1R - 43

REPORTS

DATE:

1996

State of New Mexico
ENVIRONMENT DEPARTMENT
Ground Water Protection and Remediation Bureau
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-2918 phone
(505) 827-2965 fax

GARY E. JOHNSON
GOVERNOR

MARK E. WEIDLER
SECRETARY

EDGAR T. THORNTON, III
DEPUTY SECRETARY

November 8, 1996

Mr. Thomas Stenbeck
Baker Oil Tools
P.O. Box 40129
9100 Emmott Rd.
Houston, TX 77240-0129

RE: Ground Water Analyses at Hobbs Facility

Dear Mr. Stenbeck:

Enclosed you will find copies of the laboratory analyses of the ground water samples collected from the monitor wells at Baker Oil Tools' Hobbs facility. I apologize for delay, but our lab only recently sent me the last of the results. You might note the elevated levels of polycyclic aromatic hydrocarbons in well R-1. Copies of these analyses have been forwarded to Bill Olson with the Oil Conservation Division.

Thank you very much for your cooperation. If you should have any questions, please call me at 505-827-0178.

Sincerely,

Robert Pine
Hydrologist
Assessment & Abatement Section

Enclosures: Lab Analyses

STATE OF NEW MEXICO
DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700
Albuquerque, NM 87196-4700
700 Camino de Salud, NE
[505] 841-2500
ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602620
REQUEST ID No.: 154587
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-1
0 Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602620
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154587

SAMPLE PRESERVATION: Sample Temperature when received: 18 Degrees C.; pH = 4

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

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91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*		U	1.0
N/A	p- & m-Xylene*		U	1.0
N/A	*Total Xylenes*	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (PhotoIonization Detector Surrogate)	23.85	95.4%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	26.58	106.3%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile

QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO — DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602625

REQUEST ID No.: 154592
RECEIVED AT SLD: 7/31/96
☐SLD COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil MW-1
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 910

ANALYSIS No.: OR- 9602625
SLD BATCH No.: 405
DILUTION FACTOR: 1.10
REQUEST ID No.: 154592

SAMPLE PRESERVATION: Sample Temperature when received: 21 Degrees C.; pH = 7
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	1.02
208-96-8	Acenaphthylene		U	0.96
120-12-7	Anthracene		U	0.40
103-33-3	Azobenzene		U	1.10
92-87-5	Benzidine		U	1.10
56-55-3	Benzo(a)anthracene		U	0.13
205-99-2	Benzo(b)fluoranthene		U	0.36
207-08-9	Benzo(k)fluoroanthene		U	0.36
191-24-2	Benzo(g,h,i)perylene		U	1.09
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.76
111-44-4	Bis(2-chloroethyl)ether		U	0.43
108-60-1	Bis(2-chloroisopropyl)ether		U	0.49
117-81-7	Bis(2-ethylhexyl)phthalate	4		0.36
101-55-3	4-Bromophenylphenyl ether		U	0.53
85-68-7	Butylbenzyl phthalate		U	0.69
106-47-8	4-Chloroaniline		U	0.63
91-58-7	2-Chloronaphthalene		U	0.56
7005-72-3	4-Chlorophenylphenyl ether		U	0.46
218-01-9	Chrysene		U	0.26
53-70-3	Dibenz(a,h)anthracene		U	10.99
132-64-9	Dibenzofuran		U	0.79
84-74-2	Di-n-butyl phthalate		U	0.53
95-50-1	1,2-Dichlorobenzene		U	0.16
541-73-1	1,3-Dichlorobenzene		U	0.26
106-46-7	1,4-Dichlorobenzene		U	0.36
91-94-1	3,3'-Dichlorobenzidine		U	0.20

84-66-2	Diethylphthalate		U	0.86
131-11-3	Dimethylphthalate		U	0.53
121-14-2	2,4-Dinitrotoluene		U	0.49
606-20-2	2,6-Dinitrotoluene		U	0.43
117-84-0	Di-n-octyl phthalate		U	0.33
206-44-0	Fluoranthene		U	0.82
86-73-7	Fluorene		U	0.82
118-74-1	Hexachlorobenzene		U	0.82
87-68-3	Hexachlorobutadiene		U	0.33
77-47-4	Hexachlorocyclopentadiene		U	10.99
67-72-1	Hexachloroethane		U	0.33
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.99
78-59-1	Isophorone		U	0.99
91-57-6	2-Methylnaphthalene		U	1.09
91-20-3	Naphthalene		U	0.69
88-74-4	2-Nitroaniline		U	0.56
99-09-2	3-Nitroaniline		U	0.36
100-01-6	4-Nitroaniline		U	0.56
98-95-3	Nitrobenzene		U	0.45
86-30-6	N-nitrosodiphenylamine		U	0.53
62-75-9	N-nitrosodimethylamine		U	0.53
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.26
129-00-0	Pyrene		U	0.36
120-82-1	1,2,4-Trichlorobenzene		U	0.33

QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
Surrogate compounds are added to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	29.0	58%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	27.0	54%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	40.0	80%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Tim Chapman QC APPROVED BY: Roberta Hine

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quantitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de S[illegible], NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602621
REQUEST ID No.: 154588
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-2
0 Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602621
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154588

SAMPLE PRESERVATION: Sample Temperature when received: 18 Degrees C.; pH = 4

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

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91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*		U	1.0
N/A	p- & m-Xylene*		U	1.0
N/A	*Total Xylenes*	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: Acetone was observed in this sample at 35 ppb.

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photolonization Detector Surrogate)	24.14	96.6%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	26.18	104.7%

LABORATORY FORTIFIED BLANK RECOVERIES: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS: No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bureau
PO Box 26111
Santa Fe, NM 87502

SLD No.: OR- 9602626

REQUEST ID No.: 154593
RECEIVED AT SLD: 7/31/96
☐SLD COPY USER: 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil MW-2
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 900

ANALYSIS No.: OR- 9602626
SLD BATCH No.: 405
DILUTION FACTOR: 1.11
REQUEST ID No.: 154593

SAMPLE PRESERVATION: Sample Temperature when received: 23 Degrees C.; pH = 7
NOT COMPOSITED
EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL
83-32-9	Acenaphthene		U	1.03
208-96-8	Acenaphthylene		U	0.97
120-12-7	Anthracene		U	0.40
103-33-3	Azobenzene		U	1.11
92-87-5	Benzidine		U	1.11
56-55-3	Benzo(a)anthracene		U	0.13
205-99-2	Benzo(b)fluoranthene		U	0.37
207-08-9	Benzo(k)fluoroanthene		U	0.37
191-24-2	Benzo(g,h,i)perylene		U	1.10
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.77
111-44-4	Bis(2-chloroethyl)ether		U	0.43
108-60-1	Bis(2-chloroisopropyl)ether		U	0.50
117-81-7	Bis(2-ethylhexyl)phthalate	3		0.37
101-55-3	4-Bromophenylphenyl ether		U	0.53
85-68-7	Butylbenzyl phthalate		U	0.70
106-47-8	4-Chloroaniline		U	0.63
91-58-7	2-Chloronaphthalene		U	0.57
7005-72-3	4-Chlorophenylphenyl ether		U	0.47
218-01-9	Chrysene		U	0.27
53-70-3	Dibenz(a,h)anthracene		U	11.11
132-64-9	Dibenzofuran		U	0.80
84-74-2	Di-n-butyl phthalate		U	0.53
95-50-1	1,2-Dichlorobenzene		U	0.17
541-73-1	1,3-Dichlorobenzene		U	0.27
106-46-7	1,4-Dichlorobenzene		U	0.37
91-94-1	3,3'-Dichlorobenzidine		U	0.20

84-66-2	Diethylphthalate		U	0.87
131-11-3	Dimethylphthalate		U	0.53
121-14-2	2,4-Dinitrotoluene		U	0.50
606-20-2	2,6-Dinitrotoluene		U	0.43
117-84-0	Di-n-octyl phthalate		U	0.33
206-44-0	Fluoranthene		U	0.83
86-73-7	Fluorene		U	0.83
118-74-1	Hexachlorobenzene		U	0.83
87-68-3	Hexachlorobutadiene		U	0.33
77-47-4	Hexachlorocyclopentadiene		U	11.11
67-72-1	Hexachloroethane		U	0.33
193-39-5	Indeno(1,2,3-cd)pyrene		U	11.11
78-59-1	Isophorone		U	1.00
91-57-6	2-Methylnaphthalene		U	1.10
91-20-3	Naphthalene		U	0.70
88-74-4	2-Nitroaniline		U	0.57
99-09-2	3-Nitroaniline		U	0.37
100-01-6	4-Nitroaniline		U	0.57
98-95-3	Nitrobenzene		U	0.46
86-30-6	N-nitrosodiphenylamine		U	0.53
62-75-9	N-nitrosodimethylamine		U	0.53
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.27
129-00-0	Pyrene		U	0.37
120-82-1	1,2,4-Trichlorobenzene		U	0.33

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	31.0	62%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	29.3	59%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	65.7	131%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Tim Chapman QC APPROVED BY: Roberta Hine

DEFINITIONS

**	**Concentration Exceeds EPA's allowable Maximum Contamination Level**
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO — DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700
Albuquerque, NM 87196-4700
700 Camino de Salud, NE
[505] 841-2500
ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602622
REQUEST ID No.: 154589
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

OCT 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-3
Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602622
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154589

SAMPLE PRESERVATION: Sample Temperature when received: 17 Degrees C.; pH = 3

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0
91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0

79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	1.0
108-88-3	Toluene		U	10.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*		U	1.0
N/A	p- & m-Xylene*		U	1.0
N/A	*Total Xylenes*	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: Acetone was observed in this sample at 22 ppb. There were 28 compounds observed at approximately 1-10 ppb on the photoionization detector, but not identified.

The Following Compound(s) Were Tentatively (by Library Match of Mass Spectrum) Identified by GC/MS Sample Reanalysis

CAS #	Tentatively Identified Compound Name	GC/MS Match %	R.T.	Approx. Conc.	
611-14-3	1-Ethyl-2-Methyl-Benzene	97.9%	31.82	50.00	ug/L
2870-04-4	2-Ethyl-1,3-Dimethyl-Benzene	98.0%	37.12	5.00	ug/L
27133-93-3	2,3-Dihydro-1-Methyl-Indene	98.2%	37.54	5.00	ug/L
488-23-3	1,2,3,4-Tetramethyl-Benzene	99.2%	38.8	5.00	ug/L

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photoionization Detector Surrogate)	26.18	104.7%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	28.34	113.4%

LABORATORY FORTIFIED BLANK RECOVERIES: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS: No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quantitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bur.
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602627

REQUEST ID No.: 154594
RECEIVED AT SLD: 7/31/96
☐SLD COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: PIn
SAMPLING LOCATION: Baker Oil MW-3
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 1000

ANALYSIS No.: OR- 9602627
SLD BATCH No.: 405
DILUTION FACTOR: 1.00
REQUEST ID No.: 154594

SAMPLE PRESERVATION: Sample Temperature when received: 23 Degrees C.; pH = 7
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	0.93
208-96-8	Acenaphthylene		U	0.87
120-12-7	Anthracene		U	0.36
103-33-3	Azobenzene		U	1.00
92-87-5	Benzidine		U	1.00
56-55-3	Benzo(a)anthracene		U	0.12
205-99-2	Benzo(b)fluoranthene		U	0.33
207-08-9	Benzo(k)fluoroanthene		U	0.33
191-24-2	Benzo(g,h,i)perylene		U	0.99
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.69
111-44-4	Bis(2-chloroethyl)ether		U	0.39
108-60-1	Bis(2-chloroisopropyl)ether		U	0.45
117-81-7	Bis(2-ethylhexyl)phthalate	1	J	0.33
101-55-3	4-Bromophenylphenyl ether		U	0.48
85-68-7	Butylbenzyl phthalate		U	0.63
106-47-8	4-Chloroaniline		U	0.57
91-58-7	2-Chloronaphthalene		U	0.51
7005-72-3	4-Chlorophenylphenyl ether		U	0.42
218-01-9	Chrysene		U	0.24
53-70-3	Dibenz(a,h)anthracene		U	10.00
132-64-9	Dibenzofuran		U	0.72
84-74-2	Di-n-butyl phthalate		U	0.48
95-50-1	1,2-Dichlorobenzene		U	0.15
541-73-1	1,3-Dichlorobenzene		U	0.24
106-46-7	1,4-Dichlorobenzene		U	0.33
91-94-1	3,3'-Dichlorobenzidine		U	0.18

84-66-2	Diethylphthalate		U	0.78
131-11-3	Dimethylphthalate		U	0.48
121-14-2	2,4-Dinitrotoluene		U	0.45
606-20-2	2,6-Dinitrotoluene		U	0.39
117-84-0	Di-n-octyl phthalate		U	0.30
206-44-0	Fluoranthene		U	0.75
86-73-7	Fluorene		U	0.75
118-74-1	Hexachlorobenzene		U	0.75
87-68-3	Hexachlorobutadiene		U	0.30
77-47-4	Hexachlorocyclopentadiene		U	10.00
67-72-1	Hexachloroethane		U	0.30
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.00
78-59-1	Isophorone		U	0.90
91-57-6	2-Methylnaphthalene		U	0.99
91-20-3	Naphthalene		U	0.63
88-74-4	2-Nitroaniline		U	0.51
99-09-2	3-Nitroaniline		U	0.33
100-01-6	4-Nitroaniline		U	0.51
98-95-3	Nitrobenzene		U	0.41
86-30-6	N-nitrosodiphenylamine		U	0.48
62-75-9	N-nitrosodimethylamine		U	0.48
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.24
129-00-0	Pyrene		U	0.33
120-82-1	1,2,4-Trichlorobenzene		U	0.30

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	28.0	56%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	28.0	56%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	37.0	74%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Tim Chapman QC APPROVED BY: Roberta Hine

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602624

REQUEST ID No.: 154591
RECEIVED AT SLD: 7/31/96
☐ SLD COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil WW-1
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 980

ANALYSIS No.: OR- 9602624
SLD BATCH No.: 405
DILUTION FACTOR: 1.02
REQUEST ID No.: 154591

SAMPLE PRESERVATION: Sample Temperature when received: 23 Degrees C.; pH = 2
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	0.95
208-96-8	Acenaphthylene		U	0.89
120-12-7	Anthracene		U	0.37
103-33-3	Azobenzene		U	1.02
92-87-5	Benzidine		U	1.02
56-55-3	Benzo(a)anthracene		U	0.12
205-99-2	Benzo(b)fluoranthene		U	0.34
207-08-9	Benzo(k)fluoroanthene		U	0.34
191-24-2	Benzo(g,h,i)perylene		U	1.01
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.70
111-44-4	Bis(2-chloroethyl)ether		U	0.40
108-60-1	Bis(2-chloroisopropyl)ether		U	0.46
117-81-7	Bis(2-ethylhexyl)phthalate	9		0.34
101-55-3	4-Bromophenylphenyl ether		U	0.49
85-68-7	Butylbenzyl phthalate		U	0.64
106-47-8	4-Chloroaniline		U	0.58
91-58-7	2-Chloronaphthalene		U	0.52
7005-72-3	4-Chlorophenylphenyl ether		U	0.43
218-01-9	Chrysene		U	0.24
53-70-3	Dibenz(a,h)anthracene		U	10.20
132-64-9	Dibenzofuran		U	0.73
84-74-2	Di-n-butyl phthalate	1	J	0.49
95-50-1	1,2-Dichlorobenzene		U	0.15
541-73-1	1,3-Dichlorobenzene		U	0.24
106-46-7	1,4-Dichlorobenzene		U	0.34
91-94-1	3,3'-Dichlorobenzidine		U	0.18

84-66-2	Diethylphthalate		U	0.80
131-11-3	Dimethylphthalate		U	0.49
121-14-2	2,4-Dinitrotoluene		U	0.46
606-20-2	2,6-Dinitrotoluene		U	0.40
117-84-0	Di-n-octyl phthalate		U	0.31
206-44-0	Fluoranthene		U	0.77
86-73-7	Fluorene		U	0.77
118-74-1	Hexachlorobenzene		U	0.77
87-68-3	Hexachlorobutadiene		U	0.31
77-47-4	Hexachlorocyclopentadiene		U	10.20
67-72-1	Hexachloroethane		U	0.31
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.20
78-59-1	Isophorone		U	0.92
91-57-6	2-Methylnaphthalene		U	1.01
91-20-3	Naphthalene		U	0.64
88-74-4	2-Nitroaniline		U	0.52
99-09-2	3-Nitroaniline		U	0.34
100-01-6	4-Nitroaniline		U	0.52
98-95-3	Nitrobenzene		U	0.42
86-30-6	N-nitrosodiphenylamine		U	0.49
62-75-9	N-nitrosodimethylamine		U	0.49
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.24
129-00-0	Pyrene		U	0.34
120-82-1	1,2,4-Trichlorobenzene		U	0.31

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	26.0	52%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	25.0	50%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	34.0	68%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Tim Chapman QC APPROVED BY: Roberta Hine

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700
Albuquerque, NM 87196-4700
700 Camino de Salud NE
[505] 841-2500
ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602619
REQUEST ID No.: 154586
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil WW-1
0 Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602619
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154586

SAMPLE PRESERVATION: Sample Temperature when received: 19 Degrees C.; pH = 2

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL
				uG/L
71-43-2	Benzene	6.7		1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

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91-20-3	Naphthalene	0.7	J	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene	0.7	J	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*	0.8	J	1.0
N/A	p- & m-Xylene*	1.0		1.0
N/A	*Total Xylenes*	1.8		1.0
N/A	*Total Trihalomethanes*		U	1.0

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photolonization Detector Surrogate)	23.51	94.0%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	23.1	92.4%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602628

REQUEST ID No.: 154595

RECEIVED AT SLD: 7/31/96

☐SLD COPY

USER: 55321

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SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 ST: Pin

SAMPLING LOCATION: Baker Oil R-1

WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time

DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time

SAMPLE VOL (ml): 770

ANALYSIS No.: OR- 9602628

SLD BATCH No.: 405

DILUTION FACTOR: 1.30

REQUEST ID No.: 154595

SAMPLE PRESERVATION: Sample Temperature when received: 22 Degrees C.; pH = 7
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A

GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL
83-32-9	Acenaphthene	5	J	1.21
208-96-8	Acenaphthylene		U	1.13
120-12-7	Anthracene		U	0.47
103-33-3	Azobenzene		U	1.30
92-87-5	Benzidine		U	1.30
56-55-3	Benzo(a)anthracene		U	0.16
205-99-2	Benzo(b)fluoranthene		U	0.43
207-08-9	Benzo(k)fluoroanthene		U	0.43
191-24-2	Benzo(g,h,i)perylene		U	1.29
50-32-8	Benzo(a)pyrene		U	0.03
111-91-1	Bis(2-chloroethoxy)methane		U	0.90
111-44-4	Bis(2-chloroethyl)ether		U	0.51
108-60-1	Bis(2-chloroisopropyl)ether		U	0.58
117-81-7	Bis(2-ethylhexyl)phthalate	6		0.43
101-55-3	4-Bromophenylphenyl ether		U	0.62
85-68-7	Butylbenzyl phthalate		U	0.82
106-47-8	4-Chloroaniline		U	0.74
91-58-7	2-Chloronaphthalene		U	0.66
7005-72-3	4-Chlorophenylphenyl ether		U	0.55
218-01-9	Chrysene		U	0.31
53-70-3	Dibenz(a,h)anthracene		U	12.99
132-64-9	Dibenzofuran		U	0.94
84-74-2	Di-n-butyl phthalate		U	0.62
95-50-1	1,2-Dichlorobenzene		U	0.19
541-73-1	1,3-Dichlorobenzene		U	0.31
106-46-7	1,4-Dichlorobenzene		U	0.43
91-94-1	3,3'-Dichlorobenzidine		U	0.23

84-66-2	Diethylphthalate		U	1.01
131-11-3	Dimethylphthalate		U	0.62
121-14-2	2,4-Dinitrotoluene		U	0.58
606-20-2	2,6-Dinitrotoluene		U	0.51
117-84-0	Di-n-octyl phthalate		U	0.39
206-44-0	Fluoranthene		U	0.97
86-73-7	Fluorene	6		0.97
118-74-1	Hexachlorobenzene		U	0.97
87-68-3	Hexachlorobutadiene		U	0.39
77-47-4	Hexachlorocyclopentadiene		U	12.99
67-72-1	Hexachloroethane		U	0.39
193-39-5	Indeno(1,2,3-cd)pyrene		U	12.99
78-59-1	Isophorone		U	1.17
91-57-6	2-Methylnaphthalene	113		1.29
91-20-3	Naphthalene	81		0.82
88-74-4	2-Nitroaniline		U	0.66
99-09-2	3-Nitroaniline		U	0.43
100-01-6	4-Nitroaniline		U	0.66
98-95-3	Nitrobenzene		U	0.53
86-30-6	N-nitrosodiphenylamine		U	0.62
62-75-9	N-nitrosodimethylamine		U	0.62
621-64-7	N-nitroso-di-n-propylamine		U	0.04
85-01-8	Phenanthrene	2		0.31
129-00-0	Pyrene		U	0.43
120-82-1	1,2,4-Trichlorobenzene		U	0.39

COMPOUNDS DETECTED AND TENTATIVELY IDENTIFIED BY MASS SPECTROMETRY (TIC's)

CAS #	TENTATIVE ANALYTE NAME	EST CONC. (ug/L)	LIBRARY MS MATCH	RETENTION TIME (MIN)
13151-29-6	4-Methyl-1-Decene	300	815	19.90
17301-28-9	3,6-Dimethyl-undecane	300	793	18.12
57289-26-6	2-Methyl-1-Dodecanol	200	853	18.30
2217-43-8	5,6,7,8-Tetrahydro-2-Napthalenamine	200	790	19.53
247183-2	1-Ethylidene-1H-Indene	200	881	20.95
54833-48-6	2,6,10,15-Tetramethyl-Heptadecane	200	797	20.73
56292-65-0	2,5-Dimethyl-Dodecane	200	765	16.50
589-90-2	1,4-Dimethyl-Cyclohexane	200	850	20.34
7058-01-7	1-Methyl-2-(1-Methylethyl)-Benzene	100	869	13.85
934-74-7	1-Ethyl-3,5-Dimethyl-Benzene	100	793	18.87
Comment:	Numerous hydrocarbons were observed by GC/MS in the C11 to C 15 range			
	with an approximate total concentration of 20 ug/ml.			

* "Library MS Match" is a number showing the approximate percentage agreement with our 60,000 compound, *NIST mass spectral library.*
"Retention Time" is the time required for the specific compound to pass through the chromatographic column.

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	30.0	60%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	32.0	64%	Normal
efficiency and QC	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	41.0	82%	Normal
LABORATORY FORTIFIED	The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:			

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de S[illegible] NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

OCT 1996

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602623
REQUEST ID No.: 154590
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil R-1
Water
REPORTING UNITS: ug/L

Remarks: Hydrochloric acid was used as a preservative in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5

ANALYSIS No.: OR- 9602623
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154590

SAMPLE PRESERVATION: Sample Temperature when received: 18 Degrees C.; pH = 7

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene	1.3		1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene	73		1.0
135-98-8	sec-Butylbenzene	48		1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene	45		1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene	9.8		1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0
91-20-3	Naphthalene	200		10
103-65-1	Propylbenzene	45		1.0
100-42-5	Styrene		U	1.0

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[illegible]	[illegible]		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene	1.6		1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene	110		10
108-67-8	1,3,5-Trimethylbenzene	12		1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*	28		1.0
N/A	p- & m-Xylene*	12		1.0
N/A	*Total Xylenes*	41		1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: This sample was diluted and re-analyzed on 8/21/96 to quantitate Naphthalene and 1,2,4-Trimethyl Benzene. The ELCD surrogate recovery was extremely high due to co-eluting peaks. however, the internal standard area was at 94.5% of the expected area . There were 80 compounds observed on the photoionization detector at approximately 10-40 ppb, but not identified.

LABORATORY BATCH QUALITY CONTROL SUMMARY			
SURROGATE RECOVERIES:	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
	2-Bromochlorobenzene (Photolonization Detector Surrogate)	132	528.0% High
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	23.9	95.6%
LABORATORY FORTIFIED BLANK RECOVERIES	The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below: COMPOUND / CONCENTRATION (ug/L) / % RECOVERY: cis-1,2-Dichloroethene / 10 / 79%		
LABORATORY BLANKS	No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below: COMPOUND / CONCENTRATION (ug/L): No Exceptions		

ANALYST: Patrick Basile QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602620
REQUEST ID No.: 154587
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-1
0 Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602620
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154587

SAMPLE PRESERVATION: Sample Temperature when received: 18 Degrees C.; pH = 4

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

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91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*		U	1.0
N/A	p- & m-Xylene*		U	1.0
N/A	*Total Xylenes*	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photolonization Detector Surrogate)	23.85	95.4%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	26.58	106.3%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile

QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602625

REQUEST ID No.: 154592
RECEIVED AT SLD: 7/31/96
USER: 55321

☐SLD COPY

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil MW-1
WSS #: SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 910

ANALYSIS No.: OR- 9602625
SLD BATCH No.: 405
DILUTION FACTOR: 1.10
REQUEST ID No.: 154592

SAMPLE PRESERVATION: Sample Temperature when received: 21 Degrees C.; pH = 7
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	1.02
208-96-8	Acenaphthylene		U	0.96
120-12-7	Anthracene		U	0.40
103-33-3	Azobenzene		U	1.10
92-87-5	Benzidine		U	1.10
56-55-3	Benzo(a)anthracene		U	0.13
205-99-2	Benzo(b)fluoranthene		U	0.36
207-08-9	Benzo(k)fluoroanthene		U	0.36
191-24-2	Benzo(g,h,i)perylene		U	1.09
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.76
111-44-4	Bis(2-chloroethyl)ether		U	0.43
108-60-1	Bis(2-chloroisopropyl)ether		U	0.49
117-81-7	Bis(2-ethylhexyl)phthalate	4		0.36
101-55-3	4-Bromophenylphenyl ether		U	0.53
85-68-7	Butylbenzyl phthalate		U	0.69
106-47-8	4-Chloroaniline		U	0.63
91-58-7	2-Chloronaphthalene		U	0.56
7005-72-3	4-Chlorophenylphenyl ether		U	0.46
218-01-9	Chrysene		U	0.26
53-70-3	Dibenz(a,h)anthracene		U	10.99
132-64-9	Dibenzofuran		U	0.79
84-74-2	Di-n-butyl phthalate		U	0.53
95-50-1	1,2-Dichlorobenzene		U	0.16
541-73-1	1,3-Dichlorobenzene		U	0.26
106-46-7	1,4-Dichlorobenzene		U	0.36
91-94-1	3,3'-Dichlorobenzidine		U	0.20

84-66-2	Diethylphthalate		U	0.86
131-11-3	Dimethylphthalate		U	0.53
121-14-2	2,4-Dinitrotoluene		U	0.49
606-20-2	2,6-Dinitrotoluene		U	0.43
117-84-0	Di-n-octyl phthalate		U	0.33
206-44-0	Fluoranthene		U	0.82
86-73-7	Fluorene		U	0.82
118-74-1	Hexachlorobenzene		U	0.82
87-68-3	Hexachlorobutadiene		U	0.33
77-47-4	Hexachlorocyclopentadiene		U	10.99
67-72-1	Hexachloroethane		U	0.33
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.99
78-59-1	Isophorone		U	0.99
91-57-6	2-Methylnaphthalene		U	1.09
91-20-3	Naphthalene		U	0.69
88-74-4	2-Nitroaniline		U	0.56
99-09-2	3-Nitroaniline		U	0.36
100-01-6	4-Nitroaniline		U	0.56
98-95-3	Nitrobenzene		U	0.45
86-30-6	N-nitrosodiphenylamine		U	0.53
62-75-9	N-nitrosodimethylamine		U	0.53
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.26
129-00-0	Pyrene		U	0.36
120-82-1	1,2,4-Trichlorobenzene		U	0.33

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	29.0	58%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	27.0	54%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	40.0	80%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: **Tim Chapman** QC APPROVED BY: **Roberta Hine**

DEFINITIONS

****** Concentration Exceeds EPA's allowable Maximum Contamination Level

CAS# *Chemical Abstract Services Number* - Unique number to help identify analytes listed by different names

CONC. Concentration (ug/L) of analyte actually detected in the sample

QUAL Qualifier of analytical results as follows:

- B *Analyte was detected in laboratory blank*
- J *Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)*
- U No analyte was detected above the Sample Detection Limit.

MCL Maximum Contamination Level Allowed by EPA for regulated analytes

SDL Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.

ug/L Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700 [redacted] 700 Camino de S[redacted]d, NE
Albuquerque, NM 87196-4700 [505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR-9602621
REQUEST ID No.: 154588
RECEIVED AT SLD: 7/31/96
SLD COPY USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-2
0 Water REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602621
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154588

SAMPLE PRESERVATION: Sample Temperature when received: 18 Degrees C.; pH = 4

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

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91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*		U	1.0
N/A	p- & m-Xylene*		U	1.0
N/A	*Total Xylenes*	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: Acetone was observed in this sample at 35 ppb.

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photolonization Detector Surrogate)	24.14	96.6%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	26.18	104.7%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile QC APPROVED BY: Ken Sherrell

DEFINITIONS

- **: Concentration Exceeds EPA's allowable Maximum Contamination Level
- CAS#: Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
- CONC.: Concentration (ug/L) of analyte actually detected in the sample
- QUAL: Qualifier of analytical results as follows:
  - B Analyte was detected in laboratory blank
  - J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
  - U No analyte was detected above the Sample Detection Limit.
- SDL: Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
- ug/L: Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bureau
PO Box 26111
Santa Fe, NM 87502

SLD No.: OR- 9602626

REQUEST ID No.: 154593
RECEIVED AT SLD: 7/31/96
☐SLD COPY USER: 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil MW-2
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 900

ANALYSIS No.: OR- 9602626
SLD BATCH No.: 405
DILUTION FACTOR: 1.11
REQUEST ID No.: 154593

SAMPLE PRESERVATION: Sample Temperature when received: 23 Degrees C.; pH = 7
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	1.03
208-96-8	Acenaphthylene		U	0.97
120-12-7	Anthracene		U	0.40
103-33-3	Azobenzene		U	1.11
92-87-5	Benzidine		U	1.11
56-55-3	Benzo(a)anthracene		U	0.13
205-99-2	Benzo(b)fluoranthene		U	0.37
207-08-9	Benzo(k)fluoroanthene		U	0.37
191-24-2	Benzo(g,h,i)perylene		U	1.10
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.77
111-44-4	Bis(2-chloroethyl)ether		U	0.43
108-60-1	Bis(2-chloroisopropyl)ether		U	0.50
117-81-7	Bis(2-ethylhexyl)phthalate	3		0.37
101-55-3	4-Bromophenylphenyl ether		U	0.53
85-68-7	Butylbenzyl phthalate		U	0.70
106-47-8	4-Chloroaniline		U	0.63
91-58-7	2-Chloronaphthalene		U	0.57
7005-72-3	4-Chlorophenylphenyl ether		U	0.47
218-01-9	Chrysene		U	0.27
53-70-3	Dibenz(a,h)anthracene		U	11.11
132-64-9	Dibenzofuran		U	0.80
84-74-2	Di-n-butyl phthalate		U	0.53
95-50-1	1,2-Dichlorobenzene		U	0.17
541-73-1	1,3-Dichlorobenzene		U	0.27
106-46-7	1,4-Dichlorobenzene		U	0.37
91-94-1	3,3'-Dichlorobenzidine		U	0.20

84-66-2	Diethylphthalate		U	0.87
131-11-3	Dimethylphthalate		U	0.53
121-14-2	2,4-Dinitrotoluene		U	0.50
606-20-2	2,6-Dinitrotoluene		U	0.43
117-84-0	Di-n-octyl phthalate		U	0.33
206-44-0	Fluoranthene		U	0.83
86-73-7	Fluorene		U	0.83
118-74-1	Hexachlorobenzene		U	0.83
87-68-3	Hexachlorobutadiene		U	0.33
77-47-4	Hexachlorocyclopentadiene		U	11.11
67-72-1	Hexachloroethane		U	0.33
193-39-5	Indeno(1,2,3-cd)pyrene		U	11.11
78-59-1	Isophorone		U	1.00
91-57-6	2-Methylnaphthalene		U	1.10
91-20-3	Naphthalene		U	0.70
88-74-4	2-Nitroaniline		U	0.57
99-09-2	3-Nitroaniline		U	0.37
100-01-6	4-Nitroaniline		U	0.57
98-95-3	Nitrobenzene		U	0.46
86-30-6	N-nitrosodiphenylamine		U	0.53
62-75-9	N-nitrosodimethylamine		U	0.53
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.27
129-00-0	Pyrene		U	0.37
120-82-1	1,2,4-Trichlorobenzene		U	0.33

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	31.0	62%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	29.3	59%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	65.7	131%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Tim Chapman QC APPROVED BY: Roberta Hine

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602622
REQUEST ID No.: 154589
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

OCT 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-3
Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602622
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154589

SAMPLE PRESERVATION: Sample Temperature when received: 17 Degrees C.; pH = 3

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0
91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0

630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*		U	1.0
N/A	p- & m-Xylene*		U	1.0
N/A	*Total Xylenes*	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: Acetone was observed in this sample at 22 ppb. There were 28 compounds observed at approximately 1-10 ppb on the photoionization detector, but not identified.

The Following Compound(s) Were Tentatively (by Library Match of Mass Spectrum) Identified by GC/MS Sample Reanalysis

				Approx. Conc.	
CAS #	Tentatively Identified Compound Name	GC/MS Match %	R.T.		
611-14-3	1-Ethyl-2-Methyl-Benzene	97.9%	31.82	50.00	ug/L
2870-04-4	2-Ethyl-1,3-Dimethyl-Benzene	98.0%	37.12	5.00	ug/L
27133-93-3	2,3-Dihydro-1-Methyl-Indene	98.2%	37.54	5.00	ug/L
488-23-3	1,2,3,4-Tetramethyl-Benzene	99.2%	38.8	5.00	ug/L

LABORATORY BATCH QUALITY CONTROL SUMMARY

SURROGATE RECOVERIES:	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
	2-Bromochlorobenzene (Photolonization Detector Surrogate)	26.18	104.7%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	28.34	113.4%

LABORATORY FORTIFIED BLANK RECOVERIES: The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS: No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bur.
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602627

REQUEST ID No.: 154594
RECEIVED AT SLD: 7/31/96
☐ SLD COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil MW-3
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 1000

ANALYSIS No.: OR- 9602627
SLD BATCH No.: 405
DILUTION FACTOR: 1.00
REQUEST ID No.: 154594

SAMPLE PRESERVATION: Sample Temperature when received: 23 Degrees C.; pH = 7
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	0.93
208-96-8	Acenaphthylene		U	0.87
120-12-7	Anthracene		U	0.36
103-33-3	Azobenzene		U	1.00
92-87-5	Benzidine		U	1.00
56-55-3	Benzo(a)anthracene		U	0.12
205-99-2	Benzo(b)fluoranthene		U	0.33
207-08-9	Benzo(k)fluoroanthene		U	0.33
191-24-2	Benzo(g,h,i)perylene		U	0.99
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.69
111-44-4	Bis(2-chloroethyl)ether		U	0.39
108-60-1	Bis(2-chloroisopropyl)ether		U	0.45
117-81-7	Bis(2-ethylhexyl)phthalate	1	J	0.33
101-55-3	4-Bromophenylphenyl ether		U	0.48
85-68-7	Butylbenzyl phthalate		U	0.63
106-47-8	4-Chloroaniline		U	0.57
91-58-7	2-Chloronaphthalene		U	0.51
7005-72-3	4-Chlorophenylphenyl ether		U	0.42
218-01-9	Chrysene		U	0.24
53-70-3	Dibenz(a,h)anthracene		U	10.00
132-64-9	Dibenzofuran		U	0.72
84-74-2	Di-n-butyl phthalate		U	0.48
95-50-1	1,2-Dichlorobenzene		U	0.15
541-73-1	1,3-Dichlorobenzene		U	0.24
106-46-7	1,4-Dichlorobenzene		U	0.33
91-94-1	3,3'-Dichlorobenzidine		U	0.18

84-66-2	Diethylphthalate		U	0.78
131-11-3	Dimethylphthalate		U	0.48
121-14-2	2,4-Dinitrotoluene		U	0.45
606-20-2	2,6-Dinitrotoluene		U	0.39
117-84-0	Di-n-octyl phthalate		U	0.30
206-44-0	Fluoranthene		U	0.75
86-73-7	Fluorene		U	0.75
118-74-1	Hexachlorobenzene		U	0.75
87-68-3	Hexachlorobutadiene		U	0.30
77-47-4	Hexachlorocyclopentadiene		U	10.00
67-72-1	Hexachloroethane		U	0.30
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.00
78-59-1	Isophorone		U	0.90
91-57-6	2-Methylnaphthalene		U	0.99
91-20-3	Naphthalene		U	0.63
88-74-4	2-Nitroaniline		U	0.51
99-09-2	3-Nitroaniline		U	0.33
100-01-6	4-Nitroaniline		U	0.51
98-95-3	Nitrobenzene		U	0.41
86-30-6	N-nitrosodiphenylamine		U	0.48
62-75-9	N-nitrosodimethylamine		U	0.48
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.24
129-00-0	Pyrene		U	0.33
120-82-1	1,2,4-Trichlorobenzene		U	0.30

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	28.0	56%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	28.0	56%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	37.0	74%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: **Tim Chapman** QC APPROVED BY: **Roberta Hine**

DEFINITIONS

**	**Concentration Exceeds EPA's allowable Maximum Contamination Level**
CAS#	*Chemical Abstract Services Number - Unique number to help identify analytes listed by different names*
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B *Analyte was detected in laboratory blank* J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U *No analyte was detected above the Sample Detection Limit.*
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - *micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)*

STATE OF NEW MEXICO
DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602624

REQUEST ID No.: 154591
RECEIVED AT SLD: 7/31/96
☐ COPY
USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil WW-1
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 980

ANALYSIS No.: OR- 9602624
SLD BATCH No.: 405
DILUTION FACTOR: 1.02
REQUEST ID No.: 154591

SAMPLE PRESERVATION: Sample Temperature when received: 23 Degrees C.; pH = 2
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	0.95
208-96-8	Acenaphthylene		U	0.89
120-12-7	Anthracene		U	0.37
103-33-3	Azobenzene		U	1.02
92-87-5	Benzidine		U	1.02
56-55-3	Benzo(a)anthracene		U	0.12
205-99-2	Benzo(b)fluoranthene		U	0.34
207-08-9	Benzo(k)fluoroanthene		U	0.34
191-24-2	Benzo(g,h,i)perylene		U	1.01
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.70
111-44-4	Bis(2-chloroethyl)ether		U	0.40
108-60-1	Bis(2-chloroisopropyl)ether		U	0.46
117-81-7	Bis(2-ethylhexyl)phthalate	9		0.34
101-55-3	4-Bromophenylphenyl ether		U	0.49
85-68-7	Butylbenzyl phthalate		U	0.64
106-47-8	4-Chloroaniline		U	0.58
91-58-7	2-Chloronaphthalene		U	0.52
7005-72-3	4-Chlorophenylphenyl ether		U	0.43
218-01-9	Chrysene		U	0.24
53-70-3	Dibenz(a,h)anthracene		U	10.20
132-64-9	Dibenzofuran		U	0.73
84-74-2	Di-n-butyl phthalate	1	J	0.49
95-50-1	1,2-Dichlorobenzene		U	0.15
541-73-1	1,3-Dichlorobenzene		U	0.24
106-46-7	1,4-Dichlorobenzene		U	0.34
91-94-1	3,3'-Dichlorobenzidine		U	0.18

84-66-2	Diethylphthalate		U	0.80
131-11-3	Dimethylphthalate		U	0.49
121-14-2	2,4-Dinitrotoluene		U	0.46
606-20-2	2,6-Dinitrotoluene		U	0.40
117-84-0	Di-n-octyl phthalate		U	0.31
206-44-0	Fluoranthene		U	0.77
86-73-7	Fluorene		U	0.77
118-74-1	Hexachlorobenzene		U	0.77
87-68-3	Hexachlorobutadiene		U	0.31
77-47-4	Hexachlorocyclopentadiene		U	10.20
67-72-1	Hexachloroethane		U	0.31
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.20
78-59-1	Isophorone		U	0.92
91-57-6	2-Methylnaphthalene		U	1.01
91-20-3	Naphthalene		U	0.64
88-74-4	2-Nitroaniline		U	0.52
99-09-2	3-Nitroaniline		U	0.34
100-01-6	4-Nitroaniline		U	0.52
98-95-3	Nitrobenzene		U	0.42
86-30-6	N-nitrosodiphenylamine		U	0.49
62-75-9	N-nitrosodimethylamine		U	0.49
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.24
129-00-0	Pyrene		U	0.34
120-82-1	1,2,4-Trichlorobenzene		U	0.31

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	26.0	52%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	25.0	50%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	34.0	68%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: **Tim Chapman** QC APPROVED BY: **Roberta Hine**

DEFINITIONS

**	**Concentration Exceeds EPA's allowable Maximum Contamination Level**
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	*Qualifier of analytical results as follows:* B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	*Maximum Contamination Level Allowed by EPA for regulated analytes*
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to *Parts Per Billion (ppb)*

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

OCT 1996

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

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Environmental Bureau
Oil Conservation Division

SLD No.: OR- 9602623
REQUEST ID No.: 154590
RECEIVED AT SLD: 7/31/96
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil R-1
Water
REPORTING UNITS: ug/L

Remarks: Hydrochloric acid was used as a preservative in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5

ANALYSIS No.: OR- 9602623
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154590

SAMPLE PRESERVATION: Sample Temperature when received: 18 Degrees C.; pH = 7

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene	1.3		1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene	73		1.0
135-98-8	sec-Butylbenzene	48		1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene	45		1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene	9.8		1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0
91-20-3	Naphthalene	200		10
103-65-1	Propylbenzene	45		1.0
100-42-5	Styrene		U	1.0

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630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene	1.6		1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene	110		10
108-67-8	1,3,5-Trimethylbenzene	12		1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene#	28		1.0
N/A	p- & m-Xylene#	12		1.0
N/A	#Total Xylenes#	41		1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: This sample was diluted and re-analyzed on 8/21/96 to quantitate Naphthalene and 1,2,4-Trimethyl Benzene. The ELCD surrogate recovery was extremely high due to co-eluting peaks, however, the Internal standard area was at 94.5% of the expected area . There were 80 compounds observed on the photoionization detector at approximately 10-40 ppb, but not identified.

LABORATORY BATCH QUALITY CONTROL SUMMARY

SURROGATE RECOVERIES:	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
	2-Bromochlorobenzene (PhotoIonization Detector Surrogate)	132	528.0% High
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	23.9	95.6%
LABORATORY FORTIFIED BLANK RECOVERIES	The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:		
	COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
	cis-1,2-Dichloroethene	10	79%
LABORATORY BLANKS	No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:		
	COMPOUND	CONCENTRATION (ug/L)	
	No Exceptions		

ANALYST: Patrick Basile QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602628

REQUEST ID No.: 154595

RECEIVED AT SLD: 7/31/96

☐SLD COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin

SAMPLING LOCATION: Baker Oil R-1

WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time

DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time

SAMPLE VOL (ml): 770

ANALYSIS No.: OR- 9602628

SLD BATCH No.: 405

DILUTION FACTOR: 1.30

REQUEST ID No.: 154595

SAMPLE PRESERVATION: **Sample Temperature when received: 22 Degrees C.; pH = 7**

NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A

GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene	5	J	1.21
208-96-8	Acenaphthylene		U	1.13
120-12-7	Anthracene		U	0.47
103-33-3	Azobenzene		U	1.30
92-87-5	Benzidine		U	1.30
56-55-3	Benzo(a)anthracene		U	0.16
205-99-2	Benzo(b)fluoranthene		U	0.43
207-08-9	Benzo(k)fluoroanthene		U	0.43
191-24-2	Benzo(g,h,i)perylene		U	1.29
50-32-8	Benzo(a)pyrene		U	0.03
111-91-1	Bis(2-chloroethoxy)methane		U	0.90
111-44-4	Bis(2-chloroethyl)ether		U	0.51
108-60-1	Bis(2-chloroisopropyl)ether		U	0.58
117-81-7	Bis(2-ethylhexyl)phthalate	6		0.43
101-55-3	4-Bromophenylphenyl ether		U	0.62
85-68-7	Butylbenzyl phthalate		U	0.82
106-47-8	4-Chloroaniline		U	0.74
91-58-7	2-Chloronaphthalene		U	0.66
7005-72-3	4-Chlorophenylphenyl ether		U	0.55
218-01-9	Chrysene		U	0.31
53-70-3	Dibenz(a,h)anthracene		U	12.99
132-64-9	Dibenzofuran		U	0.94
84-74-2	Di-n-butyl phthalate		U	0.62
95-50-1	1,2-Dichlorobenzene		U	0.19
541-73-1	1,3-Dichlorobenzene		U	0.31
106-46-7	1,4-Dichlorobenzene		U	0.43
91-94-1	3,3'-Dichlorobenzidine		U	0.23

84-66-2	Diethylphthalate		U	1.01
131-11-3	Dimethylphthalate		U	0.62
121-14-2	2,4-Dinitrotoluene		U	0.58
606-20-2	2,6-Dinitrotoluene		U	0.51
117-84-0	Di-n-octyl phthalate		U	0.39
206-44-0	Fluoranthene		U	0.97
86-73-7	Fluorene	6		0.97
118-74-1	Hexachlorobenzene		U	0.97
87-68-3	Hexachlorobutadiene		U	0.39
77-47-4	Hexachlorocyclopentadiene		U	12.99
67-72-1	Hexachloroethane		U	0.39
193-39-5	Indeno(1,2,3-cd)pyrene		U	12.99
78-59-1	Isophorone		U	1.17
91-57-6	2-Methylnaphthalene	113		1.29
91-20-3	Naphthalene	81		0.82
88-74-4	2-Nitroaniline		U	0.66
99-09-2	3-Nitroaniline		U	0.43
100-01-6	4-Nitroaniline		U	0.66
98-95-3	Nitrobenzene		U	0.53
86-30-6	N-nitrosodiphenylamine		U	0.62
62-75-9	N-nitrosodimethylamine		U	0.62
621-64-7	N-nitroso-di-n-propylamine		U	0.04
85-01-8	Phenanthrene	2		0.31
129-00-0	Pyrene		U	0.43
120-82-1	1,2,4-Trichlorobenzene		U	0.39

COMPOUNDS DETECTED AND TENTATIVELY IDENTIFIED BY MASS SPECTROMETRY (TIC's)

CAS #	TENTATIVE ANALYTE NAME	EST CONC. (ug/L)	LIBRARY MS MATCH	RETENTION TIME (MIN)
13151-29-6	4-Methyl-1-Decene	300	815	19.90
17301-28-9	3,6-Dimethyl-undecane	300	793	18.12
57289-26-6	2-Methyl-1-Dodecanol	200	853	18.30
2217-43-8	5,6,7,8-Tetrahydro-2-Napthalenamine	200	790	19.53
247183-2	1-Ethylidene-1H-Indene	200	881	20.95
54833-48-6	2,6,10,15-Tetramethyl-Heptadecane	200	797	20.73
56292-65-0	2,5-Dimethyl-Dodecane	200	765	16.50
589-90-2	1,4-Dimethyl-Cyclohexane	200	850	20.34
7058-01-7	1-Methyl-2-(1-Methylethyl)-Benzene	100	869	13.85
934-74-7	1-Ethyl-3,5-Dimethyl-Benzene	100	793	18.87
Comment:	Numerous hydrocarbons were observed by GC/MS in the C11 to C 15 range			
	with an approximate total concentration of 20 ug/ml.			

* "Library MS Match" is a number showing the approximate percentage agreement with our 60,000 compound, NIST mass spectral library.
"Retention Time" is the time required for the specific compound to pass through the chromatographic column.

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	30.0	60%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	32.0	64%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	41.0	82%	Normal
LABORATORY FORTIFIED	The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:			

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de S[redacted], NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602619
REQUEST ID No.: 154586
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil WW-1
0 Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602619
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154586

SAMPLE PRESERVATION: **Sample Temperature when received: 19 Degrees C.; pH = 2**

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene	6.7		1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

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91-20-3	Naphthalene	0.7	J	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene	0.7	J	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene#	0.8	J	1.0
N/A	p- & m-Xylene#	1.0		1.0
N/A	#Total Xylenes#	1.8		1.0
N/A	*Total Trihalomethanes*		U	1.0

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photolonization Detector Surrogate)	23.51	94.0%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	23.1	92.4%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile

QC APPROVED BY: Ken Sherrell

DEFINITIONS

- **: Concentration Exceeds EPA's allowable Maximum Contamination Level
- CAS#: Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
- CONC.: Concentration (ug/L) of analyte actually detected in the sample
- QUAL: Qualifier of analytical results as follows:
  - B Analyte was detected in laboratory blank
  - J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
  - U No analyte was detected above the Sample Detection Limit.
- SDL: Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
- ug/L: Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO ● ● DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
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700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602624

REQUEST ID No.: 154591
RECEIVED AT SLD: 7/31/96
☐ SPLIT COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil WW-1
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 980

ANALYSIS No.: OR- 9602624
SLD BATCH No.: 405
DILUTION FACTOR: 1.02
REQUEST ID No.: 154591

SAMPLE PRESERVATION: **Sample Temperature when received: 23 Degrees C.; pH = 2**
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	0.95
208-96-8	Acenaphthylene		U	0.89
120-12-7	Anthracene		U	0.37
103-33-3	Azobenzene		U	1.02
92-87-5	Benzidine		U	1.02
56-55-3	Benzo(a)anthracene		U	0.12
205-99-2	Benzo(b)fluoranthene		U	0.34
207-08-9	Benzo(k)fluoroanthene		U	0.34
191-24-2	Benzo(g,h,i)perylene		U	1.01
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.70
111-44-4	Bis(2-chloroethyl)ether		U	0.40
108-60-1	Bis(2-chloroisopropyl)ether		U	0.46
117-81-7	Bis(2-ethylhexyl)phthalate	9		0.34
101-55-3	4-Bromophenylphenyl ether		U	0.49
85-68-7	Butylbenzyl phthalate		U	0.64
106-47-8	4-Chloroaniline		U	0.58
91-58-7	2-Chloronaphthalene		U	0.52
7005-72-3	4-Chlorophenylphenyl ether		U	0.43
218-01-9	Chrysene		U	0.24
53-70-3	Dibenz(a,h)anthracene		U	10.20
132-64-9	Dibenzofuran		U	0.73
84-74-2	Di-n-butyl phthalate	1	J	0.49
95-50-1	1,2-Dichlorobenzene		U	0.15
541-73-1	1,3-Dichlorobenzene		U	0.24
106-46-7	1,4-Dichlorobenzene		U	0.34
91-94-1	3,3'-Dichlorobenzidine		U	0.18

84-66-2	Diethylphthalate		U	0.80
131-11-3	Dimethylphthalate		U	0.49
121-14-2	2,4-Dinitrotoluene		U	0.46
606-20-2	2,6-Dinitrotoluene		U	0.40
117-84-0	Di-n-octyl phthalate		U	0.31
206-44-0	Fluoranthene		U	0.77
86-73-7	Fluorene		U	0.77
118-74-1	Hexachlorobenzene		U	0.77
87-68-3	Hexachlorobutadiene		U	0.31
77-47-4	Hexachlorocyclopentadiene		U	10.20
67-72-1	Hexachloroethane		U	0.31
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.20
78-59-1	Isophorone		U	0.92
91-57-6	2-Methylnaphthalene		U	1.01
91-20-3	Naphthalene		U	0.64
88-74-4	2-Nitroaniline		U	0.52
99-09-2	3-Nitroaniline		U	0.34
100-01-6	4-Nitroaniline		U	0.52
98-95-3	Nitrobenzene		U	0.42
86-30-6	N-nitrosodiphenylamine		U	0.49
62-75-9	N-nitrosodimethylamine		U	0.49
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.24
129-00-0	Pyrene		U	0.34
120-82-1	1,2,4-Trichlorobenzene		U	0.31

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	26.0	52%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	25.0	50%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	34.0	68%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: **Tim Chapman** QC APPROVED BY: **Roberta Hine**

DEFINITIONS

**	**Concentration Exceeds EPA's allowable Maximum Contamination Level**
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602620
REQUEST ID No.: 154587
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-1
0 Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602620
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154587

SAMPLE PRESERVATION: **Sample Temperature when received: 18 Degrees C.; pH = 4**

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

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91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*		U	1.0
N/A	p- & m-Xylene#		U	1.0
N/A	#Total Xylenes#	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photolonization Detector Surrogate)	23.85	95.4%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	26.58	106.3%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile

QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602625

REQUEST ID No.: 154592
RECEIVED AT SLD: 7/31/96
☐SLD COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil MW-1
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 910

ANALYSIS No.: OR- 9602625
SLD BATCH No.: 405
DILUTION FACTOR: 1.10
REQUEST ID No.: 154592

SAMPLE PRESERVATION: Sample Temperature when received: 21 Degrees C.; pH = 7
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	1.02
208-96-8	Acenaphthylene		U	0.96
120-12-7	Anthracene		U	0.40
103-33-3	Azobenzene		U	1.10
92-87-5	Benzidine		U	1.10
56-55-3	Benzo(a)anthracene		U	0.13
205-99-2	Benzo(b)fluoranthene		U	0.36
207-08-9	Benzo(k)fluoroanthene		U	0.36
191-24-2	Benzo(g,h,i)perylene		U	1.09
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.76
111-44-4	Bis(2-chloroethyl)ether		U	0.43
108-60-1	Bis(2-chloroisopropyl)ether		U	0.49
117-81-7	Bis(2-ethylhexyl)phthalate	4		0.36
101-55-3	4-Bromophenylphenyl ether		U	0.53
85-68-7	Butylbenzyl phthalate		U	0.69
106-47-8	4-Chloroaniline		U	0.63
91-58-7	2-Chloronaphthalene		U	0.56
7005-72-3	4-Chlorophenylphenyl ether		U	0.46
218-01-9	Chrysene		U	0.26
53-70-3	Dibenz(a,h)anthracene		U	10.99
132-64-9	Dibenzofuran		U	0.79
84-74-2	Di-n-butyl phthalate		U	0.53
95-50-1	1,2-Dichlorobenzene		U	0.16
541-73-1	1,3-Dichlorobenzene		U	0.26
106-46-7	1,4-Dichlorobenzene		U	0.36
91-94-1	3,3'-Dichlorobenzidine		U	0.20

84-66-2	Diethylphthalate		U	0.86
131-11-3	Dimethylphthalate		U	0.53
121-14-2	2,4-Dinitrotoluene		U	0.49
606-20-2	2,6-Dinitrotoluene		U	0.43
117-84-0	Di-n-octyl phthalate		U	0.33
206-44-0	Fluoranthene		U	0.82
86-73-7	Fluorene		U	0.82
118-74-1	Hexachlorobenzene		U	0.82
87-68-3	Hexachlorobutadiene		U	0.33
77-47-4	Hexachlorocyclopentadiene		U	10.99
67-72-1	Hexachloroethane		U	0.33
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.99
78-59-1	Isophorone		U	0.99
91-57-6	2-Methylnaphthalene		U	1.09
91-20-3	Naphthalene		U	0.69
88-74-4	2-Nitroaniline		U	0.56
99-09-2	3-Nitroaniline		U	0.36
100-01-6	4-Nitroaniline		U	0.56
98-95-3	Nitrobenzene		U	0.45
86-30-6	N-nitrosodiphenylamine		U	0.53
62-75-9	N-nitrosodimethylamine		U	0.53
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.26
129-00-0	Pyrene		U	0.36
120-82-1	1,2,4-Trichlorobenzene		U	0.33

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	29.0	58%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	27.0	54%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	40.0	80%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range *with the following exceptions:*

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: **Tim Chapman** QC APPROVED BY: **Roberta Hine**

DEFINITIONS

**	**Concentration Exceeds EPA's allowable Maximum Contamination Level**
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	*Qualifier of analytical results as follows:* B Analyte was detected in laboratory blank J *Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)* U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 470[redacted] 700 Camino de [redacted]alud, NE
Albuquerque, NM 87196-4700 [505] 841-2500
ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602621
REQUEST ID No.: 154588
RECEIVED AT SLD: 7/31/96
SLD COPY USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-2
0 Water REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602621
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154588

SAMPLE PRESERVATION: **Sample Temperature when received: 18 Degrees C.; pH = 4**

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

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91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene#		U	1.0
N/A	p- & m-Xylene#		U	1.0
N/A	#Total Xylenes#	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: Acetone was observed in this sample at 35 ppb.

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photolonization Detector Surrogate)	24.14	96.6%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	26.18	104.7%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile

QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bureau
PO Box 26111
Santa Fe, NM 87502

SLD No.: OR- 9602626

REQUEST ID No.: 154593
RECEIVED AT SLD: 7/31/96
☐SLD COPY USER: 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil MW-2
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 900

ANALYSIS No.: OR- 9602626
SLD BATCH No.: 405
DILUTION FACTOR: 1.11
REQUEST ID No.: 154593

SAMPLE PRESERVATION: **Sample Temperature when received: 23 Degrees C.; pH = 7**
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene		U	1.03
208-96-8	Acenaphthylene		U	0.97
120-12-7	Anthracene		U	0.40
103-33-3	Azobenzene		U	1.11
92-87-5	Benzidine		U	1.11
56-55-3	Benzo(a)anthracene		U	0.13
205-99-2	Benzo(b)fluoranthene		U	0.37
207-08-9	Benzo(k)fluoroanthene		U	0.37
191-24-2	Benzo(g,h,i)perylene		U	1.10
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.77
111-44-4	Bis(2-chloroethyl)ether		U	0.43
108-60-1	Bis(2-chloroisopropyl)ether		U	0.50
117-81-7	Bis(2-ethylhexyl)phthalate	3		0.37
101-55-3	4-Bromophenylphenyl ether		U	0.53
85-68-7	Butylbenzyl phthalate		U	0.70
106-47-8	4-Chloroaniline		U	0.63
91-58-7	2-Chloronaphthalene		U	0.57
7005-72-3	4-Chlorophenylphenyl ether		U	0.47
218-01-9	Chrysene		U	0.27
53-70-3	Dibenz(a,h)anthracene		U	11.11
132-64-9	Dibenzofuran		U	0.80
84-74-2	Di-n-butyl phthalate		U	0.53
95-50-1	1,2-Dichlorobenzene		U	0.17
541-73-1	1,3-Dichlorobenzene		U	0.27
106-46-7	1,4-Dichlorobenzene		U	0.37
91-94-1	3,3'-Dichlorobenzidine		U	0.20

84-66-2	Diethylphthalate		U	0.87
131-11-3	Dimethylphthalate		U	0.53
121-14-2	2,4-Dinitrotoluene		U	0.50
606-20-2	2,6-Dinitrotoluene		U	0.43
117-84-0	Di-n-octyl phthalate		U	0.33
206-44-0	Fluoranthene		U	0.83
86-73-7	Fluorene		U	0.83
118-74-1	Hexachlorobenzene		U	0.83
87-68-3	Hexachlorobutadiene		U	0.33
77-47-4	Hexachlorocyclopentadiene		U	11.11
67-72-1	Hexachloroethane		U	0.33
193-39-5	Indeno(1,2,3-cd)pyrene		U	11.11
78-59-1	Isophorone		U	1.00
91-57-6	2-Methylnaphthalene		U	1.10
91-20-3	Naphthalene		U	0.70
88-74-4	2-Nitroaniline		U	0.57
99-09-2	3-Nitroaniline		U	0.37
100-01-6	4-Nitroaniline		U	0.57
98-95-3	Nitrobenzene		U	0.46
86-30-6	N-nitrosodiphenylamine		U	0.53
62-75-9	N-nitrosodimethylamine		U	0.53
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.27
129-00-0	Pyrene		U	0.37
120-82-1	1,2,4-Trichlorobenzene		U	0.33

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	31.0	62%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	29.3	59%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	65.7	131%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: **Tim Chapman** QC APPROVED BY: **Roberta Hine**

DEFINITIONS

**	**Concentration Exceeds EPA's allowable Maximum Contamination Level**
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO

DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de [redacted]d, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602622
REQUEST ID No.: 154589
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

OCT 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil MW-3
Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.
No Targeted Compounds were detected in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

ANALYSIS No.: OR- 9602622

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154589

SAMPLE PRESERVATION: Sample Temperature when received: 17 Degrees C.; pH = 3

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene		U	1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0
91-20-3	Naphthalene		U	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0

630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene		U	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*		U	1.0
N/A	p- & m-Xylene*		U	1.0
N/A	*Total Xylenes*	0.0	U	1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: Acetone was observed in this sample at 22 ppb. There were 28 compounds observed at approximately 1-10 ppb on the photoionization detector, but not identified.

The Following Compound(s) Were Tentatively (by Library Match of Mass Spectrum) Identified by GC/MS Sample Reanalysis

CAS #	Tentatively Identified Compound Name	GC/MS Match %	R.T.	Approx. Conc.	
611-14-3	1-Ethyl-2-Methyl-Benzene	97.9%	31.82	50.00	ug/L
2870-04-4	2-Ethyl-1,3-Dimethyl-Benzene	98.0%	37.12	5.00	ug/L
27133-93-3	2,3-Dihydro-1-Methyl-Indene	98.2%	37.54	5.00	ug/L
488-23-3	1,2,3,4-Tetramethyl-Benzene	99.2%	38.8	5.00	ug/L

LABORATORY BATCH QUALITY CONTROL SUMMARY

SURROGATE RECOVERIES:	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
	2-Bromochlorobenzene (Photolonization Detector Surrogate)	26.18	104.7%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	28.34	113.4%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile

QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO — DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Quality Bur.
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602627

REQUEST ID No.: 154594
RECEIVED AT SLD: 7/31/96
☐ SLD COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil MW-3
WSS #: _____ SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 1000

ANALYSIS No.: OR- 9602627
SLD BATCH No.: 405
DILUTION FACTOR: 1.00
REQUEST ID No.: 154594

SAMPLE PRESERVATION: Sample Temperature when received: 23 Degrees C.; pH = 7
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL	SDL
83-32-9	Acenaphthene		U	0.93
208-96-8	Acenaphthylene		U	0.87
120-12-7	Anthracene		U	0.36
103-33-3	Azobenzene		U	1.00
92-87-5	Benzidine		U	1.00
56-55-3	Benzo(a)anthracene		U	0.12
205-99-2	Benzo(b)fluoranthene		U	0.33
207-08-9	Benzo(k)fluoroanthene		U	0.33
191-24-2	Benzo(g,h,i)perylene		U	0.99
50-32-8	Benzo(a)pyrene		U	0.02
111-91-1	Bis(2-chloroethoxy)methane		U	0.69
111-44-4	Bis(2-chloroethyl)ether		U	0.39
108-60-1	Bis(2-chloroisopropyl)ether		U	0.45
117-81-7	Bis(2-ethylhexyl)phthalate	1	J	0.33
101-55-3	4-Bromophenylphenyl ether		U	0.48
85-68-7	Butylbenzyl phthalate		U	0.63
106-47-8	4-Chloroaniline		U	0.57
91-58-7	2-Chloronaphthalene		U	0.51
7005-72-3	4-Chlorophenylphenyl ether		U	0.42
218-01-9	Chrysene		U	0.24
53-70-3	Dibenz(a,h)anthracene		U	10.00
132-64-9	Dibenzofuran		U	0.72
84-74-2	Di-n-butyl phthalate		U	0.48
95-50-1	1,2-Dichlorobenzene		U	0.15
541-73-1	1,3-Dichlorobenzene		U	0.24
106-46-7	1,4-Dichlorobenzene		U	0.33
91-94-1	3,3'-Dichlorobenzidine		U	0.18

84-66-2	Diethylphthalate		U	0.78
131-11-3	Dimethylphthalate		U	0.48
121-14-2	2,4-Dinitrotoluene		U	0.45
606-20-2	2,6-Dinitrotoluene		U	0.39
117-84-0	Di-n-octyl phthalate		U	0.30
206-44-0	Fluoranthene		U	0.75
86-73-7	Fluorene		U	0.75
118-74-1	Hexachlorobenzene		U	0.75
87-68-3	Hexachlorobutadiene		U	0.30
77-47-4	Hexachlorocyclopentadiene		U	10.00
67-72-1	Hexachloroethane		U	0.30
193-39-5	Indeno(1,2,3-cd)pyrene		U	10.00
78-59-1	Isophorone		U	0.90
91-57-6	2-Methylnaphthalene		U	0.99
91-20-3	Naphthalene		U	0.63
88-74-4	2-Nitroaniline		U	0.51
99-09-2	3-Nitroaniline		U	0.33
100-01-6	4-Nitroaniline		U	0.51
98-95-3	Nitrobenzene		U	0.41
86-30-6	N-nitrosodiphenylamine		U	0.48
62-75-9	N-nitrosodimethylamine		U	0.48
621-64-7	N-nitroso-di-n-propylamine		U	0.03
85-01-8	Phenanthrene		U	0.24
129-00-0	Pyrene		U	0.33
120-82-1	1,2,4-Trichlorobenzene		U	0.30

QUALITY CONTROL SUMMARY

Surrogate compounds are added	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	28.0	56%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	28.0	56%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	37.0	74%	Normal

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:

COMPOUND	CONCENTRATION	% RECOVERY
No Exceptions		

LABORATORY BLANKS

No target analytes were detected above the sample detection limit in laboratory blank with the exception of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: **Tim Chapman** QC APPROVED BY: **Roberta Hine**

DEFINITIONS

**	**Concentration Exceeds EPA's allowable Maximum Contamination Level**
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows: B Analyte was detected in laboratory blank J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL) U No analyte was detected above the Sample Detection Limit.
MCL	Maximum Contamination Level Allowed by EPA for regulated analytes
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-[illegible]0

700 Camino de Sa[illegible] NE
[505] 841-250[illegible]

ORGANIC CHEMISTRY SECTION [505] 841-2570

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602619
REQUEST ID No.: 154586
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil WW-1
0 Water
REPORTING UNITS: ug/L

Remarks: Hydrocloric acid was used as a preservative in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5
0

ANALYSIS No.: OR- 9602619
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154586

SAMPLE PRESERVATION: Sample Temperature when received: 19 Degrees C.; pH = 2

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene	6.7		1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene		U	1.0
135-98-8	sec-Butylbenzene		U	1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-8	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene		U	1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene		U	1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0

91-20-3	Napnthalene	0.7	J	1.0
103-65-1	Propylbenzene		U	1.0
100-42-5	Styrene		U	1.0
630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene		U	1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene	0.7	J	1.0
108-67-8	1,3,5-Trimethylbenzene		U	1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*	0.8	J	1.0
N/A	p- & m-Xylene*	1.0		1.0
N/A	*Total Xylenes*	1.8		1.0
N/A	*Total Trihalomethanes*		U	1.0

LABORATORY BATCH QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
SURROGATE RECOVERIES:	2-Bromochlorobenzene (Photolonization Detector Surrogate)	23.51	94.0%
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	23.1	92.4%

LABORATORY FORTIFIED BLANK RECOVERIES

The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below:

COMPOUND	CONCENTRATION (ug/L)	% RECOVERY
cis-1,2-Dichloroethene	10	79%

LABORATORY BLANKS

No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below:

COMPOUND	CONCENTRATION (ug/L)
No Exceptions	

ANALYST: Patrick Basile

QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

STATE OF NEW MEXICO DEPARTMENT OF HEALTH

SCIENTIFIC LABORATORY DIVISION

P.O. Box 4700
Albuquerque, NM 87196-4700

700 Camino de Salud, NE
[505] 841-2500

ORGANIC CHEMISTRY SECTION [505] 841-2570

ED FIELD OFFICE: ☐

Rob Pine
NMED/Ground Water Bureau
PO Box 26110
Santa Fe, NM 87502

SLD No.: OR- 9602628

REQUEST ID No.: 154595
RECEIVED AT SLD: 7/31/96
☐SLD COPY USER: 55321

AUG 1996 RECEIVED

SAMPLE COLLECTION: DATE: 7/29/96 TIME: 0 BY: Pin
SAMPLING LOCATION: Baker Oil R-1
WSS #: SAMPLE MATRIX: water REPORTING UNITS: ug/L

EPA METHOD 625 NEUTRAL AND BASIC SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

DATE EXTRACTED: 8/5/96 7 Days: Within EPA Holding Time
DATE ANALYZED: 8/5/96 7 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 770

ANALYSIS No.: OR- 9602628
SLD BATCH No.: 405
DILUTION FACTOR: 1.30
REQUEST ID No.: 154595

SAMPLE PRESERVATION: **Sample Temperature when received: 22 Degrees C.; pH = 7**
NOT COMPOSITED

EXTRACTION TECHNIQUE: Separatory Funnel PERCENT MOISTURE: N/A
GPC CLEANUP: Not Used

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
83-32-9	Acenaphthene	5	J	1.21
208-96-8	Acenaphthylene		U	1.13
120-12-7	Anthracene		U	0.47
103-33-3	Azobenzene		U	1.30
92-87-5	Benzidine		U	1.30
56-55-3	Benzo(a)anthracene		U	0.16
205-99-2	Benzo(b)fluoranthene		U	0.43
207-08-9	Benzo(k)fluoroanthene		U	0.43
191-24-2	Benzo(g,h,i)perylene		U	1.29
50-32-8	Benzo(a)pyrene		U	0.03
111-91-1	Bis(2-chloroethoxy)methane		U	0.90
111-44-4	Bis(2-chloroethyl)ether		U	0.51
108-60-1	Bis(2-chloroisopropyl)ether		U	0.58
117-81-7	Bis(2-ethylhexyl)phthalate	6		0.43
101-55-3	4-Bromophenylphenyl ether		U	0.62
85-68-7	Butylbenzyl phthalate		U	0.82
106-47-8	4-Chloroaniline		U	0.74
91-58-7	2-Chloronaphthalene		U	0.66
7005-72-3	4-Chlorophenylphenyl ether		U	0.55
218-01-9	Chrysene		U	0.31
53-70-3	Dibenz(a,h)anthracene		U	12.99
132-64-9	Dibenzofuran		U	0.94
84-74-2	Di-n-butyl phthalate		U	0.62
95-50-1	1,2-Dichlorobenzene		U	0.19
541-73-1	1,3-Dichlorobenzene		U	0.31
106-46-7	1,4-Dichlorobenzene		U	0.43
91-94-1	3,3'-Dichlorobenzidine		U	0.23

84-66-2	Diethylphthalate		U	1.01
131-11-3	Dimethylphthalate		U	0.62
121-14-2	2,4-Dinitrotoluene		U	0.58
606-20-2	2,6-Dinitrotoluene		U	0.51
117-84-0	Di-n-octyl phthalate		U	0.39
206-44-0	Fluoranthene		U	0.97
86-73-7	Fluorene	6		0.97
118-74-1	Hexachlorobenzene		U	0.97
87-68-3	Hexachlorobutadiene		U	0.39
77-47-4	Hexachlorocyclopentadiene		U	12.99
67-72-1	Hexachloroethane		U	0.39
193-39-5	Indeno(1,2,3-cd)pyrene		U	12.99
78-59-1	Isophorone		U	1.17
91-57-6	2-Methylnaphthalene	113		1.29
91-20-3	Naphthalene	81		0.82
88-74-4	2-Nitroaniline		U	0.66
99-09-2	3-Nitroaniline		U	0.43
100-01-6	4-Nitroaniline		U	0.66
98-95-3	Nitrobenzene		U	0.53
86-30-6	N-nitrosodiphenylamine		U	0.62
62-75-9	N-nitrosodimethylamine		U	0.62
621-64-7	N-nitroso-di-n-propylamine		U	0.04
85-01-8	Phenanthrene	2		0.31
129-00-0	Pyrene		U	0.43
120-82-1	1,2,4-Trichlorobenzene		U	0.39

COMPOUNDS DETECTED AND TENTATIVELY IDENTIFIED BY MASS SPECTROMETRY (TIC's)

CAS #	TENTATIVE ANALYTE NAME	EST CONC. (ug/L)	LIBRARY MS MATCH	RETENTION TIME (MIN)
13151-29-6	4-Methyl-1-Decene	300	815	19.90
17301-28-9	3,6-Dimethyl-undecane	300	793	18.12
57289-26-6	2-Methyl-1-Dodecanol	200	853	18.30
2217-43-8	5,6,7,8-Tetrahydro-2-Napthalenamine	200	790	19.53
247183-2	1-Ethylidene-1H-Indene	200	881	20.95
54833-48-6	2,6,10,15-Tetramethyl-Heptadecane	200	797	20.73
56292-65-0	2,5-Dimethyl-Dodecane	200	765	16.50
589-90-2	1,4-Dimethyl-Cyclohexane	200	850	20.34
7058-01-7	1-Methyl-2-(1-Methylethyl)-Benzene	100	869	13.85
934-74-7	1-Ethyl-3,5-Dimethyl-Benzene	100	793	18.87
Comment:	Numerous hydrocarbons were observed by GC/MS in the C11 to C 15 range			
	with an approximate total concentration of 20 ug/ml.			

* "Library MS Match" is a number showing the approximate percentage agreement with our 60,000 compound, NIST mass spectral library.
"Retention Time" is the time required for the specific compound to pass through the chromatographic column.

QUALITY CONTROL SUMMARY

	SURROGATE COMPOUNDS ADDED TO SAMPLE BEFORE EXTRACTION	Surrogate Recovered	% RECOVERY	QC Eval.
Surrogate compounds are added to samples to determine extraction efficiency and QC	Nitrobenzene-d5 (Neutral Surrogate added at 50 ug/L)	30.0	60%	Normal
	2-Fluorobiphenyl (Neutral Surrogate added at 50 ug/L)	32.0	64%	Normal
	Terphenyl-d14 (Neutral Surrogate added at 50 ug/L)	41.0	82%	Normal
LABORATORY FORTIFIED	The % recoveries of target analytes in the batch spike(s) were within the expected range with the following exceptions:			

SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700
Albuquerque, NM 87196-4700
700 Camino de S[redacted], NE
[505] 841-2500
ORGANIC CHEMISTRY SECTION [505] 841-2570

OCT 1996

REPORT TO CLIENT:

Attn: Rob Pine
Ground Water Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502

SLD No.: OR- 9602623
REQUEST ID No.: 154590
RECEIVED AT SLD: 7/31/96
SLD COPY
USER 55321

SAMPLE COLLECTION: DATE: 7/29/96 TIME: na BY: Pin
SAMPLING LOCATION: Baker Oil R-1
Water
REPORTING UNITS: ug/L

Remarks: Hydrochloric acid was used as a preservative in this sample.

EPA METHOD 8021 VOLATILES BY GAS CHROMATOGRAHY (PID/ELCD)

DATE EXTRACTED: N/A
DATE ANALYZED: 8/2/96 4 Days: Within EPA Analysis Time
SAMPLE VOL (ml): 5

ANALYSIS No.: OR- 9602623
SLD BATCH No.: 400
DILUTION FACTOR: 1.00
REQUEST ID No.: 154590

SAMPLE PRESERVATION: Sample Temperature when received: 18 Degrees C.; pH = 7

CAS #	ANALYTE NAME	CONC. (ug/L)	QUAL.	SDL
				uG/L
71-43-2	Benzene	1.3		1.0
108-86-1	Bromobenzene		U	1.0
74-97-5	Bromochloromethane		U	1.0
75-27-4	Bromodichloromethane*		U	1.0
75-25-2	Bromoform*		U	1.0
24-83-9	Bromomethane		U	1.0
78-93-3	2-Butanone (MEK)		U	10.0
104-51-8	n-Butylbenzene	73		1.0
135-98-8	sec-Butylbenzene	48		1.0
98-06-6	tert-Butylbenzene		U	1.0
1634-04-4	tert-Butyl methyl ether (MTBE)		U	10.0
56-23-5	Carbon tetrachloride		U	1.0
108-90-7	Chlorobenzene (monochlorobenzene)		U	1.0
75-00-3	Chloroethane		U	1.0
67-66-3	Chloroform*		U	1.0
74-87-3	Chloromethane		U	1.0
95-49-3	2-Chlorotoluene		U	1.0
106-43-4	4-Chlorotoluene		U	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		U	1.0
124-48-1	Dibromochloromethane*		U	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide (EDB))		U	1.0
74-95-3	Dibromomethane		U	1.0
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)		U	1.0
541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)		U	1.0
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)		U	1.0
75-71-8	Dichlorodifluoromethane		U	1.0
75-34-3	1,1-Dichloroethane		U	1.0
107-06-2	1,2-Dichloroethane		U	1.0
75-35-4	1,1-Dichloroethene		U	1.0
156-59-2	cis-1,2-Dichloroethene		U	1.0
156-60-5	trans-1,2-Dichloroethene		U	1.0
78-87-5	1,2-Dichloropropane		U	1.0
142-28-9	1,3-Dichloropropane		U	1.0
590-20-7	2,2-Dichloropropane		U	1.0
563-58-6	1,1-Dichloropropene		U	1.0
1006-01-5	cis-1,3-Dichloropropene		U	1.0
1006-02-6	trans-1,3-Dichloropropene		U	1.0
100-41-4	Ethylbenzene	45		1.0
87-68-3	Hexachlorobutadiene		U	1.0
98-82-8	Isopropylbenzene	9.8		1.0
99-87-6	4-Isopropyltoluene		U	2.0
75-09-2	Methylene chloride (Dichloromethane)		U	2.0
91-20-3	Naphthalene	200		10
103-65-1	Propylbenzene	45		1.0
100-42-5	Styrene		U	1.0

OCT 1996 RECEIVED

630-20-6	1,1,1,2-Tetrachloroethane		U	1.0
79-34-5	1,1,2,2-Tetrachloroethane		U	1.0
127-18-4	Tetrachloroethene		U	1.0
109-99-9	Tetrahydrofuran (THF)		U	10.0
108-88-3	Toluene	1.6		1.0
87-61-5	1,2,3-Trichlorobenzene		U	1.0
120-82-1	1,2,4-Trichlorobenzene		U	1.0
71-55-6	1,1,1-Trichloroethane		U	1.0
79-00-5	1,1,2-Trichloroethane		U	1.0
79-01-6	Trichloroethene		U	1.0
75-69-4	Trichlorofluoromethane		U	1.0
96-18-4	1,2,3-Trichloropropane		U	1.0
95-63-6	1,2,4-Trimethylbenzene	110		10
108-67-8	1,3,5-Trimethylbenzene	12		1.0
75-01-4	Vinyl chloride		U	1.0
95-47-6	o-Xylene*	28		1.0
N/A	p- & m-Xylene*	12		1.0
N/A	*Total Xylenes*	41		1.0
N/A	*Total Trihalomethanes*		U	1.0

Laboratory Remarks: This sample was diluted and re-analyzed on 8/21/96 to quantitate Naphthalene and 1,2,4-Trimethyl Benzene. The ELCD surrogate recovery was extremely high due to co-eluting peaks. however, the internal standard area was at 94.5% of the expected area . There were 80 compounds observed on the photoionization detector at approximately 10-40 ppb, but not identified.

LABORATORY BATCH QUALITY CONTROL SUMMARY

SURROGATE RECOVERIES:	SURROGATE COMPOUNDS	CONCENTRATION	% RECOVERY
	2-Bromochlorobenzene (Photolonization Detector Surrogate)	132	528.0% High
	2-Bromochlorobenzene(Electrolytic Conductivity Detector Surrogate)	23.9	95.6%
LABORATORY FORTIFIED BLANK RECOVERIES	The % recoveries for compounds in the batch spike were from 80% to 120% with the exception of the compounds listed below: COMPOUND / CONCENTRATION (ug/L) / % RECOVERY: cis-1,2-Dichloroethene / 10 / 79%		
LABORATORY BLANKS	No target compounds were detected above the sample detection limit in laboratory blank with the ecxeption of the compound(s) listed below: COMPOUND / CONCENTRATION (ug/L): No Exceptions		

ANALYST: Patrick Basile

QC APPROVED BY: Ken Sherrell

DEFINITIONS

**	Concentration Exceeds EPA's allowable Maximum Contamination Level
CAS#	Chemical Abstract Services Number - Unique number to help identify analytes listed by different names
CONC.	Concentration (ug/L) of analyte actually detected in the sample
QUAL	Qualifier of analytical results as follows:
	B Analyte was detected in laboratory blank
	J Analyte was detected at a level below which an accurate quanitation can be given (~5 * SDL)
	U No analyte was detected above the Sample Detection Limit.
SDL	Sample Detection Limit - The lowest concentration which can be differentiated from Zero with 99% confidence taking sample size (compositing) into account.
ug/L	Concentration Units - micrograms per liter which is approximately equivalent to Parts Per Billion (ppb)

EPIC LABORATORIES, INC.

ANALYTICAL AND QUALITY CONTROL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

11/04/1996

EPIC Job Number: 96.07903

Enclosed is the Analytical and Quality Control report for the following samples submitted to the Dallas Division of EPIC Laboratories, Inc. for analysis. Reproduction of this analytical report is permitted only in its entirety.

Sample Number	Sample Description	Date Taken	Date Received
321462	MW-3	10/23/1996	10/24/1996
321463	MW-2	10/23/1996	10/24/1996
321464	MW-1	10/23/1996	10/24/1996
321465	WW-1	10/23/1996	10/24/1996
321466	R-1	10/23/1996	10/24/1996
321467	TRIP BLANK	10/18/1996	10/24/1996

EPIC Laboratories, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Holding Times: All holding times were within method criteria.

Method Blanks: All method blanks were within quality control criteria.

Instrument calibration: All calibrations were within method quality control criteria.

Analysis Comments: No Unusual Comments

Jim Rowley
Project Manager

1548 Valwood Parkway, Suite 118, Carrollton, Texas 75006 (972) 406-8100 Fax: (972) 484-2969
2621 Ridgepoint Drive, Suite 135, Austin, Texas 78754 (512) 928-8905 Fax: (512) 928-3208

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

11/04/1996
Job No.: 96.07903

Project Name: BOT HOBBS/4TH QT MONITOR 1996

Date Received: 10/24/1996

321462 MW-3
Taken: 10/23/1996 14:30

pH	6.7	units
Conductivity	2220	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<5	ug/L
SURR: a,a,a-TFT	81	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<10	ug/L
Naphthalene	<10	ug/L
SURR: 2-Fluorobiphenyl	55	% Rec
SURR: Nitrobenzene-d5	62	% Rec
SURR: Terphenyl-d14	96	% Rec

321463 MW-2
Taken: 10/23/1996 14:45

pH	6.8	units
Conductivity	4800	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<5	ug/L
SURR: a,a,a-TFT	83	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<10	ug/L
Naphthalene	<10	ug/L
SURR: 2-Fluorobiphenyl	66	% Rec
SURR: Nitrobenzene-d5	73	% Rec
SURR: Terphenyl-d14	107	% Rec

321464 MW-1
Taken: 10/23/1996 15:00

pH	6.9	units
Conductivity	1370	umhos/cm
EPA-8020 AQ (PRESERVED)		

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

11/04/1996
Job No.: 96.07903

Project Name: BOT HOBBS/4TH QT MONITOR 1996

Date Received: 10/24/1996

321464 MW-1
Taken: 10/23/1996 15:00

Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<5	ug/L
SURR: a,a,a-TFT	73	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<10	ug/L
Naphthalene	<10	ug/L
SURR: 2-Fluorobiphenyl	59	% Rec
SURR: Nitrobenzene-d5	65	% Rec
SURR: Terphenyl-d14	96	% Rec

321465 WW-1
Taken: 10/23/1996 15:30

pH	6.9	units
Conductivity	1970	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	27	ug/L
Ethylbenzene	7	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	15	ug/L
SURR: a,a,a-TFT	71	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<10	ug/L
Naphthalene	<10	ug/L
SURR: 2-Fluorobiphenyl	62	% Rec
SURR: Nitrobenzene-d5	62	% Rec
SURR: Terphenyl-d14	118	% Rec

321466 R-1
Taken: 10/23/1996 16:00

pH	6.7	units
Conductivity	2110	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	230	ug/L
Toluene	<2	ug/L

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

11/04/1996
Job No.: 96.07903

Project Name: BOT HOBBS/4TH QT MONITOR 1996

Date Received: 10/24/1996

321466 R-1
Taken: 10/23/1996 16:00

Xylenes, Total	410	ug/L
MTBE	<5	ug/L
SURR: a,a,a-TFT	67	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	240	ug/L
Naphthalene	140	ug/L
SURR: 2-Fluorobiphenyl	58	% Rec
SURR: Nitrobenzene-d5	84	% Rec
SURR: Terphenyl-d14	113	% Rec

321467 TRIP BLANK
Taken: 10/18/1996 16:45

EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<5	ug/L
SURR: a,a,a-TFT	70	% Rec

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 96.07903

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
pH	jmd	10/24/1996	SM-4500H.	7.9	8.0	99	NA
Conductivity	kwo	10/31/1996	E-120.1	1387	1410	98	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	dtw	10/28/1996	S-8020M	16.5	20	83	NA
Ethylbenzene	dtw	10/28/1996	S-8020M	18.0	20	90	NA
MTBE	dtw	10/28/1996	S-8020M	14.7	20	74	NA
Toluene	dtw	10/28/1996	S-8020M	17.3	20	87	NA
Xylenes, Total	dtw	10/28/1996	S-8020M	63	60	105	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	dtw	10/30/1996	S-8020M	16.5	20	83	NA
Ethylbenzene	dtw	10/30/1996	S-8020M	18	20	90	NA
MTBE	dtw	10/30/1996	S-8020M	14.7	40	37	NA
Toluene	dtw	10/30/1996	S-8020M	17.3	20	87	NA
Xylenes, Total	dtw	10/30/1996	S-8020M	63	60	105	NA

Method References and Codes

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.

E-100 through 493: "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

E-601 through 625: "Guidelines Establishing Test Procedures for the Analysis of Pollutants", U.S. EPA, 40CFR, Part 136, rev. 1990.

S-1000 through 9999: "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd Edition, 1986.

A: "Standard Methods for the Examination of Water and Wastewater", 16th Edition, APHA, 1985.

SM: "Standard Methods for the Examination of Water and Wastewater", 18th Edition, APHA, 1992.

D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
BLANKS

JOB NUMBER: 96.07903

PARAMETER	DATE ANALYZED	BLANK	UNITS	REPORTING LIMIT	FLAG
Conductivity	10/31/1996	<5.0	umhos	5.0	NA
EPA-8020 AQ (PRESERVED)					
Benzene	10/28/1996	<2	ug/L	2	NA
Ethylbenzene	10/28/1996	<2	ug/L	2	NA
MTBE	10/28/1996	<5	ug/L	5	NA
Toluene	10/28/1996	<2	ug/L	2	NA
Xylenes, Total	10/28/1996	<2	ug/L	2	NA
BASE/NEUTRALS - 8270 AQUEOUS					
2-Methylnaphthalene	10/31/1996	<10	ug/L	10	NA
Naphthalene	10/31/1996	<10	ug/L	10	NA

Advisory Control Limits for Blanks

Metals/Wet Chemistry/Conventionals/GC - All compounds should be less than the Reporting Limit.

GC/MS Semi-Volatiles - All compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the Reporting Limit.

GC/MS Volatiles - Toluene, Methylene chloride, Acetone and Chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
Laboratory Control Sample
(LCS)

JOB NUMBER: 96.07903

PARAMETER	LCS RESULT	TRUE CONC.	LCS % REC.	FLAG
Conductivity	2720	2764	98	
EPA-8020 AQ (PRESERVED)				
Benzene	13	20	65	
Ethylbenzene	14	20	70	
MTBE	12	20	60	
Toluene	14	20	70	
Xylenes, Total	45	40	113	

Advisory Control Limits for LCS

Inorganic Parameters - The LCS recovery should be 80-120%.

QUALITY CONTROL REPORT
Matrix Spike / Matrix Spike Duplicate
(MS / MSD)

JOB NUMBER: 96.07903

PARAMETER	SAMPLE RESULT	MS RESULT	MSD RESULT	SPIKE AMOUNT	MS % REC.	MSD % REC.	MS/MSD RPD	FLAG
EPA-8020 AQ (PRESERVED)								
Benzene	15	26	29	20	55	70	24	
Ethylbenzene	<2	12	15	20	60	75	22	
Toluene	<2	12	15	20	60	75	22	
Xylenes, Total	<2	25	33	40	63	83	28	
MTBE	190	173	164	20	-84	-129	42	

Advisory Control Limits for MS/MSDs

Inorganic Parameters - The spike recovery should be 75-125% if the spike amount value is greater than or equal to one fourth of the sample result value. The RPD for the MS/MSD should be less than 20.

NOTE: Matrix Spike Samples may not be samples from this job.

QUALITY CONTROL REPORT
DUPLICATES

JOB NUMBER: 96.07903

PARAMETER	SAMPLE RESULT	DUPLICATE RESULT	RPD	SPIKE SAMPLE RESULT	SPIKE RESULT	SPIKE AMOUNT	% REC.	FLAG
pH	6.8	6.8	0.0	NA	NA	NA	NA	
Conductivity	2220	2230	0.4	NA	NA	NA	NA	

Advisory Control Limits for Spikes

The spike recovery should be 75-125% if the spike amount is greater than or equal to one fourth of the sample result value.

NOTE: Spike Samples may not be samples from this job.

Advisory Control Limits for Duplicates

The RPD for the sample and duplicate should be less than 20.

EPIC LABORATORIES, INC.

1548 VALWOOD PARKWAY, SUITE 118
CARROLLTON, TEXAS 75006
DALLAS (972) 406-8100
AUSTIN (512) 928-8905

CHAIN OF CUSTODY RECORD

COMPANY Baker Oil Tools (BOT)
ADDRESS
PHONE 713 4662520 FAX
PROJECT NAME/LOCATION BOT Hobbs / 4th Qt Monit 96
PROJECT NUMBER
PROJECT MANAGER Tom Stenbeck

REPORT TO: Tom Stenbeck
INVOICE TO: Tom Stenbeck
P.O. NO. BOT Emmot Rd
EPIC QUOTE NO.

SAMPLED BY JON BARRETT (PRINT NAME) SIGNATURE
(PRINT NAME) SIGNATURE

DATE 96	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl (pres.)	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: BTEX	MTBE	2-Methyl Naphthalene	Naphthalene	pH	cond.
10/23	2:30	MW-3 (3)	W	X		X					X	X	X	X	X	X
	2:45	MW-2														
	3:00	MW-1														
	3:30	WW-1														
	4:00	R-1														
10/18	1645	Trip Blank (1)														

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes ___ No ___

Is this work being conducted for regulatory enforcement action? Yes ___ No ___

Which regulations apply: RCRA ___ NPDES Wastewater ___ UST ___ Drinking Water ___ Other ___ None ___

COMMENTS

D.Q 10/31

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? YES / NO VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT: ___ Bottles supplied by EPIC? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ___ I REQUEST EPIC TO DISPOSE OF ALL SAMPLE REMAINDERS ___ DATE ___

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR EPIC BY:
	10/24/96	5:00 pm					10/24/96 0930

METHOD OF SHIPMENT: FEDEX

REMARKS: Result to Tom S. BOT Emmot Rd Houston

PT 1 - ORIGINAL - WHITE PT 2 - EPIC PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

BAKER
OIL TOOLS
A Baker Hughes company
9100 Emmott Road
P.O. Box 40129
Houston, Texas 77240-0129
Telephone (713) 466-1322

July 22, 1996

Mr. William C. Olsen, Hydrogeologist
State of New Mexico
Energy, Mineral and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Olsen:

Baker Oil Tools is requesting an extension of the report due date for the quarterly monitoring report due August 1, 1996 for the Baker Oil Tools, 2800 West Marland, Hobbs, NM facility. The sampling is being rescheduled to coordinate sampling with Mr. Ron Pine of the New Mexico Environmental Division, who would like to sample the wells on July 29, 1996 as part of the investigation of the adjoining property (Keeling Petroleum). Our sampling report should be submitted by August 23, 1996. Should any further delay be incurred, BOT will notify you immediately. If you require any additional information please contact me at (713)466-2520.

Sincerely,

Thomas V. Stenbeck
Health, Safety and Environmental Manager

xc Mr. Wayne Price NMOCD-Hobbs

BAKER OIL TOOLS
A Baker Hughes company

1 May 1996

Mr. William Olson, Hydrogeologist
State of New Mexico
Energy, Mineral and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Olson:

Baker Oil Tools is submitting the fourth required monitoring in response to the NMOCD request of June 20, 1995 to provide quarterly monitoring data for groundwater contamination in the direct vicinity of the former disposal pit on the property located at 2800 W. Marland in Hobbs, New Mexico. The NMOCD requested the following three items from BOT for each monitoring session:

1. A brief description of all monitoring activities which occurred during the quarter.

BOT performed sampling on April 4, 1996. Each well was bailed of three volumes and allowed to equalize prior to sampling except for WW-1 which is a 125' deep water well. The wells were gauged for depth and bailed on the 3rd with sampling occurring on the 4th.. The Hobbs district office of the NMOCD was notified prior to sampling as required. Samples were packaged and submitted to the laboratory for analysis.

2. A summary of the laboratory analytical results of water quality sampling of the monitoring wells. The data will be presented in tabular form showing past and present sampling results.

Tables 1a through 1g present the sampling data.

Table 1a

BENZENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3 January 11, 1996	Quarter 4 April 4, 1996
Trip Blank	<0.5	<2	<2	<0.5	<2.0
MW-1	<0.5	<2	<2	<0.5	<2.0
MW-2	<0.5	<2	<2	<0.5	<2.0
MW-3	<0.5	<2	<2	<0.5	<2.0
WW-1	260	51	<2	0.5	<2.0
R-1	<0.5	<2	<20	1.3	10

Table 1b

TOLUENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3 January 11, 1996	Quarter 4 April 4, 1996
Trip Blank	<0.5	<2	<2	<0.5	<2.0
MW-1	<0.5	<2	<2	<0.5	<2.0
MW-2	0.5	<2	<2	<0.5	<2.0
MW-3	<0.5	<2	<2	<0.5	<2.0
WW-1	1.9	<2	<2	<0.5	<2.0
R-1	3.0	<2	<20	1.9	<2.0

Table 1c

ETHYL BENZENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3 January 11, 1996	Quarter 4 April 4, 1996
Trip Blank	<0.5	<2	<2	<0.5	<2.0
MW-1	<0.5	<2	<2	<0.5	<2.0
MW-2	<0.5	<2	<2	<0.5	<2.0
MW-3	<0.5	<2	<2	<0.5	<2.0
WW-1	180	<2	<2	1.0	<2.0
R-1	49	52	46	40.0	16

Table 1d

XYLENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3 January 11, 1996	Quarter 4 April 4, 1996
Trip Blank	<0.5	<2	<2	<0.5	<2.0
MW-1	1.2	<2	<2	<0.5	<2.0
MW-2	0.5	<2	<2	<0.5	<2.0
MW-3	0.8	<2	<2	<0.5	<2.0
WW-1	7.0	<2	<2	0.6	<2.0
R-1	94	64	72	67.0	20

Table 1e

MTBE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3 January 11, 1996	Quarter 4 April 4, 1996
Trip Blank	<2.5	<2	<2	<2.5	<2.0
MW-1	<2.5	<2	<2	<2.5	<2.0
MW-2	<2.5	<2	<2	<2.5	<2.0
MW-3	2.6	<2	<2	<2.5	<2.0
WW-1	4.1	<2	<2	<2.5	<2.0
R-1	<2.5	21	<20	<2.5	<2.0

Table 1f

NAPHTHALENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3 January 11, 1996	Quarter 4 April 4, 1996
Trip Blank	<0.3	<5	not analyzed	<0.5	not analyzed
MW-1	<0.3	<5	<10	<0.5	<5.0
MW-2	<0.3	<5	<10	<0.5	<5.0
MW-3	<0.3	not available*	<10	<0.5	<5.0
WW-1	46	12.9	<10	<0.5	<5.0
R-1	240	101	39.4	140.0	33.0

*sample broke during shipment

Table 1g

2-METHYL NAPHTHALENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3 January 11, 1996	Quarter 4 April 4, 1996
Trip Blank	<0.3	<5	not analyzed	<1.0	not analyzed
MW-1	<0.3	<5	<10	<1.0	<10.0
MW-2	<0.3	<5	<10	<1.0	<10.0
MW-3	1.0	not available*	<10	<1.0	<10.0
WW-1	14	<5	<10	<1.0	<10.0
R-1	360	115	56.2	170.0	35

*sample broke during shipment

3. A ground water elevation map using the water table elevation of the ground water in all monitoring wells.

Figure 1 presents the water elevation data as requested. Table 2 lists the well number, the depth of the well, the depth to the top of the water, the elevation of the well casing and the actual depth to ground water.

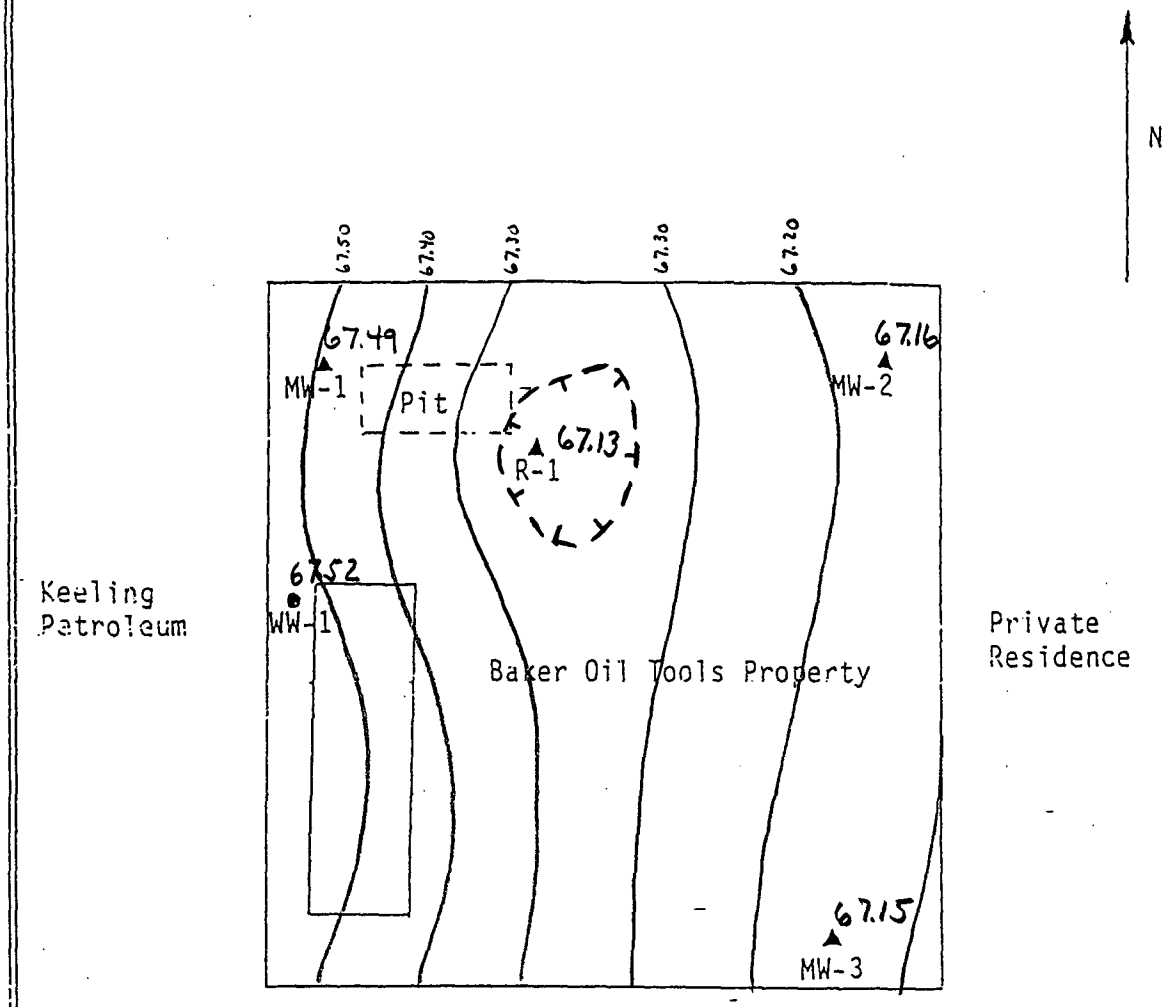
Table 2
Ground Water Elevation Data

Well ID	Well Depth	Elevation	Quarter 1		Quarter 2		Quarter 3		Quarter 4	
			gauged depth	actual depth	gauged depth	actual depth	gauged depth	actual depth	gauged depth	actual depth
MW-1	46.0	100.19	33.2	66.99	32.5	67.69	32.32	67.87	32.7	67.49
MW-2	45.7	99.56	32.5	67.06	32.0	67.56	31.97	67.59	32.4	67.16
MW-3	39.3	99.15	32.7	66.45	32.0	67.15	31.55	67.60	32.0	67.15
WW-1	125.0	99.52	32.3	67.22	31.8	67.72	31.65	67.87	32.0	67.52
R-1	40.0	100.03	33.0	67.03	32.8	67.23	32.24	67.79	32.9	67.13

The next scheduled monitoring will occur in July with the report submitted by August 1996. If you have any questions or require additional information, please do not hesitate in contacting me at (713)466-2520.

Sincerely,
For Baker Oil Tools

Thomas V. Stenbeck
Manager of Health, Safety and Environment



Scale: 1" = 60'

Figure No. 1	Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

NATIONAL ENVIRONMENTAL TESTING, INC.

Dallas Division
1548 Valwood Parkway
Suite 118
Carrollton, TX 75006
Tel: (214) 406-8100
Fax: (214) 484-2969

ANALYTICAL AND QUALITY CONTROL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

04/22/1996

NET Job Number: 96.02648

Enclosed is the Analytical and Quality Control report for the following samples submitted to the Dallas Division of NET, Inc. for analysis. Reproduction of this analytical report is permitted only in its entirety.

Sample Number	Sample Description	Date Taken	Date Received
301973	MW-3	04/04/1996	04/05/1996
301974	MW-2	04/04/1996	04/05/1996
301975	MW-1	04/04/1996	04/05/1996
301976	WW-1	04/04/1996	04/05/1996
301977	R-1	04/04/1996	04/05/1996
301978	TRIP BLANK		04/05/1996

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Holding Times: All holding times were within method criteria.

Method Blanks: All method blanks were within quality control criteria.

Instrument calibration: All calibrations were within method quality control criteria.

Analysis Comments: No Unusual Comments

Gregory K. Horton
Project Manager

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

04/22/1996
Job No.: 96.02648

Project Name: BOT HOBBS, N.M.

Date Received: 04/05/1996

301973 MW-3
Taken: 04/04/1996 11:00

pH	6.5	units
Conductivity	2000	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	73	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<10	ug/L
Naphthalene	<5	ug/L
SURR: 2-Fluorobiphenyl	72.8	% Rec
SURR: Nitrobenzene-d5	76.4	% Rec
SURR: Terphenyl-d14	83.3	% Rec

301974 MW-2
Taken: 04/04/1996 10:30

pH	6.6	units
Conductivity	4030	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	73	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<10	ug/L
Naphthalene	<5	ug/L
SURR: 2-Fluorobiphenyl	64.8	% Rec
SURR: Nitrobenzene-d5	66.8	% Rec
SURR: Terphenyl-d14	73.7	% Rec

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

04/22/1996
Job No.: 96.02648

Project Name: BOT HOBBS, N.M.

Date Received: 04/05/1996

301975 MW-1
Taken: 04/04/1996 11:00

pH	6.8	units
Conductivity	1470	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	70	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<10	ug/L
Naphthalene	<5	ug/L
SURR: 2-Fluorobiphenyl	67.2	% Rec
SURR: Nitrobenzene-d5	67.0	% Rec
SURR: Terphenyl-d14	89.0	% Rec

301976 WW-1
Taken: 04/04/1996 11:20

pH	7.7	units
Conductivity	279	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	75	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<10	ug/L
Naphthalene	<5	ug/L
SURR: 2-Fluorobiphenyl	66.1	% Rec
SURR: Nitrobenzene-d5	70.5	% Rec
SURR: Terphenyl-d14	87.8	% Rec

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

04/22/1996
Job No.: 96.02648

Project Name: BOT HOBBS, N.M.

Date Received: 04/05/1996

301977 R-1
Taken: 04/04/1996 12:00

pH	6.6	units
Conductivity	1900	umhos/cm
EPA-8020 AQ (PRESERVED)		
Benzene	10	ug/L
Ethylbenzene	16	ug/L
Toluene	<2	ug/L
Xylenes, Total	20	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	78	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	35	ug/L
Naphthalene	33	ug/L
SURR: 2-Fluorobiphenyl	62.5	% Rec
SURR: Nitrobenzene-d5	59.7	% Rec
SURR: Terphenyl-d14	76.7	% Rec

301978 TRIP BLANK
Taken:

EPA-8020 AQ (PRESERVED)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	70	% Rec

NET®

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 96.02648

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
pH	rsd	04/08/1996	SM-4500H.	8.01	8.00	100	NA
Conductivity	des	04/09/1996	E-120.1	1390	1409	99	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	bdb	04/08/1996	S-8020M	18	20	90	NA
Ethylbenzene	bdb	04/08/1996	S-8020M	16	20	80	NA
MTBE	NA	NA	S-8020M	NA		NA	NA
Toluene	bdb	04/08/1996	S-8020M	17	20	85	NA
Xylenes, Total	bdb	04/08/1996	S-8020M	48	60	80	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	bdb	04/09/1996	S-8020M	22	20	110	NA
Ethylbenzene	bdb	04/09/1996	S-8020M	23	20	115	NA
MTBE	bdb	04/09/1996	S-8020M	33	40	83	NA
Toluene	bdb	04/09/1996	S-8020M	23	20	115	NA
Xylenes, Total	bdb	04/09/1996	S-8020M	70	60	117	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	bdb	04/11/1996	S-8020M	19	20	95	NA
Ethylbenzene	bdb	04/11/1996	S-8020M	17	20	85	NA
MTBE	bdb	04/11/1996	S-8020M	34	40	85	NA
Toluene	bdb	04/11/1996	S-8020M	18	20	90	NA
Xylenes, Total	bdb	04/11/1996	S-8020M	54	60	90	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	bdb	04/10/1996	S-8020M	21	20	105	NA

Method References and Codes

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.

E-100 through 493: "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

E-601 through 625: "Guidelines Establishing Test Procedures for the Analysis of Pollutants", U.S. EPA, 40CFR, Part 136, rev. 1990.

S-1000 through 9999: "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd Edition, 1986.

A: "Standard Methods for the Examination of Water and Wastewater", 16th Edition, APHA, 1985.

SM: "Standard Methods for the Examination of Water and Wastewater", 18th Edition, APHA, 1992.

D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
Continuing Calibration Verification (CCV)

JOB NUMBER: 96.02648

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
Ethylbenzene	bdb	04/10/1996	S-8020M	21	20	105	NA
MTBE	bdb	04/10/1996	S-8020M	32	40	80	NA
Toluene	bdb	04/10/1996	S-8020M	21	20	105	NA
Xylenes, Total	bdb	04/10/1996	S-8020M	67	60	112	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	tcc	04/11/1996	S-8020M	19	20	95	NA
Ethylbenzene	tcc	04/11/1996	S-8020M	17	20	85	NA
MTBE	tcc	04/11/1996	S-8020M	33	40	83	NA
Toluene	tcc	04/11/1996	S-8020M	18	20	90	NA
Xylenes, Total	tcc	04/11/1996	S-8020M	55	60	92	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	tcc	04/12/1996	S-8020M	20	20	100	NA
Ethylbenzene	tcc	04/12/1996	S-8020M	20	20	100	NA
MTBE	tcc	04/12/1996	S-8020M	32	40	80	NA
Toluene	tcc	04/12/1996	S-8020M	20	20	100	NA
Xylenes, Total	tcc	04/12/1996	S-8020M	64	60	107	NA
EPA-8020 AQ (PRESERVED)			S-8020M				
Benzene	tcc	04/15/1996	S-8020M	21	20	105	NA
Ethylbenzene	tcc	04/15/1996	S-8020M	20	20	100	NA
MTBE	tcc	04/15/1996	S-8020M	32	40	80	NA
Toluene	tcc	04/15/1996	S-8020M	22	20	110	NA
Xylenes, Total	tcc	04/15/1996	S-8020M	64	60	107	NA

Method References and Codes

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.

E-100 through 493: "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

E-601 through 625: "Guidelines Establishing Test Procedures for the Analysis of Pollutants", U.S. EPA, 40CFR, Part 136, rev. 1990.

S-1000 through 9999: "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd Edition, 1986.

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SM: "Standard Methods for the Examination of Water and Wastewater", 18th Edition, APHA, 1992.

D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 96.02648

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
BASE/NEUTRALS - 8270 AQUEOUS			S-8270A				
2-Methylnaphthalene	cac	04/17/1996	S-8270A	47.2	50.0	94	NA
Naphthalene	cac	04/17/1996	S-8270A	46.5	50.0	93	NA

Method References and Codes

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.

E-100 through 493: "Methods for Chemical Analysis of Water & Wastes", *U.S. EPA, 600/4-79-020, rev. 1983.*

E-601 through 625: "Guidelines Establishing Test Procedures for the Analysis of Pollutants", U.S. EPA, 40CFR, Part 136, rev. 1990.

S-1000 through 9999: "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd Edition, 1986.

A: "Standard Methods for the Examination of Water and Wastewater", 16th Edition, APHA, 1985.

SM: "Standard Methods for the Examination of Water and Wastewater", 18th Edition, APHA, 1992.

D: ASTM Method

M: Method has been modified

*: *Other Reference*

QUALITY CONTROL REPORT
BLANKS

JOB NUMBER: 96.02648

PARAMETER	DATE ANALYZED	BLANK	UNITS	REPORTING LIMIT	FLAG
pH	04/08/1996	N/A	units	N/A	NA
Conductivity	04/09/1996	<5.0	umhos	5.0	NA
EPA-8020 AQ (PRESERVED)					
Benzene	04/08/1996	<2	ug/L	2	NA
Ethylbenzene	04/08/1996	<2	ug/L	2	NA
MTBE	04/08/1996	<2	ug/L	2	NA
Toluene	04/08/1996	<2	ug/L	2	NA
Xylenes, Total	04/08/1996	<2	ug/L	2	NA
EPA-8020 AQ (PRESERVED)					
Benzene	04/09/1996	<2	ug/L	2	NA
Ethylbenzene	04/09/1996	<2	ug/L	2	NA
MTBE	04/09/1996	<2	ug/L	2	NA
Toluene	04/09/1996	<2	ug/L	2	NA
Xylenes, Total	04/09/1996	<2	ug/L	2	NA
EPA-8020 AQ (PRESERVED)					
Benzene	04/11/1996	<2	ug/L	2	NA
Ethylbenzene	04/11/1996	<2	ug/L	2	NA
MTBE	04/11/1996	<2	ug/L	2	NA
Toluene	04/11/1996	<2	ug/L	2	NA
Xylenes, Total	04/11/1996	<2	ug/L	2	NA
BASE/NEUTRALS - 8270 AQUEOUS					
2-Methylnaphthalene	04/17/1996	<10	ug/L	5	NA
Naphthalene	04/17/1996	<5	ug/L	5	NA

Advisory Control Limits for Blanks

Metals/Wet Chemistry/Conventionals/GC - All compounds should be less than the Reporting Limit.

GC/MS Semi-Volatiles - All compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the Reporting Limit.

GC/MS Volatiles - Toluene, Methylene chloride, Acetone and Chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
Laboratory Control Sample
(LCS)

JOB NUMBER: 96.02648

PARAMETER	LCS RESULT	TRUE CONC.	LCS % REC.	FLAG
pH	N/A	0	0	
EPA-8020 AQ (PRESERVED)				
Benzene	18	20	90	
Ethylbenzene	17	20	85	
MTBE	NA		NA	
Toluene	16	20	80	
Xylenes, Total	52	60	87	
EPA-8020 AQ (PRESERVED)				
Benzene	15	20	75	
Ethylbenzene	14	20	70	
MTBE	32	40	80	
Toluene	14	20	70	
Xylenes, Total	45	60	75	
EPA-8020 AQ (PRESERVED)				
Benzene	20	20	100	
Ethylbenzene	18	20	90	
MTBE	34	40	85	
Toluene	18	20	90	
Xylenes, Total	64	60	107	
BASE/NEUTRALS - 8270 AQUEOUS				
Naphthalene	65.2	100	65	

Advisory Control Limits for LCS

Inorganic Parameters - The LCS recovery should be 80-120%.

QUALITY CONTROL REPORT
Matrix Spike / Matrix Spike Duplicate
(MS / MSD)

JOB NUMBER: 96.02648

PARAMETER	SAMPLE RESULT	MS RESULT	MSD RESULT	SPIKE AMOUNT	MS % REC.	MSD % REC.	MS/MSD RPD	FLAG
EPA-8020 AQ (PRESERVED)								
Benzene	<2	14	12	20	70	60	15	
Ethylbenzene	<2	15	13	20	75	65	14	
Toluene	<2	14	13	20	70	65	7.4	
Xylenes, Total	<2	46	39	60	77	65	17	
EPA-8020 AQ (PRESERVED)								
Benzene	<2	15	16	20	75	80	6.5	
Ethylbenzene	<2	14	14	20	70	70	0	
Toluene	<2	14	15	20	70	75	6.9	
Xylenes, Total	<2	45	45	60	75	75	0	
EPA-8020 AQ (PRESERVED)								
Benzene	2.5	17	19	20	73	83	13	
Ethylbenzene	11	26	29	20	75	90	18	
Toluene	<2	16	18	20	80	90	12	
Xylenes, Total	34	80	89	60	77	92	18	
EPA-8020 AQ (PRESERVED)								
Benzene	<2	15	27	20	75	135	57	
Ethylbenzene	<2	14	30	20	70	150	73	MI
Toluene	<2	14	28	20	70	140	67	MI
Xylenes, Total	<2	44	88	60	73	147	67	MI
EPA-8020 AQ (PRESERVED)								
Benzene	<2	15	16	20	75	80	6.5	
Ethylbenzene	<2	13	12	20	65	60	8	
Toluene	<2	13	14	20	65	70	7.4	
Xylenes, Total	<2	41	41	60	68	68	0	
MTBE	<2	31	33	40	78	83	6.3	

MI - MS/MSD outside limits - matrix interference suspected

Advisory Control Limits for MS/MSDs

Inorganic Parameters - The spike recovery should be 75-125% if the spike amount value is greater than or equal to one fourth of the sample result value. The RPD for the MS/MSD should be less than 20.

NOTE: Matrix Spike Samples may not be samples from this job.

QUALITY CONTROL REPORT
DUPLICATES

JOB NUMBER: 96.02648

PARAMETER	SAMPLE RESULT	DUPLICATE RESULT	RPD	SPIKE SAMPLE RESULT	SPIKE RESULT	SPIKE AMOUNT	% REC.	FLAG
pH	6.5	6.5	0.0	NA	NA	NA	NA	
pH	8.0	8.0	0.0	NA	NA	NA	NA	

Advisory Control Limits for Spikes

The spike recovery should be 75-125% if the spike amount is greater than or equal to one fourth of the sample result value.

NOTE: Spike Samples may not be samples from this job.

Advisory Control Limits for Duplicates

The RPD for the sample and duplicate should be less than 20.

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY: Baker Oil Tools
ADDRESS: 3900 Essex Ln Ste 1200
PHONE: 713 439 8183 FAX: 713 439 8383
PROJECT NAME/LOCATION: BOT Hobbs, NM
PROJECT NUMBER:
PROJECT MANAGER: Tom Stenbeck

REPORT TO: Tom Stenbeck BOT EMMOT Hou. TX
INVOICE TO: Tom S.
P.O. NO.:
NET QUOTE NO.:

SAMPLED BY
Jon Barrett (PRINT NAME) — Jon Barrett (SIGNATURE)
(PRINT NAME) — (SIGNATURE)

DATE	TIME	SAMPLE ID/DESCRIPTION	GRAB	COMP	# OF CONTAINERS TYPE	MATRIX	PRESERVED Y/N	BTEX	MTBE	2-Methyl Nap	Naphthalene	Pb	Conduct.	COMMENTS
4/4	~~9:30am~~	MW-3 11:40am J.B.	W	X	1L/VOA	H_2O	N/HCl	X	X	X	X			
	10:30am	MW-2												
	11:00am	MW-1												
	11:20	NW-1												
	12:00	K-1												* Sheen present Hydrocarbon Odor Strong
		Trip Blank	ML											(1)

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / ~~NO~~
COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT: 40°

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS — DATE

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR NET BY:
	4/4/96 1:45			4/5/96 1100	Liza Sanders

METHOD OF SHIPMENT: FEDEX

REMARKS: FAX RESULTS TO TOM STENBECK EMMOT Rd, Houston, TX

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

MONITORING WELL SAMPLE LOG

Name of Site BOT Hobbs Date of Sample 4/4/96

Name of Person Completing Log Jon Barrett

Samples for the 2 Quarter of 1996 Page ____ of ____

Monitoring Well Number MW 3 Date 4/3/96 Time 3:00 pm

Outage to Static Water Level 32'-38.5' = 6.5 x .66 gal = 4.29 gal x 3

Elevation of Top of Casing 12.87 gal

Water Temperature Before Bailing —

Water Volume in Well 12.87 gal

Number of Bailer Volumes Removed to Purge Well 13

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well 13 gal

* Static Water Level After Recharge 32'

Quantity of Sample Collected 1L / 1 VOA

Sample Number MW#3 Sample Sealed By J.B

Observed Water Recharge Rate Overnight

Did Well Bail Dry During Purge or Sample No

pH lab Conductivity lab

Notes and Remarks: Water Clear

Signature J Barrett

MONITORING WELL SAMPLE LOG

Name of Site BOT Hobbs Date of Sample 4/4/96

Name of Person Completing Log Jon Barrett

Samples for the 2 Quarter of 1996 Page _____ of _____

Monitoring Well Number WW-1 Date 4/3/96 Time 5:40

Outage to Static Water Level 32'-12.5' = 93 x .66 = 61 gal

Elevation of Top of Casing 32

Water Temperature Before Bailing —

Water Volume in Well 61 gal

Number of Bailer Volumes Removed to Purge Well 1 SV

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well —

Static Water Level After Recharge 32'

Quantity of Sample Collected 1L/1VOA

Sample Number WW-1 Sample Sealed By J.B

Observed Water Recharge Rate Overnight

Did Well Bail Dry During Purge or Sample _____

pH Lab Conductivity Lab

Notes and Remarks: Not Bailed.

Signature J. Barrett

MONITORING WELL SAMPLE LOG

Name of Site BOT Hobbs Date of Sample 4/4/96

Name of Person Completing Log JON BARRETT

Samples for the 2 Quarter of 1996 Page _____ of _____

Monitoring Well Number R-1 Date 4/3/96 Time 5:25p

Outage to Static Water Level 32.9 - 48' = 15.3 x .17 = 2.6 gal x 3

Elevation of Top of Casing _____

Water Temperature Before Bailing —

Water Volume in Well 2.6 gal

Number of Bailer Volumes Removed to Purge Well 8 gal / 40oz bailer ↑ 25 bailers

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well 8 gal

Static Water Level After Recharge 32.9

Quantity of Sample Collected 1L / 1 VOA

Sample Number R-1 Sample Sealed By T I E

Observed Water Recharge Rate Overnight

Did Well Bail Dry During Purge or Sample NO

pH Lab Conductivity Lab

Notes and Remarks: Hydrocarbon Odor present
Sheen w/ Black & Grey Water

Signature Jon Barrett

MONITORING WELL SAMPLE LOG

Name of Site BOT Hobbs Date of Sample 4/4/96

Name of Person Completing Log Jon Barrett

Samples for the 2 Quarter of 1996 Page _____ of _____

Monitoring Well Number MW1 Date 4/3/96 Time 4:40

Outage to Static Water Level 32.7 - 45.7' x .66 = 8.58 gal x 3

Elevation of Top of Casing 32.7

Water Temperature Before Bailing ~~70~~

Water Volume in Well 8.6 gal

Number of Bailer Volumes Removed to Purge Well 26

Water Temperature After Bailing ———

Quantity of Water Remover to Purge Well 26 gal

Static Water Level After Recharge 32.6

Quantity of Sample Collected 1L / 1 VOA

Sample Number MW1 Sample Sealed By J.B.

Observed Water Recharge Rate Overnight

Did Well Bail Dry During Purge or Sample No

pH lab Conductivity lab

Notes and Remarks: Water Cloudy W/Sediment (brown)

Signature J BT

MONITORING WELL SAMPLE LOG

Name of Site BOT Hobbs Date of Sample 4/4/96

Name of Person Completing Log JON BARRETT

Samples for the 2 Quarter of 19 96 Page ____ of ____

45'

Monitoring Well Number MW 2 Date 4/3/96 Time 4:00 pm

Outage to Static Water Level 32.4' - 45' = 12.6' x .66 = 8.32 gal X 3

Elevation of Top of Casing 32.4'

Water Temperature Before Bailing —

Water Volume in Well 8.32 gal

Number of Bailer Volumes Removed to Purge Well 25 bailers

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well 25 gal

* Static Water Level After Recharge 32.3'

Quantity of Sample Collected 1L/1 VOA

Sample Number MW#2 Sample Sealed By MW# 2

Observed Water Recharge Rate overnight

Did Well Bail Dry During Purge or Sample NO

pH lab Conductivity lab

Notes and Remarks: Water Clear

Signature J Barrett

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY Baker O.T. Tool
ADDRESS 2401 Locust Ln St 1200
PHONE 713 419 8483 FAX 713 419 8503
PROJECT NAME/LOCATION BOT Hobbs, NM
PROJECT NUMBER
PROJECT MANAGER Tom Stanbeck

REPORT TO: Tom Stanbeck BOT Houston TX
INVOICE TO: Tom S.
P.O. NO.
NET QUOTE NO.

SAMPLED BY Tom Parrett (PRINT NAME) — SIGNATURE
(PRINT NAME) — SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	GRAB	COMP	# OF CONTAINERS TYPE	MATRIX	PRESERVED Y/N	ANALYSES: BTEX / MTBE / 2-Methyl Naph / Naphthalene / PAH / Chloride	COMMENTS
4/1	~~Time~~	MW-3 11:40am 4.15.	W	X	12 1VOA	11,6	N/Hcl	X X ✓ X ✓ ✓	
"	11:20	MW-2							
"	11:00	MW-1							
"	11:20	NW-1							
"	12:00	K-1							* Sheen present Hydrocarbon odor Strong

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT:

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS DATE

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR NET BY:

METHOD OF SHIPMENT

REMARKS: FAX RESULTS TO TOM STANBECK (MKT Ref, Houston, TX

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

BAKER OIL TOOLS
A Baker Hughes company

1 February 1996

Mr. William Olson, Hydrogeologist
State of New Mexico
Energy, Mineral and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Olson:

Baker Oil Tools is submitting the third required monitoring in response to the NMOCD request of June 20, 1995 to provide quarterly monitoring data for groundwater contamination in the direct vicinity of the former disposal pit on the property located at 2800 W. Marland in Hobbs, New Mexico. The NMOCD requested the following three items from BOT for each monitoring session:

1. A brief description of all monitoring activities which occurred during the quarter.

BOT contracted Rhino Environmental Services, Inc. to perform sampling on January 11, 1996. Each well was bailed of three volumes and allowed to equalize prior to sampling except for WW-1 which is a 125' deep water well. The wells were gauged for elevation and depth and sampled on the 11th.. The Hobbs district office of the NMOCD was notified prior to sampling as required. Samples were packaged and submitted to the laboratory for analysis.

2. A summary of the laboratory analytical results of water quality sampling of the monitoring wells. The data will be presented in tabular form showing past and present sampling results.

Tables 1a through 1g present the sampling data.

Table 1a
BENZENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3 January 11, 1996	Quarter 4
Trip Blank	<0.5	<2	<2	<0.5	
MW-1	<0.5	<2	<2	<0.5	
MW-2	<0.5	<2	<2	<0.5	
MW-3	<0.5	<2	<2	<0.5	
WW-1	260	51	<2	0.5	
R-1	<0.5	<2	<20	1.3	

Table 1b
TOLUENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.5	<2	<2	<0.5	
MW-1	<0.5	<2	<2	<0.5	
MW-2	0.5	<2	<2	<0.5	
MW-3	<0.5	<2	<2	<0.5	
WW-1	1.9	<2	<2	<0.5	
R-1	3.0	<2	<20	1.9	

Table 1c
ETHYL BENZENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.5	<2	<2	<0.5	
MW-1	<0.5	<2	<2	<0.5	
MW-2	<0.5	<2	<2	<0.5	
MW-3	<0.5	<2	<2	<0.5	
WW-1	180	<2	<2	1.0	
R-1	49	52	46	40.0	

Table 1d
XYLENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.5	<2	<2	<0.5	
MW-1	1.2	<2	<2	<0.5	
MW-2	0.5	<2	<2	<0.5	
MW-3	0.8	<2	<2	<0.5	
WW-1	7.0	<2	<2	0.6	
R-1	94	64	72	67.0	

Table 1e
MTBE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<2.5	<2	<2	<2.5	
MW-1	<2.5	<2	<2	<2.5	
MW-2	<2.5	<2	<2	<2.5	
MW-3	2.6	<2	<2	<2.5	
WW-1	4.1	<2	<2	<2.5	
R-1	<2.5	21	<20	<2.5	

Table 1f
NAPHTHALENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.3	<5	not analyzed	<0.5	
MW-1	<0.3	<5	<10	<0.5	
MW-2	<0.3	<5	<10	<0.5	
MW-3	<0.3	not available*	<10	<0.5	
WW-1	46	12.9	<10	<0.5	
R-1	240	101	39.4	140.0	

*sample broke during shipment

Table 1g
2-METHYL NAPHTHALENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.3	<5	not analyzed	<1.0	
MW-1	<0.3	<5	<10	<1.0	
MW-2	<0.3	<5	<10	<1.0	
MW-3	1.0	not available*	<10	<1.0	
WW-1	14	<5	<10	<1.0	
R-1	360	115	56.2	170.0	

*sample broke during shipment

3. A ground water elevation map using the water table elevation of the ground water in all monitoring wells.

Figure 1 presents the water elevation data as requested. Table 2 lists the well number, the depth of the well, the depth to the top of the water, the elevation of the well casing and the actual depth to ground water.

Table 2
Ground Water Elevation Data

Well ID	Well Depth	Elevation	Quarter 1		Quarter 2		Quarter 3		Quarter 4	
			gauged depth	actual depth	gauged depth	actual depth	gauged depth	actual depth	gauged depth	actual depth
MW-1	46.0	100.19	33.2	66.99	32.5	67.69	32.32	67.87		
MW-2	45.7	99.56	32.5	67.06	32.0	67.56	31.97	67.59		
MW-3	39.3	99.15	32.7	66.45	32.0	67.15	31.55	67.60		
WW-1	125.0	99.52	32.3	67.22	31.8	67.72	31.65	67.87		
R-1	40.0	100.03	33.0	67.03	32.8	67.23	32.24	67.79		

The next scheduled monitoring will occur in April with the report submitted by May 1, 1996. If you have any questions or require additional information, please do not hesitate in contacting me at (713)466-2520.

Sincerely,
For Baker Oil Tools

Thomas V. Stenbeck
Manager of Health, Safety and Environment

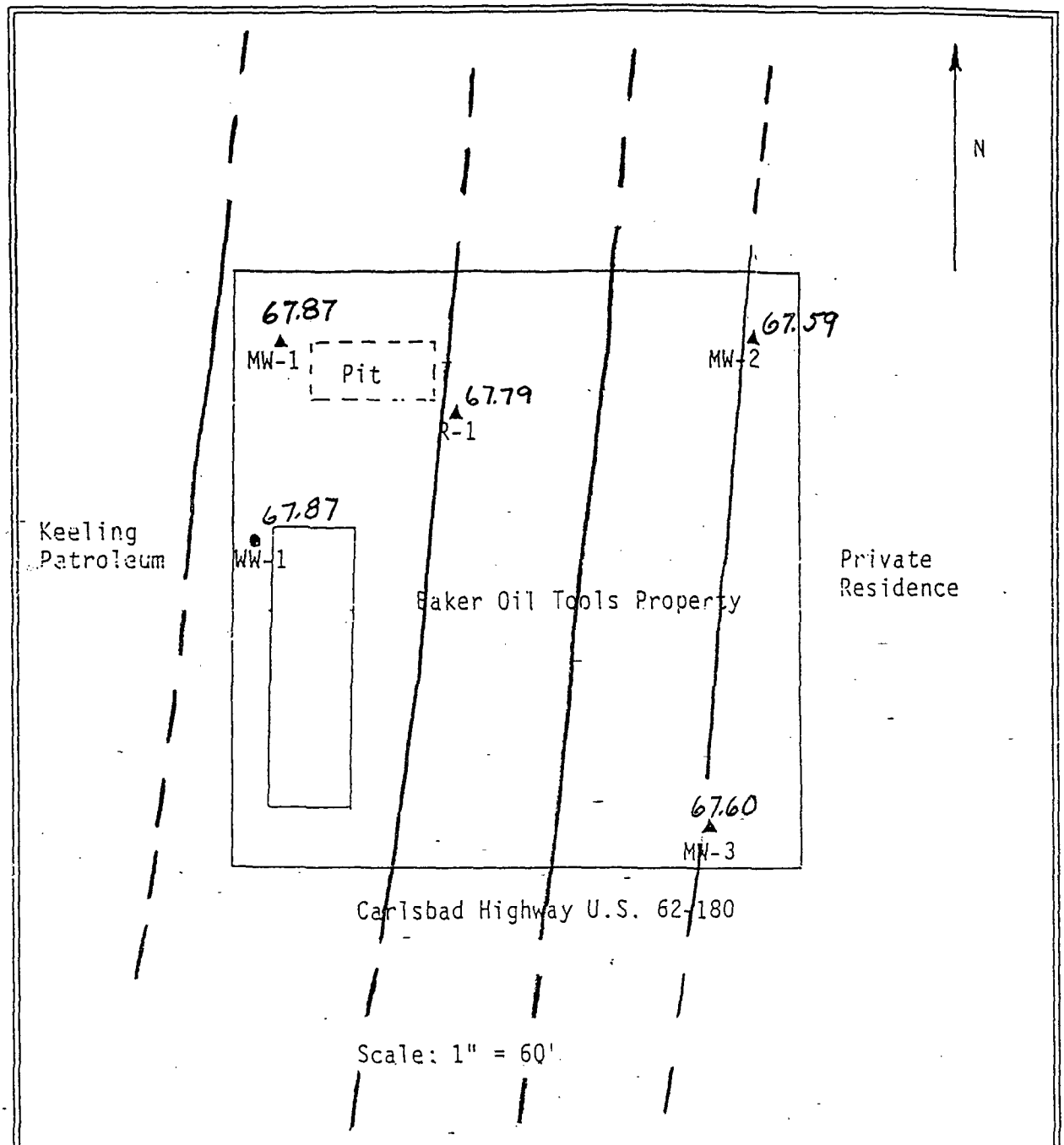


Figure No. 1	Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

RHINO
Environmental Services, Inc.
P.O. BOX 2327 • HOBBS, NM 88241 • PHONE & FAX (505) 392-4498

Tightness Tests
Removals
New Installations
Repairs
Remedial Services
Contaminated Soils Disposal
Leak Detection

Tom Stenbeck
Baker Oil Tools
9100 Emmott Rd
PO Box 40129
Houston, TX 77040-3514

February 12, 1996

Re: Baker Oil Tools Facility
2800 W. Marland
Hobbs, NM

Dear Tom,

On January 11, 1996 Rhino gauged, purged and sampled five monitor wells at the above referenced site. The depths to water in the wells are summarized in Table No. 1. The wells were not surveyed.

TABLE NO. 1
SUMMARY OF WATER LEVELS

WELL NO.	DEPTH TO WATER (FEET)
MW-1	32.32
MW-2	31.97
MW-3	31.55
WW-1	31.65
R-1	32.24

A copy of the analytical results are attached.

If you have any questions, please call me.

Sincerely,

Royce Cooper, Jr.

ATI I.D. 601347

January 26, 1996

Rhino Environmental
P.O. Box 2327
Hobbs, NM 88240

Project Name/Number: BAKER-OIL MARLAND

Attention: Royce Cooper

On 01/15/96, Analytical Technologies, of New Mexico Inc., (ADHS License No. AZ0015), received a request to analyze aqueous samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

EPA method 8310 analyses were performed by Analytical Technologies, Inc., 225 Commerce Drive, Fort Collins, CO.

All other analyses were performed by Analytical Technologies, Inc., Albuquerque, NM.

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

Kimberly D. McNeill
Project Manager

H. Mitchell Rubenstein, Ph.D.
Laboratory Manager

MR:jt

Enclosure

CLIENT : RHINO ENVIRONMENTAL DATE RECEIVED : 01/15/96
PROJECT # : (NONE)
PROJECT NAME : BAKER-OIL MARLAND REPORT DATE : 01/26/96

ATI ID: 601347

	ATI ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	601347-01	MW-1	AQUEOUS	01/11/96
02	601347-02	MW-2	AQUEOUS	01/11/96
03	601347-03	MW-3	AQUEOUS	01/11/96
04	601347-04	R-1	AQUEOUS	01/11/96
05	601347-05	WW-1	AQUEOUS	01/11/96
06	601347-06	TRIP BLANK	AQUEOUS	01/09/96

---TOTALS---

MATRIX	#SAMPLES
AQUEOUS	6

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX, MTBE (EPA 8020)
CLIENT : RHINO ENVIRONMENTAL ATI I.D.: 601347
PROJECT # : (NONE)
PROJECT NAME : BAKER-OIL MARLAND

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	MW-1	AQUEOUS	01/11/96	NA	01/17/96	1
02	MW-2	AQUEOUS	01/11/96	NA	01/17/96	1
03	MW-3	AQUEOUS	01/11/96	NA	01/17/96	1

PARAMETER	UNITS	01	02	03
BENZENE	UG/L	<0.5	<0.5	<0.5
TOLUENE	UG/L	<0.5	<0.5	<0.5
ETHYLBENZENE	UG/L	<0.5	<0.5	<0.5
TOTAL XYLENES	UG/L	<0.5	<0.5	<0.5
METHYL-t-BUTYL ETHER	UG/L	<2.5	<2.5	<2.5
SURROGATE:				
BROMOFLUOROBENZENE (%)		90	91	91

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX, MTBE (EPA 8020)
CLIENT : RHINO ENVIRONMENTAL ATI I.D.: 601347
PROJECT # : (NONE)
PROJECT NAME : BAKER-OIL MARLAND

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	R-1	AQUEOUS	01/11/96	NA	01/17/96	1
05	WW-1	AQUEOUS	01/11/96	NA	01/17/96	1
06	TRIP BLANK	AQUEOUS	01/09/96	NA	01/17/96	1

PARAMETER	UNITS	04	05	06
BENZENE	UG/L	1.3	0.5	<0.5
TOLUENE	UG/L	1.9	<0.5	<0.5
ETHYLBENZENE	UG/L	40	1.0	<0.5
TOTAL XYLENES	UG/L	67	0.6	<0.5
METHYL-t-BUTYL ETHER	UG/L	<2.5	<2.5	<2.5
SURROGATE:				
BROMOFLUOROBENZENE (%)		131*	92	90

*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE

GAS CHROMATOGRAPHY RESULTS

REAGENT BLANK

TEST	: BTEX, MTBE (EPA 8020)	ATI I.D.	: 601347
BLANK I.D.	: 011796	MATRIX	: AQUEOUS
CLIENT	: RHINO ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: (NONE)	DATE ANALYZED	: 01/17/96
PROJECT NAME	: BAKER-OIL MARLAND	DILUTION FACTOR	: 1

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

SURROGATE:

BROMOFLUOROBENZENE (%)	91

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

TEST	: BTEX, MTBE (EPA 8020)		
MSMSD #	: 011796	ATI I.D.	: 601347
CLIENT	: RHINO ENVIRONMENTAL	DATE EXTRACTED	: NA
PROJECT #	: (NONE)	DATE ANALYZED	: 01/17/96
PROJECT NAME	: BAKER-OIL MARLAND	SAMPLE MATRIX	: AQUEOUS
REF. I.D.	: 011796	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD
BENZENE	<0.5	10.0	8.9	89	9.1	91	2
TOLUENE	<0.5	10.0	9.1	91	9.3	93	2
ETHYLBENZENE	<0.5	10.0	9.1	91	9.3	93	2
TOTAL XYLENES	<0.5	30.0	27.4	91	28.0	93	2
METHYL-t-BUTYL ETHER	<2.5	20.0	17.1	86	18.0	90	5

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

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

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Lab Name: Analytical Technologies of Colorado, Inc.
Client Name: ATI-NM
Client Project ID: Baker Oil-Marland: RES
Lab Sample ID: 96-01-081-01

Sample Matrix: Water
Cleanup: N/A

Sample ID
MW-1

Date Collected: 1-11-96
Date Extracted: 1-16-96
Date Analyzed: 1-19-96

Sample Volume: 1000 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	ND	0.050
Anthracene	ND	0.10
Flouranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.050
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	85	15 - 117

ND = Not Detected at or above client requested detection limit.

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Lab Name: Analytical Technologies of Colorado, Inc.
Client Name: ATI-NM
Client Project ID: Baker Oil-Marland: RES
Lab Sample ID: 96-01-081-02

Sample Matrix: Water
Cleanup: N/A

Sample ID
MW-2

Date Collected: 1-11-96
Date Extracted: 1-16-96
Date Analyzed: 1-19-96

Sample Volume: 1000 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	0.020 J	0.050
Anthracene	ND	0.10
Flouranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.050
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	89	15 - 117

ND = Not Detected at or above client requested detection limit.
J = Estimated value.

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Lab Name: Analytical Technologies of Colorado, Inc.
Client Name: ATI-NM
Client Project ID: Baker Oil-Marland: RES
Lab Sample ID: 96-01-081-03

Sample Matrix: Water
Cleanup: N/A

Sample ID
MW-3

Date Collected: 1/11/96
Date Extracted: 1/16/96
Date Analyzed: 1/19/96

Sample Volume: 1000 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	0.74 J	1.0
Acenaphthene	ND	1.0
Fluorene	0.11	0.10
Phenanthrene	0.40	0.050
Anthracene	ND	0.10
Flouranthrene	0.073 J	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.050
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	84	15 - 117

ND = Not Detected at or above client requested detection limit.
J = Estimated value.

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Lab Name: Analytical Technologies of Colorado, Inc.
Client Name: ATI-NM
Client Project ID: Baker Oil-Marland: RES
Lab Sample ID: 96-01-081-04

Sample Matrix: Water
Cleanup: N/A

Sample ID
R-1

Date Collected: 1-11-96
Date Extracted: 1-16-96
Date Analyzed: 1-22-96

Sample Volume: 1000 mL
Final Volume: 100 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	140	50
Acenaphthylene	ND	100
1-Methylnaphthalene	170	100
2-Methylnaphthalene	180	100
Acenaphthene	ND	100
Fluorene	5.8 J	10
Phenanthrene	ND	5.0
Anthracene	ND	10
Flouranthrene	ND	10
Pyrene	ND	5.0
Benzo(a)anthracene	ND	5.0
Chrysene	ND	5.0
Benzo(b)fluoranthrene	ND	10
Benzo(k)fluoranthrene	ND	5.0
Benzo(a)pyrene	ND	5.0
Dibenzo(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10
Indeno(1,2,3-c,d)pyrene	ND	10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	I	15 - 117

ND = Not Detected at or above client requested detection limit.
J = Estimated value.
I = Surrogate recovery not reported due to high level of sample dilution.

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Lab Name: Analytical Technologies of Colorado, Inc.
Client Name: ATI-NM
Client Project ID: Baker Oil-Marland: RES
Lab Sample ID: 96-01-081-05

Sample Matrix: Water
Cleanup: N/A

Sample ID
WW-1

Date Collected: 1-11-96
Date Extracted: 1-16-96
Date Analyzed: 1-19-96

Sample Volume: 1000 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	0.027 J	0.050
Anthracene	ND	0.10
Flouranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.050
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	85	15 - 117

ND = Not Detected at or above client requested detection limit.
J = Estimated value.

POLYNUCLEAR AROMATIC HYDROCARBONS

Method 8310

Lab Name: Analytical Technologies of Colorado, Inc.
Client Name: ATI-NM
Client Project ID: Baker Oil-Marland: RES
Lab Sample ID: WRB1 01/16/96

Sample Matrix: Water
Cleanup: N/A

Sample ID

Reagent Blank

Date Collected: N/A
Date Extracted: 1-16-96
Date Analyzed: 1-19-96

Sample Volume: 1000 mL
Final Volume: 1 mL

Analyte	Conc (ug/L)	Detection Limit (ug/L)
Naphthalene	ND	0.50
Acenaphthylene	ND	1.0
1-Methylnaphthalene	ND	1.0
2-Methylnaphthalene	ND	1.0
Acenaphthene	ND	1.0
Fluorene	ND	0.10
Phenanthrene	ND	0.050
Anthracene	ND	0.10
Flouranthrene	ND	0.10
Pyrene	ND	0.050
Benzo(a)anthracene	ND	0.050
Chrysene	ND	0.050
Benzo(b)fluoranthrene	ND	0.10
Benzo(k)fluoranthrene	ND	0.050
Benzo(a)pyrene	ND	0.050
Dibenzo(a,h)anthracene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Indeno(1,2,3-c,d)pyrene	ND	0.10

SURROGATE RECOVERY

Analyte	% Recovery	% Rec Limits
2-Chloroanthracene	92	15 - 117

ND = Not Detected at or above client requested detection limit.

POLYNUCLEAR AROMATIC HYDROCARBONS BLANK SPIKE

Method 8310

Lab Name: Analytical Technologies of Colorado, Inc.

Lab Sample ID: WBS1,2 01/16/96

Client Name: ATI-NM

Client Project ID: Baker Oil-Marland: RES

Date Extracted: 1/16/96

Date Analyzed: 1/19/96

Sample Matrix: Water

Cleanup: N/A

Sample Volume: 1,000 mL

Final Volume: 1 mL

Analyte	Spike Added (ug/L)	BS Concentration (ug/L)	BS Percent Recovery	QC Limits % Rec
Acenaphthylene	10.0	6.52	65	23 - 122
Phenanthrene	1.00	0.768	77	34 - 112
Pyrene	1.00	0.672	67	35 - 116
Dibenzo(a,h)anthracene	1.00	0.779	78	33 - 123
Benzo(k)fluoranthene	0.250	0.240	96	39 - 119

Analyte	Spike Added (ug/L)	BSD Concentration (ug/L)	BSD Percent Recovery	RPD	QC Limits RPD
Acenaphthylene	10.0	6.74	67	3	20
Phenanthrene	1.00	0.776	78	1	20
Pyrene	1.00	0.690	69	3	20
Dibenzo(a,h)anthracene	1.00	0.782	78	0.4	20
Benzo(k)fluoranthene	0.250	0.244	97	1	20

SURROGATE RECOVERY BS/BSD

Analyte	% Recovery BS	% Recovery BSD	% Rec Limits
2-Chloroanthracene	92	93	15 -117

Analytical Technologies of New Mexico, Inc., Albuquerque, NM
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland • Albuquerque • Anchorage

CHAIN OF CUSTODY

DATE: 1-11-96 PAGE: 1 OF 1

PROJECT MANAGER: Royce Cooper

COMPANY: Rhino Environmental

ADDRESS: PO Box 2327
Hobbs, NM 88240

PHONE: 505-392-4469

FAX: 392-4498

BILL TO: Same

COMPANY:

ADDRESS:

				Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	Gasoline/BTEX & MTBE (M8015/8020)	BTXE/MTBE (8020)	BTEX & Chlorinated Aromatics (602/8020)	BTEX/MTBE/EDC & EDB (8020/8010/Short)	Chlorinated Hydrocarbons (601/8010)	504 EDB ☐ / DBCP ☐	Polynuclear Aromatics (610/8310)	Volatile Organics (624/8240) GC/MS	Volatile Organics (8260) GC/MS	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral/Acid Compounds GC/MS (625/8270)	General Chemistry			Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)		
MW-1	Water	1054	Water					X					X													
MW-2	Water	1222	Water					X					X													
MW-3	Water	1247	Water					X					X													
R-1	Water	1029	Water					X					X													
MW-1	Water	1143	Water					X					X													4
Trip Blank	1/9	1400	AQ					X																		

PROJ. NO.:

PROJ. NAME: Baker Oil - Maljamar

P.O. NO.:

SHIPPED VIA: UPS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☒ 2 WEEK

CERTIFICATION REQUIRED: ☐ NM ☐ OTHER

METHANOL PRESERVATION ☐

COMMENTS:

MW-1 1LB/R Broken

RELINQUISHED BY:
Signature: Time: 1630
Printed Name: Royce Cooper Date: 1-11-96
Company: Rhino

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

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

RECEIVED BY:
Signature: Time: 1115
Printed Name: Date: 1-12-96
Company: ATI

PLEASE FILL THIS FORM IN COMPLETELY.

Analytical Technologies of New Mexico, Inc.
Albuquerque, New Mexico

Interlab Chain of Custody

96-01-091

DATE: 1/15 PAGE: 6 OF 1

NETWORK PROJECT MANAGER: KIMBERLY D. McNEILL

COMPANY: Analytical Technologies of New Mexico, Inc.
ADDRESS: 2709-D Pan American Freeway, NE
Albuquerque, NM 87107

CLIENT PROJECT MANAGER: Kim McNeill

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals - TAL	Metals - PP List	Metals - RCRA	RCRA Metals by TCLP (1311)	TOX	TOC	Gen Chemistry	Oil and Grease	BOD	COD	Pesticides/PCB (608/8080)	Herbicides (615/8150)	Base/Neutral Acid Compounds GC/MS (625/8270)	Volatile Organics GC/MS (624/8240)	Polynuclear Aromatics (610/8310)	8240 (TCLP 1311) ZHE	8270 (TCLP 1311)		TO-14	Gross Alpha/Beta				Number of containers
601347-01	1/11	1054	AQ	01															X									9
-02		1222		02															X									
-03		1247		03															X									
-04		1029		04															X									
-05		1143		05															X									1

PROJECT INFORMATION

PROJECT NUMBER: 601347
PROJECT NAME: Baker Oil-Mackland :RES
QC LEVEL: (STD) IV
QC REQUIRED: MS MSD BLANK
TAT: (STANDARD) RUSH

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS	9
CHAIN OF CUSTODY SEALS	Y
INTACT?	Y
RECEIVED GOOD COND./COLD	Y
LAB NUMBER	

SAMPLES SENT TO:

SAN DIEGO	
FT. COLLINS	X
RENTON	
PENSACOLA	
PORTLAND	
PHOENIX	

RELINQUISHED BY: 1.
Signature: Andrew Parker Time: 1700
Printed Name: Andrew Parker Date: 1/15
Analytical Technologies of New Mexico, Inc. Albuquerque
Company: Fedex

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

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

RECEIVED BY: (LAB) 2.
Signature: Time: 930
Printed Name: DAVE Date: 1/16/96
Company: ATICO

Work Order # 601149

DUE DATE: 1/26
RUSH SURCHARGE: 10%
CLIENT DISCOUNT: 10%
SPECIAL CERTIFICATION REQUIRED: ☐ YES ☐ NO

WATCH EXT. TIME

10/30/95 ATI Labs: San Diego (619) 458-9141 • Phoenix (602) 496-4400 • Seattle (206) 228-8335 • Pensacola (904) 474-1001 • Portland (503) 684-0447 • Albuquerque (505) 344-3777 DISTRIBUTION: White, Canary - ATI Pink - ORIGINATOR

BAKER OIL TOOLS
A Baker Hughes company

1 November, 1995

Mr. William Olson, Hydrogeologist
State of New Mexico
Energy, Mineral and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Olson:

Baker Oil Tools is submitting the second required monitoring in response to the NMOCD request of June 20, 1995 to provide quarterly monitoring data for groundwater contamination in the direct vicinity of the former disposal pit on the property located at 2800 W. Marland in Hobbs, New Mexico. The NMOCD requested the following three items from BOT for each monitoring session:

1. A brief description of all monitoring activities which occurred during the quarter.

BOT performed sampling on October 19 and 20, 1995. Each well was bailed of three volumes and allowed to equalize prior to sampling except for WW-1 which is a 125' deep water well. The wells were gauged for elevation and depth then bailed on the 19th and subsequently sampled on the 20th. The Hobbs district office of the NMOCD was notified prior to sampling as required. Samples were packaged and submitted to the laboratory for analysis.

2. A summary of the laboratory analytical results of water quality sampling of the monitoring wells. The data will be presented in tabular form showing past and present sampling results.

Tables 1a through 1g present the sampling data.

Table 1a

BENZENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.5	<2	<2		
MW-1	<0.5	<2	<2		
MW-2	<0.5	<2	<2		
MW-3	<0.5	<2	<2		
WW-1	260	51	<2		
R-1	<0.5	<2	<20		

Table 1b

TOLUENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.5	<2	<2		
MW-1	<0.5	<2	<2		
MW-2	0.5	<2	<2		
MW-3	<0.5	<2	<2		
WW-1	1.9	<2	<2		
R-1	3.0	<2	<20		

Table 1c

ETHYL BENZENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.5	<2	<2		
MW-1	<0.5	<2	<2		
MW-2	<0.5	<2	<2		
MW-3	<0.5	<2	<2		
WW-1	180	<2	<2		
R-1	49	52	46		

Table 1d

XYLENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.5	<2	<2		
MW-1	1.2	<2	<2		
MW-2	0.5	<2	<2		
MW-3	0.8	<2	<2		
WW-1	7.0	<2	<2		
R-1	94	64	72		

Table 1e
MTBE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<2.5	<2	<2		
MW-1	<2.5	<2	<2		
MW-2	<2.5	<2	<2		
MW-3	2.6	<2	<2		
WW-1	4.1	<2	<2		
R-1	<2.5	21	<20		

Table 1f
NAPHTHALENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.3	<5	not analyzed		
MW-1	<0.3	<5	<10		
MW-2	<0.3	<5	<10		
MW-3	<0.3	not available*	<10		
WW-1	46	12.9	<10		
R-1	240	101	39.4		

*sample broke during shipment

Table 1g
2-METHYL NAPHTHALENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2 October 20, 1995	Quarter 3	Quarter 4
Trip Blank	<0.3	<5	not analyzed		
MW-1	<0.3	<5	<10		
MW-2	<0.3	<5	<10		
MW-3	1.0	not available*	<10		
WW-1	14	<5	<10		
R-1	360	115	56.2		

*sample broke during shipment

3. A ground water elevation map using the water table elevation of the ground water in all monitoring wells.

Figure 1 presents the water elevation data as requested. Table 2 lists the well number, the depth of the well, the depth to the top of the water, the elevation of the well casing and the actual depth to ground water.

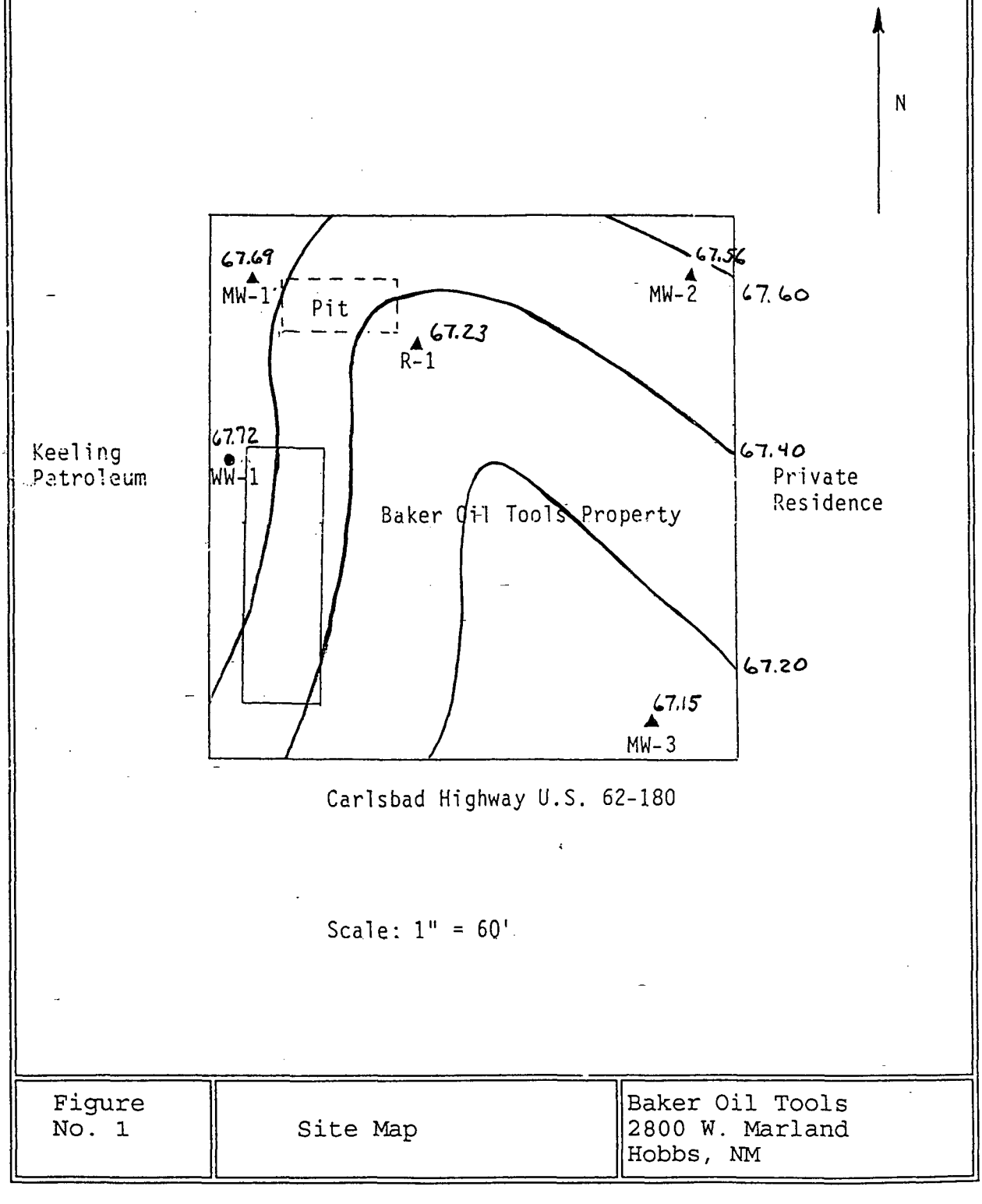
Table 2
Ground Water Elevation Data

Well ID	Well Depth	Elevation	Quarter 1		Quarter 2		Quarter 3		Quarter 4	
			gauged depth	actual depth	gauged depth	actual depth	gauged depth	actual depth	gauged depth	actual depth
MW-1	46.0	100.19	33.2	66.99	32.5	67.69				
MW-2	45.7	99.56	32.5	67.06	32.0	67.56				
MW-3	39.3	99.15	32.7	66.45	32.0	67.15				
WW-1	125.0	99.52	32.3	67.22	31.8	67.72				
R-1	40.0	100.03	33.0	67.03	32.8	67.23				

The next scheduled monitoring will occur in January with the report submitted by February 1, 1996. If you have any questions or require additional information, please do not hesitate in contacting me at (713)466-2520.

Sincerely,
For Baker Oil Tools

Thomas V. Stenbeck
Manager of Health, Safety and Environment



Scale: 1" = 60'

Figure No. 1	Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

MONITORING WELL SAMPLE LOG

Name of Site BOT - Hobbs NM Date of Sample 10/20/95

Name of Person Completing Log J. Barrett

Samples for the _____ Quarter of 19 95 Page _____ of _____

46'
45.7
Depth

Monitoring Well Number #1 Date 10/19/95 Time 4:30p

Outage to Static Water Level 45.7 Depth

Elevation of Top of Casing 31.5' - 45.7 = 13.2' x .66 = 8.7 gal x 1X3

Water Temperature Before Bailing —

Water Volume in Well 8.7 gal

Number of Bailer Volumes Removed to Purge Well 26

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well 26 gal

Static Water Level After Recharge 22.5

Quantity of Sample Collected 1L / 1 VOA

Sample Number MW-1 Sample Sealed By J.B

Observed Water Recharge Rate overnight

Did Well Bail Dry During Purge or Sample NO

pH — Conductivity —

Notes and Remarks: ph / cond - tab

Signature

MONITORING WELL SAMPLE LOG

Name of Site BOT - Hobbs NM Date of Sample 10/20/95

Name of Person Completing Log T. Barnett

Samples for the _____ Quarter of 1995 Page _____ of _____

Monitoring Well Number #2 Date 10/19/95 Time 3:30

~~100~~ 45 Depth

Outage to Static Water Level 32' - 45' = 13' x .66 = 8.58 x 3

Elevation of Top of Casing 32'

Water Temperature Before Bailing —

Water Volume in Well 8.58 gal

Number of Bailer Volumes Removed to Purge Well 26

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well 26 gals

Static Water Level After Recharge 1L / 1UOA

Quantity of Sample Collected 3Z

Sample Number MW#2 Sample Sealed By C.J.B

Observed Water Recharge Rate overnight

Did Well Bail Dry During Purge or Sample No

pH — Conductivity —

Notes and Remarks: ph/cond - lab

Signature

MONITORING WELL SAMPLE LOG

Name of Site BOT Hobbs Date of Sample 10/2./95

Name of Person Completing Log Tom Barrett

Samples for the ______ Quarter of 1995 Page ______ of ______

~~[illegible]~~ 38.5 Depth

Monitoring Well Number #3 Date 10/19/95 Time 2:44p

Outage to Static Water Level 32' - 38.5' = 6.5 x .66 = 4.29 gal x 3

Elevation of Top of Casing 12.87g

Water Temperature Before Bailing —

Water Volume in Well 12.87 gal.

Number of Bailer Volumes Removed to Purge Well 13

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well 13 gal (3 vols)

Static Water Level After Recharge 31.8'

Quantity of Sample Collected 1L / 1 VOA

Sample Number MW#3 Sample Sealed By [illegible]

Observed Water Recharge Rate overnight

Did Well Bail Dry During Purge or Sample NO

pH — Conductivity —

Notes and Remarks: ph/cond. [illegible] taken - [illegible]

Signature [signature]

MONITORING WELL SAMPLE LOG

Name of Site BDT Hobbs NM Date of Sample 1/20/95

Name of Person Completing Log J. Barrett

Samples for the _____ Quarter of 19____ Page____ of____

Monitoring Well Number MW-1 Date 10/19/95 Time 5:30p

Outage to Static Water Level 31.8' - ~~125'~~ 125' Depth = 93.2' X .66 61.5 gal

Elevation of Top of Casing 31.8'

Water Temperature Before Bailing —

Water Volume in Well 61.5 gal

Number of Bailer Volumes Removed to Purge Well 184

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well ~~25 bailes~~ 10 bailes

Static Water Level After Recharge 32'

Quantity of Sample Collected 1L / 1 VOA

Sample Number MW-1 Sample Sealed By J. Barrett

Observed Water Recharge Rate overnight

Did Well Bail Dry During Purge or Sample No

pH — Conductivity —

Notes and Remarks: ph / cond - lab

Signature

MONITORING WELL SAMPLE LOG

Name of Site BOT - Hobbs NM Date of Sample 10/20/95

Name of Person Completing Log J. Barrett

Samples for the _____ Quarter of 19____ Page_____of_____

48' Depth

Monitoring Well Number R-1 Date 10/20/95 Time 11:00 am

Outage to Static Water Level 32.8 - 48' = 15.2 x .17 = 2.58 gal

Elevation of Top of Casing 32.8 -

Water Temperature Before Bailing —

Water Volume in Well 2.58 gal x 3 vol = 7.75 gal x 128 oz = 992 oz ÷ 40 oz

Number of Bailer Volumes Removed to Purge Well 25 bailer

Water Temperature After Bailing —

Quantity of Water Remover to Purge Well 7.75 gal

Static Water Level After Recharge 32.8

Quantity of Sample Collected 1L/1VOA

Sample Number R-1 Sample Sealed By J. Barrett

Observed Water Recharge Rate rapid

Did Well Bail Dry During Purge or Sample _____

pH — Conductivity —

Notes and Remarks: ph/cond = lab

1st bail clear; subsequent cloudy gray

Signature

_____

NATIONAL ENVIRONMENTAL TESTING, INC.

Dallas Division
1548 Valwood Parkway
Suite 118
Carrollton, TX 75006
Tel: (214) 406-8100
Fax: (214) 484-2969

ANALYTICAL AND QUALITY CONTROL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

10/27/1995

NET Job Number: 95.07544

Enclosed is the Analytical and Quality Control report for the following samples submitted to the Dallas Division of NET, Inc. for analysis. Reproduction of this analytical report is permitted only in its entirety.

Sample Number	Sample Description	Date Taken	Date Received
280642	MW-3	10/20/1995	10/21/1995
280643	MW-2	10/20/1995	10/21/1995
280644	MW-1	10/20/1995	10/21/1995
280645	WW-1	10/20/1995	10/21/1995
280646	R-1	10/20/1995	10/21/1995
280647	TRIP BLANK		10/21/1995

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Holding Times: All holding times were within method criteria.

Method Blanks: All method blanks were within quality control criteria.

Instrument calibration: All calibrations were within method quality control criteria.

Analysis Comments: No Unusual Comments

David Weese
Project Coordinator

OCEAN GROUP

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

10/27/1995
Job No.: 95.07544

Project Name: BOT, HOBBS, N.M.

Date Received: 10/21/1995

280642 MW-3
Taken: 10/20/1995 09:00

pH	6.5		units
Conductivity	2,210		umhos/cm
EPA 8020-AQ (Preserved)			
Benzene	<2		ug/L
Ethylbenzene	<2		ug/L
Toluene	<2		ug/L
Xylenes, Total	<2		ug/L
MTBE	<2		ug/L
SURR: a,a,a-TFT	109		% Rec
BASE/NEUTRALS - 8270 AQUEOUS			
2-Methylnaphthalene	<10	RLI	ug/L
Naphthalene	<10	RLI	ug/L
SURR: 2-Fluorobiphenyl	66		% Rec
SURR: Nitrobenzene-d5	78		% Rec
SURR: Terphenyl-d14	68		% Rec

280643 MW-2
Taken: 10/20/1995 09:30

pH	6.7		units
Conductivity	3,800		umhos/cm
EPA 8020-AQ (Preserved)			
Benzene	<2		ug/L
Ethylbenzene	<2		ug/L
Toluene	<2		ug/L
Xylenes, Total	<2		ug/L
MTBE	<2		ug/L
SURR: a,a,a-TFT	127		% Rec
BASE/NEUTRALS - 8270 AQUEOUS			
2-Methylnaphthalene	<10	RLI	ug/L
Naphthalene	<10	RLI	ug/L
SURR: 2-Fluorobiphenyl	57		% Rec
SURR: Nitrobenzene-d5	59		% Rec
SURR: Terphenyl-d14	63		% Rec

RLI - Reporting Limit Increased, sample volume < method specification

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

10/27/1995
Job No.: 95.07544

Project Name: BOT, HOBBS, N.M.

Date Received: 10/21/1995

280644 MW-1
Taken: 10/20/1995 09:45

pH	6.8		units
Conductivity	1,650		umhos/cm
EPA 8020-AQ (Preserved)			
Benzene	<2		ug/L
Ethylbenzene	<2		ug/L
Toluene	<2		ug/L
Xylenes, Total	<2		ug/L
MTBE	<2		ug/L
SURR: a,a,a-TFT	110		% Rec
BASE/NEUTRALS - 8270 AQUEOUS			
2-Methylnaphthalene	<10	RLI	ug/L
Naphthalene	<10	RLI	ug/L
SURR: 2-Fluorobiphenyl	60		% Rec
SURR: Nitrobenzene-d5	72		% Rec
SURR: Terphenyl-d14	66		% Rec

280645 WW-1
Taken: 10/20/1995 10:00

pH	8.3		units
Conductivity	289		umhos/cm
EPA 8020-AQ (Preserved)			
Benzene	<2		ug/L
Ethylbenzene	<2		ug/L
Toluene	<2		ug/L
Xylenes, Total	<2		ug/L
MTBE	<2		ug/L
SURR: a,a,a-TFT	129		% Rec
BASE/NEUTRALS - 8270 AQUEOUS			
2-Methylnaphthalene	<10	RLI	ug/L
Naphthalene	<10	RLI	ug/L
SURR: 2-Fluorobiphenyl	54		% Rec
SURR: Nitrobenzene-d5	67		% Rec
SURR: Terphenyl-d14	64		% Rec

RLI - Reporting Limit Increased, sample volume < method specification

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

10/27/1995
Job No.: 95.07544

Project Name: BOT, HOBBS, N.M.

Date Received: 10/21/1995

280646 R-1
Taken: 10/20/1995 10:30

pH	6.6		units
Conductivity	2,350		umhos/cm
EPA 8020-AQ (Preserved)			
Benzene	<20	EDL	ug/L
Ethylbenzene	46		ug/L
Toluene	<20	EDL	ug/L
Xylenes, Total	72		ug/L
MTBE	<20	EDL	ug/L
SURR: a,a,a-TFT	114		% Rec
BASE/NEUTRALS - 8270 AQUEOUS			
2-Methylnaphthalene	56.2		ug/L
Naphthalene	39.4		ug/L
SURR: 2-Fluorobiphenyl	19	SU	% Rec
SURR: Nitrobenzene-d5	21	SU	% Rec
SURR: Terphenyl-d14	19	SU	% Rec

280647 TRIP BLANK
Taken:

EPA 8020-AQ (Preserved)			
Benzene	<2		ug/L
Ethylbenzene	<2		ug/L
Toluene	<2		ug/L
Xylenes, Total	<2		ug/L
MTBE	<2		ug/L
SURR: a,a,a-TFT	125		% Rec

EDL - Elevated Detection Limit due to matrix interference.
SU - Surrogate outside limits due to matrix interference.

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 95.07544

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
pH	rsd	10/23/1995	SM-4500H.	7.77	8.0	97	NA
Conductivity	des	10/23/1995	E-120.1	1430	1410	101	NA
EPA 8020-AQ (Preserved)			S-8020M				
Benzene	tcc	10/24/1995	S-8020M	21	20	105	NA
Ethylbenzene	tcc	10/24/1995	S-8020M	23	20	115	NA
MTBE	tcc	10/24/1995	S-8020M	36	40	90	NA
Toluene	tcc	10/24/1995	S-8020M	22	20	110	NA
Xylenes, Total	tcc	10/24/1995	S-8020M	67	60	112	NA
EPA 8020-AQ (Preserved)			S-8020M				
Benzene	tcc	10/25/1995	S-8020M	21	20	105	NA
Ethylbenzene	tcc	10/25/1995	S-8020M	22	20	110	NA
MTBE	tcc	10/25/1995	S-8020M	41	40	103	NA
Toluene	tcc	10/25/1995	S-8020M	23	20	115	NA
Xylenes, Total	tcc	10/25/1995	S-8020M	69	60	115	NA
EPA 8020-AQ (Preserved)			S-8020M				
Benzene	bwb	10/26/1995	S-8020M	23	20	115	NA
Ethylbenzene	bwb	10/26/1995	S-8020M	23	20	115	NA
MTBE	bwb	10/26/1995	S-8020M	41	40	103	NA
Toluene	bwb	10/26/1995	S-8020M	23	20	115	NA
Xylenes, Total	bwb	10/26/1995	S-8020M	69	60	115	NA
BASE/NEUTRALS - 8270 AQUEOUS			S-8270				
2-Methylnaphthalene	slw	10/17/1995	S-8270	47.6	50.0	95	NA

Method References and Codes

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.

E-100 through 493: "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

E-601 through 625: "Guidelines Establishing Test Procedures for the Analysis of Pollutants", U.S. EPA, 40CFR, Part 136, rev. 1990.

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D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 95.07544

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
Naphthalene	slw	10/17/1995	S-8270	55.2	50.0	110	NA
BASE/NEUTRALS - 8270 AQUEOUS			S-8270				
2-Methylnaphthalene	slw	10/11/1995	S-8270	48.1	50.0	96	NA
Naphthalene	slw	10/11/1995	S-8270	54.1	50.0	108	NA
BASE/NEUTRALS - 8270 AQUEOUS			S-8270				
2-Methylnaphthalene	slw	10/20/1995	S-8270	51.8	50.0	104	NA
Naphthalene	slw	10/20/1995	S-8270	50.0	50.0	100	NA
BASE/NEUTRALS - 8270 AQUEOUS			S-8270				
2-Methylnaphthalene	slw	10/25/1995	S-8270	53.0	50.0	106	NA
Naphthalene	slw	10/25/1995	S-8270	54.7	50.0	109	NA
BASE/NEUTRALS - 8270 AQUEOUS			S-8270				
2-Methylnaphthalene	slw	10/25/1995	S-8270	52.2	50.0	104	NA
Naphthalene	slw	10/25/1995	S-8270	56.4	50.0	113	NA

Method References and Codes

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.

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E-601 through 625: "Guidelines Establishing Test Procedures for the Analysis of Pollutants", U.S. EPA, 40CFR, Part 136, rev. 1990.

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D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
BLANKS

JOB NUMBER: 95.07544

PARAMETER	DATE ANALYZED	BLANK	UNITS	REPORTING LIMIT	FLAG
pH	10/23/1995	N/A	units	N/A	NA
Conductivity	10/23/1995	<5.0	umhos	5.0	NA
EPA 8020-AQ (Preserved)					
Benzene	10/24/1995	<2	ug/L	2	NA
Ethylbenzene	10/24/1995	<2	ug/L	2	NA
MTBE	10/24/1995	<4	ug/L	4	NA
Toluene	10/24/1995	<2	ug/L	2	NA
Xylenes, Total	10/24/1995	<2	ug/L	2	NA
EPA 8020-AQ (Preserved)					
Benzene	10/25/1995	<2	ug/L	2	NA
Ethylbenzene	10/25/1995	<2	ug/L	2	NA
MTBE	10/25/1995	<4	ug/L	4	NA
Toluene	10/25/1995	<2	ug/L	2	NA
Xylenes, Total	10/25/1995	<2	ug/L	2	NA
EPA 8020-AQ (Preserved)					
Benzene	10/26/1995	<2	ug/L	2	NA
Ethylbenzene	10/26/1995	<2	ug/L	2	NA
MTBE	10/26/1995	<4	ug/L	4	NA
Toluene	10/26/1995	<2	ug/L	2	NA
Xylenes, Total	10/26/1995	<2	ug/L	2	NA
BASE/NEUTRALS - 8270 AQUEOUS					
2-Methylnaphthalene	10/17/1995	<5	ug/L	5	NA
Naphthalene	10/17/1995	<5	ug/L	5	NA
BASE/NEUTRALS - 8270 AQUEOUS					
2-Methylnaphthalene	10/25/1995	<5	ug/L	5	NA
Naphthalene	10/25/1995	<5	ug/L	5	NA

Advisory Control Limits for Blanks

Metals/Wet Chemistry/Conventionals/GC - All compounds should be less than the Reporting Limit.

GC/MS Semi-Volatiles - All compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the Reporting Limit.

GC/MS Volatiles - Toluene, Methylene chloride, Acetone and Chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
Laboratory Control Sample
(LCS)

JOB NUMBER: 95.07544

PARAMETER	LCS RESULT	TRUE CONC.	LCS % REC.	FLAG
pH	N/A	9.18	NA	
EPA 8020-AQ (Preserved)				
Benzene	30	20	150	
Ethylbenzene	28	20	140	
MTBE	45	40	113	
Toluene	29	20	145	
Xylenes, Total	79	60	132	

Advisory Control Limits for LCS

Inorganic Parameters - The LCS recovery should be 80-120%.

NET®

QUALITY CONTROL REPORT
Matrix Spike / Matrix Spike Duplicate
(MS / MSD)

JOB NUMBER: 95.07544

PARAMETER	SAMPLE RESULT	MS RESULT	MSD RESULT	SPIKE AMOUNT	MS % REC.	MSD % REC.	MS/MSD RPD	FLAG
EPA 8020-AQ (Preserved)								
Benzene	4	27	26	20	115	110	4.4	
Ethylbenzene	<2	27	26	20	135	130	3.8	
MTBE	<4	46	45	40	115	113	2.2	
Toluene	<2	27	28	20	135	140	3.6	
Xylenes, Total	<2	80	80	60	133	133	0	

Advisory Control Limits for MS/MSDs

Inorganic Parameters - The spike recovery should be 75-125% if the spike amount value is greater than or equal to one fourth of the sample result value. The RPD for the MS/MSD should be less than 20.

NOTE: Matrix Spike Samples may not be samples from this job.

QUALITY CONTROL REPORT
DUPLICATES

JOB NUMBER: 95.07544

PARAMETER	SAMPLE RESULT	DUPLICATE RESULT	RPD	SPIKE SAMPLE RESULT	SPIKE RESULT	SPIKE AMOUNT	% REC.	FLAG
pH	6.5	6.5	0.0	NA	NA	NA	NA	
pH	5.9	6.1	3.3	NA	NA	NA	NA	
Conductivity	3,150	3,160	0.3	NA	NA	NA	NA	

Advisory Control Limits for Spikes

The spike recovery should be 75-125% if the spike amount is greater than or equal to one fourth of the sample result value.

NOTE: Spike Samples may not be samples from this job.

Advisory Control Limits for Duplicates

The RPD for the sample and duplicate should be less than 20.

NET NATIONAL ENVIRONMENTAL TESTING, INC.®

CHAIN OF CUSTODY RECORD

COMPANY Baker Hughes - Baker Oil Tools BOT
ADDRESS 3900 Essex Ln Ste 1200
PHONE 713 439 8783 FAX 713 439 8353
PROJECT NAME/LOCATION BOT Hobbs, NM
PROJECT NUMBER
PROJECT MANAGER Tom Stenbeck

REPORT TO: Tom S
INVOICE TO: "
P.O. NO.
NET QUOTE NO.

SAMPLED BY (PRINT NAME) JON BARRETT SIGNATURE
(PRINT NAME) SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers: HCl	NaOH	HNO_3	H_2SO_4	OTHER	ANALYSES: BTEX	MTBE	2-Methyl Naph	Naphthalene	pH	Conductivity
10/20	9:00a	MW-3	W	X		X				1	X	X	X	X	X	X
	9:30	MW-2														
	9:45	MW-1														
	10:00	WW-1														
	10:30	R-1														

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes ___ No ___

Is this work being conducted for regulatory enforcement action? Yes ___ No ___

Which regulations apply: RCRA ___ NPDES Wastewater ___ UST ___ Drinking Water ___ Other ___ None ___

COMMENTS

pH Rec'd out of H.T., A

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT: 17.4 C
Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ___
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ___ DATE ___

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
J. Barrett	10/20/95	12:45					10/21/95 11:00

METHOD OF SHIPMENT: FEDEX

REMARKS: RUSH (2) FAX + Send Results to Tom Stenbeck BOT Emmot Rd

PT 1 ORIGINAL WHITE PT 2 NET PROJECT MANAGER YELLOW PT 3 CUSTOMER COPY PINK

BAKER OIL TOOLS
A Baker Hughes company

9100 Emmott Road
P.O. Box 40129
Houston, Texas 77240-0129
Tel: 713/466/1322

2 August, 1995

Mr. William Olson, Hydrologist
State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Olson:

Upon review of the information submitted to you regarding the quarterly monitoring at the Baker Oil Tools facility located at 2800 W. Marland in Hobbs, New Mexico, I realized an item had been unintentionally omitted from the report. I have included under this cover the analytical results from the laboratory. Sorry for the omission.

If you have any questions or require additional information, please do not hesitate in contacting me at (713)466-2520.

Sincerely,
For Baker Oil Tools

Thomas V. Stenbeck
Manager of Health, Safety and Environmental - North America

attachments

NATIONAL ENVIRONMENTAL TESTING, INC.

Dallas Division
1548 Valwood Parkway
Suite 118
Carrollton, TX 75006
Tel: (214) 406-8100
Fax: (214) 484-2969

ANALYTICAL AND QUALITY CONTROL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

07/26/1995

NET Job Number: 95.04703

Enclosed is the Analytical and Quality Control report for the following samples submitted to the Dallas Division of NET, Inc. for analysis. Reproduction of this analytical report is permitted only in its entirety.

Sample Number	Sample Description	Date Taken	Date Received
268203	TRIP BLANK		07/20/1995
268204	MW-1	07/19/1995	07/20/1995
268205	MW-2	07/19/1995	07/20/1995
268206	WW-1	07/19/1995	07/20/1995
268207	R-1	07/19/1995	07/20/1995
268208	MW-3	07/19/1995	07/20/1995

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Holding Times: All holding times were within method criteria.

Method Blanks: All method blanks were within quality control criteria.

Instrument calibration: All calibrations were within method quality control criteria.

Analysis Comments: No Unusual Comments

Beth Freeman
Project Coordinator

OCEAN GROUP

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

07/26/1995
Job No.: 95.04703

Project Name: HOBB NEW MEXICO

Date Received: 07/20/1995

268203 TRIP BLANK
Taken:

EPA 8020-AQ (Preserved)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	109	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<5	ug/L
Naphthalene	<5	ug/L
SURR: 2-Fluorobiphenyl	53	%
SURR: Nitrobenzene-d5	52	%
SURR: Terphenyl-d14	66	%

268204 MW-1
Taken: 07/19/1995 14:30

EPA 8020-AQ (Preserved)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	97	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<5	ug/L
Naphthalene	<5	ug/L
SURR: 2-Fluorobiphenyl	44	%
SURR: Nitrobenzene-d5	36	%
SURR: Terphenyl-d14	57	%

268205 MW-2
Taken: 07/19/1995 14:00

EPA 8020-AQ (Preserved)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

07/26/1995
Job No.: 95.04703

Project Name: HOBB NEW MEXICO

Date Received: 07/20/1995

268205 MW-2
Taken: 07/19/1995 14:00

Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	83	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<5	ug/L
Naphthalene	<5	ug/L
SURR: 2-Fluorobiphenyl	46	%
SURR: Nitrobenzene-d5	42	%
SURR: Terphenyl-d14	60	%

268206 WW-1
Taken: 07/19/1995 15:00

EPA 8020-AQ (Preserved)		
Benzene	51	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	109	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	<5	ug/L
Naphthalene	12.9	ug/L
SURR: 2-Fluorobiphenyl	63	%
SURR: Nitrobenzene-d5	68	%
SURR: Terphenyl-d14	79	%

268207 R-1
Taken: 07/19/1995 14:45

EPA 8020-AQ (Preserved)		
Benzene	<2	ug/L
Ethylbenzene	52	ug/L
Toluene	<2	ug/L
Xylenes, Total	64	ug/L
MTBE	21	ug/L

ANALYTICAL REPORT

Tom Stenbeck
BAKER OIL TOOLS
9100 Emmott Road
Houston, TX 77040

07/26/1995
Job No.: 95.04703

Project Name: HOBB NEW MEXICO

Date Received: 07/20/1995

268207 R-1
Taken: 07/19/1995 14:45

SURR: a,a,a-TFT	119	% Rec
BASE/NEUTRALS - 8270 AQUEOUS		
2-Methylnaphthalene	115	ug/L
Naphthalene	101	ug/L
SURR: 2-Fluorobiphenyl	67	%
SURR: Nitrobenzene-d5	56	%
SURR: Terphenyl-d14	78	%

268208 MW-3
Taken: 07/19/1995 13:45

EPA 8020-AQ (Preserved)		
Benzene	<2	ug/L
Ethylbenzene	<2	ug/L
Toluene	<2	ug/L
Xylenes, Total	<2	ug/L
MTBE	<2	ug/L
SURR: a,a,a-TFT	117	% Rec

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 95.04703

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
EPA 8020-AQ (Preserved)			S-8020M				
Benzene	dwr	07/21/1995	S-8020M	21	20	105	NA
Ethylbenzene	dwr	07/21/1995	S-8020M	23	20	115	NA
MTBE	dwr	07/21/1995	S-8020M	39	40	98	NA
Toluene	dwr	07/21/1995	S-8020M	22	20	110	NA
Xylenes, Total	dwr	07/21/1995	S-8020M	68	60	113	NA
EPA 8020-AQ (Preserved)			S-8020M				
Benzene	dwr	07/24/1995	S-8020M	20	20	100	NA
Ethylbenzene	dwr	07/24/1995	S-8020M	23	20	115	NA
MTBE	dwr	07/24/1995	S-8020M	37	40	93	NA
Toluene	dwr	07/24/1995	S-8020M	21	20	105	NA
Xylenes, Total	dwr	07/24/1995	S-8020M	64	60	107	NA
EPA 8020-AQ (Preserved)			S-8020M				
Benzene	dwr	07/25/1995	S-8020M	19	20	95	NA
Ethylbenzene	dwr	07/25/1995	S-8020M	23	20	115	NA
MTBE	dwr	07/25/1995	S-8020M	36	40	90	NA
Toluene	dwr	07/25/1995	S-8020M	21	20	105	NA
Xylenes, Total	dwr	07/25/1995	S-8020M	66	60	110	NA
BASE/NEUTRALS - 8270 AQUEOUS			S-8270				
2-Methylnaphthalene	slw	07/21/1995	S-8270	46.7	50.0	93	NA
Naphthalene	slw	07/21/1995	S-8270	45.2	50.0	90	NA
BASE/NEUTRALS - 8270 AQUEOUS			S-8270				

Method References and Codes

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D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 95.04703

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
2-Methylnaphthalene	slw	07/25/1995	S-8270	49.2	50.0	98	NA
Naphthalene	slw	07/25/1995	S-8270	47.7	50.0	95	NA
BASE/NEUTRALS - 8270 AQUEOUS			S-8270				
2-Methylnaphthalene	slw	07/26/1995	S-8270	56.8	50.0	114	NA
Naphthalene	slw	07/26/1995	S-8270	56.2	50.0	112	NA

Method References and Codes

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S-1000 through 9999: "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd Edition, 1986.

A: "Standard Methods for the Examination of Water and Wastewater", 16th Edition, APHA, 1985.

SM: "Standard Methods for the Examination of Water and Wastewater", 18th Edition, APHA, 1992.

D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
BLANKS

JOB NUMBER: 95.04703

PARAMETER	DATE ANALYZED	BLANK	UNITS	REPORTING LIMIT	FLAG
EPA 8020-AQ (Preserved)					
Benzene	07/21/1995	<2	ug/L	2	NA
Ethylbenzene	07/21/1995	<2	ug/L	2	NA
MTBE	07/21/1995	<2	ug/L	2	NA
Toluene	07/21/1995	<2	ug/L	2	NA
Xylenes, Total	07/21/1995	<2	ug/L	2	NA
EPA 8020-AQ (Preserved)					
Benzene	07/24/1995	<2	ug/L	2	NA
Ethylbenzene	07/24/1995	<2	ug/L	2	NA
MTBE	07/24/1995	<2	ug/L	2	NA
Toluene	07/24/1995	<2	ug/L	2	NA
Xylenes, Total	07/24/1995	<2	ug/L	2	NA
EPA 8020-AQ (Preserved)					
Benzene	07/25/1995	<2	ug/L	2	NA
Ethylbenzene	07/25/1995	<2	ug/L	2	NA
MTBE	07/25/1995	<2	ug/L	2	NA
Toluene	07/25/1995	<2	ug/L	2	NA
Xylenes, Total	07/25/1995	<2	ug/L	2	NA
BASE/NEUTRALS - 8270 AQUEOUS					
2-Methylnaphthalene	07/25/1995	<5	ug/L	5	NA
Naphthalene	07/25/1995	<5	ug/L	5	NA

Advisory Control Limits for Blanks

Metals/Wet Chemistry/Conventionals/GC - All compounds should be less than the Reporting Limit.

GC/MS Semi-Volatiles - All compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the Reporting Limit.

GC/MS Volatiles - Toluene, Methylene chloride, Acetone and Chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
Laboratory Control Sample
(LCS)

JOB NUMBER: 95.04703

PARAMETER	LCS RESULT	TRUE CONC.	LCS % REC.	FLAG
EPA 8020-AQ (Preserved)				
Benzene	19	20	95	
Ethylbenzene	25	20	125	
MTBE	39	40	98	
Toluene	21	20	105	
Xylenes, Total	74	60	123	
BASE/NEUTRALS - 8270 AQUEOUS				
2-Methylnaphthalene	93.8	100	94	
Naphthalene	52.8	100	53	

Advisory Control Limits for LCS

Inorganic Parameters - The LCS recovery should be 80-120%.

QUALITY CONTROL REPORT
Matrix Spike / Matrix Spike Duplicate
(MS / MSD)

JOB NUMBER: 95.04703

PARAMETER	SAMPLE RESULT	MS RESULT	MSD RESULT	SPIKE AMOUNT	MS % REC.	MSD % REC.	MS/MSD RPD	FLAG
EPA 8020-AQ (Preserved)								
Benzene	<2	18	19	20	90	95	5.4	
Ethylbenzene	<2	25	26	20	125	130	3.9	
MTBE	<2	39	41	40	98	103	4.9	
Toluene	<2	21	22	20	105	110	4.7	
Xylenes, Total	<2	72	76	60	120	127	5.4	
BASE/NEUTRALS - 8270 AQUEOUS	Insufficient sample within batch to perform spike							

Advisory Control Limits for MS/MSDs

Inorganic Parameters - The spike recovery should be 75-125% if the spike amount value is greater than or equal to one fourth of the sample result value. The RPD for the MS/MSD should be less than 20.

NOTE: Matrix Spike Samples may not be samples from this job.

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY: Baker Hughes Oil Tools
ADDRESS:
PHONE: 713 466 2520 FAX:
PROJECT NAME/LOCATION: Hobbs, New Mexico
PROJECT NUMBER:
PROJECT MANAGER: Tom Stenbeck

REPORT TO: Tom Stenbeck
INVOICE TO:
P.O. NO.
NET QUOTE NO.

SAMPLED BY: Jon Barrett (PRINT NAME) — SIGNATURE: JB
(PRINT NAME) — SIGNATURE

ANALYSES: BTEX, MTBE, Naphthalene, 2-Methylnaphthalene

Date	Time	Sample		# and Type of Containers	BTEX	MTBE	Naphthalene	2-Methylnaphthalene		COMMENTS
7-19 (95)	2:30	MW-1	X	2	X	X	X	X	3	
	2:00	MW-2	|		|	|	|	|	3	
	1:45	MW-3 *	|		|	|	|	|	2	NO BNA
	3:00	WW-1	|		|	|	|	|	3	
	2:45	R-1	|		|	|	|	|	3	

* 1- Amber Liter Broke in transit.

✓ Trip Blank + VOA ✓✓✓✓ (1 Amber Liter)

due 7/26

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO — except listed above
FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT: 4°
Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS — DATE

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR NET BY:
				7/20/95 9:30 AM	BS Dewitt

METHOD OF SHIPMENT:
REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

BAKER OIL TOOLS
A Baker Hughes company

9100 Emmott Road
P.O. Box 40129
Houston, Texas 77240-0129
Tel: 713/466/1322

31 July, 1995

Mr. William Olson, Hydrologist
State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Dear Mr. Olson:

Baker Oil Tools (BOT) is responding to the NMOCD request of June 20, 1995 to submit quarterly monitoring data for groundwater contamination in the direct vicinity of the former pit on the property located at 2800 W. Marland in Hobbs, New Mexico. The NMOCD requested the following 3 items from BOT for each monitoring session:

1. A brief description of all monitoring activities which occurred during the quarter:

   BOT conducted the monitoring on 7/19/95. Each well was bailed of three volumes and allowed to equalize except for WW-1 which is a 125' deep water well. The wells were bailed with either a 30 oz or 40 oz bailer. The wells were gauged for depth and ground water elevation, temperature of water taken before and after bailing, sampled and a monitoring well sampling log completed for each well. (A copy of the sampling log for each well is included as Appendix 1.) Your Hobbs district office was notified of the sampling and stated they would come out to the location if schedule allowed. The local inspector did not make it to the location while we were sampling. Samples were packed and sent for laboratory analysis.

2. A summary of the laboratory analytic results of water quality sampling of the monitoring wells. The data will be presented in tabular form showing past and present sampling results.

Tables 1a through 1g, below presents the sampling data for this quarter. The 1 liter sample bottle for MW-3 broke during shipment to the laboratory so only the BTEX and MTBE analyses were performed on the sample.

Table 1a
BENZENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2	Quarter 3	Quarter 4
Trip Blank	<0.5	<2			
MW-1	<0.5	<2			
MW-2	<0.5	<2			
MW-3	<0.5	<2			
WW-1	260	51			
R-1	<0.5	<2			

Table 1b
TOLUENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2	Quarter 3	Quarter 4
Trip Blank	<0.5	<2			
MW-1	<0.5	<2			
MW-2	0.5	<2			
MW-3	<0.5	<2			
WW-1	1.9	<2			
R-1	3.0	<2			

Table 1c
ETHYL BENZENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2	Quarter 3	Quarter 4
Trip Blank	<0.5	<2			
MW-1	<0.5	<2			
MW-2	<0.5	<2			
MW-3	<0.5	<2			
WW-1	180	<2			
R-1	49	52			

Table 1d
XYLENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2	Quarter 3	Quarter 4
Trip Blank	<0.5	<2			
MW-1	1.2	<2			
MW-2	0.5	<2			
MW-3	0.8	<2			
WW-1	7.0	<2			
R-1	94	64			

Table 1e
MTBE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2	Quarter 3	Quarter 4
Trip Blank	<2.5	<2.0			
MW-1	<2.5	<2.0			
MW-2	<2.5	<2.0			
MW-3	2.6	<2.0			
WW-1	4.1	<2.0			
R-1	<2.5	21			

Table 1f
NAPHTHALENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2	Quarter 3	Quarter 4
Trip Blank	<0.3	<5			
MW-1	<0.3	<5			
MW-2	<0.3	<5			
MW-3	<0.3	not available*			
WW-1	46	12.9			
R-1	240	101			

*sample broke during shipment

Table 1g
2-METHYL NAPHTHALENE (µg/L)

Well ID	Previous Nov. 17, 1994	Quarter 1 July 17, 1995	Quarter 2	Quarter 3	Quarter 4
Trip Blank	<0.3	<5			
MW-1	<0.3	<5			
MW-2	<0.3	<5			
MW-3	1.0	not available*			
WW-1	14	<5			
R-1	360	115			

*sample broke during shipment

3. A water table elevation map using the water table elevation of the ground water in all monitoring wells.

Figure 1 presents the water elevation data as requested. Table 8 below lists the well number, the depth of the well, the depth to top of water, the elevation of the well casing and the actual depth to groundwater.

Table 8
GROUNDWATER DATA

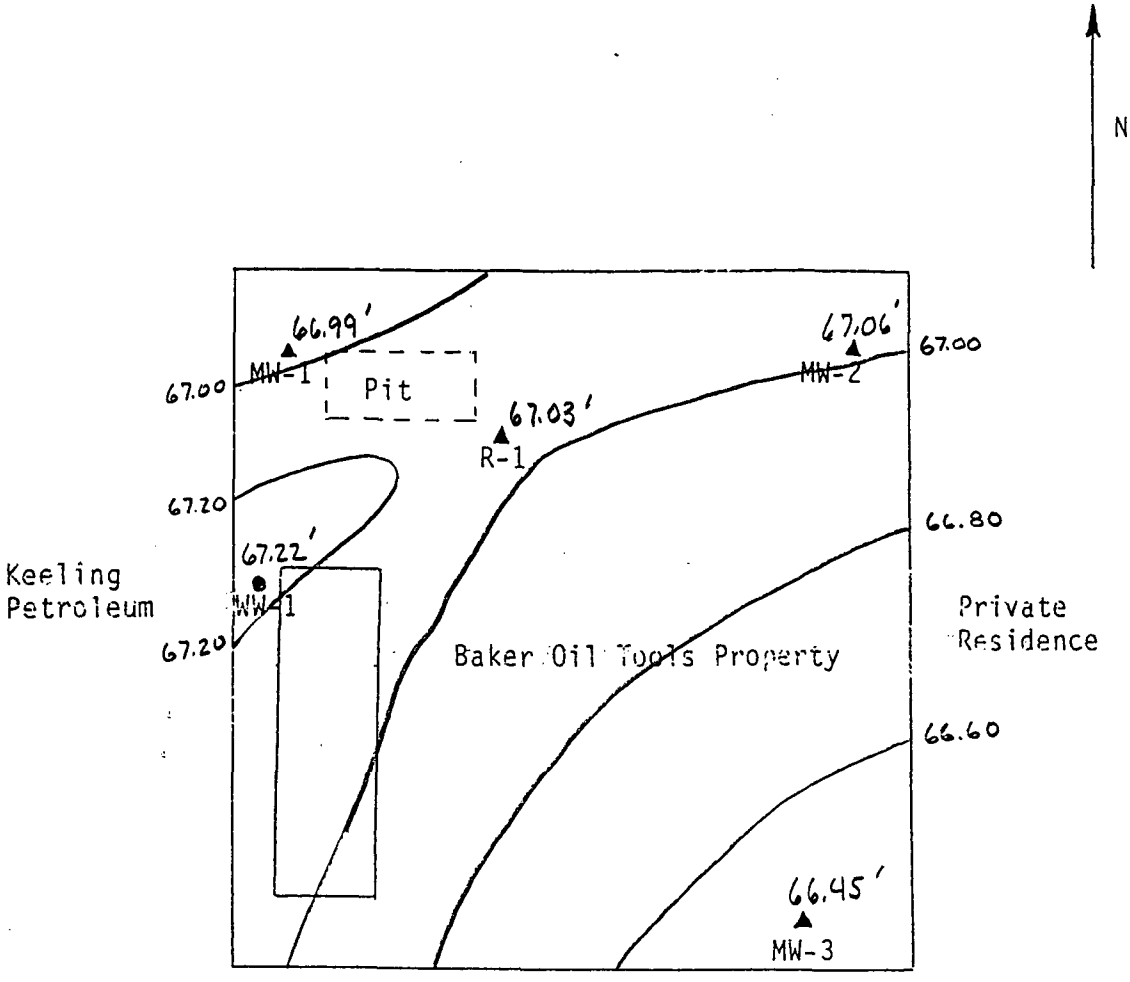
Well ID	Well Depth	Elevation	Quarter 1		Quarter 2		Quarter 3		Quarter 4	
			gauged depth	actual depth	gauged depth	actual depth	gauged depth	actual depth	gauged depth	actual depth
MW-1	46.0'	100.19	33.2'	66.99						
MW-2	45.7'	99.56	32.5'	67.06						
MW-3	39.3'	99.15	32.7'	66.45						
WW-1	125.0'	99.52	32.3'	67.22						
R-1	40.0'	100.03	33.0'	67.03						

Additionally BOT has included maps indicating the contaminant concentrations at each well location for the site. These are included as figures 1a-1g.

The next monitoring is scheduled for October with the report submitted by November 1, 1995. If you have any questions or require additional information, please do not hesitate in contacting me at (713)466-2520.

Sincerely,
For Baker Oil Tools

Thomas V. Stenbeck
Manager of Health, Safety and Environmental - North America



Scale: 1" = 60'

Figure No. 1	Groundwater Elevations Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

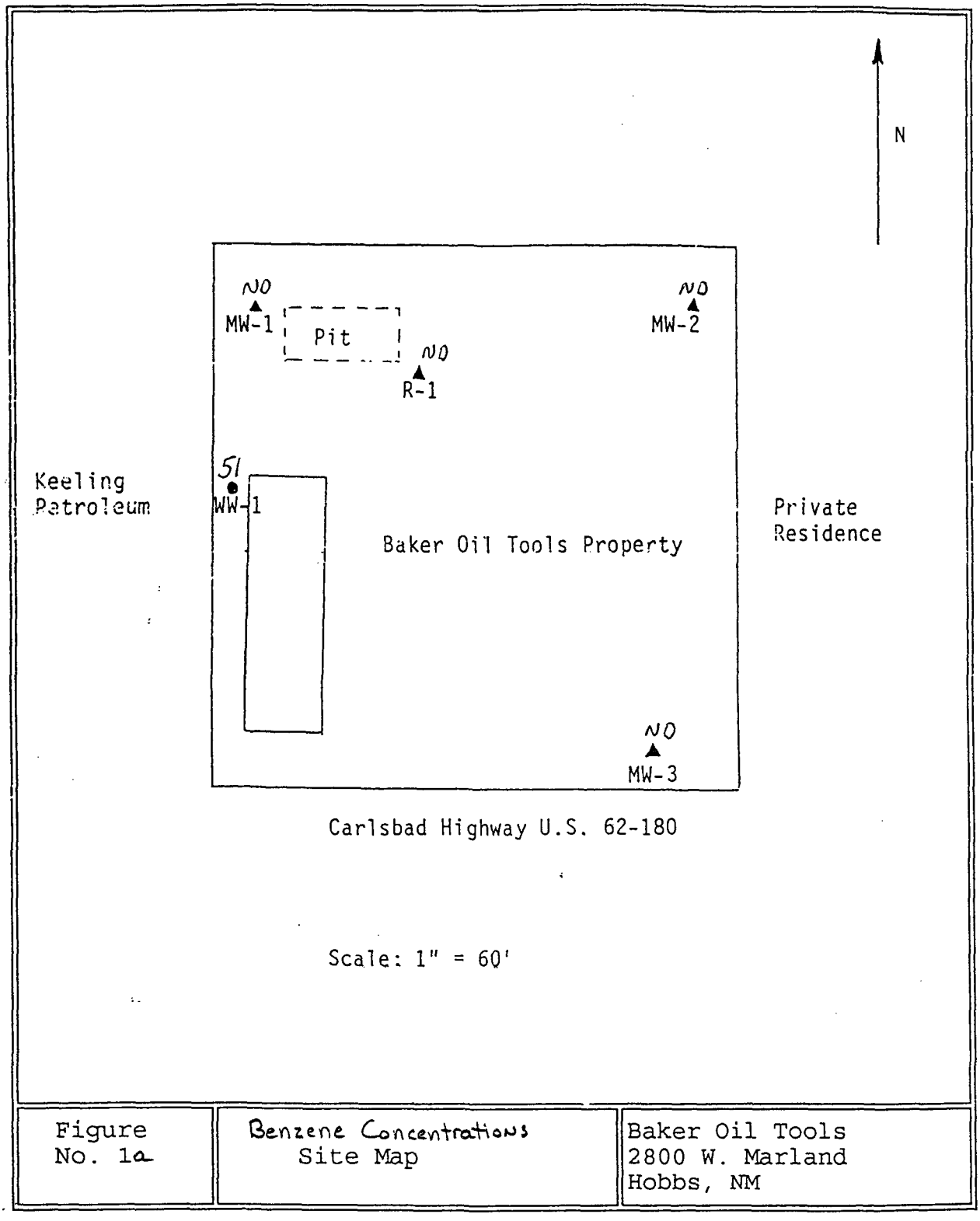


Figure No. 1a	Benzene Concentrations Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

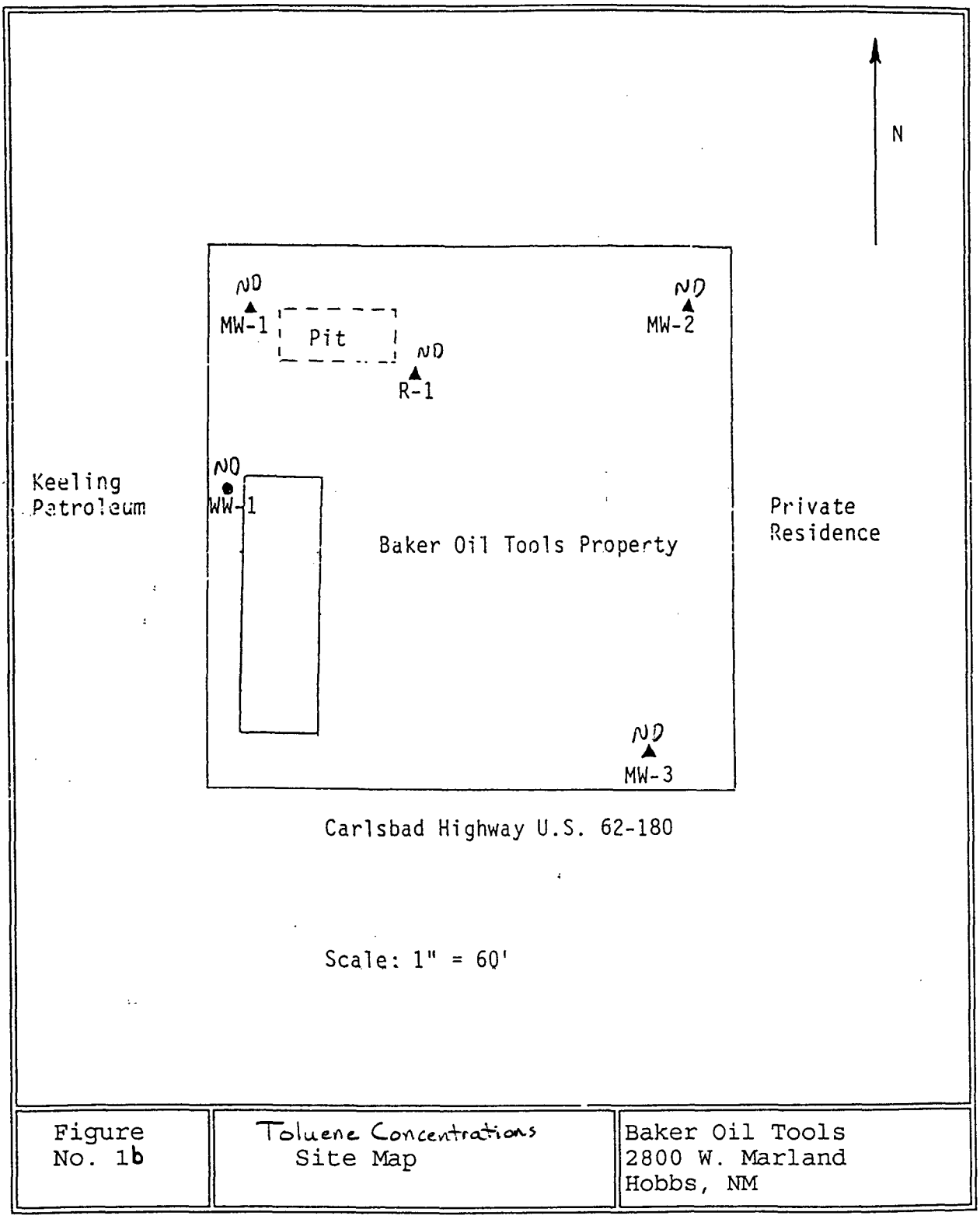


Figure No. 1b	Toluene Concentrations Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

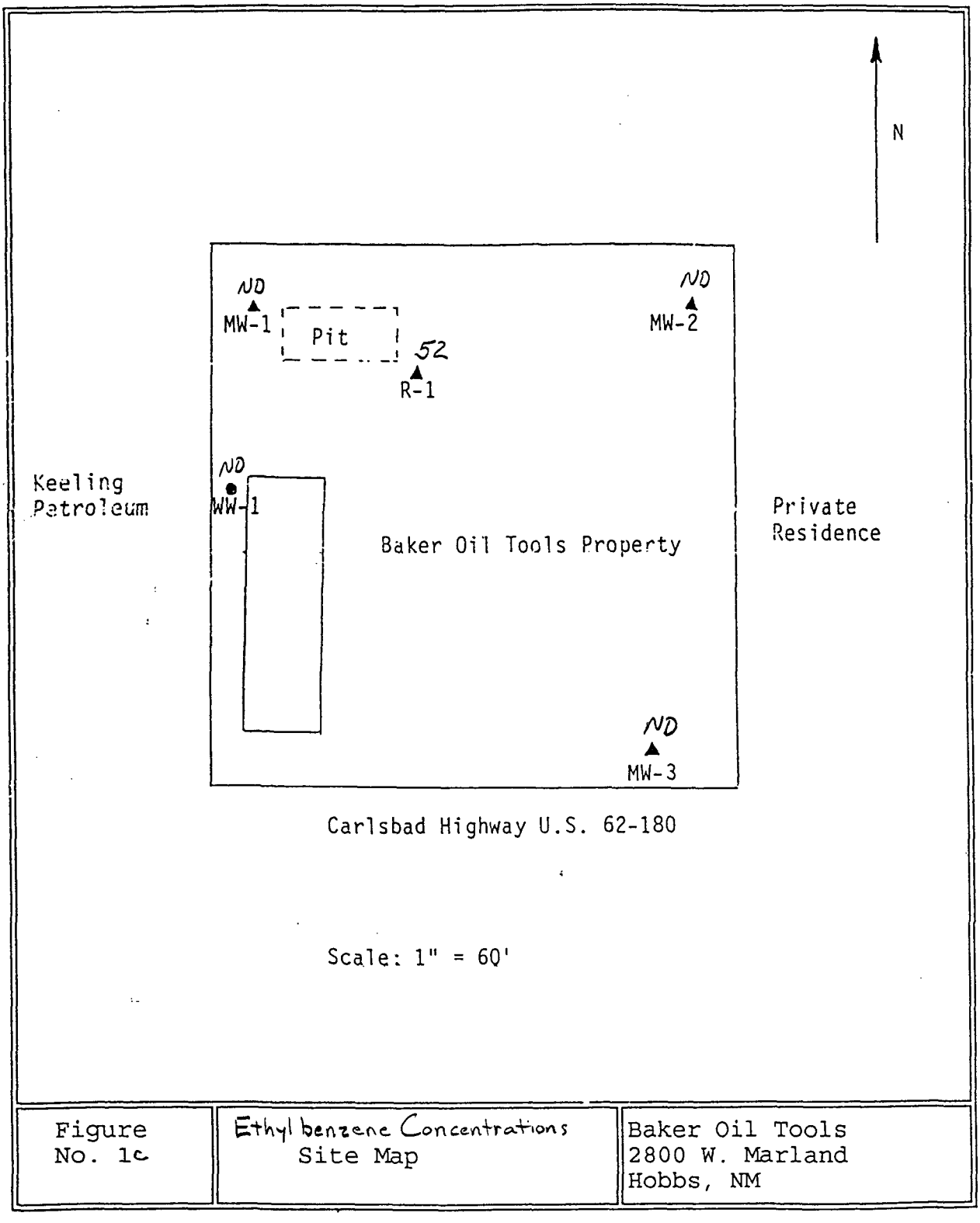


Figure No. 1c	Ethylbenzene Concentrations Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

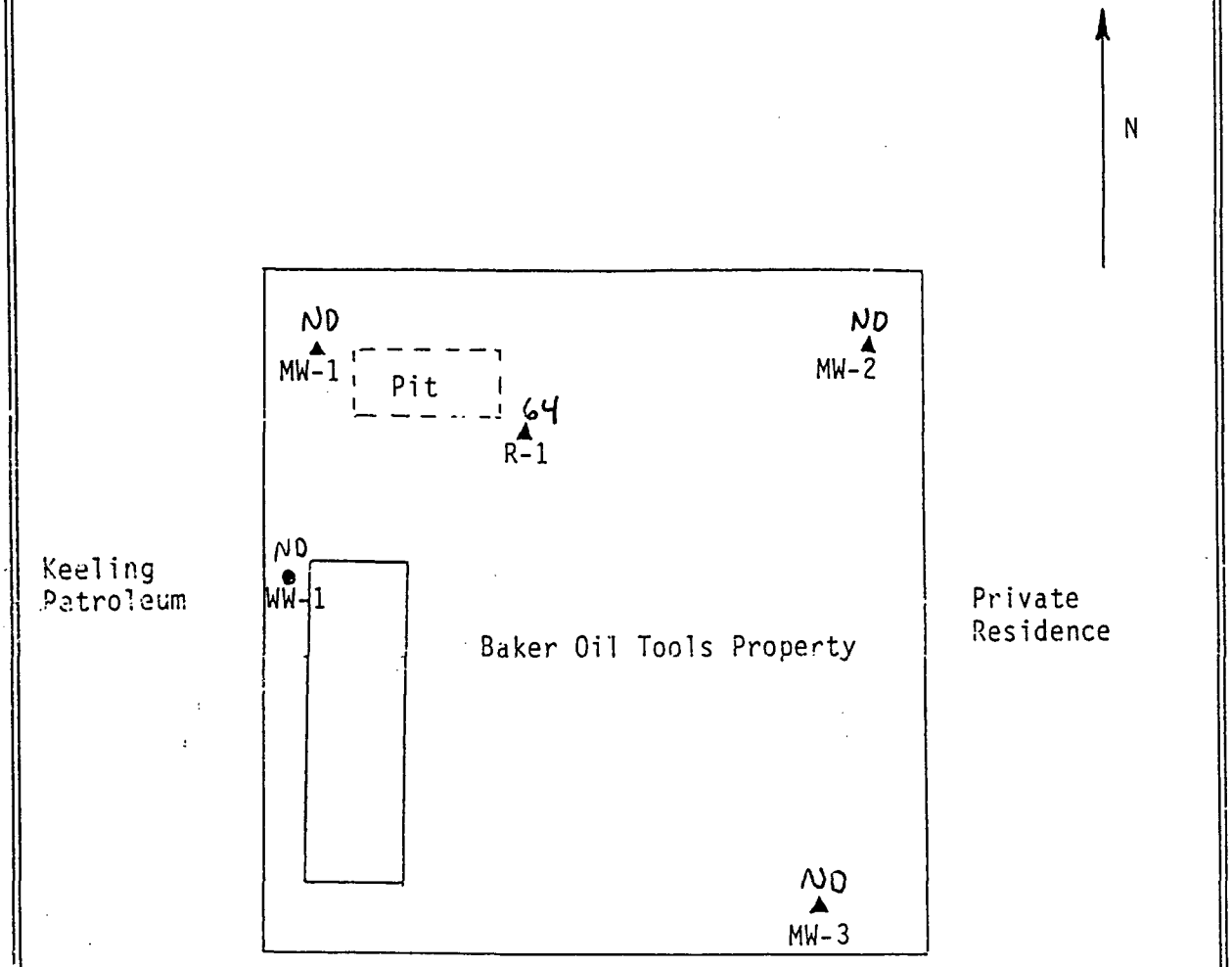


Figure No. 1d	Xylene Concentrations Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

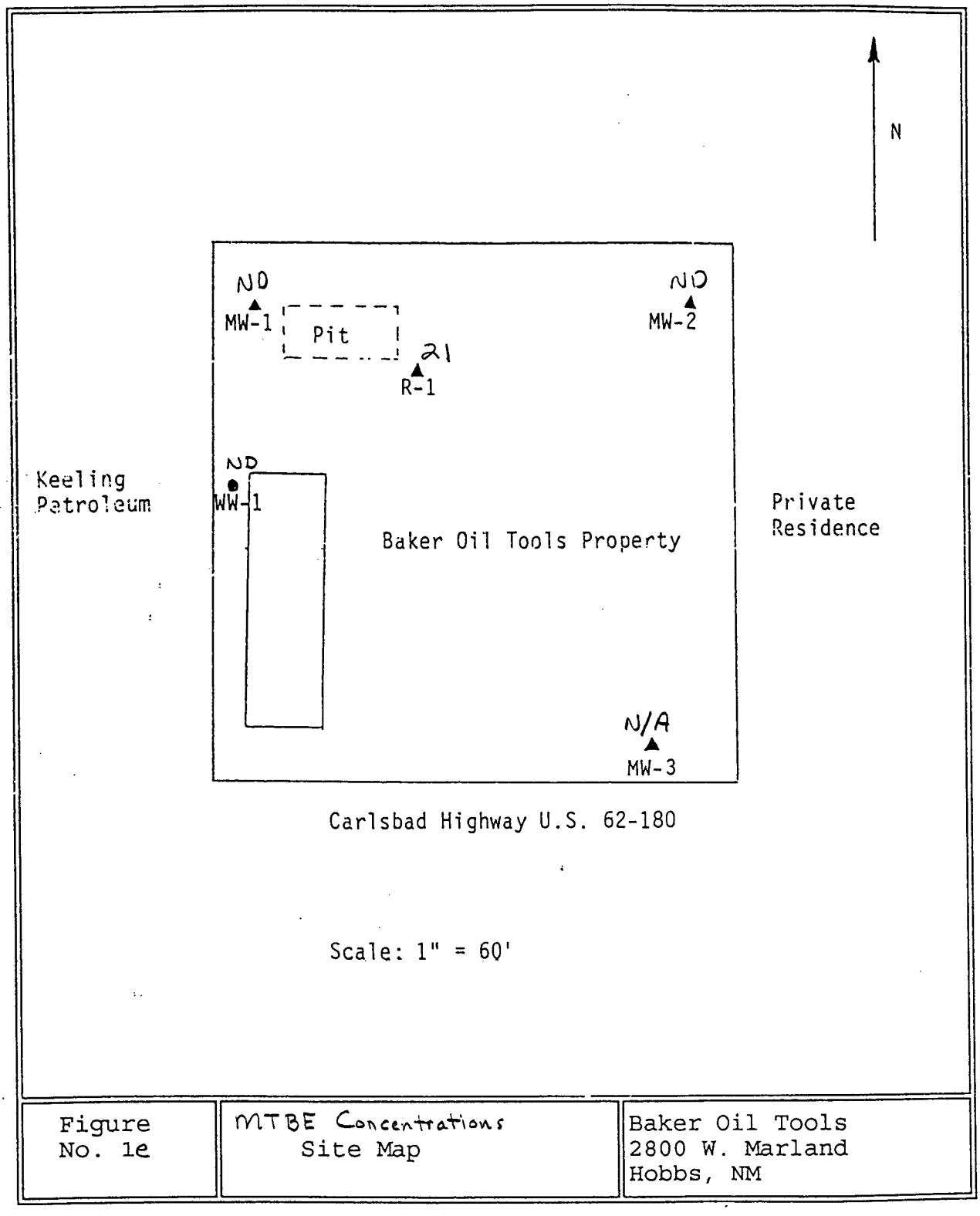
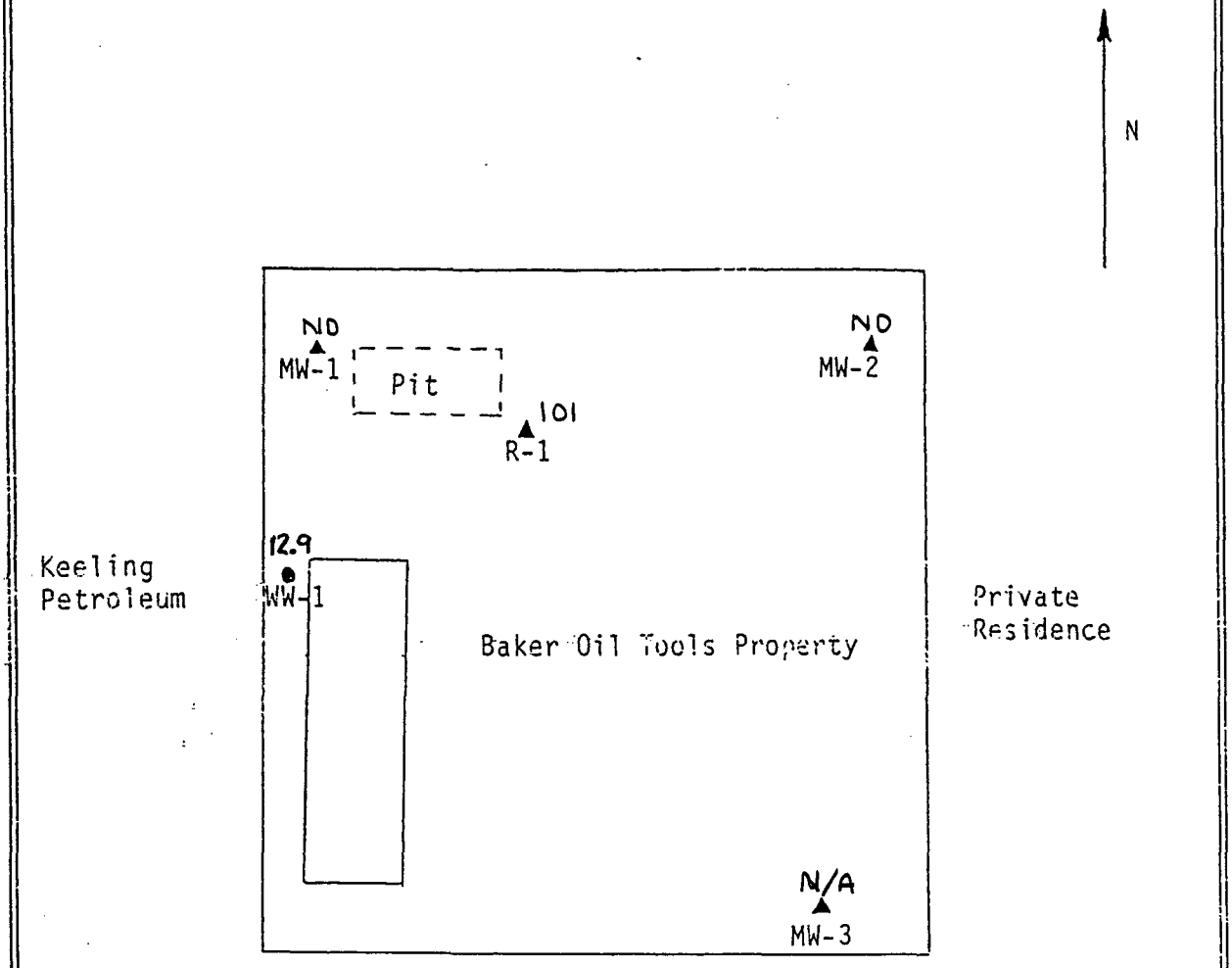


Figure No. 1e	MTBE Concentrations Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM



Scale: 1" = 60'

Figure No. 1f	Naphthalene Concentrations Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM

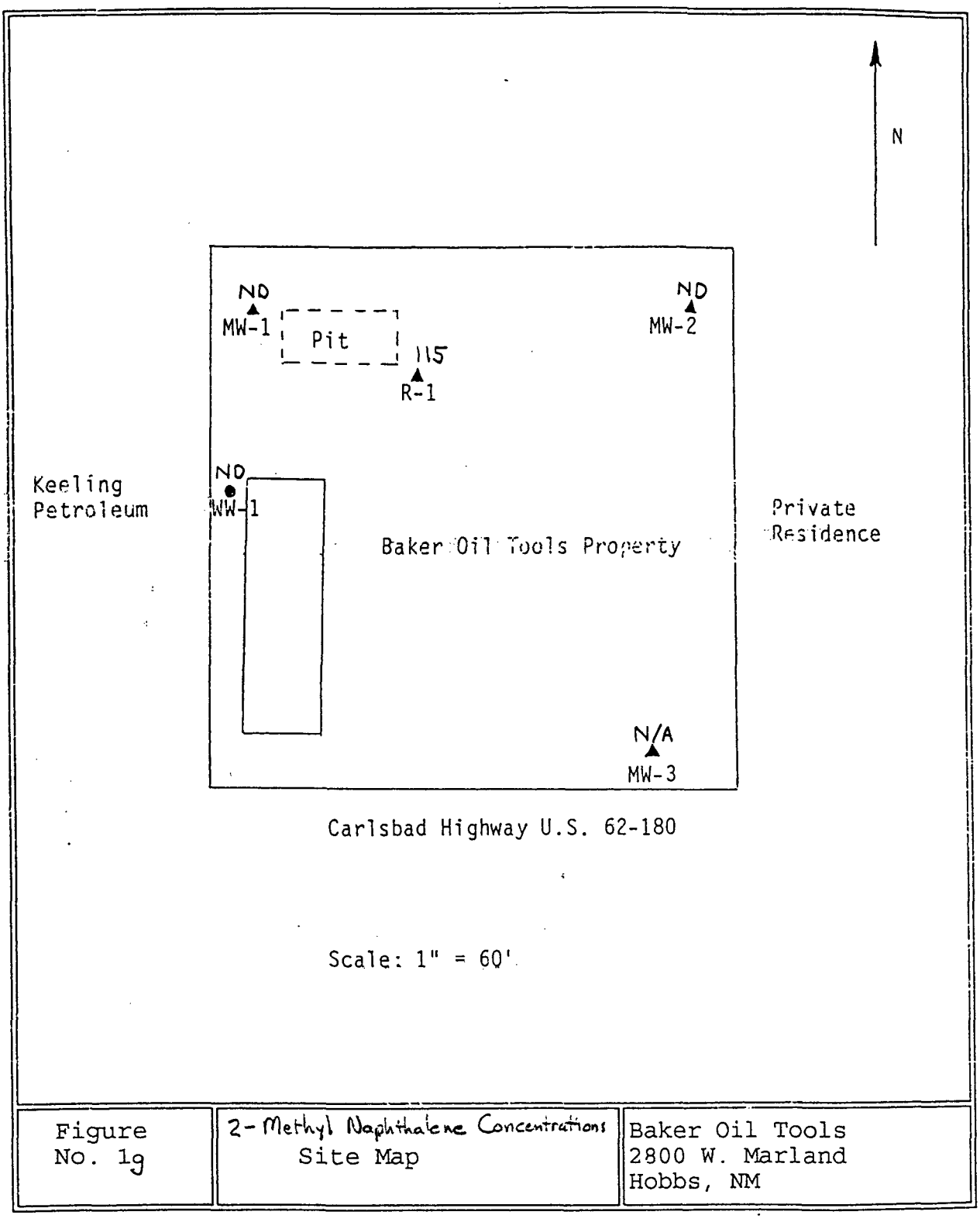


Figure No. 1g	2-Methyl Naphthalene Concentrations Site Map	Baker Oil Tools 2800 W. Marland Hobbs, NM