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July 28, 1999

Ms. Cindy Rintoul
North Carolina Department of Environment and Natural Resources
585 Waughtown Street
Winston-Salem, North Carolina 27107-2241

Subject: **Groundwater Monitoring Report, Second Quarter 1999**
Exxon RAS # 4-3998
4701 W. Market Street
Greensboro, North Carolina
Groundwater Incident # 10001
Site Rank: Intermediate

Dear Ms. Rintoul:

Piedmont Industrial Services, Inc. and ERM on behalf of Exxon Company, U.S.A., are submitting this status report for the referenced site.

A soil vapor extraction and aquifer air sparge system are currently in operation at the site. The system operated throughout the reporting period with only temporary shutdowns for maintenance.

If you have any questions or require further information, please feel free to contact me at (336) 725-3788.

Sincerely,

Piedmont Industrial Services, Inc.

GEOLOGIST
THOMAS P. LENNON
1491

Tom Lennon, L.G.
Project Geologist

enclosure
copy: Frank Medlin, Exxon Company U.S.A.

GROUND WATER MONITORING REPORT
APRIL 1999 THROUGH JUNE 1999

Exxon RAS # 4-3998
4701 W. Market Street
Greensboro, North Carolina
Groundwater Incident # 10001
Site Rank: Intermediate

Prepared By:

Piedmont Industrial Services
P.O. Box 5061
Winston-Salem, NC 27113

Date:

July 26, 1999

NORTH CAROLINA LICENSED SEAL 1491 GEOLOGIST THOMAS P. LENNON

Thomas P. Lennon, L.G.
Piedmont Industrial Services, Inc.

Jerry Prosser, L.G.
ERM-Southeast

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Introduction

The following is the groundwater monitoring report for Exxon RAS #4-3998, located at 4701 West Market Street., in Greensboro, North Carolina (Figure 1).

An aquifer air sparge/soil vapor extraction (AAS/SVE) system was installed and operated from the second quarter 1996 through the present.

Work Performed This Quarter

The groundwater monitoring wells associated with this site have been sampled (Table 1) and gauged (Table 2) periodically since wells were first installed in 1992. Select monitoring wells were most recently sampled in June 1999. Laboratory test reports for the most recent groundwater sampling event are included as Appendix A.

On June 28 and 29, 1999, an additional four monitoring wells (MW-10 through MW-14) were installed on the subject site as part of a property transaction environmental site assessment (Figure 2). Analytical results for ground water samples collected from the newly installed wells are included in Table 1. Well construction records for the newly installed wells are included as Appendix B.

Free product (NAPL) was detected in wells MW-2 and MW-3 this quarter. Product thickness was as follows: MW-2: 0.01 feet, MW-3: 0.01 feet. The NAPL was recovered via bailer, and stored in a steel 55-gallon drum at the site. The drum is vented and labeled. ~~Exxon initiated an inventory investigation at the facility and reviewed UST tightness testing records when the product was first detected in the wells. No product inventory discrepancies were noted.~~

The SVE system was in continuous operation throughout the second quarter 1999. Remediation system operation and maintenance is performed monthly. A table of SVE off-gas analytical results is presented as part of Table 3.

A site location map is presented in Figure 1. A site configuration map is presented as Figure 2. A map illustrating the direction of groundwater flow for water table conditions is presented as Figure 3. The dissolved phase hydrocarbon plume is presented as Figure 4.

Conclusions and Recommendations

Planned remediation activities at this site include the operation of the remediation system to reduce dissolved hydrocarbon levels in the groundwater to below risk based corrective action levels (GCLs).

Aggressive Fluid Vapor Recovery (AFVR) may be utilized during the third quarter for free product recovery if free product continues to be present in monitor wells MW-2 and MW-3.

TABLES

TABLE 1
EPA METHOD 602 AND LEAD GROUND WATER ANALYTICAL RESULTS
EXXON RETAIL LOCATION 4-3998
4701 WEST MARKET STREET
GREENSBORO, NORTH CAROLINA

MONITOR WELL ID	DATE	EXPANDED EPA METHOD 602							METHOD 504.1	METHOD 3030C
		TOTAL BTEX	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	IPE	EDB	LEAD
MW-1	8/20/92	65,900	5000	35000	3900	22000	<500	--	--	--
	3/25/93	44,600	3500	21000	3100	17000	<250	--	--	--
	6/22/93	44,600	4200	18000	3400	19000	<500	--	--	--
	6/9/94	62,450	6150	22500	5000	28800	96	900	<10	5
	6/14/95	<1	<1	<1	<1	<1	<10	465	--	--
	9/18/95	50,500	4,000	24,000	3,000	19,500	<5,000	<5,000	--	--
	12/6/95	47,700	4,500	18,000	3,600	21,600	<225	1,230	--	--
	3/27/96	15,350	2,340	3,420	1,350	8,240	<450	945	<0.503	<3.0
	6/26/96	32,280	3,420	7,980	2,640	18,240	<200	1,030	<20	<3.0
	6/17/97	25,730	3,000	4,800	2,430	15500	ND	950	ND	ND
	12/16/97	4,250	1,110	560	780	1800	90	130	0.07	ND
	9/30/98	9,125	1,750	715	1,810	4850	15	765	0.34	ND
	12/22/98	1,959	414	327	382	836	ND	311	0.29	
	6/21/99	**2,060**	**600**	**100**	**220**	**1140**	**ND**	**400**	**NT**	**4**
MW-2	8/20/92	13,900	1400	4900	1600	6000	<250	--	--	--
	3/25/93	16,400	2000	7300	1200	5900	<250	--	--	--
	6/22/93	76,800	8100	40000	4700	24000	<2500	--	--	--
	6/9/94	70,520	7160	33500	4560	25300	390	280	<10	3
	6/14/95	234,900	14,000	112,000	17,100	91,800	<225	1,710	--	--
	9/18/95	56,000	4,500	25,000	4,000	22,500	<1,000	1,600	--	--
	12/6/95	5,553	788	2,900	315	1,550	<225	292	--	--
	3/27/96	136,800	22,000	72,000	7,200	35,600	<900	10,800	0.70	<3.0
	6/26/96	103,000	16,000	60,000	4,500	22,500	<10000	<10000	<1000	<3.0
	6/17/97	86,800	13,100	46,000	4,100	23,600	ND	6,000	ND	ND
	12/16/97	90,550	14,000	49,500	4,050	23,000	1,350	4,050	0.22	ND
	9/30/98	116,130	17,400	74,300	7,130	17,300	ND	8,750	1.26	ND
	12/22/98	NS								
	6/21/99	**57,660**	**12,000**	**40,200**	**1,040**	**4,420**	**ND**	**7,400**	**NT**	**ND**
MW-3	8/20/92	84,800	11000	41000	4800	26000	<500	--	--	--
	3/25/93	67,300	9700	35000	3600	19000	<1000	--	--	--
	6/22/93	88,900	13000	50000	3900	22000	<2500	--	--	--
	6/9/94	114,700	12600	65400	4500	32200	<1000	2580	<50	678
	6/14/95	308,200	25,200	157,000	18,000	108,000	<225	2,740	--	390
	9/18/95	125,000	15,000	73,000	6,000	31,000	<5,000	<5,000	--	372
	12/6/95	156,600	19,800	94,500	6,300	36,000	<4500	7,650	--	147
	3/27/96	158,400	23,400	80,100	8,100	46,800	<900	11,200	59	1,400
	6/26/96	106,750	14,300	49,000	5,650	37,800	<5000	7,300	<500	1,010
	6/17/97	39,381	3,550	19,100	2,181	14,550	ND	1,140	ND	376
	12/16/97	97,200	16,400	49,300	4,500	27,000	450	4,720	35	956
	9/30/98	59,530	8,320	37,800	3,560	9,850	ND	2,240	69	516
	12/22/98	NS								
	6/21/99	**47,420**	**2,000**	**39,000**	**1,240**	**5,180**	**ND**	**400**	**NT**	**259**

TABLE 1
EPA METHOD 602 AND LEAD GROUND WATER ANALYTICAL RESULTS
EXXON RETAIL LOCATION 4-3998
4701 WEST MARKET STREET
GREENSBORO, NORTH CAROLINA

MONITOR WELL ID	DATE	EXPANDED EPA METHOD 602							METHOD 504.1 EDB	METHOD 3030C LEAD
		TOTAL BTEX	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	IPE		
MW-4	8/20/92	4	<2.0	<2.0	<2.0	4	<10	--	--	--
	3/25/93	17.6	1.9	4.7	<1.0	11	<10	--	--	--
	6/22/93	17.5	1.5	<1.0	<1.0	16	<10	--	--	--
	6/9/94	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<1.0	4
	6/14/95	71	6	9	3	53	<10	<10	--	--
	9/18/95	33	4	<1.0	<1.0	29	<10	33	--	--
	6/17/97	112.2	11.4	ND	15.8	85.0	ND	ND	--	--
	12/16/97	175.0	22.0	2.0	14.0	137.0	ND	2	ND	ND
	9/30/98	65.9	8.8	1.2	2.4	53.5	ND	1	ND	ND
	12/22/98	170.4	31.2	ND	2.2	137.0	2	4	ND	
	6/21/99	**180.0**	**36.0**	**ND**	**1.0**	**143.0**	**1**	**3**	**NT**	**ND**
MW-5	3/25/93	<1.0	<1.0	<1.0	<1.0	<1.0	<10	--	--	--
	6/22/93	<1.0	<1.0	<1.0	<1.0	<1.0	<10	--	--	--
	6/9/94	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<1.0	13
	6/14/95	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	--	--
	9/18/95	2	<1.0	1	<1.0	1	<10	27	--	--
MW-6	3/25/93	<1.0	<1.0	<1.0	<1.0	<1.0	<10	--	--	--
	6/22/93	<1.0	<1.0	<1.0	<1.0	<1.0	<10	--	--	--
	6/9/94	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<1.0	13
	6/14/95	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	--	--
	9/18/95	<1.0	<1.0	<1.0	<1.0	<1.0	<10	14	--	--
MW-7	3/25/93	9.1	1.9	1.9	1.9	3.4	36.0	--	--	--
	6/22/93	<5.0	<5.0	<5.0	<5.0	<5.0	<50	--	--	--
	6/9/94	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<1.0	20
	6/14/95	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	--	26
	9/18/95	2	<1.0	1	<1.0	1	10	16	--	15
	12/16/97	11	7	4	<1.0	<1.0	<1.0	<1.0	<0.02	7
	12/22/98	79.5	23.3	26.1	4.5	25.6	24.5	2.0	ND	
	6/21/99	**34.0**	**15.0**	**9.0**	**1.0**	**9.0**	**16.0**	**1.0**	**NT**	**15**
DW-8	3/25/93	<1.0	<1.0	<1.0	<1.0	<1.0	<10	--	--	--
	6/22/93	<1.0	<1.0	<1.0	<1.0	<1.0	<10	--	--	--
	6/9/94	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<1.0	4
	6/14/95	2	<1	1	<1	1	<10	<10	--	--
	9/18/95	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	--	--
	12/16/97	14	2	6	<1.0	6	<1.0	<1.0	<0.02	5
	9/30/98	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/22/98	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/21/99	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**11**

TABLE 1
EPA METHOD 602 AND LEAD GROUND WATER ANALYTICAL RESULTS
EXXON RETAIL LOCATION 4-3998
4701 WEST MARKET STREET
GREENSBORO, NORTH CAROLINA

MONITOR WELL ID	DATE	EXPANDED EPA METHOD 602							METHOD 504.1 EDB	METHOD 3030C LEAD
		TOTAL BTEX	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	IPE		
MW-9	12/6/95	823	36	7	110	670	<10	38	–	–
	12/16/97	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.02	5
	9/30/98	<1.0	8	70	45	307	ND	8	ND	ND
	12/22/98	124	5	ND	5	114	ND	15	ND	
OP-1	12/16/97	561	320	10	57	174	45	10	<0.02	<3
	12/22/98	525	334	11	47	133	83	8	ND	
MW-1A*	11/20/92	<1.0	<1.0	<1.0	<1.0	<1.0	–	–	–	–
(MW-Moore)	11/13/95	<1.0	<1.0	<1.0	<1.0	<1.0	–	–	–	–
MW-10	**36332**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**NT**	**NT**
MW-11	**6/21/99**	**78**	**70**	**<1**	**<1**	**7**	**27**	**41**	**NT**	**NT**
MW-12	**6/21/99**	**45,930**	**7,980**	**13,000**	**3,650**	**21,300**	**280**	**4,710**	**Nt**	**NT**
Mw-13	**6/21/99**	**9,340**	**3,680**	**940**	**760**	**3,960**	**<100**	**1,100**	**NT**	**NT**
T15A NCAC 2L STANDARD			**1**	**1,000**	**29**	**530**	**200**	**NS**	**0.0004**	**15**
GCL's			**5,000**	**257,500**	**29,000**	**87,500**	**200,000**	**70,000**	**50**	**15**

TABLE 2
GROUND WATER ELEVATION DATA
EXXON RETAIL LOCATION 4-3998
4701 WEST MARKET STREET
GREENSBORO, NORTH CAROLINA

	MW-1 96.50		MW-2 96.56		MW-3 96.92		MW-4 97.92	
DATE	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION
8/20/92	23.45	73.05	22.99	73.57	24.49	72.43	24.50	73.42
3/25/93	18.77	77.73	18.90	77.66	20.91	76.01	22.62	75.30
6/11/93	19.23	77.27	18.85	77.71	20.74	76.18	21.36	76.56
4/13/94	19.79	76.71	19.06	77.50	21.60	75.32	22.74	75.18
6/9/94	21.97	74.53	21.40	75.16	23.24	73.68	23.26	74.66
6/14/95	22.65	73.85	22.70*	73.86	23.96*	72.96	24.28	73.64
9/18/95	23.73	72.77	24.06*	72.50	25.22*	71.70	24.82	73.10
12/6/95	22.20	74.30	21.70	74.86	23.60	73.32	24.26	73.66
12/14/95	22.10	74.40	21.62	74.94	23.44*	96.92	24.22	73.70
3/27/96	19.56	76.94	19.25	77.31	21.16	75.76	n/a	n/a
6/26/96	20.39	76.11	20.15	76.41	21.70	75.22	n/a	n/a
6/17/97	18.28	78.22	18.08	78.48	19.7	77.22	20.26	77.66
12/16/97	21.84	74.66	21.05	75.51	23.02	73.90	22.92	75.00
9/30/98	22.65	73.85	22.43	74.13	23.41	73.51	22.61	75.31
12/22/98	23.6	72.90	0.5" NAPL	NAPL	0.25" NAPL	NAPL	24.38	73.54
1/28/99	NM	NM	0.03' NAPL	NAPL	22.88	74.04	NM	NM
2/15/99	NM	NM	0.03' NAPL	NAPL	22.8	74.12	NM	NM
3/19/99	NM	NM	0.03' NAPL	NAPL	22.84	74.08	NM	NM
4/21/99	NM	NM	0.03' NAPL	NAPL	23.01	73.91	NM	NM
5/6/99	NM	NM	0.01' NAPL	NAPL	22.38	74.54	NM	NM
6/21/99	29.5	67.00	0.01' NAPL	NAPL	0.01' NAPL	NAPL	29.5	68.42

	MW-5 97.24		MW-6 96.15		MW-7 98.64		DW-8 98.00	
DATE	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION
3/25/93	22.05	75.19	21.10	75.05	26.60	72.04	9.50	88.50
6/11/93	21.88	75.36	20.71	75.44	25.61	73.03	22.41	75.59
4/13/94	22.74	74.50	21.62	74.53	--	--	--	--
6/9/94	24.19	73.05	23.08	73.07	27.30	71.34	25.31	72.69
6/14/95	25.02	72.22	23.90	72.25	27.78	70.86	25.40	72.60
9/18/95	25.82	71.42	24.86	71.29	27.35	71.29	25.57	72.43
12/6/95	24.77	72.47	23.73	72.42	27.60	71.04	25.18	72.82
12/14/95	24.68	72.56	23.66	72.49	27.47	71.17	25.11	72.89
3/27/96	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6/26/96	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
12/16/97	n/a	n/a	n/a	n/a	n/a	n/a	24.25	73.75
9/30/98	n/a	n/a	n/a	n/a	n/a	n/a	22.87	75.13
12/22/98	n/a	n/a	n/a	n/a	27.18	71.46	22.87	75.13
6/21/99	n/a	n/a	n/a	n/a	30.00	68.64	25.02	72.98

	MW-9 94.56		MW -Moore 98.10		0P-1 96.79		MW-10 N/A	
DATE	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION
4/13/94	--	--	--	--	21.06	75.73		
6/9/94	--	--	--	--	23.04	73.75		
6/14/95	--	--	--	--	23.94	72.85		
11/13/95	--	--	23.90	74.20	--	--		
12/6/95	**20.64	73.92	23.12	74.98	--	--		
12/14/95	19.19	75.37	--	--	--	--		
3/27/96	n/a	n/a	--	--	--	--		
6/26/96	n/a	n/a	--	--	--	--		
12/16/97	18.45	76.11	--	--	24.22	72.57		
9/30/98	21.08	73.48	--	--	n/a	n/a		
12/22/98	21.03	73.53	--	--	25.55	71.24		
6/21/99	n/a	n/a	n/a	n/a	n/a	n/a	25.42	n/s

d:\exxqrs

TABLE 2
GROUND WATER ELEVATION DATA
EXXON RETAIL LOCATION 4-3998
4701 WEST MARKET STREET
GREENSBORO, NORTH CAROLINA

DATE	AS-1 96.38		EP-1 96.31		MW-11		MW-12	
	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION
4/13/94	20.90	75.48	20.77	75.54				
6/9/94	22.65	73.73	22.56	73.75				
6/14/95	23.54	72.84	DRY	--				
6/21/99	n/a	n/a	n/a	n/a	22.36	n/s	23.62	n/s
DATE	MW-13							
	DEPTH TO GROUND WATER	GROUND WATER ELEVATION	DEPTH TO GROUND WATER	GROUND WATER ELEVATION				
36332	25.10	n/s						

Notes:
Depth to ground water measured in feet below top of casing.
Elevations are relative to an on-site reference point which has been assigned an elevation of 100.00 feet.
"--" = Gauging data not available
* = Free product film detected in monitor well (<0.01 feet thick)
** = Ground water not at static level
n/a = well not gauged
n/s = not surveyed

d:\exxqrs

TABLE 3
SVE OFF-GAS ANALYTICAL RESULTS

SVES SAMPLING

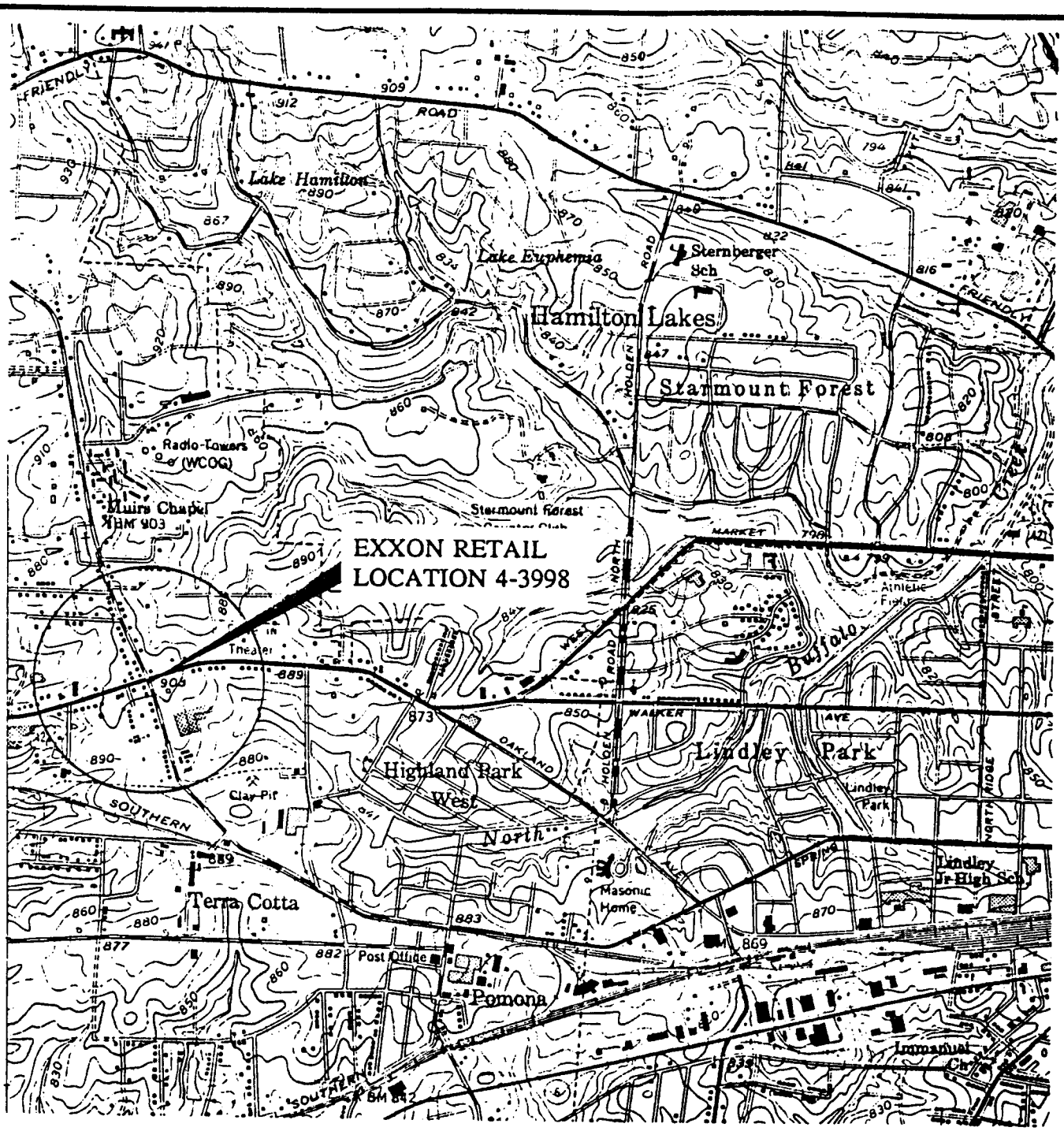
Date	Benzene (ppm)	Toluene (ppm)	Ethyl-benz (ppm)	Tot-Xylenes (ppm)	Total VOCs (TPH, ppm)	Air Velocity (fps)	Flow Rate ft^3/min	TPH Removed This period (lbs)	Equivalent NAPL Recovered This Period (gallons)
6/12/96	*2.91*	*2.50*	*<0.5*	*1.07*	*44.50*	*38.26*	*200.23*	--	--
12/16/97	--	--	--	--	*3.60*	--	--	--	--
4/6/99	*<15*	*0.52*	*0.82*	*2.15*	*8.26*	*166.00*	*868.73*	*301.10*	*48.18*
6/16/99	***5.10***	***6.60***	***0.80***	***1.90***	***59.00***	***186.00***	***973.40***	***359.46***	***57.51***

Results in micrograms per liter (ug/l). EDB = Ethylene dibromide

MTBE = Methy tert-butyl ether "--" = not analyzed

IPE = Isopropyl ether

Figures



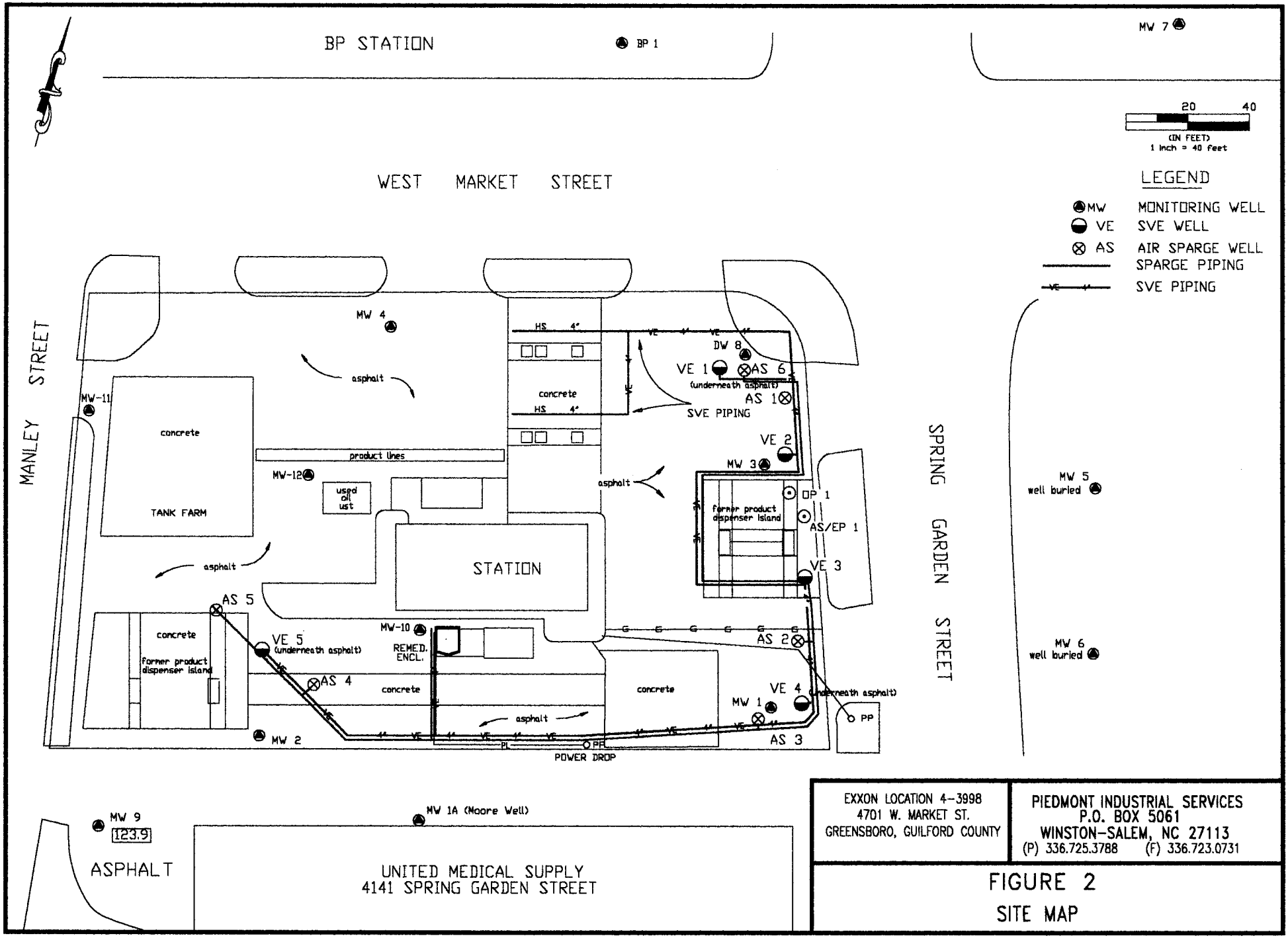
SOURCE: GREENSBORO, NC 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE, 1951 (PHOTOREVISED 1968)

SCALE IN FEET
0 2000

ERM-Southeast, Inc.
CHARLOTTE, NORTH CAROLINA
ERM

SITE LOCATION MAP
EXXON COMPANY, U.S.A.
RETAIL LOCATION 4-3998
GREENSBORO, NORTH CAROLINA

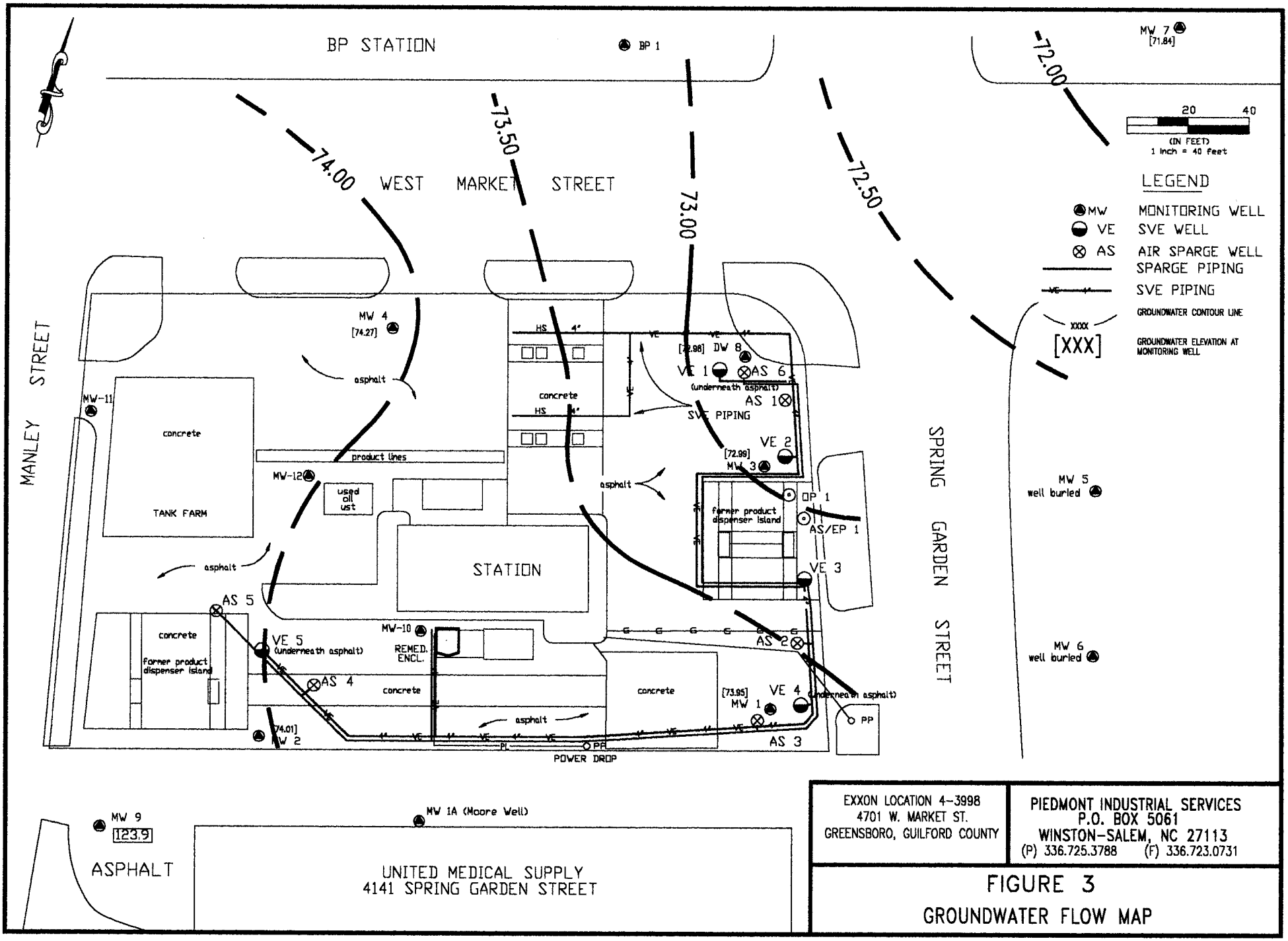
FIGURE
1



EXXON LOCATION 4-3998
4701 W. MARKET ST.
GREENSBORO, GUILFORD COUNTY

PIEDMONT INDUSTRIAL SERVICES
P.O. BOX 5061
WINSTON-SALEM, NC 27113
(P) 336.725.3788 (F) 336.723.0731

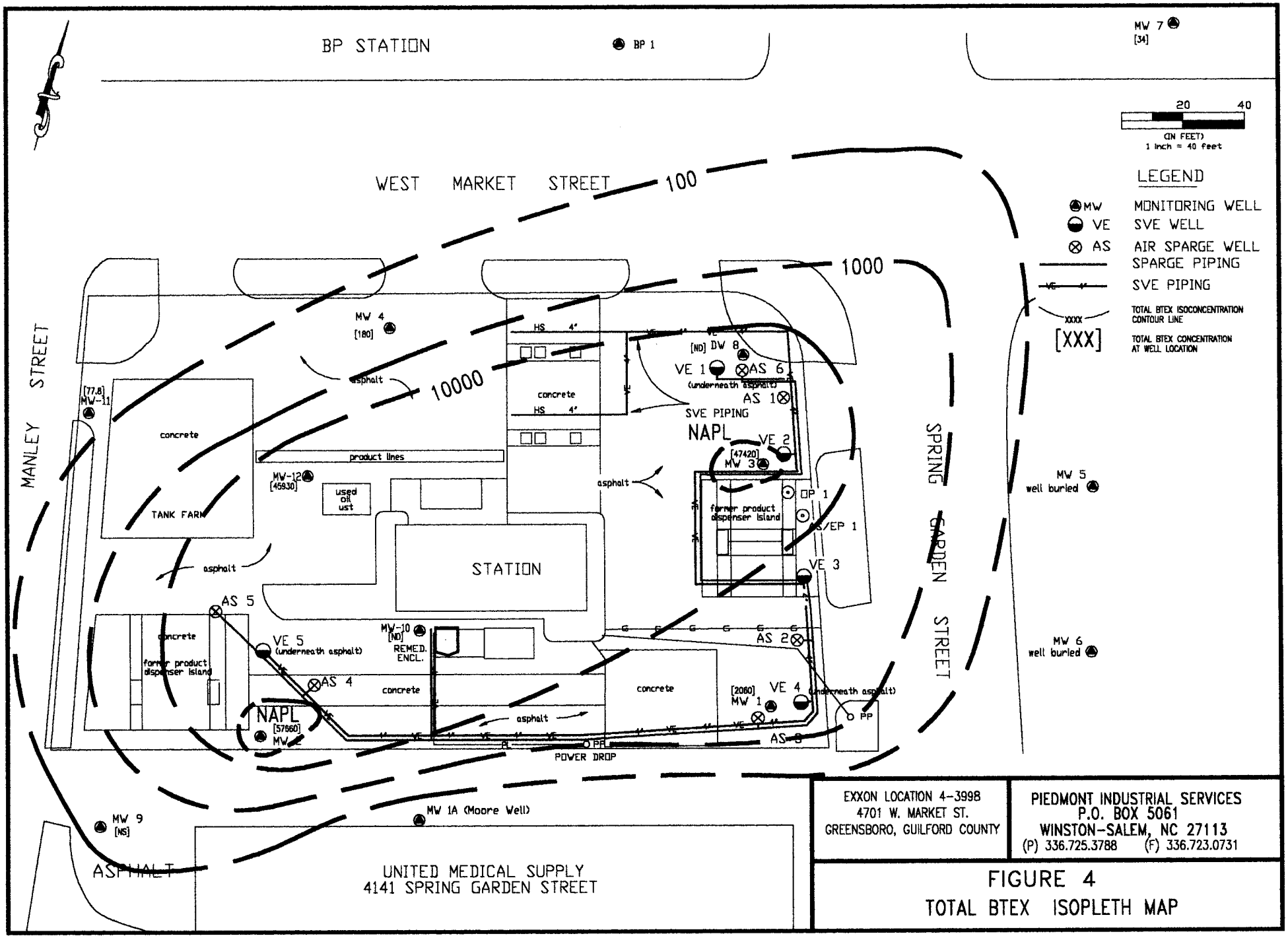
FIGURE 2
SITE MAP



EXXON LOCATION 4-3998
4701 W. MARKET ST.
GREENSBORO, GUILFORD COUNTY

PIEDMONT INDUSTRIAL SERVICES
P.O. BOX 5061
WINSTON-SALEM, NC 27113
(P) 336.725.3788 (F) 336.723.0731

FIGURE 3
GROUNDWATER FLOW MAP



EXXON LOCATION 4-3998
4701 W. MARKET ST.
GREENSBORO, GUILFORD COUNTY

PIEDMONT INDUSTRIAL SERVICES
P.O. BOX 5061
WINSTON-SALEM, NC 27113
(P) 336.725.3788 (F) 336.723.0731

FIGURE 4
TOTAL BTEX ISOPLETH MAP

Appendix A

SPECIALIZED ASSAYS ENVIRONMENTAL
2960 Foster Creighton Dr.
Nashville, Tennessee 37204

1-800-765-0980
615-726-0177
Fax: 615-726-3404

148398

EXXON COMPANY USA

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUESTED

LWR #: _____

Name: Piedmont Industrial Service #8259
Phone: 336 725-3788
Fax:

Address: P.O. Box 5061
Winston Salem NC 27113

Client Project #
Name: Exxon

Project Mgr: Tom Lawson
Exxon Env. Work Release: 19900714

Exxon Contact: Frank Moolin [circle one] EE or C&M Phone:

RAS #: 4-3998
Site Address:
State ID #:

Cooler Seal
Seal Intact

Consultant Receipt
yes no Initial

Laboratory Receipt
yes no Initial

Air Bill # 808923212887 ◆ 808923212843
2 # of coolers
Sample Temperature 4 [°C] upon receipt

Sampled by [please print] Alan Duke
Sampler Signature:
Ship Date: 6/21/99

TAT REQUESTED 24hr 48hr 72hr other _____ day Exxon Std TAT

FIELD SAMPLE ID	SAE LAB # [for lab use only]	# CONT	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCL	HNO3	H2SO4	ICE	NON-PRES	OTHER SPECIFY	Sampling: DATE	TIME	BTEX 602 ☒ 8020 ☐	MTBE ☒ 8021 ☒	EDB METHOD ____	PETROLEUM HYDROCARBONS, GC, 8015 GAS ☐ DIESEL ☐	TRPH/OIL AND GREASE 418.1 ☐ 9070 ☐ 9071 ☐ 413.1 ☐ 413.2 ☐	PURGEABLE HALOCARBONS 601 ☐ 8010 ☐ 8021 ☐	PURGEABLE AROMATICS 602 ☐ 8020 ☐ 8021 ☐	PCB's ☐	VOLATILE ORGANICS 624 ☐ 8240 TCL ☐ 8260 ☐	EXTRACTABLE ORGANICS 625 ☐ 8270 TCL ☐	PAH's 610 ☐ 8310 ☐ 8100 ☐ 8270 ☐	TCLP METALS ☐ VOA's ☐ BNA's ☐ P/H ☐ TOTAL ☐	METALS RCRA ☐ PP ☐ TAL ☐	LEAD 238.2 ☐ 200.7 ☐ 6010 ☐ 7421 ☐ 3030c ☒	CORROSIVITY ☐ REACTIVITY ☐	FP OPEN CUP ☐ CLOSED CUP ☐	MADEP VPH ☒				
MW-1	91726	9	X						X	X					6/21	1400	X	X											X			X				
MW-2	27	9	X						X	X						1230	X	X											X			X				
MW-3	28	9	X						X	X						1245	X	X											X			X				
MW-4	29	9	X						X	X						1315	X	X											X			X				
MW-7	30	9	X						X	X						1400	X	X											X			X				
DW-2	91731	9	X						X	X						1345	X	X											X			X				

SPECIAL DETECTION LIMITS:

REPORTING LIMITS:

CLIENT REMARKS:

STORAGE LOCATION:

		DATE	TIME
Relinquished by Sampler:	Alan Duke	6/21/99	
Company / Affiliation:	P.I.S.		
Received by:	M. Bailey	6/22/99	9:00
Relinquished by:			
Company / Affiliation:			
Received by:			

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91726
Sample ID: MW-1
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 14:00
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

VPH Initial Calibration Date: 6/ 4/99

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.999
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.998
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.999

Continuing Calibration Check Date: 6/26/99

Range	Level (ug/l)	%D
C5-C8 Aliphatics	300	5.7
C9-C12 Aliphatics	220	4.5
C9-C10 Aromatics	40	1.2

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91726
Sample ID: MW-1
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 14:00
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	2650	ug/l	1000	100.	10.0	6/25/99	13:27	Ciesielski	VPH-98-1	4249
VPH C9-C12 Aliphatics	1860	ug/l	1000	100.	10.0	6/25/99	13:27	Ciesielski	VPH-98-1	4249
VPH C9-C10 Aromatics	2160	ug/l	1000	100.	10.0	6/25/99	13:27	Ciesielski	VPH-98-1	4249
ORGANIC PARAMETERS										
Benzene	600.	ug/l	20.0	1.0	20	6/27/99	9:04	D.Raney	602	4008
Toluene	100.	ug/l	20.0	1.0	20	6/27/99	9:04	D.Raney	602	4008
Ethylbenzene	220.	ug/l	20.0	1.0	20	6/27/99	9:04	D.Raney	602	4008
Xylenes, total	1140	ug/l	20.0	1.0	20	6/27/99	9:04	D.Raney	602	4008
Methyl-t-butylether	ND	ug/l	20.0	1.0	20	6/27/99	9:04	D.Raney	602	4008
Isopropyl ether	400.	ug/l	20.0	1.0	20	6/27/99	9:04	D.Raney	602	4008
METALS										
Lead	0.004	mg/l	0.003	0.003	1	6/26/99	13:28	R. Kelley	3030c	959

ND = Not detected at the report limit.

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-trifluorotoluene	82.	50. - 150.
VPH Surr., FID	122.	70. - 130.
VPH surr., FID	122.	70. - 130.

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A91726
Sample ID: MW-1

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: Russell Morgan

Theodore J. Duellp, Ph.D., Lab Mgr.
Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
Johnny A. Mitchell, Technical Serv. Dir.
Russell Morgan, Technical Services

Laboratory Certification Number: 387

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

Lab Number: 99-A91727
Sample ID: MW-2
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 12:30
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

VPH Initial Calibration Date: 6/ 4/99

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.999
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.998
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.999

Continuing Calibration Check Date: 6/26/99

Range	Level (ug/l)	%D
C5-C8 Aliphatics	300	5.7
C9-C12 Aliphatics	220	4.5
C9-C10 Aromatics	40	1.2

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91727
Sample ID: MW-2
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 12:30
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	121000	ug/l	5000	100.	50.0	6/25/99	14:05	Ciesielski	VPH-98-1	4249
VPH C9-C12 Aliphatics	19400	ug/l	5000	100.	50.0	6/25/99	14:05	Ciesielski	VPH-98-1	4249
VPH C9-C10 Aromatics	18400	ug/l	5000	100.	50.0	6/25/99	14:05	Ciesielski	VPH-98-1	4249
ORGANIC PARAMETERS										
Benzene	12000	ug/l	200.	1.0	200	6/27/99	9:33	D.Raney	602	4008
Toluene	40200	ug/l	200.	1.0	200	6/27/99	9:33	D.Raney	602	4008
Ethylbenzene	1040	ug/l	20.0	1.0	20	6/27/99	9:33	D.Raney	602	4008
Xylenes, total	4420	ug/l	20.0	1.0	20	6/27/99	9:33	D.Raney	602	4008
Methyl-t-butylether	ND	ug/l	20.0	1.0	20	6/27/99	9:33	D.Raney	602	4008
Isopropyl ether	7400	ug/l	200.	1.0	200	6/27/99	9:33	D.Raney	602	4008
METALS										
Lead	ND	mg/l	0.003	0.003	1	6/26/99	13:28	R. Kelley	3030c	959

ND = Not detected at the report limit.

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-trifluorotoluene	83.	50. - 150.
VPH Surr., FID	122.	70. - 130.
VPH surr., FID	119.	70. - 130.

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A91727
Sample ID: MW-2

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: _____
Theodore J. Duzillo, Ph.D., Lab Mgr.
Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
Johnny A. Mitchell, Technical Serv. Dir.
Russell Morgan, Technical Services

Laboratory Certification Number: 387

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P. O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91728
Sample ID: MW-3
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 12:45
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

VPH Initial Calibration Date: 6/ 4/99

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.999
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.998
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.999

Continuing Calibration Check Date: 6/26/99

Range	Level (ug/l)	%D
C5-C8 Aliphatics	300	5.7
C9-C12 Aliphatics	220	4.5
C9-C10 Aromatics	40	1.2

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91728
Sample ID: MW-3
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 12:45
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	81800	ug/l	5000	100.	50.0	6/25/99	14:42	Ciesielski	VPH-98-1	4249
VPH C9-C12 Aliphatics	23200	ug/l	5000	100.	50.0	6/25/99	14:42	Ciesielski	VPH-98-1	4249
VPH C9-C10 Aromatics	24600	ug/l	5000	100.	50.0	6/25/99	14:42	Ciesielski	VPH-98-1	4249
ORGANIC PARAMETERS										
Benzene	2000	ug/l	20.0	1.0	20	6/27/99	10:02	D.Raney	602	4008
Toluene	39000	ug/l	500.	1.0	500	6/27/99	10:02	D.Raney	602	4008
Ethylbenzene	1240	ug/l	20.0	1.0	20	6/27/99	10:02	D.Raney	602	4008
Xylenes, total	5180	ug/l	20.0	1.0	20	6/27/99	10:02	D.Raney	602	4008
Methyl-t-butylether	ND	ug/l	20.0	1.0	20	6/27/99	10:02	D.Raney	602	4008
Isopropyl ether	400.	ug/l	20.0	1.0	20	6/27/99	10:02	D.Raney	602	4008
METALS										
Lead	0.259	mg/l	0.003	0.003	1	6/26/99	13:28	R. Kelley	3030c	959

ND = Not detected at the report limit.

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-trifluorotoluene	74.	50. - 150.
VPH Surr., FID	124.	70. - 130.
VPH surr., FID	121.	70. - 130.

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A91728
Sample ID: MW-3

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: Russell Morgan

Theodore J. Duello, Ph.D., Lab Mgr.
Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
Johnny A. Mitchell, Technical Serv. Dir.
Russell Morgan, Technical Services

Laboratory Certification Number: 387

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91729
Sample ID: MW-4
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 13:15
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

VPH Initial Calibration Date: 6/ 4/99

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.999
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.998
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.999

Continuing Calibration Check Date: 6/26/99

Range	Level (ug/l)	%D
C5-C8 Aliphatics	300	5.7
C9-C12 Aliphatics	220	4.5
C9-C10 Aromatics	40	1.2

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91729
Sample ID: MW-4
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 13:15
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3996
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	160.	ug/l	100.	100.	1.0	6/25/99	15:20	Ciesielski	VPH-98-1	4249
VPH C9-C12 Aliphatics	140.	ug/l	100.	100.	1.0	6/25/99	15:20	Ciesielski	VPH-98-1	4249
VPH C9-C10 Aromatics	120.	ug/l	100.	100.	1.0	6/25/99	15:20	Ciesielski	VPH-98-1	4249
ORGANIC PARAMETERS										
Benzene	36.0	ug/l	1.0	1.0	1	6/27/99	11:29	D.Ramey	602	4008
Toluene	ND	ug/l	1.0	1.0	1	6/27/99	11:29	D.Ramey	602	4008
Ethylbenzene	1.0	ug/l	1.0	1.0	1	6/27/99	11:29	D.Ramey	602	4008
Xylenes, total	143.	ug/l	1.0	1.0	1	6/27/99	11:29	D.Ramey	602	4008
Methyl-t-butylether	1.0	ug/l	1.0	1.0	1	6/27/99	11:29	D.Ramey	602	4008
Isopropyl ether	3.0	ug/l	1.0	1.0	1	6/27/99	11:29	D.Ramey	602	4008
METALS										
Lead	ND	mg/l	0.003	0.003	1	6/26/99	13:28	R. Kelley	3030c	959

ND = Not detected at the report limit.

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-trifluorotoluene	107.	50. - 150.
VPH Surr., FID	103.	70. - 130.
VPH surr., FID	94.	70. - 130.

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A91729
Sample ID: MW-4

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: Russell Morgan

Theodore J. Duello, Ph.D., Lab Mgr.
Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
Johnny A. Mitchell, Technical Serv. Dir.
Russell Morgan, Technical Services

Laboratory Certification Number: 387

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91730
Sample ID: MW-7
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 14:00
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

VPH Initial Calibration Date: 6/ 4/99

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.999
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.998
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.999

Continuing Calibration Check Date: 6/26/99

Range	Level (ug/l)	%D
C5-C8 Aliphatics	300	5.7
C9-C12 Aliphatics	220	4.5
C9-C10 Aromatics	40	1.2

COPY 1

SPECIALIZED ASSAYS, INC.

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ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P. O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91730
Sample ID: MW-7
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 14:00
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	1580	ug/l	100.	100.	1.0	6/25/99	15:58	Ciesielski	VPH-98-1	4249
VPH C9-C12 Aliphatics	ND	ug/l	100.	100.	1.0	6/25/99	15:58	Ciesielski	VPH-98-1	4249
VPH C9-C10 Aromatics	ND	ug/l	100.	100.	1.0	6/25/99	15:58	Ciesielski	VPH-98-1	4249
ORGANIC PARAMETERS										
Benzene	15.0	ug/l	1.0	1.0	1	6/27/99	11:58	D.Ramey	602	4008
Toluene	9.0	ug/l	1.0	1.0	1	6/27/99	11:58	D.Ramey	602	4008
Ethylbenzene	1.0	ug/l	1.0	1.0	1	6/27/99	11:58	D.Ramey	602	4008
Xylenes, total	9.0	ug/l	1.0	1.0	1	6/27/99	11:58	D.Ramey	602	4008
Methyl-t-butylether	16.0	ug/l	1.0	1.0	1	6/27/99	11:58	D.Ramey	602	4008
Isopropyl ether	1.0	ug/l	1.0	1.0	1	6/27/99	11:58	D.Ramey	602	4008
METALS										
Lead	0.015	mg/l	0.003	0.003	1	6/26/99	13:28	R. Kelley	3030c	959

ND = Not detected at the report limit.

Surrogate	% Recovery	Target Range
VPH Surr., PID	102.	70. - 130.
VPH surr., FID	100.	70. - 130.

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A91730
Sample ID: MW-7

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: _____
Theodore J. Duella, Ph.D., Lab Mgr.
Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
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Russell Morgan, Technical Services

Laboratory Certification Number: 387

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Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P.O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91731
Sample ID: DW-2
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 13:45
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

VPH Initial Calibration Date: 6/ 4/99

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.999
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.998
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.999

Continuing Calibration Check Date: 6/26/99

Range	Level (ug/l)	%D
C5-C8 Aliphatics	300	5.7
C9-C12 Aliphatics	220	4.5
C9-C10 Aromatics	40	1.2

COPY 1

SPECIALIZED ASSAYS, INC.

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Phone 1-615-726-0177

ANALYTICAL REPORT

PIEDMONT INDUSTRIAL SERVICES 8259
TOM LENNON
P. O. BOX 5061
WINSTON SALEM, NC 27103

Lab Number: 99-A91731
Sample ID: DW-2
Sample Type: Water
Site ID:

Date Collected: 6/21/99
Time Collected: 13:45
Date Received: 6/22/99
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Project:
Project Name: EXXON 4-3998
Matrix: Water
Received condition: Good
Sampler: ALAN DUKE

Analyte	Result	Units	Report Limit	Ruan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	ND	ug/l	100.	100.	1.0	6/25/99	16:36	Ciesielski	VPH-98-1	4249
VPH C9-C12 Aliphatics	ND	ug/l	100.	100.	1.0	6/25/99	16:36	Ciesielski	VPH-98-1	4249
VPH C9-C10 Aromatics	ND	ug/l	100.	100.	1.0	6/25/99	16:36	Ciesielski	VPH-98-1	4249
ORGANIC PARAMETERS										
Benzene	ND	ug/l	1.0	1.0	1	6/27/99	12:27	D.Raney	602	4008
Toluene	ND	ug/l	1.0	1.0	1	6/27/99	12:27	D.Raney	602	4008
Ethylbenzene	ND	ug/l	1.0	1.0	1	6/27/99	12:27	D.Raney	602	4008
Xylenes, total	ND	ug/l	1.0	1.0	1	6/27/99	12:27	D.Raney	602	4008
Methyl-t-butylether	ND	ug/l	1.0	1.0	1	6/27/99	12:27	D.Raney	602	4008
Isopropyl ether	ND	ug/l	1.0	1.0	1	6/27/99	12:27	D.Raney	602	4008
METALS										
Lead	0.011	mg/l	0.003	0.003	1	6/26/99	13:28	R. Kelley	3030c	959

ND = Not detected at the report limit.

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-trifluorotoluene	90.	50. - 150.
VPH Surr., PID	90.	70. - 130.
VPH surr., FID	93.	70. - 130.

COPY 1

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

ANALYTICAL REPORT

Laboratory Number: 99-A91731
Sample ID: DW-2

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: Russell Morgan

Theodore J. Duello, Ph.D., Lab Mgr.
Michael H. Dunn, M.S., Technical Dir.
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Laboratory Certification Number: 387

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Phone 1-615-726-0177

PROJECT QUALITY CONTROL DATA

Matrix Spike Recovery

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	A.C. Batch
Benzene	mg/l	< 0.0010	0.0230	0.0200	115	59. - 138.	4008
Benzene	mg/l	0.0230	0.0220	0.0200	-5%	59. - 138.	4008
Toluene	mg/l	< 0.0010	0.0220	0.0200	110	59. - 135.	4008
Toluene	mg/l	0.0220	0.0210	0.0200	-5%	59. - 135.	4008
Ethylbenzene	mg/l	< 0.0010	0.0200	0.0200	100	47. - 144.	4008
Ethylbenzene	mg/l	0.0200	0.0190	0.0200	-5%	47. - 144.	4008
Xylenes, total	mg/l	< 0.0010	0.0210	0.0200	105	58. - 136.	4008
Xylenes, total	mg/l	0.0210	0.0200	0.0200	-5%	58. - 136.	4008
VPH C5-C8 Aliphatics	mg/l	< 0.10	0.28	0.30	93	80. - 122.	4249
VPH C5-C8 Aliphatics	mg/l	< 0.10	0.28	0.30	93	80. - 122.	4249
VPH C9-C12 Aliphatics	mg/l	< 0.10	0.20	0.22	91	80. - 122.	4249
VPH C9-C12 Aliphatics	mg/l	< 0.10	0.22	0.22	100	80. - 122.	4249
VPH C9-C10 Aromatics	mg/l	< 0.10	< 0.10	0.40	N/A	80. - 122.	4249
VPH C9-C10 Aromatics	mg/l	< 0.10	< 0.10	0.40	N/A	80. - 122.	4249
Methyl-t-butylether	mg/l	< 0.0010	0.0190	0.0200	95	62. - 133.	4008
Methyl-t-butylether	mg/l	0.0190	0.0190	0.0200	0%	62. - 133.	4008
Isopropyl ether	mg/l	< 0.001	0.019	0.020	95	74. - 132.	4008
Isopropyl ether	mg/l	0.019	0.018	0.020	-5%	74. - 132.	4008

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	A.C. Batch
Benzene	mg/l	0.0200	0.0220	110	70 - 130	4008
Toluene	mg/l	0.0200	0.0210	105	70 - 130	4008
Ethylbenzene	mg/l	0.0200	0.0200	100	70 - 130	4008
Xylenes, total	mg/l	0.0200	0.0210	105	70 - 130	4008
Methyl-t-butylether	mg/l	0.0200	0.0180	90	70 - 130	4008
Isopropyl ether	mg/l	0.020	0.018	90	60 - 140	4008

Blank Data

Analyte	Blank Value	Units	A.C. Batch
Benzene	< 0.0010	mg/l	4008
Toluene	< 0.0010	mg/l	4008
Ethylbenzene	< 0.0010	mg/l	4008
Xylenes, total	< 0.0010	mg/l	4008
VPH C5-C8 Aliphatics	< 0.10	mg/l	4249
VPH C9-C12 Aliphatics	< 0.10	mg/l	4249
VPH C9-C10 Aromatics	< 0.10	mg/l	4249
Methyl-t-butylether	< 0.0010	mg/l	4008
Isopropyl ether	< 0.001	mg/l	4008

COPY 1

SPECIALIZED ASSAYS ENVIRONMENTAL
2960 Foster Creighton Dr.
Nashville, Tennessee 37204
1-800-765-0980
615-726-0177
Fax: 615-726-3404

8749 149716

EXXON COMPANY USA

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUESTED

LWR #:

Name: ERM-Southeast
Phone: 704-541-8345
Fax: 704-541-8416
Address: 7300 Carmel Exec Prk Suite 200, Charlotte NC 28226
Client Project # Exxon
Name: 4-3998
Project Mgr: Jerry Prosser
Exxon Env. Work Release: 19903853
Exxon Contact: J. F. Medin [circle one] EE or C&M Phone: 704-529-4263
RAS #: 4-3998
Site Address: 4701 W. Market
State ID #:
Cooler Seal / Seal Intact
Consultant Receipt: yes no Initial
Laboratory Receipt: yes no Initial
Air Bill # 812344410082
1 # of coolers
Sample Temperature 4 [°C] upon receipt
Sampled by [please print] Tom Lennon
Sampler Signature:
Ship Date: 6/30

TAT REQUESTED 24hr 48hr 72hr other ____ day
Exxon Std TAT

ANALYSIS REQUEST / OTHER

FIELD SAMPLE ID	SAE LAB # [for lab use only]	# CONT	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCL	HNO3	H2SO4	ICE	NON-PRES	OTHER SPECIFY	Sampling: DATE	TIME	BTEX 602 ☒ 8020 ☐	MTBE ☒ IPE ☒	EDB METHOD	PETROLEUM HYDROCARBONS, GC, 8015 GAS ☐ DIESEL ☐	TRPH/OIL AND GREASE 418.1 ☐ 9070 ☐ 9071 ☐ 413.1 ☐ 413.2 ☐	PURGEABLE HALOCARBONS 601 ☐ 8010 ☐ 8021 ☐	PURGEABLE AROMATICS 602 ☐ 8020 ☐ 8021 ☐	PCB's ☐	VOLATILE ORGANICS 624 ☐ 8240 TCL ☐ 8260 ☐	EXTRACTABLE ORGANICS 625 ☐ 8270 TCL ☐	PAH's 610 ☐ 8310 ☐ 8100 ☐ 8270 ☐	TCLP METALS ☐ VOA's ☐ BNA's ☐ P/H ☐ TOTAL ☐	METALS RCRA ☐ PP ☐ TAL ☐	LEAD 238.2 ☐ 200.7 ☐ 6010 ☐ 7421 ☐	CORROSIVITY ☐ REACTIVITY ☐	FP OPEN CUP ☐ CLOSED CUP ☐	6210D + MTBE + IPE
MW-10	97347	4	X						X						6/30	810	~~X~~	~~X~~	NOT.C														X
MW-11	48	4	X						X						6/30	750	X	X															
MW-12	49	4	X						X						6/30	740	X	X															
MW-13	50	4	X						X						6/30	840	X	X															
Tripblank	97351	2	X																														

SPECIAL DETECTION LIMITS:

REPORTING LIMITS:

CLIENT REMARKS: run only 6210D MTBE+IPE ON MW10

STORAGE LOCATION:

	DATE	TIME
Relinquished by Sampler: [signature] Company / Affiliation: P.I.S.	6/30	1500
Relinquished by: Company / Affiliation:		
Received by:		
Received by: [signature]	7/1/99	0900

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

SUMMARY REPORT

ERM-SOUTHEAST INC. 5919
JERRY PROSSER
7300 CARMEL EXEC, #200
CHARLOTTE, NC 28226

Site ID:
Project:
RAS #: 4-3998
Date Sampled:

Analyte	MW-10 99-A97347	MW-11 99-A97348	MW-12 99-A97349	MW-13 99-A97350	TRIP BLANK 99-A97351	
Benzene	---	70.4	7980	3680	< 1.0	ug/l
Toluene	---	< 1.0	13000	940.	< 1.0	ug/l
Ethylbenzene	---	< 1.0	3650	760.	< 1.0	ug/l
Xylenes, total	---	7.4	21300	3960	< 1.0	ug/l
Methyl-t-butylether	---	26.9	280.	< 100.	< 1.0	ug/l
Isopropyl ether	---	41.0	4710	1100	< 1.0	ug/l
Benzene	< 0.5	---	---	---	---	ug/l
Bromobenzene	< 0.5	---	---	---	---	ug/l
Bromochloromethane	< 0.5	---	---	---	---	ug/l
Bromoform	< 0.5	---	---	---	---	ug/l
Bromomethane	< 0.5	---	---	---	---	ug/l
n-Butylbenzene	< 0.5	---	---	---	---	ug/l
sec-Butylbenzene	< 0.5	---	---	---	---	ug/l
t-Butylbenzene	< 0.5	---	---	---	---	ug/l
Carbon Disulfide	< 0.5	---	---	---	---	ug/l
Carbon tetrachloride	< 0.5	---	---	---	---	ug/l
Chlorobenzene	< 0.5	---	---	---	---	ug/l
Chloroethane	< 0.5	---	---	---	---	ug/l
2-Chloroethylvinylether	< 0.5	---	---	---	---	ug/l
Chloroform	0.6	---	---	---	---	ug/l
Chloromethane	< 0.5	---	---	---	---	ug/l
2-Chlorotoluene	< 0.5	---	---	---	---	ug/l
4-Chlorotoluene	< 0.5	---	---	---	---	ug/l
1,2-Dibromo-3-chloropropa	<e0.5	---	---	---	---	ug/l
Dibromochloromethane	< 0.5	---	---	---	---	ug/l
1,2-Dibromoethane	< 0.5	---	---	---	---	ug/l
Dibromomethane	< 0.5	---	---	---	---	ug/l
1,2-Dichlorobenzene	< 0.5	---	---	---	---	ug/l
1,3-Dichlorobenzene	< 0.5	---	---	---	---	ug/l
1,4-Dichlorobenzene	< 0.5	---	---	---	---	ug/l
Dichlorodifluoromethane	< 0.5	---	---	---	---	ug/l
1,1-Dichloroethane	4.9	---	---	---	---	ug/l
1,2-Dichloroethane	< 0.5	---	---	---	---	ug/l
1,1-Dichloroethene	1.8	---	---	---	---	ug/l
cis-1,2-Dichloroethene	< 0.5	---	---	---	---	ug/l
trans-1,2-Dichloroethene	< 0.5	---	---	---	---	ug/l
1,2-Dichloropropane	< 0.5	---	---	---	---	ug/l
1,3-Dichloropropane	< 0.5	---	---	---	---	ug/l
2,2-Dichloropropane	< 0.5	---	---	---	---	ug/l
1,1-Dichloropropene	< 0.5	---	---	---	---	ug/l
cis-1,3-Dichloropropene	< 0.5	---	---	---	---	ug/l
trans-1,3-Dichloropropene	< 0.5	---	---	---	---	ug/l

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P.O. Box 40566
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SUMMARY REPORT

ERM-SOUTHEAST INC. 5919
JERRY PROSSER
7300 CARMEL EXEC, #200
CHARLOTTE, NC 28226

Site ID:
Project:
RAS #: 4-3998
Date Sampled:

Analyte	MW-10 99-A97347	MW-11 99-A97348	MW-12 99-A97349	MW-13 99-A97350	TRIP BLANK 99-A97351	
Ethylbenzene	< 0.5	---	---	---	---	ug/l
Hexachlorobutadiene	< 0.5	---	---	---	---	ug/l
Isopropylbenzene	< 0.5	---	---	---	---	ug/l
4-Isopropyltoluene	< 0.5	---	---	---	---	ug/l
Methylene chloride	< 0.5	---	---	---	---	ug/l
Naphthalene	< 0.5	---	---	---	---	ug/l
n-Propylbenzene	< 0.5	---	---	---	---	ug/l
Styrene	< 0.5	---	---	---	---	ug/l
1,1,1,2-Tetrachloroethane	< 0.5	---	---	---	---	ug/l
1,1,2,2-Tetrachloroethane	< 0.5	---	---	---	---	ug/l
Tetrachloroethene	< 0.5	---	---	---	---	ug/l
Toluene	< 0.5	---	---	---	---	ug/l
1,2,3-Trichlorobenzene	< 0.5	---	---	---	---	ug/l
1,2,4-Trichlorobenzene	< 0.5	---	---	---	---	ug/l
1,1,1-Trichloroethane	< 0.5	---	---	---	---	ug/l
1,1,2-Trichloroethane	< 0.5	---	---	---	---	ug/l
Trichloroethene	< 0.5	---	---	---	---	ug/l
1,2,3-Trichloropropane	< 0.5	---	---	---	---	ug/l
1,2,4-Trimethylbenzene	< 0.5	---	---	---	---	ug/l
1,3,5-Trimethylbenzene	< 0.5	---	---	---	---	ug/l
Vinyl chloride	< 0.5	---	---	---	---	ug/l
Xylenes	< 0.5	---	---	---	---	ug/l
Bromodichloromethane	< 0.5	---	---	---	---	ug/l
Trichlorofluoromethane	< 0.5	---	---	---	---	ug/l
Methyl-t-butyl ether	< 0.5	---	---	---	---	ug/l
Isopropylether	< 0.5	---	---	---	---	ug/l

Appendix B

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, NC 27611-7687
PHONE (919)733-3221

SB1/MW10

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY	
Quad. No.	Serial No.
Lat.	Long. / Pc
Minor Basin	
Basin Code	
Header Ent.	GW-1 Ent.

DRILLING CONTRACTOR: American Environmental Drilling

DRILLER REGISTRATION NUMBER: 1436

STATE WELL CONSTRUCTION PERMIT NUMBER:

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Greensboro
   4701 W. Market St. Exxon 4-3998
   (Road, Community, or Subdivision and Lot No.)
   County: Guilford
2. OWNER: Exxon Company USA
   ADDRESS: P.O. Box 30451 (Street or Route No.)
   Charlotte NC 28230-0451
   City or Town / State / Zip Code
3. DATE DRILLED: 4/28/99 USE OF WELL: Monitor G.W.
4. TOTAL DEPTH: 38' CUTTINGS COLLECTED: ☐ Yes ☒ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
6. STATIC WATER LEVEL: 25.42 FT. ☐ above ☒ below TOP OF CASING.
   TOP OF CASING IS _____ FT. ABOVE LAND SURFACE.
7. YIELD (gpm): NA METHOD OF TEST: NA
8. WATER ZONES (depth):
9. CHLORINATION: Type: NA Amount:
10. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0	10	1"	Sch 40	PVC

11. GROUT:

	Depth From	Depth To	Material	Method
	8	6	Bentonite	

12. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	10	30	1"	.001	PVC

13. GRAVEL PACK:

	Depth From	Depth To	Size	Material
	30	8	#2	well sand
	6	2	#2	well sand

14. REMARKS:

Depth From	Depth To	DRILLING LOG Formation Description
	10'	Tan, orange silty clay, 4.95 ppm
	15'	Red-orange, silty clay, no odor 4.49 ppm
	20'	Red-orange, silty clay, no odor, 5.17 ppm
	20-38	As above - no soil samples.

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT: [signature] DATE: 7/28/99

GW-1 REVISED 2/90

Submit original to Division of Environmental Management and copy to well owner.

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, NC 27611-7687
PHONE (919)733-3221

SB2/MW11

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY	
Quad. No.	Serial No.
Lat.	Long. / Pc
Minor Basin	
Basin Code	
Header Ent.	GW-1 Ent.

DRILLING CONTRACTOR: American Environmental Drilling

DRILLER REGISTRATION NUMBER: 1436

STATE WELL CONSTRUCTION PERMIT NUMBER:

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Greensboro
4701 W. Market St. Exxon 4-3998
(Road, Community, or Subdivision and Lot No.)

County: Guilford

2. OWNER: Exxon Company USA
ADDRESS: P.O. Box 30451 (Street or Route No.)
Charlotte NC 28230-0451
City or Town / State / Zip Code

3. DATE DRILLED: 6/29 USE OF WELL: monitoring
4. TOTAL DEPTH: 40 CUTTINGS COLLECTED ☐ Yes ☐ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
6. STATIC WATER LEVEL: 22.36 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.
7. YIELD (gpm): NA METHOD OF TEST: NA
8. WATER ZONES (depth): NA
9. CHLORINATION: Type: NA Amount:

10. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0	15	1	Sch 40	PVC

11. GROUT:

	Depth From	Depth To	Material	Method
	13	11	Bentonite	

12. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	25	40	1 in.	.021 in.	PVC
			in.	in.	
			in.	in.	

13. GRAVEL PACK:

	Depth From	Depth To	Size	Material
	13	40	#2	well sand
	0	11	#2	well sand

14. REMARKS:

Depth From	Depth To	DRILLING LOG Formation Description
	5	Orange, silty clay - 1.9 ppm
	10	Orange-tan, silty-clay, dry, no odor, 14.69 ppm
	15	Orange-tan, silty-clay saprolite, trace relic fractures, no odor 15.92 ppm
	20	A/A 6.89 ppm, moist
	25-40	Red orange, silty clay saprolite relic fractures, no odor, wet 5.28 ppm

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT: [signature] DATE: 7/20/99

GW-1 REVISED 2-90

Submit original to Division of Environmental Management and copy to well owner.

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, NC 27611-7687
PHONE (919)733-3221

SB 3/MW12

FOR OFFICE USE ONLY	
Quad. No.	Serial No.
Lat.	Long. / Pc
Minor Basin	
Basin Code	
Header Ent.	GW-1 Ent.

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR American Environmental Drilling

DRILLER REGISTRATION NUMBER 1436

STATE WELL CONSTRUCTION PERMIT NUMBER:

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Greensboro

County: Guilford

4701 W. Market St. Exxon 4-3998
(Road, Community, or Subdivision and Lot No.)

2. OWNER Exxon Company U.S.A

ADDRESS P.O. Box 30451
(Street or Route No.)

Charlotte NC 28230-0451
City or Town State Zip Code

3. DATE DRILLED 6/29 USE OF WELL

4. TOTAL DEPTH 34 CUTTINGS COLLECTED ☐ Yes ☒ No

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL: 23.62 FT. ☐ above ☒ below TOP OF CASING,

TOP OF CASING IS _____ FT. ABOVE LAND SURFACE.

7. YIELD (gpm): NA METHOD OF TEST NA

8. WATER ZONES (depth): NA

9. CHLORINATION: Type NA Amount

10. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0	14	1	Sch 40	PVC

11. GROUT:

	Depth From	Depth To	Material	Method
	10	12	Bentonite	

12. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	14	34	1	.001	PVC

13. GRAVEL PACK:

	Depth From	Depth To	Size	Material
	12	34	#2	well sand
	10	0	#2	well sand

14. REMARKS:

DRILLING LOG

Depth From	Depth To	Formation Description
	10	Red, silty clay, no odor, dry, 12.57 ppm
	15	Red, silty clay saprolite, dry, no odor, 24.66 ppm
	20	Red-orange, silty clay saprolite, moist, no odor, 138 ppm
	25	As above
	29-40	As above, no soil samples collected.

If additional space is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points)

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT 7/28/95 DATE

Submit original to Division of Environmental Management and copy to well owner.

GW-1 REVISED 2-90

ORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, NC 27611-7687
PHONE (919)733-3221

SB4 | MW13

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY

Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

DRILLING CONTRACTOR American Environmental Drilling
DRILLER REGISTRATION NUMBER 1436
STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Greensboro
County: Guilford
4701 W. Market St. Exxon 4-3998
(Road, Community, or Subdivision and Lot No.)

2. OWNER Exxon Company USA
ADDRESS P. O. Box 30451 (Street or Route No.)
Charlotte (City or Town) NC (State) 28230-0451 (Zip Code)

3. DATE DRILLED 4/29/99 USE OF WELL monitor G.w.
4. TOTAL DEPTH 29.5 CUTTINGS COLLECTED ☐ Yes ☒ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
6. STATIC WATER LEVEL: 25.1 FT. ☐ above ☒ below TOP OF CASING,
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.
7. YIELD (gpm): NA METHOD OF TEST _____
8. WATER ZONES (depth): NA
9. CHLORINATION: Type NA Amount _____

10. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0	9.5	1	Sch 40	PVC

11. GROUT:

	Depth From	Depth To	Material	Method
	7	5	Bentonite	

12. SCREEN:

	Depth From	Depth To	Diameter	Slot Size	Material
	9.5	29.5	1 in.	.001 in.	PVC
			in.	in.	
			in.	in.	

13. GRAVEL PACK:

	Depth From	Depth To	Size	Material
	0	5	#2	well sand
	7	29.5	#2	well sand.

14. REMARKS: _____

DRILLING LOG

Depth From	Depth To	Formation Description
	5	red-orange, silty clay, no odor, dry, 4.92 ppm
	10	Red-orange, silty clay, no odor, dry, 3.87 ppm
	15	Red-orange, silty clay saprolite no odor, relic fractures, moist, 7.21 ppm
	20	Red-orange, silty clay saprolite, moist, slight odor, 3.79 ppm
	25-30	As Above - no soil sample

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)

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SIGNATURE OF CONTRACTOR OR AGENT _____ DATE 7/20/99

Submit original to Division of Environmental Management and copy to well owner.

GW-1 REVISED 2/90