

1R - 43

REPORTS

DATE:

1999

April 16, 1999

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

**First Quarter of 1999
GROUND-WATER SAMPLING EVENT**

Former Baker Oil Tools Facility
2800 West Marland
Hobbs, New Mexico
Project No. 60260-8-1332-04

Dear Mr. Olson:

Baker Oil Tools is submitting the first quarter of 1999 ground-water monitoring report in response to the NMOCD request of June 20, 1995 to provide quarterly monitoring data for ground water contamination in the direct vicinity of the former disposal pit on the property located at 2800 West Marland in Hobbs, New Mexico. The NMOCD requested this report discuss relevant background information, execution of services, laboratory analytical results, and a summary of our findings for the subject property.

1. BOT performed the first quarter monitoring event on March 25, 1999. During this quarterly monitoring event, the wells were gauged for depth, bailed and sampled. Monitoring tasks began at 2:45 p.m. Purging of the well was accomplished using a low volume electric pump. Bailing and sampling of the wells was accomplished using new 2" bailers. Monitoring wells MW-1, MW-2 and MW-3 were pumped of three volumes and allowed to equalize prior to sampling. Water well WW-1 was sampled but not purged due to the depth of the water in the well. Monitoring well R-1 was bailed but not sampled due to the presence of free product in the well when bailing initiated. Approximately 10 inches of free product was observed in the first bailer during the sampling of monitoring well R-1. The recovered amount decreased in subsequent bails until after the 12th bailer taken the amount of product being recovered was less than $\frac{1}{8}$ th of an inch. The sampling crew left the site for one hour to deliver the samples from the other wells for transport to the laboratory. Samples collected from each well were shipped to Von Analytical Laboratories in Houston, Texas for analysis. (Note: The laboratory was changed for logistical, service and cost considerations.) When the crew returned, R-1 was bailed again. The first bailer yielded water with $\frac{1}{4}$ inch of free product. The second bailer yielded 2 inches of free product. The third bail contained less than $\frac{1}{2}$ inch of free product. Subsequent bails from the well produced a diminishing quantity of free product until on the 10th bail less than $\frac{1}{8}$ th of an inch of product was recovered. The well was almost bailed dry at this point. Approximately one foot of water sample was being recovered per bail and

this material contained a high sediment load. The crew returned the next morning to resample R-1 to determine if recharge of the free product would occur overnight. Bailing of R-1 began at 7:00 a.m. The first bail taken was a full bailer of water with a sheen of free product. The subsequent 13 bails from the well recovered only a hydrocarbon sheen on each. Again the well bailed almost completely dry by the last bail.

2. A summary of the laboratory analytical results of water quality sampling of the monitoring wells is provided in the attached Table 1A through 1E. This data is presented in tabular form showing the previous four monitoring events sampling results. A copy of the original laboratory analytical results is also attached.
3. Water level and well depth measurements were measured using an electronic water level indicator capable of determining water levels to within 0.01 foot. Table 2 provides cumulative ground water level measurements for the previous four monitoring events. An updated ground water elevation map using the recent water table elevations of the ground water in all monitoring wells is presented in Figure 1.

If you have any questions or require additional information, please do not hesitate in contacting me at (713) 625-4492.

Sincerely,
For Baker Hughes Inteq/Baker Oil Tools/Baker Atlas



Myk Thornton
Environmental Manager

TABLE 1A
MW-1

	2nd Quarter 4/23/98	3rd Quarter 8/4/98	4th Quarter 12/29/98	1st Quarter March 26, 1999	2nd Quarter	3rd Quarter	4th Quarter
EPA 8020A							
Benzene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm			
Ethylbenzene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm			
Toluene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm			
Xylenes	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm			
Total BETX	BDL	BDL	BDL	BDL			
EPA 8020							
Methyl Tertiary Butyl Ether	<0.0050	<0.0050	<0.0050	<0.0050 ppm			
EPA 8270B							
2-Methylnaphthalene	<0.01 ppm	<0.01 ppm	<0.01 ppm	0.01 mg/l			
Naphthalene	<0.01 ppm	<0.01 ppm	<0.01 ppm	0.01 mg/l			

notes: N/A indicates the sample was not analyzed for the parameter
BDL indicates the sum of the individual constituent concentrations is below detectable limits

TABLE 1B
MW-2

	2nd Quarter 4/23/98	3rd Quarter 8/4/98	4th Quarter 12/29/98	1st Quarter March 26, 1999
EPA 8020A				
Benzene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm
Ethylbenzene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm
Toluene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm
Xylenes	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm
Total BETX	BDL	BDL	BDL	BDL
EPA 8020				
Methyl Tertiary Butyl Ether	<0.005 ppm	<0.005 ppm	<0.005 ppm	<0.0050 ppm
EPA 8270B				
2-Methylnaphthalene	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 mg/l
Naphthalene	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 mg/l

notes: N/A indicates the sample was not analyzed for the parameter
BDL indicates the sum of the individual constituent concentrations is below detectable limits

TABLE 1C
MW-3

	2nd Quarter		3rd Quarter		4th Quarter		1st Quarter	
	4/23/98	4/23/98	8/4/98	8/4/98	12/29/98	12/29/98	March 26, 1999	March 26, 1999
EPA 8020A								
Benzene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050	<0.0050
Ethylbenzene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050	<0.0050
Toluene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050	<0.0050
Xylenes	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050	<0.0050
Total BETX	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
EPA 8020								
Methyl Tertiary Butyl Ether	<0.005 ppm	<0.005 ppm	<0.005 ppm	<0.005 ppm	<0.005 ppm	<0.005 ppm	<0.0050 ppm	<0.0050 ppm
EPA 8270B								
2-Methylnaphthalene	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.010 mg/l	<0.010 mg/l
Naphthalene	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.010 mg/l	<0.010 mg/l

notes: N/A indicates the sample was not analyzed for the parameter
BDL indicates the sum of the individual constituent concentrations is below detectable limits

TABLE 1D
WW-1

	2nd Quarter 4/23/98	3rd Quarter 8/4/98	4th Quarter 12/29/98	1st Quarter 3/26/99	2nd Quarter	3rd Quarter	4th Quarter
EPA 8020A							
Benzene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm			
Ethylbenzene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm			
Toluene	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm			
Xylenes	<0.002 ppm	<0.002 ppm	<0.002 ppm	<0.0050 ppm			
Total BETX	BDL	BDL	BDL	BDL			
EPA 8020							
Methyl Tertiary Butyl Ether	<0.005 ppm	<0.005 ppm	<0.005 ppm	<0.0050 ppm			
EPA 8270B							
2-Methylnaphthalene	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.010 mg/l			
Naphthalene	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.010 mg/l			

notes: N/A indicates the sample was not analyzed for the parameter

BDL indicates the sum of the individual constituent concentrations is below detectable limits

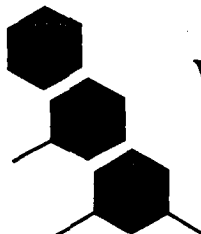
TABLE 1E
R-1

	2nd Quarter 4/23/98	3rd Quarter 8/4/98	4th Quarter 12/29/98	1st Quarter 3/25/99	2nd Quarter	3rd Quarter	4th Quarter
EPA 8020A							
Benzene	N/A	N/A	<0.002 ppm	N/A			
Ethylbenzene	N/A	N/A	0.041 oom	N/A			
Toluene	N/A	N/A	<0.002 ppm	N/A			
Xylenes	N/A	N/A	0.035 ppm	N/A			
Total BETX	N/A	N/A	0.076 ppm	N/A			
EPA 8020							
Methyl Tertiary Butyl Ether	N/A	N/A	<0.005 ppm	N/A			
EPA 8270B							
2-Methylnaphthalene	N/A	N/A	2.0 ppm	N/A			
Naphthalene	N/A	N/A	1.2 ppm	N/A			

notes: N/A indicates the sample was not analyzed for the parameter
BDL indicates the sum of the individual constituent concentrations is below detectable limits

QUARTERLY CUMULATIVE GROUND-WATER ELEVATIONS

Monitoring Well No.	Well Depth (ft)	Top of PVC Casing Elevation (ft MSL)	Ground-water Level Elevation (ft MSL)			
			4/23/98	8/4/98	12/29/98	3/25/99
MW-1	45.7	100.19	66.06	65.70	66.14	65.19
MW-2	45.0	99.56	65.71	65.32	65.21	64.88
MW-3	38.5	99.15	65.56	65.20	65.15	64.83
WW-1	125.0	99.52	65.58	65.62	65.37	65.12
R-1	48.0	100.03	*	*	63.93	*



Von Analytical Laboratories

10801 Hammerly, #250, Houston, TX 77043

P.O. Box 841624, Houston, TX 77284-1624

Ph. (713) 827-0737 • Fax (713) 827-8733

email: cfb@flash.net

April 8, 1999

Mr. Tom Steinbeck
Page & Kraemer Environmental
P. O. Box 841005
Houston, TX 77284-1005

Report: **BOT Hobbs Monitoring**
Date samples received: March 26, 1999; 1348
VAL Lab Numbers: B64-039 to B64-042
Client Sample Numbers: **MW-1 to WW-1**

Dear Sir:

We have completed the requested analyses and have presented those results in this report. We have also reported the quality assurance/quality control data for these samples.

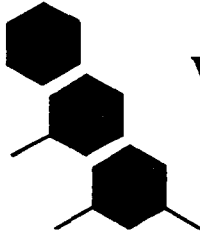
All raw data, spectra and log files shall remain on-file at VAL for a minimum of five years. Unused sample portions shall remain refrigerated at 4°C per EPA requirements for a minimum of 90 days for possible future analyses. After 90 days, we shall dispose of the samples using guidelines stated by state regulations.

The analytical results pertain only to the samples analyzed as received. Von Analytical Laboratories assumes no responsibility for any subsequent use or interpretation of the analytical results.

We at Von Analytical Laboratories are very pleased to have served you.

Sincerely,

Charles F. Bohnstedt, Ph.D.
Senior Analyst



Von Analytical Laboratories

10801 Hammerly, #250, Houston, TX 77043
P.O. Box 841624, Houston, TX 77284-1624
Ph. (713) 827-0737 • Fax (713) 827-8733
email: cfb@flash.net


Charles F. Bohnstedt, Ph.D.

Client:	Page & Kraemer
Submitted by:	Tom Steinbeck
Sample Set Identification:	BOT Hobbs Monitoring
Date Received:	March 26, 1999; 1348
Date Samples Extracted by EPA 8270C:	March 30, 1999
Date Samples Analyzed by EPA 8270C:	March 30, 1999

Client Sample No:	MW-1	MW-2	MW-3	WW-1	
VAL Sample No.:	B64-039	B64-040	B64-041	B64-042	Reagent
Sample Type:	Water	Water	Water	Water	Blank
Units:	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
Naphthalene:	< 10	< 10	< 10	< 10	< 10
2-Methylnaphthalene:	< 10	< 10	< 10	< 10	< 10
<u>% Surrogate Recovery</u>					
Nitrobenzene-d8	73.9%	80.8%	81.7%	83.1%	95.9%

Client Sample No:

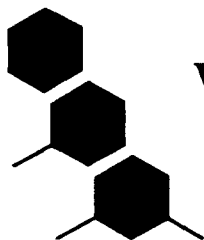
VAL Sample No.:
Sample Type:
Units:

Naphthalene:
2-Methylnaphthalene:

% Surrogate Recovery
Nitrobenzene-d8

for soils, ug/kg = ppb

for waters, ug/L = ppb



Von Analytical Laboratories

10801 Hammerly, #250, Houston, TX 77043

P.O. Box 841624, Houston, TX 77284-1624

Ph. (713) 827-0737 • Fax (713) 827-8733

email: cfb@flash.net


Charles F. Bohnstedt, Ph.D.

Client:	Page & Kraemer
Submitted by:	Tom Steinbeck
Sample Set Identification:	BOT Hobbs Monitoring
Date Received:	March 26, 1999; 1348
Date Samples Analyzed by EPA 8021B:	March 26, 1999

Client Sample No:	MW-1	MW-2	MW-3	WW-1
VAL Sample No.:	B64-039	B64-040	B64-041	B64-042
Sample Type:	Water	Water	Water	Water
Total BTEX (ppm):	<0.0050	<0.0050	<0.0050	<0.0050
Benzene (ppm):	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Toluene (ppm):	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Et-Benzene (ppm):	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Total Xylene (ppm):	< 0.0050	< 0.0050	< 0.0050	< 0.0050
MTBE (ppm):	< 0.0050	< 0.0050	< 0.0050	< 0.0050

Quality Control Results

	Blank	Daily Calibration Check	Percent Recovery
Benzene (ppm):	< 0.005	0.0718	95%
Toluene (ppm):	< 0.005	0.0807	108%
Et-Benzene (ppm):	< 0.005	0.0774	103%
p & m-Xylene (ppm):	< 0.005	0.1467	98%
o-Xylene	< 0.005	0.0809	107%
MTBE (ppm):	< 0.005	0.0707	91%
% Surrogate Recovery	105%	93%	

for soils, ppm = mg/kg

for waters, ppm = mg/l

MTBE = Methyl tert-Butyl Ether



ENVIRONMENTAL LABORATORY

17459 Village Green Drive • Houston, TX 77040 • (713) 466-0958 FAX: (713) 466-9882

Analysis Request and Chain of Custody Record

Name/Address/Phone/Fax

Page 3 Kramer
5635 Bus Central #100 713 466 8288 Fax
Houston TX 77092

713 466 3233 Phone
BOT Hobbs Monitoring

Project Name/Number

B-64

Lab ID No.	Field Sample No./ Identification	Date and Time	g	g	Sample Container (Size/Mat'l)	Sample Type (Liquid Sludge, Etc)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
	MW-1	3-25-99 5:02 P			18 Glass 240ml vials	Liquid		Naphthalene, 2 methyl naphthalene, BTEX, M9BE	339
	MW-2	3-25-99 4:40 P	X		"	"		"	40
	MW-3	3-25-99 4:30 P	X		"	"		"	41
	MW-1	3-25-99 4:53	X		"	"		"	42
	R-t	3-25-99			"	"		"	

SAMPLER

Relinquished by: (signature)

FedEx 810 998 216 955

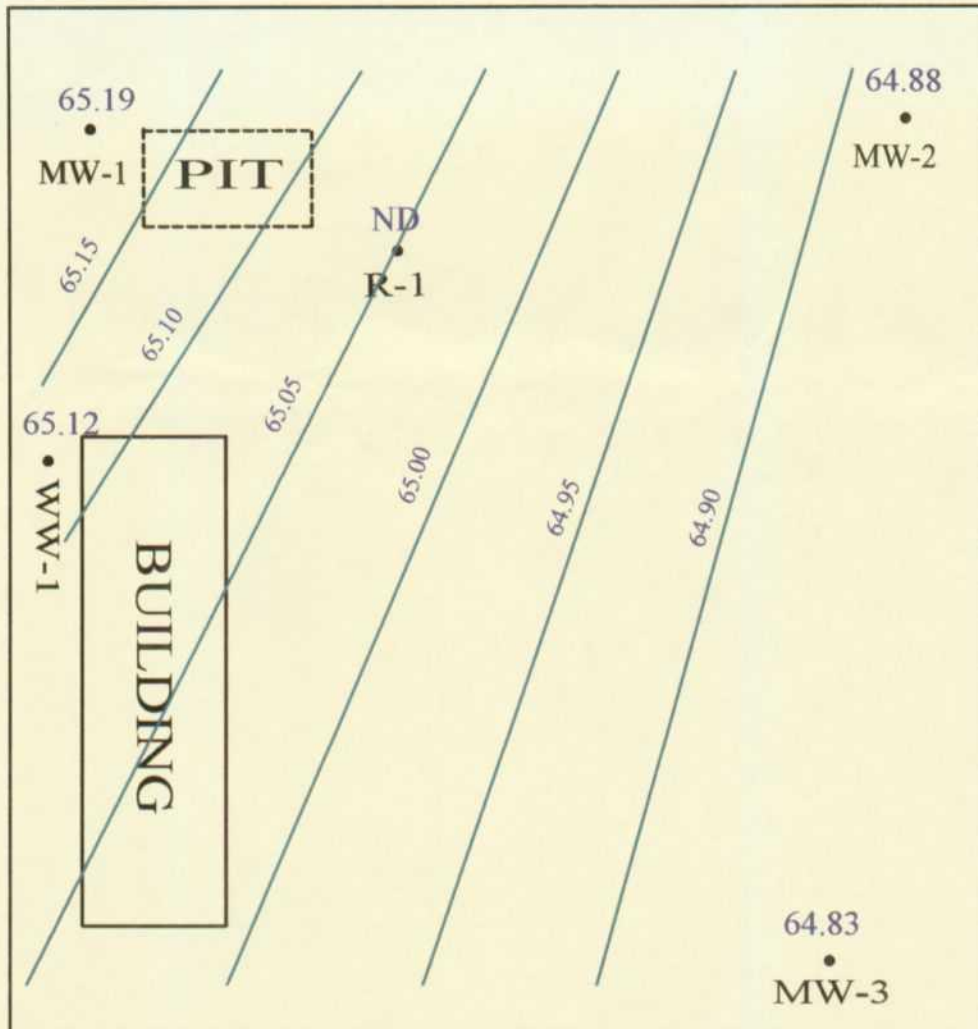
Date: 3/26/99 Time: 1348

Received by: (signature)

(signature)

Date: Time:

REMARKS:



Page and Kraemer Environmental Services, Inc.
Lafayette / Houston

Figure 1

Groundwater Elevations (QTR 1, 1999)

Baker Oil Tools
2800 W. Marland
Hobbs, NM

Prepared by TVS
 scale 1 = 40' (approx.)
 5/1/99