collected:**	2/18/00
Project:	Jim Cooper J Ranch	**Date Received:**	2/18/00
Project Manager:	Greg Bybee	**Sample Matrix:**	Aqueous
Project Number:	-	**Date Extracted:**	NA

8021 QC: 0002102-2 MS/MSD

Compound	Sample Amount (ug/L)	Spike	Recovery	% Rec	Dup	% Dup	RPD
Benzene	<0.5	20.0	19.9	98	19.5	98	2
Toluene	<0.5	20.0	20.3	97	20.0	100	1
Ethylbenzene	<0.5	20.0	19.9	99	19.6	98	2
Total Xylenes	<0.5	60.0	60.7	103	60.6	101	0

Hall Environmental Analysis Laboratory

Client: ECD Environmental
Project: Jim Cooper J Ranch
Project Manager: Greg Bybee
Project Number: -

Date Collected: 2/21,22/00
Date Received: 2/24/00
Sample Matrix: Aqueous

Inorganic Compounds

HEAL LAB ID	Sample ID	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite/Nitrate (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	o-Phosphate-P (mg/L)
0002121-1	JCJW-1	1.0	97	0.6	ND	-	26	*ND
0002121-2	JCJ House Well	1.0	174	0.9	-	*<0.5	18	*<2.5
0002121-1 Dup	Duplicate	-	-	-	-	-	-	-
Detection Limits		0.1	0.1	0.1	0.5	0.1	0.5	0.5
Method		300.0	300.0	300.0	300.0	300.0	300.0	300.0
Date Analyzed		3/1/00	3/2/00	3/1/00	3/1/00	3/1/00	3/1/00	3/1/00

*Received out of holding time

Hall Environmental Analysis Laboratory

Client:	ECD Environmental	**Date Collected:**	2/21/00
Project:	Jim Cooper J Ranch	**Date Received:**	2/24/00
Project Manager:	Greg Bybee	**Sample Matrix:**	Aqueous
Project Number:	-	**Extraction Date:**	2/25/00

EPA Method - 418.1

HEAL ID	Client ID	Dilution	TPH (mg/L)	Analysis Date
0002121-1	JCJW-1	1	1.1	2/25/00
Extraction Blank	-	1	ND	2/25/00

MRL	1.0

QA/QC

Sample ID:	Sample Amount	Spike	Recovery	% Recovery
Blank Spike 2/25	<1.0	5.0	4.3	86

Sample ID:	Sample Amount	Duplicate	RPD
Blank Duplicate 2/25	<1.0	<1.0	NA

CHAIN-OF-CUSTODY RECORD

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite A
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: ECD Environmental	Project Name: Jim Cooper So. Ranch
Address: P.O. Box 9328 Alb. New Mexico 87119	Project #:
	Project Manager: E. Seay
Phone #:	Sampler: ES
Fax #:	Samples Cold?: ☒ Yes ☐ No

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative: $HgCl_2$	Preservative: HCl		HEAL No.
2/21	6pm	H_2O	JCSW 1					0002121-1
2/22	8:30a	H_2O	JCJ Hayswell					-2
			Trip Blank					-3

ANALYSIS REQUEST

BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B MOD (Gas/Diesel)	TPH (Method 418.1)	Volatiles Full List (8021)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)	BC		Air Bubbles or Headspace (Y or N)
X			X						X	X				X		
									X	X				X		

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
2/24/00			Jeff Bruce 2/24
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com

LABORATORY ANALYSIS REPORT

Hall Environmental Laboratory
Nancy McDuffie
4901 Hawkins NE
Suite A
Albuquerque, NM 87109

Project ID: JIM COOPER JR. RANCH, PROJ. #0002121
Sample ID: JCJ W. WATER WELL
Laboratory ID: 00-51557-1
Sample Matrix: Water
Sample Date: 21-Feb-00 1800
Received at lab: 01-Mar-00 **Reported:** 07-Mar-00

	Results	Units	Qual	Reporting Limit	Regulatory Limit	Method	Analyzed	
Calcium	56	mg/l		1		EPA 200.7	03-Mar-00 1505	RLH
Magnesium	14	mg/l		1		EPA 200.7	03-Mar-00 1505	RLH
Potassium	3	mg/l		1		EPA 200.7	03-Mar-00 1505	RLH
Sodium	56	mg/l		1		EPA 200.7	03-Mar-00 1505	RLH

ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com

LABORATORY ANALYSIS REPORT

Hall Environmental Laboratory	**Project ID:**	**JIM COOPER JR. RANCH, PROJ. #0002121**	
Nancy McDuffie	**Sample ID:**	**JCJ HOME WELL**	
4901 Hawkins NE	**Laboratory ID:**	**00-51557-2**	
Suite A	**Sample Matrix:**	**Water**	
Albuquerque, NM 87109	**Sample Date:**	**21-Feb-00 0830**	
	Received at lab:	**01-Mar-00**	**Reported:** **07-Mar-00**

	Results	Units	Qual	Reporting Limit	Regulatory Limit	Method	Analyzed	
Calcium	137	mg/l		1		EPA 200.7	03-Mar-00 1507	RLH
Magnesium	26	mg/l		1		EPA 200.7	03-Mar-00 1507	RLH
Potassium	3	mg/l		1		EPA 200.7	03-Mar-00 1507	RLH
Sodium	93	mg/l		1		EPA 200.7	03-Mar-00 1507	RLH

Lab Nos. 00-51557-1-2

QUALITY ASSURANCE DATA PACKAGE

This report includes the results of quality assurance tests performed with the sample analyses. They are performed to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate and precise results.

	Duplicate Analysis -------mg/l (ppm)-------		Spiked Analysis, %	Blank	-----Calibration Verification----- Sample	Acceptance	
Constituents	Original	Duplicate	Recovery	Analysis, mg/l (ppm)	Analysis, mg/l (ppm)	Range, mg/l (ppm)	Date Analyzed
Calcium	7	7	96	<1	49	45-55	03/03/00
Magnesium	3	3	101	<1	49	45-55	03/03/00
Potassium	3	3	101	<1	48	45-55	03/03/00
Sodium	178	176	100	<1	49	45-55	03/03/00

Lab Nos.: 001-00-51557 - 002-00-51557

Date: 01-MAR-00

Received by: Justin McMillan

Logged In by: Justin McMillan

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s) and associated sample custody information on receipt at the laboratory.

Chain of Custody Form Completed & Signed	Yes	Comments:
Chain of Custody Seal	No	Comments:
Intact	N/A	Comments:
Signature Match Chain of Custody vs. Seal	N/A	Comments:
Samples Received Cold	N/A	Comments: Received @ 7 C
Samples Received Within Holding Time	Yes	Comments:
Samples Received in Proper Containers	Yes	Comments:
Samples Received Properly Preserved	Yes	Comments:

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis. Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: _____ By: _____ Date/Time: _____

Method of Shipping: FedEx 815509603641

Additional comments: _____

TRACEANALYSIS, INC.

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

ANALYTICAL RESULTS FOR
OCD
Attention: Bill Olson
2040 S. Pacheco
Santa Fe, NM 87505

February 28, 2000
Receiving Date: 02/23/2000
Sample Type: Oil
Project No: NA
Project Location: Jimmy Cooper Ranch

Extraction Date: 02/22/2000
Analysis Date: 02/25/2000
Sampling Date: 02/22/2000
Sample Condition: I & C
Sample Received by: VW
Project Name: Cooper Ranch

TA#: T141113
FIELD CODE: 0002220830 (House Well) FINGERPRINT

Sample has hydrocarbons present across the gasoline and diesel range. Possibly contains heavier oils as well.

CV Avg.: 466
EA: 84
IA: 93
RPD: 5

CHEMIST: MA

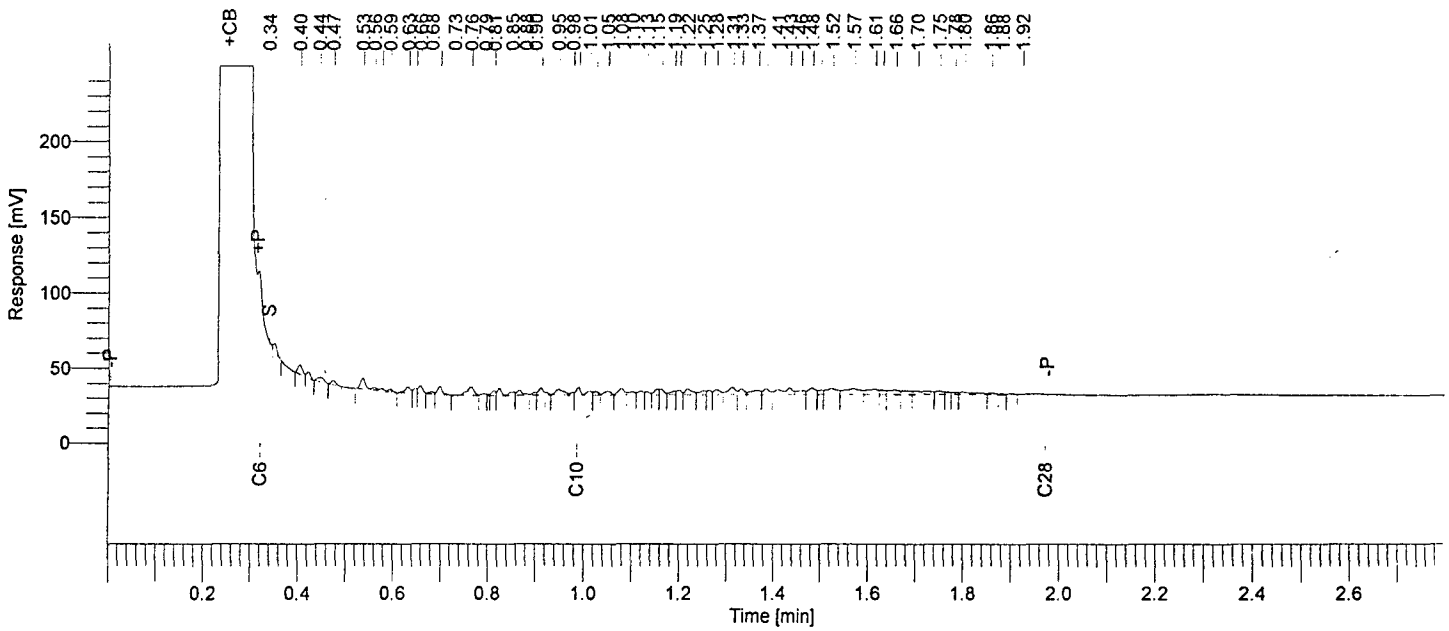
Director, Dr. Blair Leftwich

2-28-00
DATE

Software Version	: 6.1.0.2:G07	Date	: 02/25/00 12:09:21 PM
Operator	: TurboChrom	Sample Name	: 141113
Sample Number	: 069	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/69
Instrument Name	: GC6	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 2.80 min
Sampling Rate	: 25.0000 pts/s		
Volume Injected	: 1.000000 ul	Area Reject	: 0.000000
Sample Amount	: 1.0000	Dilution Factor	: 200.00
Data Acquisition Time	: 02/25/00 03:54:57 AM	Cycle	: 69

Raw Data File : D:\Data\GC6\CC6A069.raw
Result File : D:\Data\GC6\CC6A069.rst
Inst Method : D:\Method\TPHEZ from D:\Data\GC6\CC6A069.rst
Proc Method : D:\Method\TPHEZ.mth
Calib Method : D:\Method\TPHEZ.mth
Sequence File : D:\Sequence\CC6A.seq

141113



TX1005

Analytical Method: TX1005
Reporting Units: mg/L
Matrix: water

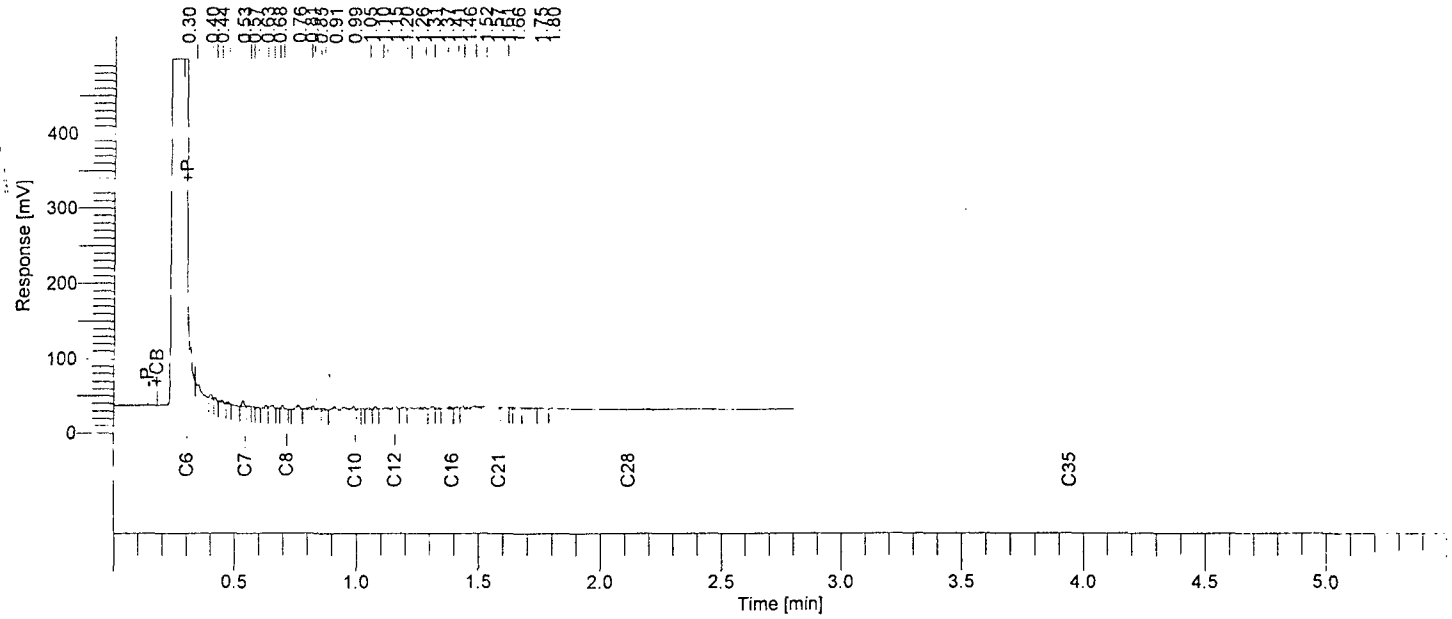
Component Name	Adjusted Amount	Raw Amount	Area [µV·s]
TPH AS GASOLINE	22847.6	114.2	64687.57
TPH AS DIESEL	28924.2	144.6	111060.99
			175748.56

Report stored in ASCII file: D:\Data\GC6\CC6A069.TX0

Software Version	: 6.1.0.2:G07	Date	: 02/25/00 12:13:45 PM
Operator	: TurboChrom	Sample Name	: 141113
Sample Number	: 069	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/69
Instrument Name	: GC6	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 2.80 min
Sampling Rate	: 25.0000 pts/s		
Volume Injected	: 1.000000 ul	Area Reject	: 0.000000
Sample Amount	: 1.0000	Dilution Factor	: 200.00
Data Acquisition Time	: 02/25/00 03:54:57 AM	Cycle	: 69

Raw Data File : T:\Data\GC6\CC6A069.raw
Inst Method : D:\Method\TPHEZ from T:\Data\GC6\CC6A069.raw
Proc Method : D:\Method\TX1006F.mth
Calib Method : D:\Method\TX1006F.mth
Sequence File : D:\Sequence\CC6A.seq

141113



TX1005

Analytical Method: TX1005
Reporting Units: mg/L
Matrix: water

mg/L

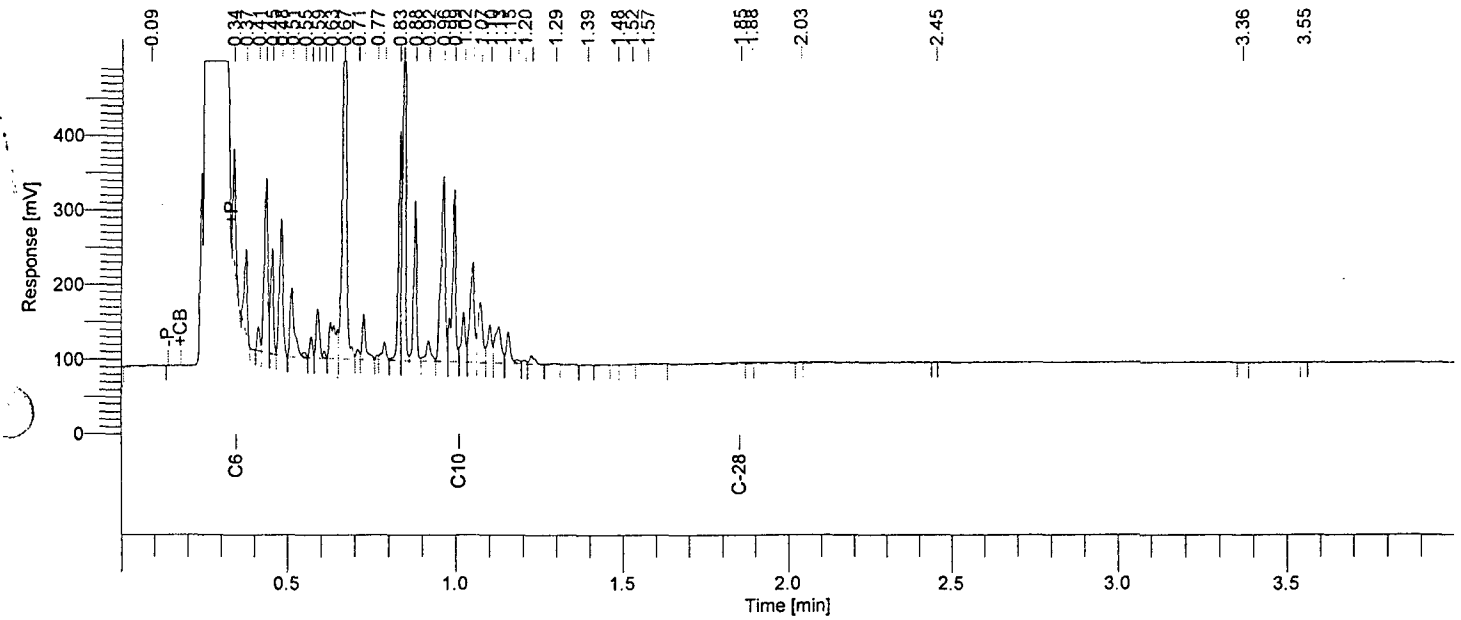
Component Name	Adjusted Amount	Raw Amount	Area [µV·s]
>C6-C7	3781.7	18.9	15978.66
>C6-C8	7713.1	38.6	32589.78
>C7-C8	3931.4	19.7	16611.12
>C8-C10	6563.0	32.8	27730.37
>C10-C12	3526.5	17.6	14900.17
>C12-C16	5921.3	29.6	25018.94
>C16-C21	7163.8	35.8	30268.65
C6-C35	45173.8	225.9	136845.78
>C16-C35	8663.8	43.3	36606.51
>C21-C35	1500.0	7.5	6337.87
			342887.84

Report stored in ASCII file: .TX0

Software Version	: 6.1.0.2:G07	Date	: 02/09/99 01:31:47 PM
Operator	: TurboChrom	Sample Name	: Gasoline*100
Sample Number	: 004	Study	: TPH
AutoSampler	: BUILT-IN	Rack/Vial	: 0/4
Instrument Name	: GC6	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 4.00 min
Sampling Rate	: 25.0000 pts/s		
Volume Injected	: 1.000000 ul	Area Reject	: 0.000000
Sample Amount	: 1.0000	Dilution Factor	: 100.00
Data Acquisition Time	: 02/09/99 12:34:33 PM	Cycle	: 4

Raw Data File : T:\Data\GC6\BN6A004.raw
Inst Method : D:\Method\TPHEZ from T:\Data\GC6\BN6A004.raw
Proc Method : T:\Method\TPHEZ.mth
Calib Method : T:\Method\TPHEZ.mth
Sequence File : D:\Sequence\BN6A.seq

Gasoline Standard



TX1005

Analytical Method: TX1005
Reporting Units: mg/L
Matrix: water

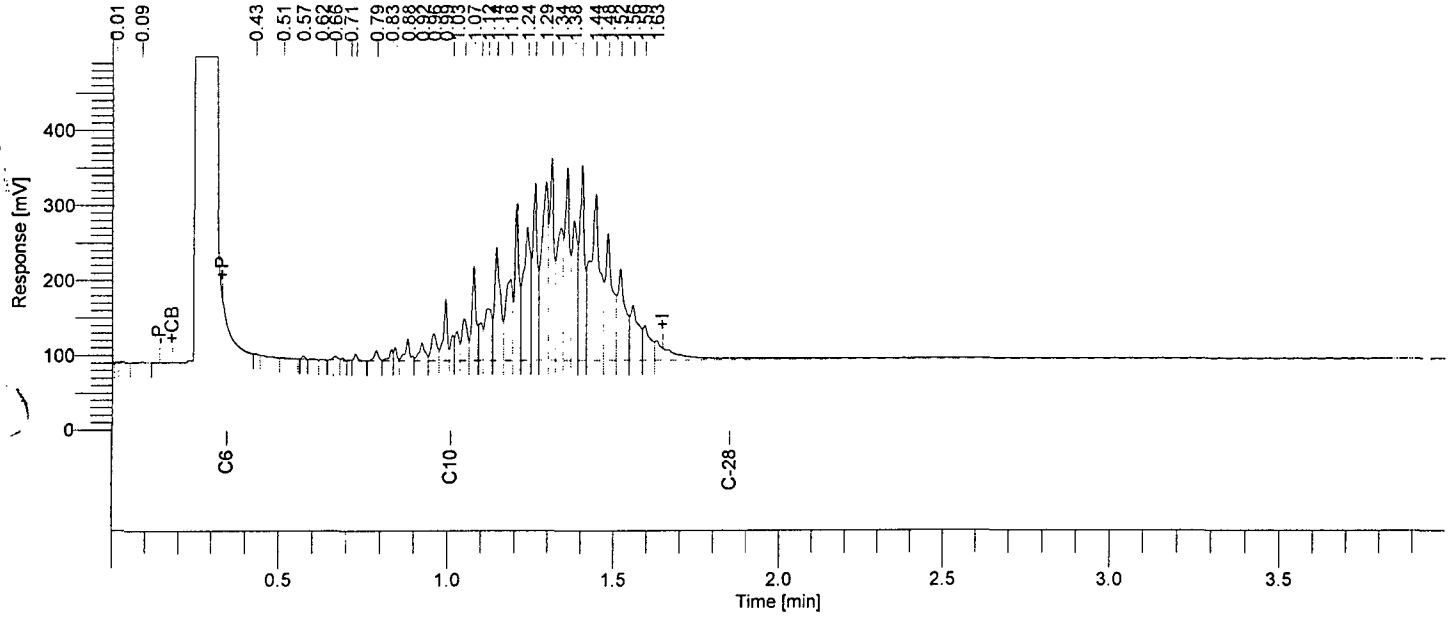
Component Name	Adjusted Amount	Raw Amount	Area [µV·s]
	0.7	0.0	7469.00
C6	8.0	0.1	80386.66
TPH AS GASOLINE	515292.0	5152.9	2330238.71
TPH AS DIESEL	60228.5	602.3	443364.97
	0.3	0.0	2651.41
	0.2	0.0	1628.05
	0.0	0.0	209.85
	0.0	0.0	239.83
	0.0	0.0	203.58
			2866392.07

Report stored in ASCII file: .TX0

Software Version	: 6.1.0.2:G07	Date	: 02/09/99 01:32:35 PM
Operator	: TurboChrom	Sample Name	: Diesel*100
Sample Number	: 005	Study	: TPH
AutoSampler	: BUILT-IN	Rack/Vial	: 0/5
Instrument Name	: GC6	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 4.00 min
Sampling Rate	: 25.0000 pts/s		
Volume Injected	: 1.000000 ul	Area Reject	: 0.000000
Sample Amount	: 1.0000	Dilution Factor	: 100.00
Data Acquisition Time	: 02/09/99 12:45:40 PM	Cycle	: 5

Raw Data File : T:\Data\GC6\BN6A005.raw
Inst Method : D:\Method\TPHEZ from T:\Data\GC6\BN6A005.raw
Proc Method : T:\Method\TPHEZ.mth
Calib Method : T:\Method\TPHEZ.mth
Sequence File : D:\Sequence\BN6A.seq

Diesel Standard



TX1005

Analytical Method: TX1005
Reporting Units: mg/L
Matrix: water

Component Name	Adjusted Amount	Raw Amount	Area [µV·s]
	0.1	0.0	743.15
	0.2	0.0	2463.95
	0.3	0.0	2637.81
TPH AS GASOLINE	48401.0	484.0	212577.14
TPH AS DIESEL	447838.2	4478.4	4269768.32
			4488190.37

Report stored in ASCII file: .TX0

TRACE ANALYSIS, INC.

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Bill To: **OCD**
2040 S. Pacheco
Santa Fe, NM 87505

Attn: **Wayne Price**

Invoice # **41238**

Invoice Date: **Feb 29, 2000**

Order ID: **A00022308**

Project #:	**N/A**
Project Name:	**Cooper Ranch**
Project Location:	**Jimmy Cooper Ranch**

Test	Quantity	Matrix	Description	Price	SubTotal
Cu, Total	1	Water	141112 - 141112	$10.00	$10.00
8270	1	Water	141112 - 141112	$250.00	$250.00
Ag, Total	1	Water	141112 - 141112	$10.00	$10.00
Al, Total	1	Water	141112 - 141112	$10.00	$10.00
Anions/Cations/Gen. Chem.)	1	Water	141112 - 141112	$120.00	$120.00
As, Total	1	Water	141112 - 141112	$10.00	$10.00
B, Total	1	Water	141112 - 141112	$10.00	$10.00
Ba, Total	1	Water	141112 - 141112	$10.00	$10.00
Cd, Total	1	Water	141112 - 141112	$10.00	$10.00
8260	1	Water	141112 - 141112	$120.00	$120.00
Cr, Total	1	Water	141112 - 141112	$10.00	$10.00
Zn, Total	1	Water	141112 - 141112	$10.00	$10.00
Fe, Total	1	Water	141112 - 141112	$10.00	$10.00
Fingerprint	1	Oil	141113 - 141113	$100.00	$100.00
Hg, Total	1	Water	141112 - 141112	$12.00	$12.00
Mn, Total	1	Water	141112 - 141112	$10.00	$10.00
Mo, Total	1	Water	141112 - 141112	$10.00	$10.00
Ni, Total	1	Water	141112 - 141112	$10.00	$10.00
Pb, Total	1	Water	141112 - 141112	$10.00	$10.00
Se, Total	1	Water	141112 - 141112	$10.00	$10.00
Si, Total	1	Water	141112 - 141112	$10.00	$10 00
Co, Total	1	Water	141112 - 141112	$10.00	$10.00

Payment Terms: Net 30 Days

Total $772.00

Director, Dr. Blair Leftwich

APPROVED BY
WAYNE PRICE

HESS

AMERADA HESS CORPORATION
U.S. Exploration and Production
Environmental, Health & Safety
Project Worksheet

Date: 3/19/02

Page: 1

Project: Spill Data (spill looking at Houston files)
E½ Sec 31 W½ Sec 32 1992-date

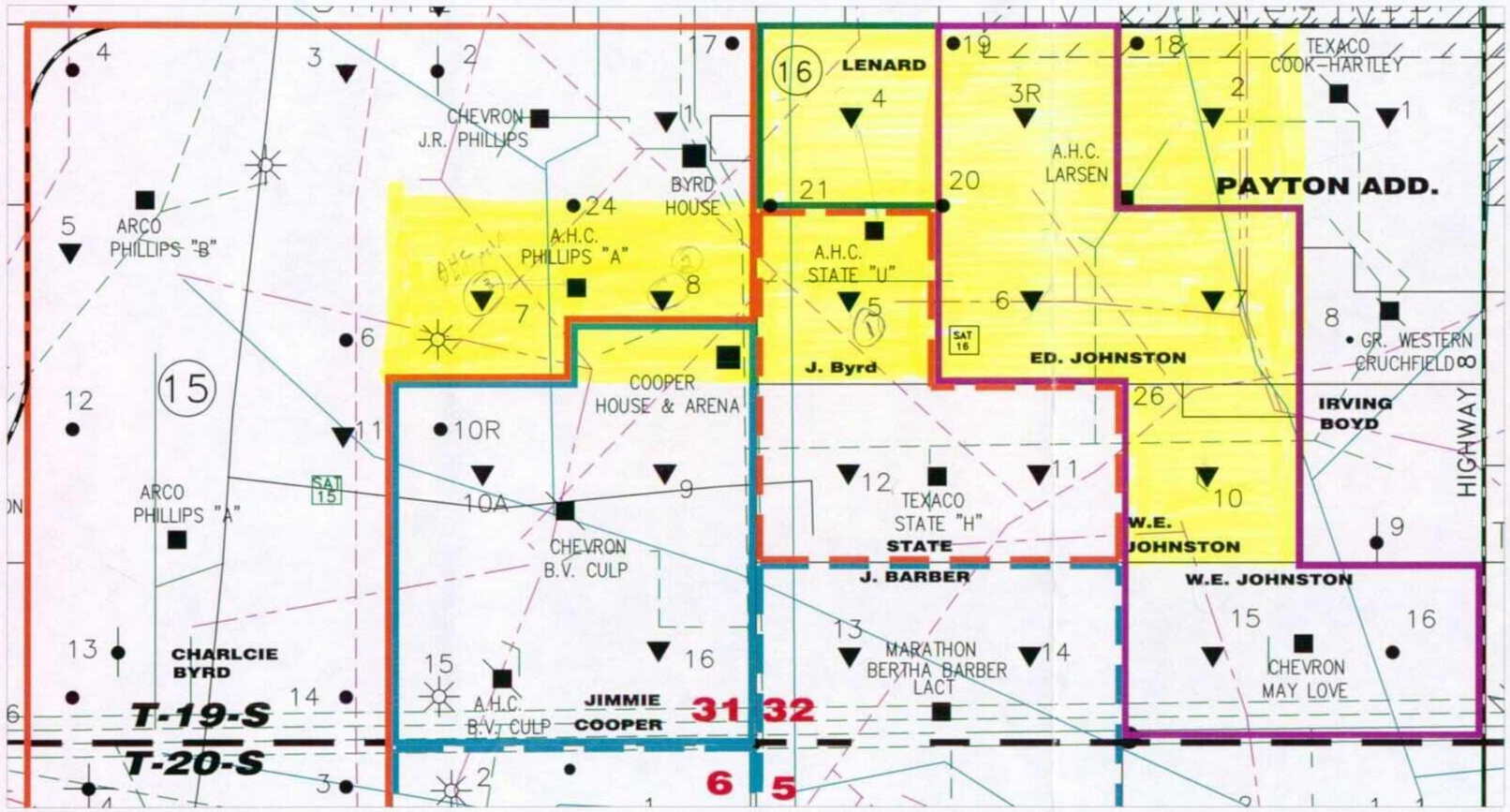
File:

4/7/92	5 BO	at wellhead 1501
3/3/93	1/4 BO	on well pad 1515
6/9/93	10 BO	S. of Batt 65
6/24/93	5 BO	at Battery 61
12/13/95	1/2 BO	300 yds w/ of 1511
1/18/96	3 BO	on location 1510
1/23/96	1 BO	Exact location unknown
2/1/96	3 BO	at wellhead 1510
3/14/96	10 BO	at wellhead 1510
6/30/96	1/2 BO	at Battery 61
1/16/97	1/4 BO	300 ft. SW of 1503 wellhead
7/6/01	4 BO	at wellhead 1612

[illegible] all [illegible]
pre 1992 data for yellow areas only
OCD files Hobbs — not included
in this but available if need BO's.
no records

spill data for this area for 1992 to date

still looking



- WARREN / DYNEGY / VESADO (GAS)
- TEXAS–NEW MEXICO (OIL)
- TEXAS–NEW MEXICO (ABANDONED AND WATER FILLED)
- RICE ENGINERING (SWD)
- ENRON (GAS)
- TRANSWESTERN (ENRON) – (GAS)
- LLANO (GAS)
- TEXACO
- ARCO (NAVAJO) – (OIL)

No.	Revision	By	Date
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Drawn By:	S. Stanfield
Date:	1-22-2002
Scale:	NONE
Engineer/ Originator	R. WILLIAMS
AFE No.	
Proj. No.	
Approved By:	
Drawing File:	MONMAP-2.DWG
File Location:	D:\MONUMENT\ LEGAL

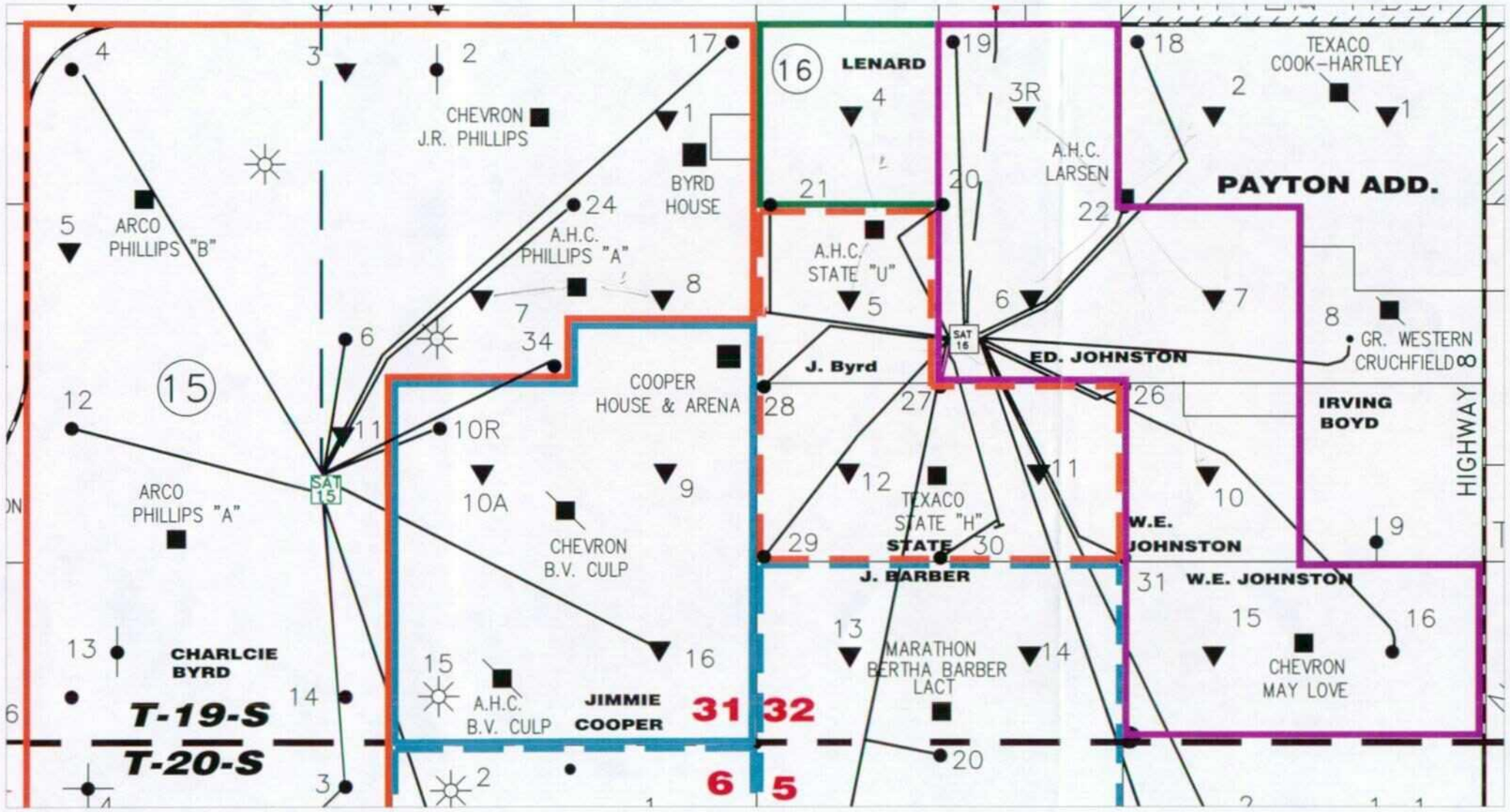
OTHERS PIPELINES

HESS

AMERADA HESS CORPORATION
PERMIAN BUSINESS UNIT

NORTH MONUMENT GRAYBURG SAN ANDRES UNIT

rec'd 3/19/02



1995 - 1996 AHC lines installed

L old surface lines (gone now)

No.	Revision	By	Date
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			

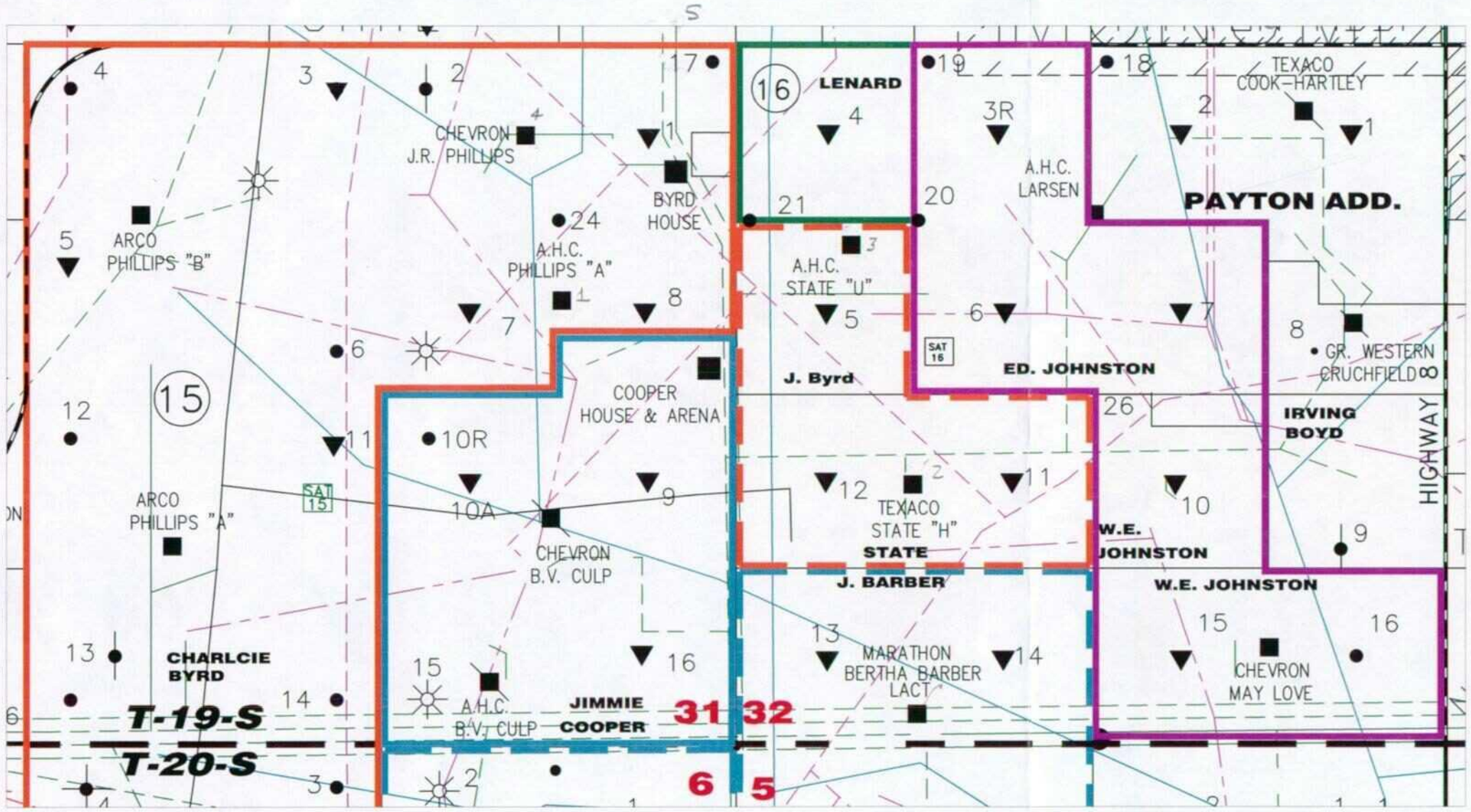
Drawn By:	S. Stanfield
Date:	1-22-2002
Scale:	NONE
Engineer/ Originator	R. WILLIAMS
AFE No.	
Proj. No.	
Approved By:	
Drawing File:	MONMAP-2.DWG
File Location:	D:\MONUMENT\ LEGAL

AHC PIPELINES

HESS AMERADA HESS CORPORATION
PERMIAN BUSINESS UNIT

NORTH MONUMENT GRAYBURG SAN ANDRES UNIT

rec'd 3/19/02



NOT AAC

- WARREN / DYNEGY / VESADO (GAS)
- TEXAS–NEW MEXICO (OIL)
- TEXAS–NEW MEXICO (ABANDONED AND WATER FILLED)
- RICE ENGINERING (SWD)
- ENRON (GAS)
- TRANSWESTERN (ENRON) – (GAS)
- LLANO (GAS)
- TEXACO
- ARCO (NAVAJO) – (OIL)

Rx – no GW last 2-3 yrs

1 18-12A red bed
2 3A caliche sand
3 no GW
4 no GW
5 RL Bridges – EOTT

No.	Revision	By	Date
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Drawn By:	S. Stanfield
Date:	1-22-2002
Scale:	NONE
Engineer/ Originator:	R. WILLIAMS
AFE No.	
Proj. No.	
Approved By:	
Drawing File:	MONMAP-2.DWG
File Location:	D:\MONUMENT\ LEGAL

OTHERS PIPELINES

HESS

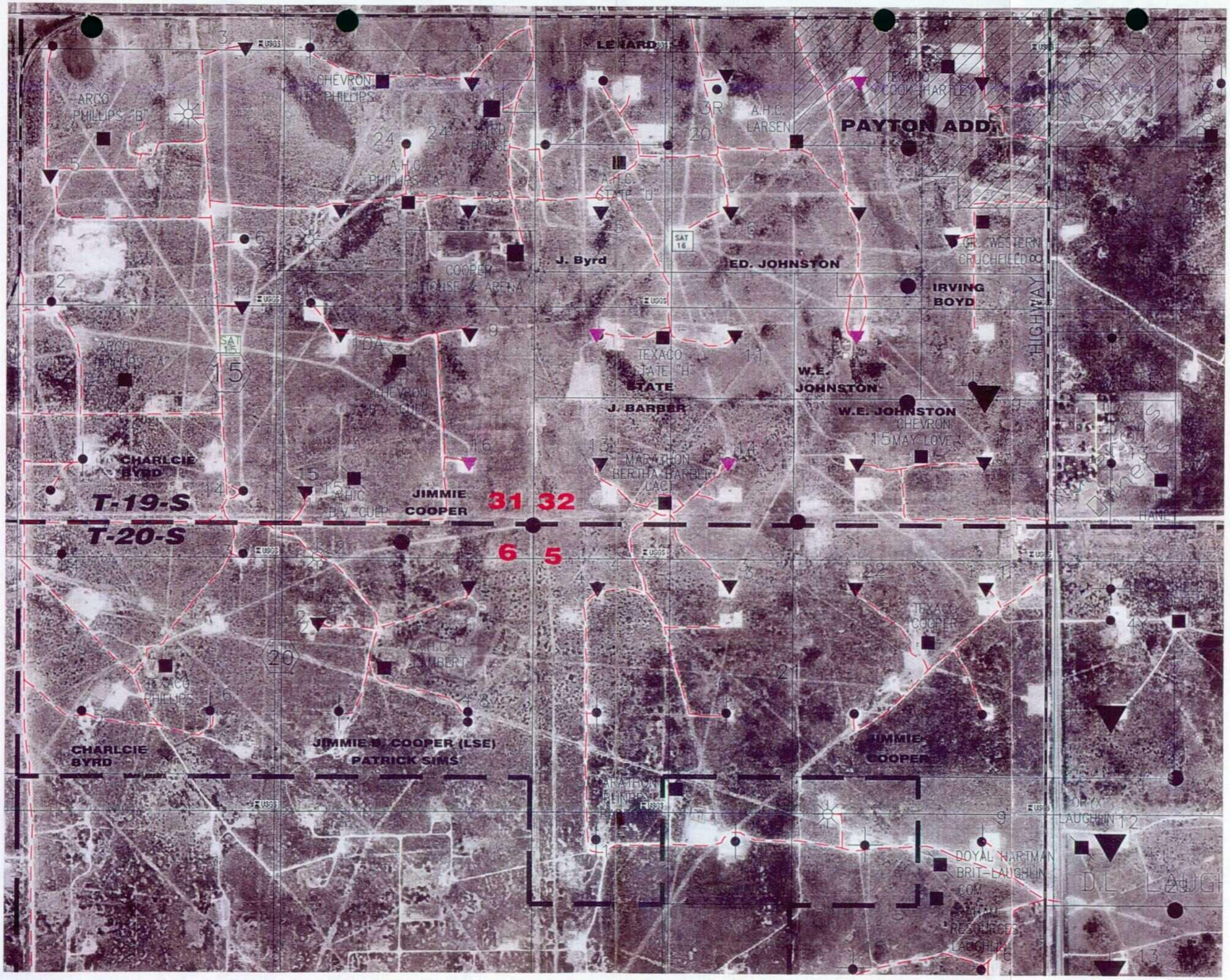
AMERADA HESS CORPORATION
PERMIAN BUSINESS UNIT

NORTH MONUMENT GRAYBURG SAN ANDRES UNIT

rcvd 3/19/02

rec'd
3/19/02

1997+



TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

PLEASE DELIVER THIS FAX:

TO: BECKY JOHNSTON

FROM: RANDY BAYLISS

DATE: 5/30/02

PAGES: 7 (INCL COVER)

SUBJECT: LAB RESULTS

GW/PSIV INFO

IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE NUMBER ABOVE.

P. 01

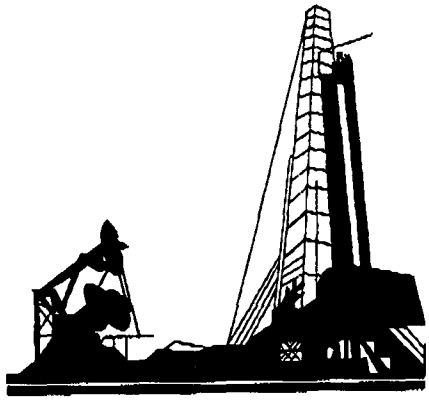
TRANSACTION REPORT

MAY-30-2002 THU 11:07 AM

FOR:

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
MAY-30	11:05 AM	915052434408	1'39"	7	SEND	OK	027	

TOTAL : 1M 39S PAGES: 7



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PLEASE DELIVER THIS FAX:

TO: BECKY JOHNSTON

FROM: RANDY BAYLISS

5-30-02