1R - 269

ANNUAL MONITORING REPORT

4/05/2005

Tipperary CORPORATION

633 Seventeenth Street
Suite 1550
Denver, Colorado 80202-3622

April 5, 2005

VIA OVERNIGHT MAIL

Mr. Roger C. Anderson
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

IRP 263
264
260
269
261
262
267
268

RE: Progress Report for Year 2004
Bagley Field
Pit Closure Project
Lea County, NM

Dear Mr. Anderson:

Please find enclosed the 2004 results from our monitor wells in the subject project area. This report summarizes the results from water samples taken on October 1, 2004. These results represent seven years of monitoring. On April 19, 2004, the NMOCD modified the monitoring program for the project to allow sampling on an annual basis. In general, we are continuing to observe decreasing levels of BTEX in the monitor wells.

The Executive Summary section contains a general discussion of the project to date and a Location Map of the pit reclamation projects.

A summary of the investigation work and results to date for each pit closure site is included. The following data is presented for each site:

- Well site plat with monitor well locations.
- Ground water potentiometric map for the 2004 sampling with the direction and magnitude of the hydraulic gradient.
- Table of ground water recovery volumes (where applicable).
- Well bailing log for each well.
- Summary table and chart of water quality results for each well.
- Geologic/lithologic log and well construction diagram for each new well.

We will continue to sample and prepare a progress report for your office on an annual basis. If you have any questions, please call me at (303) 293-9379.

Very truly yours,

Tipperary Oil & Gas Corporation

Larry G. Sugano
Vice President - Engineering

Enclosures

cc: NMOCD Hobbs Office
Whole Earth Environmental

Tipperary Oil & Gas Corporation
Bagley Field
2004 Annual Report

Executive Summary

Site History

In response to a request by a 1996 request by the NMOCD, Tipperary Corporation began a program to close a series of ten surface impoundments located with their Bagley Field west of Tatum, New Mexico. The closure program consisted of excavating the impoundments and encapsulating the contaminant plume within high-density polyethylene. As part of the closure program, a groundwater investigation was conducted at each site. The investigation concluded that due to the relatively shallow depth to the surface of the aquifer, each site impacted the Ogallala Aquifer to varying degrees.

The remediation plan included passive monitoring of those sites showing no free product on the water table and active fluid removal by means of the erection of windmills at three sites found to have more significant concentrations. A series of water monitoring wells were placed down gradient of each location. Each such well has been sampled and tested on a quarterly basis with the results of each laboratory analyses provided to the NMOCD on an annual basis. To date, three sites have been remediated to final closure. On April 19, 2004, the NMOCD modified the monitoring program to allow sampling on an annual basis.

Procedures

Whole Earth employs a Grundfos electric submersible pump and individual bailers dedicated to each well. The well fluids are pumped into a trailer mounted storage tank and sent to disposal at the Burro Pipeline Station No. 1.

The submersible pump is thoroughly decontaminated between each well by spraying the exterior with detergent followed by a clear water rinse; the inside of the pump and hose assembly is cleaned by pumping a minimum volume of five gallons of Alquinox through the system between each well.

Results and Conclusions

Generally, the trend for each pit site is to show lower concentrations of BTEX within each recovery and monitor well bore. During this sampling round we noticed that those bores containing free products had increased volumes of hydrocarbons over all previous sampling rounds. We believe that this is due to the reduction of frequency in bailing the wells (once versus four times per year). In future bailings we will continue to pump sufficient volumes from each bore containing free product until such time as the oil is no longer visible within the discharge stream.

A map showing the project area is attached. The following sections present the investigation work results to date for each of the sites.

WHOLE EARTH ENVIROMENTAL, INC.

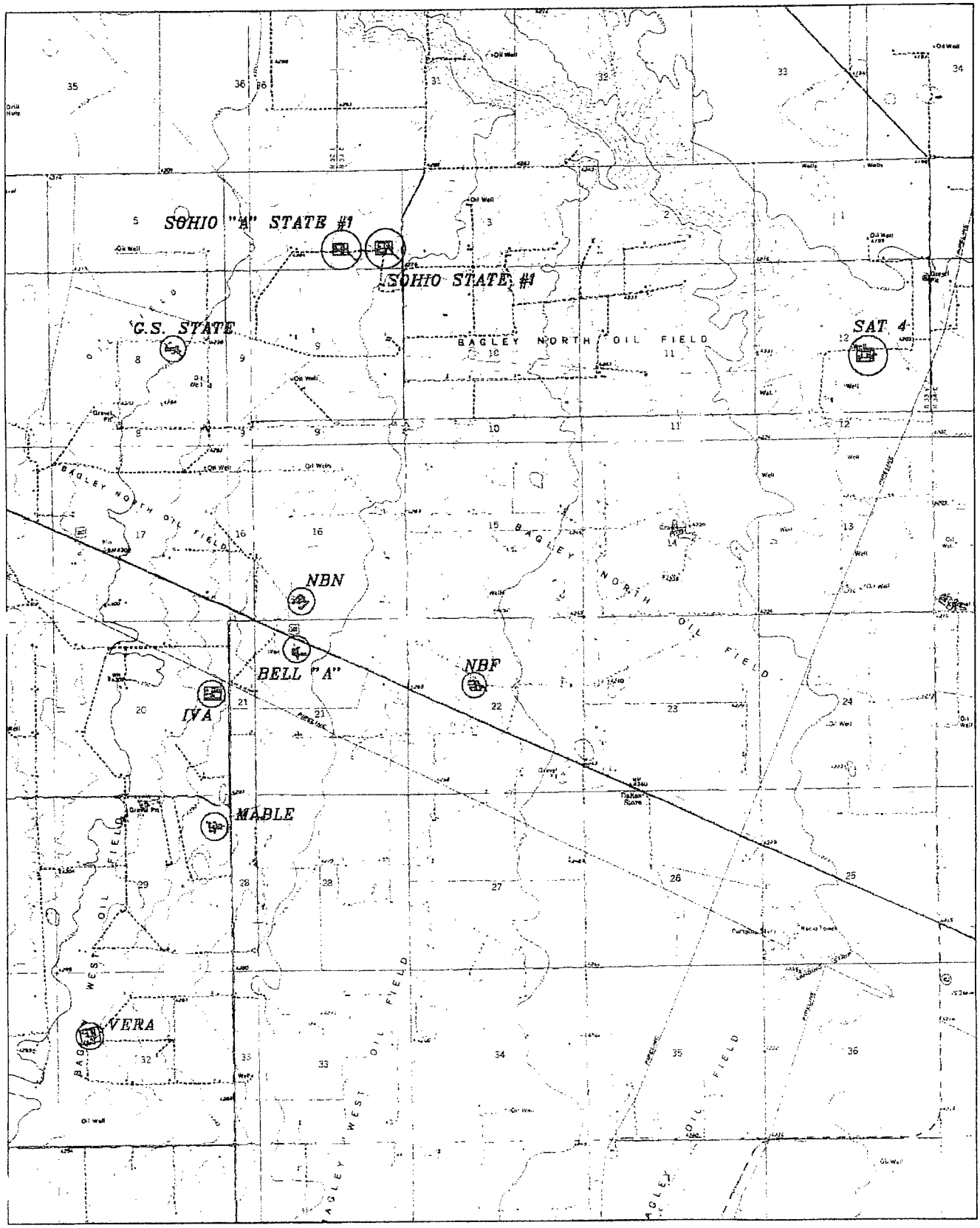


EXHIBIT 9

BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO	W.O. Number: 9352	Drawn By: K. GOAD
	Date: 10-21-99	Disk: KJG #122 – WE9352.DWG

Tipperary Oil & Gas Corporation
Bagley Field
2004 Annual Report

State NBF #1 1RP269
Section 22F-T11S-R33E

The NBF site consists of six monitor wells. The well nearest the pit, (MW 1), continues to show fluctuating BTEX concentrations over the monitoring period – two quarters with acceptable results and two over state standards.

Monitor Well No. 2 is now consistently showing 3-4" of free product within the bailer along with a black sulfide.

Monitor Well No. 3 has declined in concentrations to its lowest value ever.

Monitor Wells 4 and 5 continue to show acceptable results and fully delineate the southern edge of the plume.

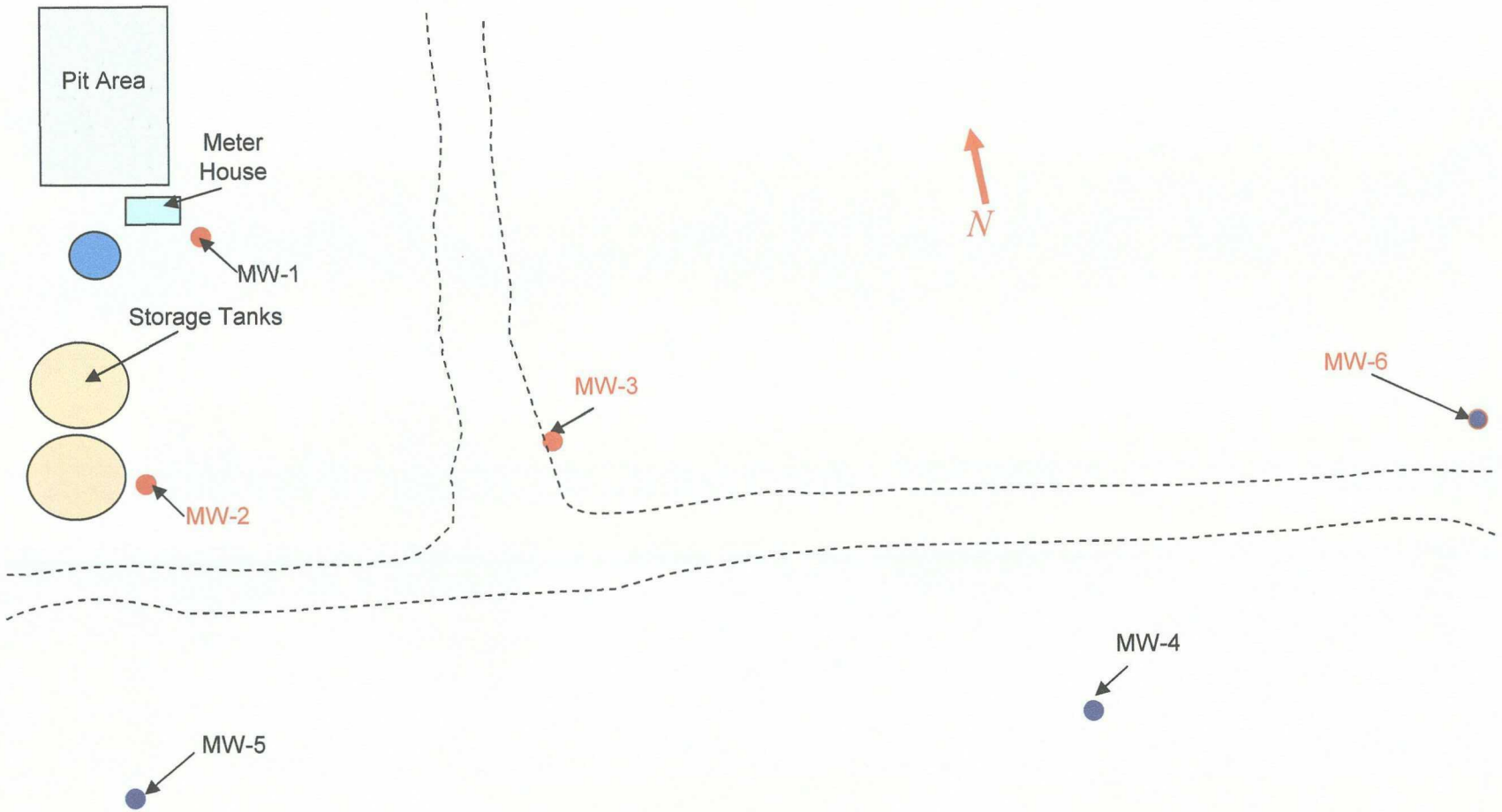
Monitor Well No. 6, drilled in June, 2003 shows negligible BTEX concentrations and effectively delineates the western edge of the plume.

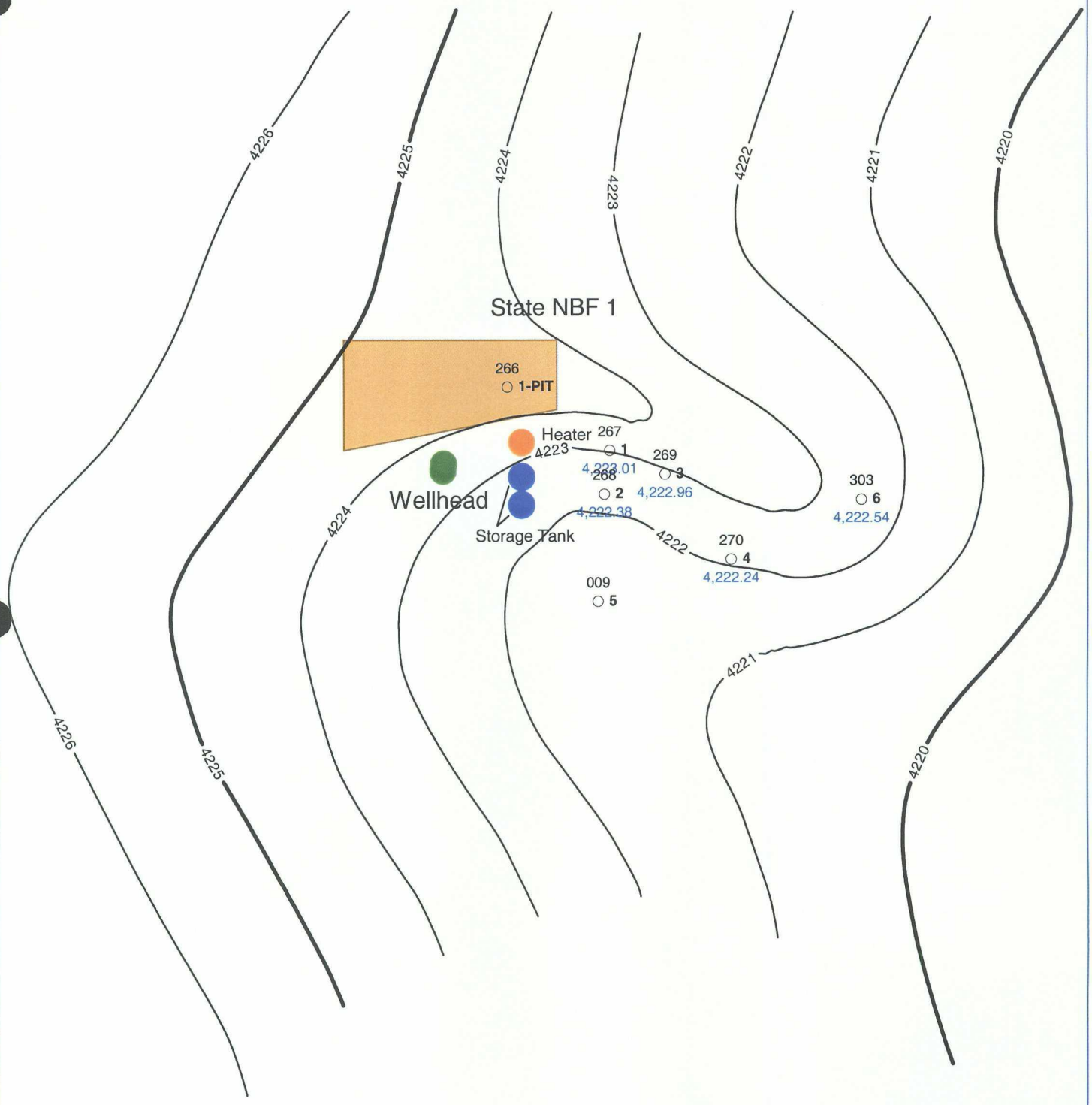
We will continue to monitor the results on an annual basis.

Please find the following data:

- Well-site plat with monitor well locations.
- Ground water potentiometric map for 2004 sampling with direction and magnitude of the hydraulic gradient.
- Well bailing log for each well.
- Summary table and chart of ground water quality results for each well.
- Copy of the recent laboratory sampling results with the QA/QC data.

Tipperary Corporation
State NBF #1
Monitor Well Locations





Tipperary Oil & Gas Corp.

North Bagley Field Pit Closure

State NBF 1 - 4thQtr 2004 Water Level

Grad= 25 ft./mi. @ 110* Az.

0 61 122

METERS

PETRA 4/4/2005 9:33:52 PM

NBF

Monitor Well Bailing Log

NBF MW #1

Lat:	33^0 21.191'
Long.	103^0 26.218
Surf. Elev.	Ft.

As Drilled		As Measured					
Date:	8/29/1997	Date:	1/23/04	9/29/04			
Top of Water	48 Ft.	Top of Water	36.40	36.50			Ft.
Bottom of Bore	60 Ft.	Bottom of Bore	55.50	55.60			Ft.
		Bore Volumn	3.08	3.08			Gal.
		LPNL Top	NA	NA			Ft.
		LPNL Bottom	NA	NA			Ft.
		DPNL Top	NA	NA			Ft.
		DPNL Bottom	NA	NA			Ft.
		Min. Bailing Vol.	9.24	9.24			Gal.
		Actual Bailing Vol.	15.00	10.00			Gal.

Comments

NBF

Monitor Well Bailing Log

NBF MW #2

Lat:	**33^0 21.179**
Long.	**103^0 36.222**
Surf. Elev.	**Ft.**

As Drilled			As Measured					
Date:	**10/1/1997**		**Date:**	**1/23/04**	**9/29/04**			
Top of Water	**47**	**Ft.**	**Top of Water**	**37.40**	**36.50**			**Ft.**
Bottom of Bore	**58**	**Ft.**	**Bottom of Bore**	**54.00**	**54.00**			**Ft.**
			Bore Volumn	**2.68**	**2.82**			**Gal.**
			LPNL Top	**54.00**	**54.00**			**Ft.**
			LPNL Bottom	**58.50**	**58.50**			**Ft.**
			DPNL Top	**NA**	**NA**			**Ft.**
			DPNL Bottom	**NA**	**NA**			**Ft.**
			Min. Bailing Vol.	**8.03**	**8.47**			**Gal.**
			Actual Bailing Vol.	**20.00**	**10.00**			**Gal.**

Comments

1-23 Free Product in Bore.

NBF

Monitor Well Bailing Log

NBF MW #3

Lat:	33^0 21.189
Long.	103^0 36.205
Surf. Elev.	Ft.

As Drilled		As Measured					
Date:	10/1/1997	Date:	1/23/04	9/29/04			
Top of Water	47.08 Ft.	Top of Water	36.20	36.50			Ft.
Bottom of Bore	58 Ft.	Bottom of Bore	54.20	54.30			Ft.
		Bore Volumn	2.90	2.87			Gal.
		LPNL Top	54.00	54.00			Ft.
		LPNL Bottom	58.50	58.50			Ft.
		DPNL Top	NA	NA			Ft.
		DPNL Bottom	NA	NA			Ft.
		Min. Bailing Vol.	8.71	8.61			Gal.
		Actual Bailing Vol.	15.00	10.00			Gal.

Comments

NBF

Monitor Well Bailing Log

NBF MW #4

Lat:	33^0 21.166
Long.	103^0 36.184'
Surf. Elev.	Ft.

As Drilled		As Measured					
Date:	3/15/1998	Date:	1/23/04	9/29/04			
Top of Water	Ft.	Top of Water	35.80	35.50			Ft.
Bottom of Bore	50 Ft.	Bottom of Bore	51.50	48.80			Ft.
		Bore Volumn	2.53	2.15			Gal.
		LPNL Top	54.00	54.00			Ft.
		LPNL Bottom	58.50	58.50			Ft.
		DPNL Top	NA	NA			Ft.
		DPNL Bottom	NA	NA			Ft.
		Min. Bailing Vol.	7.60	6.44			Gal.
		Actual Bailing Vol.	15.00	10.00			Gal.

Comments

NBF

Monitor Well Bailing Log

NBF MW #5

Lat:	33^0 21.155'
Long.	103^0 36.220'
Surf. Elev.	Ft.

As Drilled		As Measured					
Date:	6/4/2002	Date:	1/23/04	9/29/04			
Top of Water	39 Ft.	Top of Water	35.30	35.90			Ft.
Bottom of Bore	55 Ft.	Bottom of Bore	48.40	52.10			Ft.
		Bore Volumn	2.11	2.61			Gal.
		LPNL Top	54.00	54.00			Ft.
		LPNL Bottom	58.50	58.50			Ft.
		DPNL Top	NA	NA			Ft.
		DPNL Bottom	NA	NA			Ft.
		Min. Bailing Vol.	6.34	7.84			Gal.
		Actual Bailing Vol.	20.00	10.00			Gal.

Comments

NBF

Monitor Well Bailing Log

NBF MW #6

Lat:	33^0 21.175'
Long.	103^0 36.153'
Surf. Elev.	Ft.

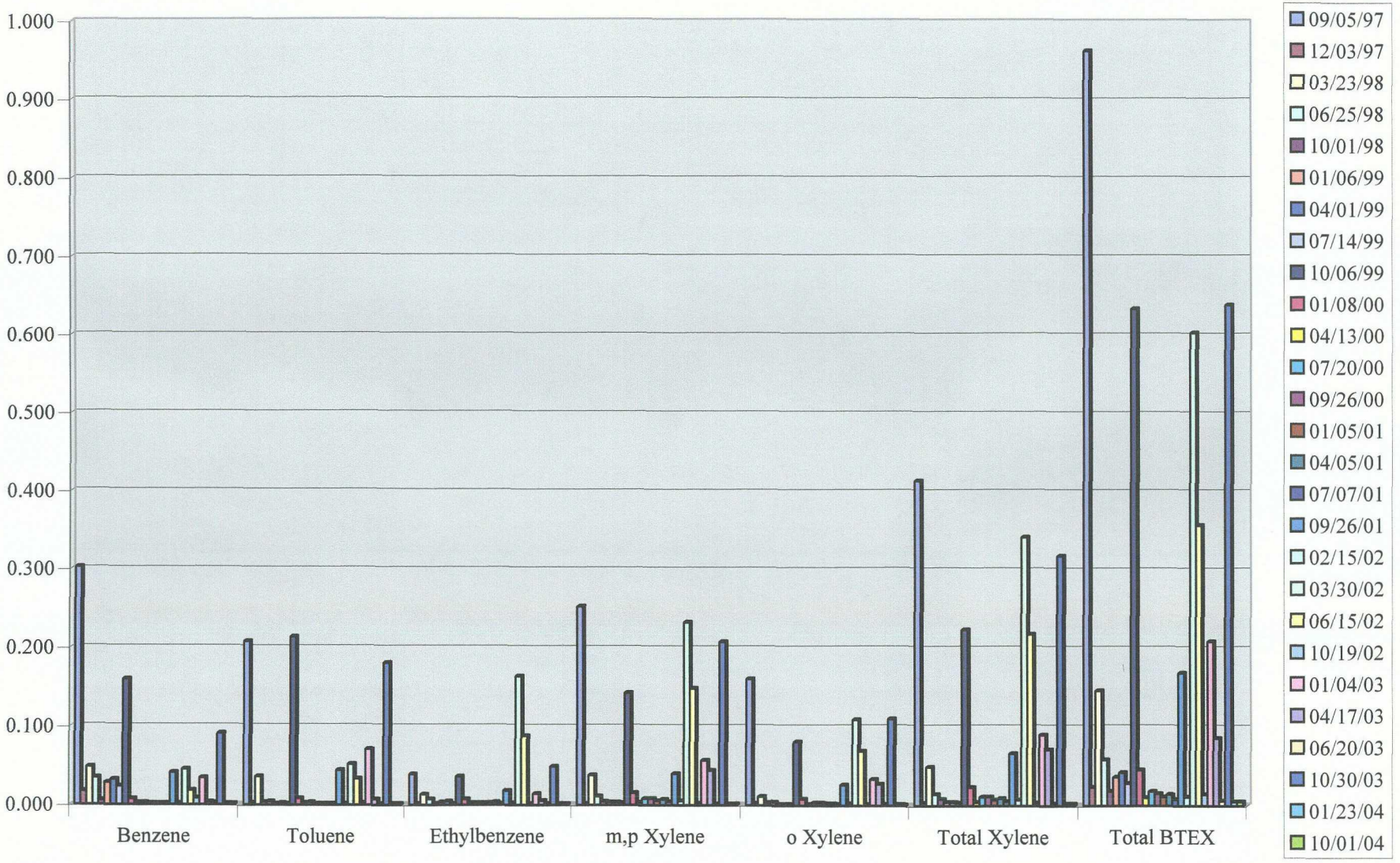
As Drilled		As Measured					
Date:	6/16/2003	Date:	1/23/04	9/29/04			
Top of Water	35.91 Ft.	Top of Water	35.80	35.90			Ft.
Bottom of Bore	55 Ft.	Bottom of Bore	50.30	50.10			Ft.
		Bore Volumn	2.34	2.29			Gal.
		LPNL Top	54.00	54.00			Ft.
		LPNL Bottom	58.50	58.50			Ft.
		DPNL Top	NA	NA			Ft.
		DPNL Bottom	NA	NA			Ft.
		Min. Bailing Vol.	7.02	6.87			Gal.
		Actual Bailing Vol.	15.00	10.00			Gal.

Comments

Monitor Well # 1
State NBF # 1

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12486	09/05/97	0.302	0.208	0.039	0.253	0.161	0.414	0.963
13175	12/03/97	0.017	0.002	0.001	0.001	0.002	0.003	0.023
14064	03/23/98	0.048	0.036	0.013	0.038	0.011	0.049	0.146
14663	06/25/98	0.034	0.003	0.007	0.011	0.003	0.014	0.058
15595	10/01/98	0.005	0.004	0.001	0.004	0.004	0.008	0.018
16602	01/06/99	0.028	0.001	0.003	0.003	0.001	0.004	0.036
17431	04/01/99	0.032	0.002	0.004	0.003	0.001	0.004	0.042
18594	07/14/99	0.023	0.001	0.001	0.002	0.001	0.003	0.028
20600	10/06/99	0.160	0.214	0.036	0.143	0.081	0.224	0.634
22761	01/08/00	0.007	0.008	0.007	0.015	0.008	0.023	0.045
25171	04/13/00	0.002	0.002	0.002	0.003	0.001	0.004	0.010
28463	07/20/00	0.002	0.003	0.002	0.008	0.003	0.011	0.018
31490	09/26/00	0.001	0.001	0.002	0.008	0.003	0.011	0.015
36147	01/05/01	0.001	0.001	0.002	0.005	0.002	0.007	0.011
38927	04/05/01	0.001	0.001	0.003	0.007	0.002	0.009	0.014
0101098-11	07/07/01	0.001	0.001	0.001	0.004	0.001	0.005	0.008
0101642-11	09/26/01	0.041	0.044	0.018	0.040	0.026	0.066	0.169
0202619-11	02/15/02	0.001	0.001	0.002	0.005	0.002	0.007	0.011
0203001-11	03/30/02	0.045	0.052	0.164	0.233	0.109	0.342	0.603
0203602-10	06/15/02	0.018	0.033	0.088	0.149	0.069	0.218	0.357
0204815-08	10/19/02	0.008	0.002	0.001	0.002	0.001	0.003	0.014
0205349-12	01/04/03	0.034	0.071	0.014	0.057	0.033	0.090	0.209
0306249-13	04/17/03	0.003	0.007	0.005	0.044	0.027	0.071	0.086
0306733-29	06/20/03	0.002	0.001	0.001	0.001	0.001	0.002	0.006
0307790-27	10/30/03	0.091	0.181	0.049	0.208	0.110	0.318	0.639
4A26008-01	01/23/04	0.001	0.001	0.001	0.001	0.001	0.002	0.005
4J04010-01	10/01/04	0.001	0.001	0.001	0.001	0.001	0.002	0.005

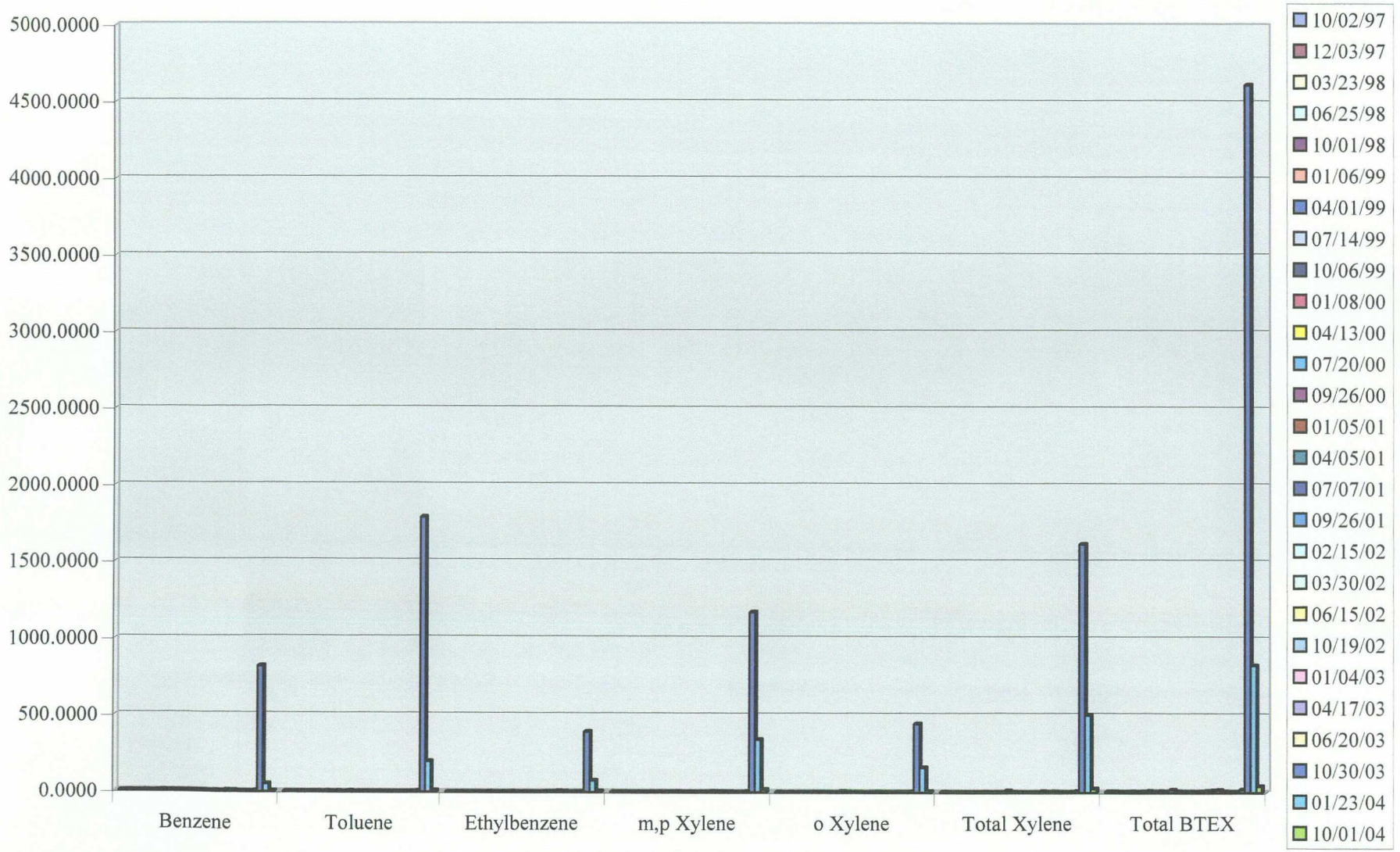
NBF MW #1


1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000
Benzene
Toluene
Ethylbenzene
m,p Xylene
o Xylene
Total Xylene
Total BTEX
09/05/97
12/03/97
03/23/98
06/25/98
10/01/98
01/06/99
04/01/99
07/14/99
10/06/99
01/08/00
04/13/00
07/20/00
09/26/00
01/05/01
04/05/01
07/07/01
09/26/01
02/15/02
03/30/02
06/15/02
10/19/02
01/04/03
04/17/03
06/20/03
10/30/03
01/23/04
10/01/04

Monitor Well # 2
State NBF # 1
Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12729	10/02/97	1.9500	1.823	0.381	1.506	0.772	2.278	6.432
13133	12/03/97	2.2890	1.176	0.338	1.285	0.411	1.696	5.499
14049	03/23/98	1.4700	1.230	0.364	1.058	0.466	1.524	4.588
14669	06/25/98	1.4150	1.165	0.270	0.927	0.412	1.339	4.189
15600	10/01/98	3.0270	1.630	0.225	0.811	0.393	1.204	6.086
16608	01/06/99	1.6300	1.490	0.182	0.728	0.350	1.078	4.380
17435	04/01/99	3.1100	1.980	0.214	0.767	0.435	1.202	6.506
18602	07/14/99	3.9700	3.070	0.436	1.610	0.886	2.496	9.972
20612	10/06/99	2.8500	1.850	0.303	1.050	0.612	1.662	6.665
22759	01/08/00	3.2500	2.550	0.335	1.240	0.654	1.894	8.029
25140	04/13/00	2.4000	1.780	0.254	1.080	0.540	1.620	6.054
28445	07/20/00	2.6300	4.320	0.655	3.680	6.660	10.340	17.945
31491	09/26/00	2.8900	1.550	0.239	0.750	2.400	3.150	7.829
36145	01/05/01	2.7900	1.360	0.249	0.612	0.493	1.105	5.504
38928	04/05/01	2.5700	1.460	0.308	0.821	0.481	1.302	5.640
0101098-12	07/07/01	1.8000	0.948	0.250	0.598	0.409	1.007	4.005
0101642-12	09/26/01	2.5200	1.340	0.331	0.960	0.562	1.522	5.713
0202619-12	02/15/02	1.3100	1.070	1.060	3.920	2.100	6.020	9.460
0203001-12	03/30/02	6.820	0.770	1.590	2.280	1.330	3.610	12.790
0203602-11	06/15/02	5.050	0.822	5.340	3.590	1.790	5.380	16.592
0204815-14	10/19/02	1.930	0.569	2.280	2.210	1.220	3.430	8.209
0205349-13	01/04/03	1.440	1.360	0.281	1.000	0.587	1.587	4.668
0306249-14	04/17/03	1.690	1.580	0.504	1.880	0.993	2.873	6.647
0306733-30	06/20/03	3.900	5.140	1.150	4.740	2.380	7.120	17.310
0307790-28	10/30/03	816.000	1790.000	393.000	1170.000	446.000	1616.000	4615.000
4A26008-02	01/23/04	50.700	199.000	74.100	342.000	161.000	503.000	826.800
4J04010-02	10/01/04	3.310	8.820	3.830	16.900	6.980	23.880	39.840

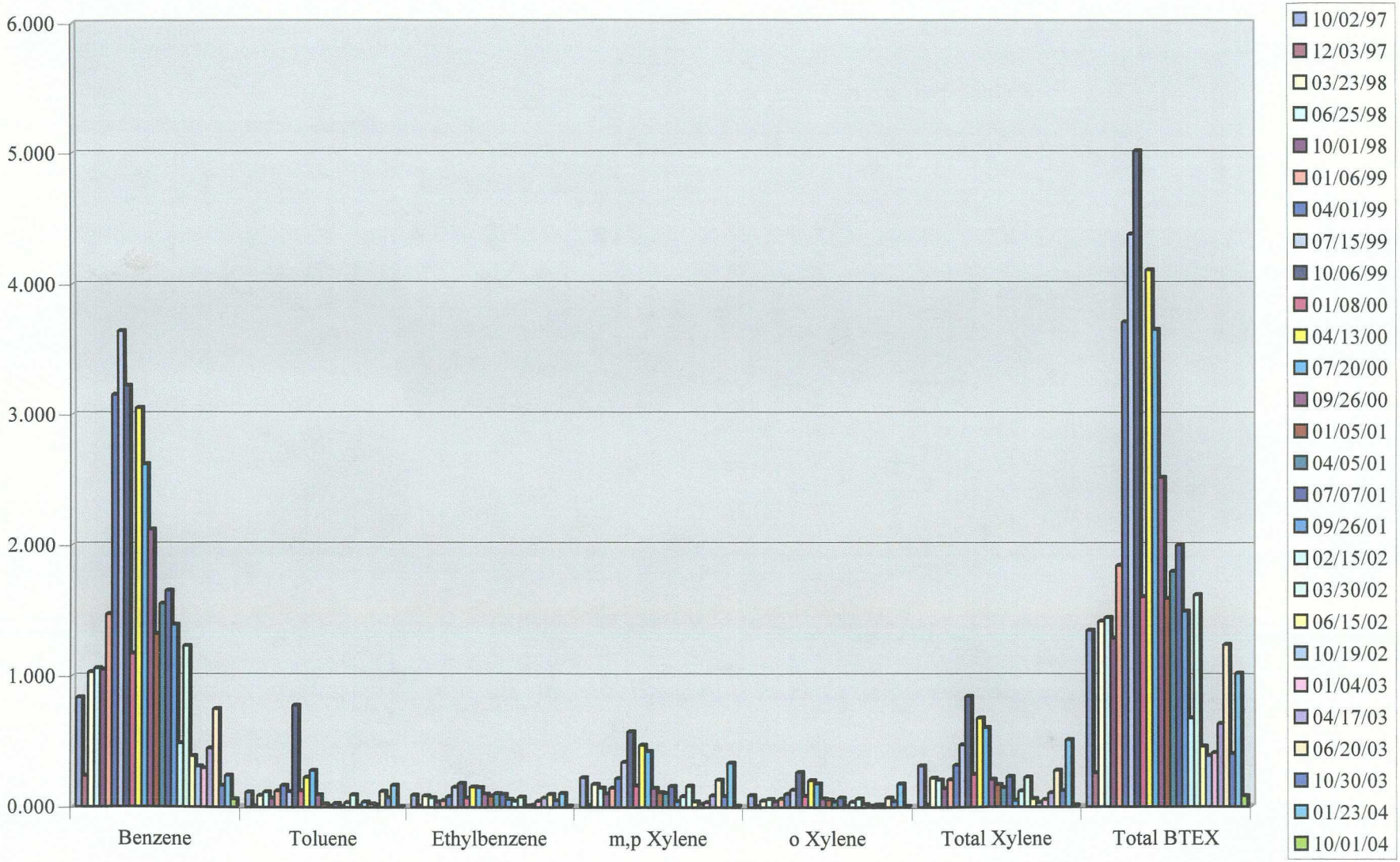
NBF MW #2


5000.0000
4500.0000
4000.0000
3500.0000
3000.0000
2500.0000
2000.0000
1500.0000
1000.0000
500.0000
0.0000
Benzene
Toluene
Ethylbenzene
m,p Xylene
o Xylene
Total Xylene
Total BTEX
10/02/97
12/03/97
03/23/98
06/25/98
10/01/98
01/06/99
04/01/99
07/14/99
10/06/99
01/08/00
04/13/00
07/20/00
09/26/00
01/05/01
04/05/01
07/07/01
09/26/01
02/15/02
03/30/02
06/15/02
10/19/02
01/04/03
04/17/03
06/20/03
10/30/03
01/23/04
10/01/04

Monitor Well # 3
State NBF # 1
Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12730	10/02/97	0.836	0.111	0.090	0.224	0.089	0.313	1.350
13176	12/03/97	0.234	0.003	0.004	0.012	0.003	0.015	0.256
14050	03/23/98	1.029	0.086	0.084	0.173	0.047	0.220	1.419
14670	06/25/98	1.058	0.113	0.070	0.145	0.060	0.205	1.446
15608	10/01/98	1.046	0.065	0.037	0.100	0.039	0.139	1.287
16609	01/06/99	1.470	0.122	0.047	0.144	0.062	0.206	1.845
17436	04/01/99	3.150	0.164	0.078	0.219	0.098	0.317	3.709
18603	07/15/99	3.640	0.116	0.151	0.343	0.129	0.472	4.379
20613	10/06/99	3.220	0.776	0.179	0.576	0.265	0.841	5.016
22772	01/08/00	1.170	0.122	0.068	0.163	0.083	0.246	1.606
25141	04/13/00	3.050	0.226	0.153	0.473	0.203	0.676	4.105
28437	07/20/00	2.620	0.278	0.149	0.424	0.178	0.602	3.649
31492	09/26/00	2.120	0.092	0.099	0.143	0.063	0.206	2.517
36156	01/05/01	1.320	0.023	0.083	0.110	0.055	0.165	1.591
38929	04/05/01	1.550	0.005	0.101	0.104	0.039	0.143	1.799
0101098-13	07/07/01	1.650	0.026	0.097	0.159	0.069	0.228	2.001
0101642-13	09/26/01	1.390	0.001	0.058	0.041	0.005	0.046	1.495
0202619-13	02/15/02	0.484	0.032	0.043	0.080	0.038	0.118	0.677
0203001-13	03/30/02	1.230	0.092	0.075	0.160	0.064	0.224	1.621
0203602-12	06/15/02	0.388	0.005	0.006	0.039	0.020	0.059	0.458
0204815-15	10/19/02	0.308	0.038	0.013	0.021	0.008	0.029	0.388
0205349-14	01/04/03	0.293	0.023	0.044	0.034	0.017	0.051	0.411
0306249-15	04/17/03	0.448	0.014	0.068	0.086	0.017	0.103	0.633
0306733-31	06/20/03	0.747	0.120	0.097	0.207	0.069	0.276	1.240
0307790-29	10/30/03	0.163	0.070	0.048	0.081	0.041	0.122	0.403
4A26008-03	01/23/04	0.239	0.165	0.104	0.337	0.175	0.512	1.020
4J04010-03	10/01/04	0.060	0.002	0.007	0.006	0.005	0.011	0.080

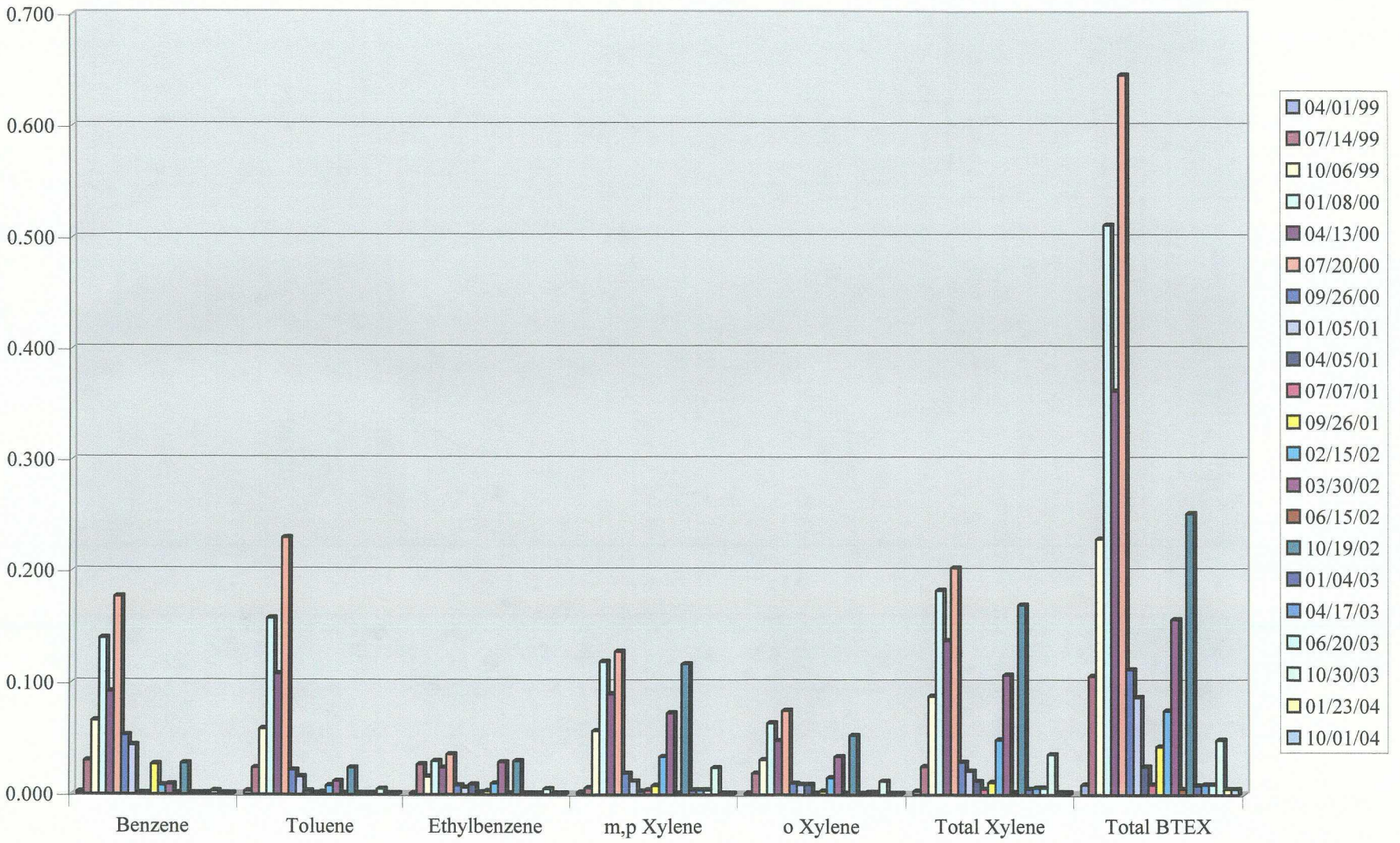
NBF MW #3


6.000
5.000
4.000
3.000
2.000
1.000
0.000
Benzene
Toluene
Ethylbenzene
m,p Xylene
o Xylene
Total Xylene
Total BTEX
10/02/97
12/03/97
03/23/98
06/25/98
10/01/98
01/06/99
04/01/99
07/15/99
10/06/99
01/08/00
04/13/00
07/20/00
09/26/00
01/05/01
04/05/01
07/07/01
09/26/01
02/15/02
03/30/02
06/15/02
10/19/02
01/04/03
04/17/03
06/20/03
10/30/03
01/23/04
10/01/04

Monitor Well # 4
State NBF # 1
Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
17266	04/01/99	0.002	0.003	0.001	0.002	0.001	0.003	0.009
18610	07/14/99	0.030	0.024	0.027	0.006	0.019	0.025	0.106
20614	10/06/99	0.066	0.059	0.016	0.057	0.031	0.088	0.229
22788	01/08/00	0.140	0.158	0.030	0.119	0.064	0.183	0.511
25142	04/13/00	0.092	0.108	0.024	0.090	0.048	0.138	0.362
28455	07/20/00	0.177	0.230	0.036	0.128	0.075	0.203	0.646
31493	09/26/00	0.053	0.022	0.008	0.019	0.010	0.029	0.112
36146	01/05/01	0.044	0.016	0.006	0.012	0.009	0.021	0.087
38930	04/05/01	0.001	0.003	0.009	0.003	0.009	0.012	0.025
0101098-14	07/07/01	0.001	0.001	0.002	0.004	0.001	0.005	0.009
0101098-14	09/26/01	0.027	0.002	0.003	0.008	0.003	0.011	0.043
0202619-14	02/15/02	0.008	0.008	0.010	0.034	0.015	0.049	0.075
0203001-14	03/30/02	0.009	0.012	0.029	0.073	0.034	0.107	0.157
0203602-13	06/15/02	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0204815-12	10/19/02	0.028	0.024	0.030	0.117	0.053	0.170	0.252
0205349-15	01/04/03	0.001	0.001	0.001	0.004	0.001	0.005	0.008
0306249-16	04/17/03	0.001	0.001	0.001	0.004	0.002	0.006	0.009
0306733-32	06/20/03	0.001	0.001	0.001	0.004	0.002	0.006	0.009
0307790-30	10/30/03	0.003	0.005	0.005	0.024	0.012	0.036	0.049
4A26008-04	01/23/04	0.001	0.001	0.001	0.001	0.001	0.002	0.005
4J04010-04	10/01/04	0.001	0.001	0.001	0.001	0.001	0.002	0.005

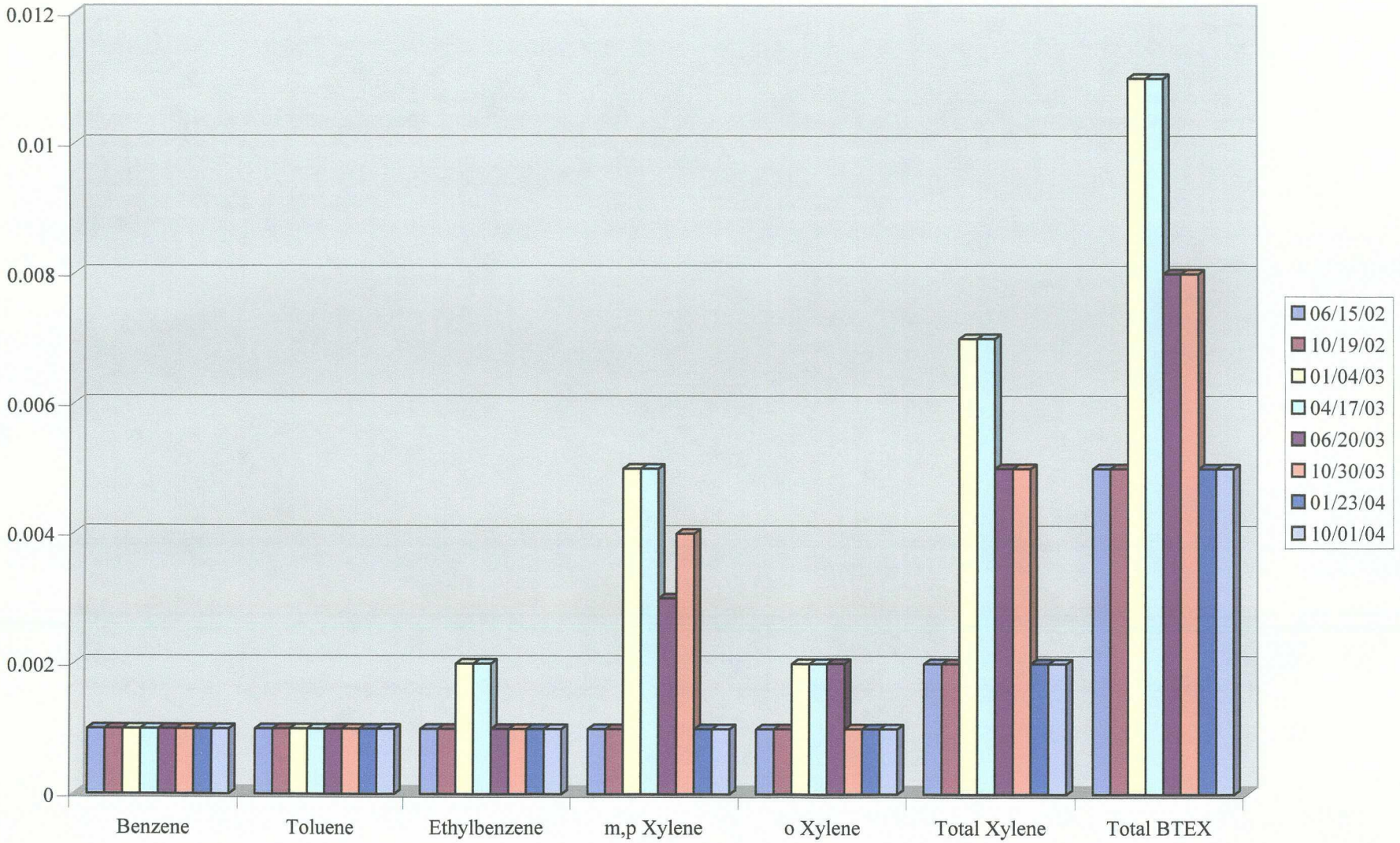
NBF MW #4


0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000
Benzene
Toluene
Ethylbenzene
m,p Xylene
o Xylene
Total Xylene
Total BTEX
04/01/99
07/14/99
10/06/99
01/08/00
04/13/00
07/20/00
09/26/00
01/05/01
04/05/01
07/07/01
09/26/01
02/15/02
03/30/02
06/15/02
10/19/02
01/04/03
04/17/03
06/20/03
10/30/03
01/23/04
10/01/04

Monitor Well # 5
State NBF # 1
Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
0203602-14	06/15/02	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0204815-17	10/19/02	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0205349-16	01/04/03	0.001	0.001	0.002	0.005	0.002	0.007	0.011
0306249-17	04/17/03	0.001	0.001	0.002	0.005	0.002	0.007	0.011
0306733-33	06/20/03	0.001	0.001	0.001	0.003	0.002	0.005	0.008
0307790-31	10/30/03	0.001	0.001	0.001	0.004	0.001	0.005	0.008
4A26008-05	01/23/04	0.001	0.001	0.001	0.001	0.001	0.002	0.005
4J04010-05	10/01/04	0.001	0.001	0.001	0.001	0.001	0.002	0.005

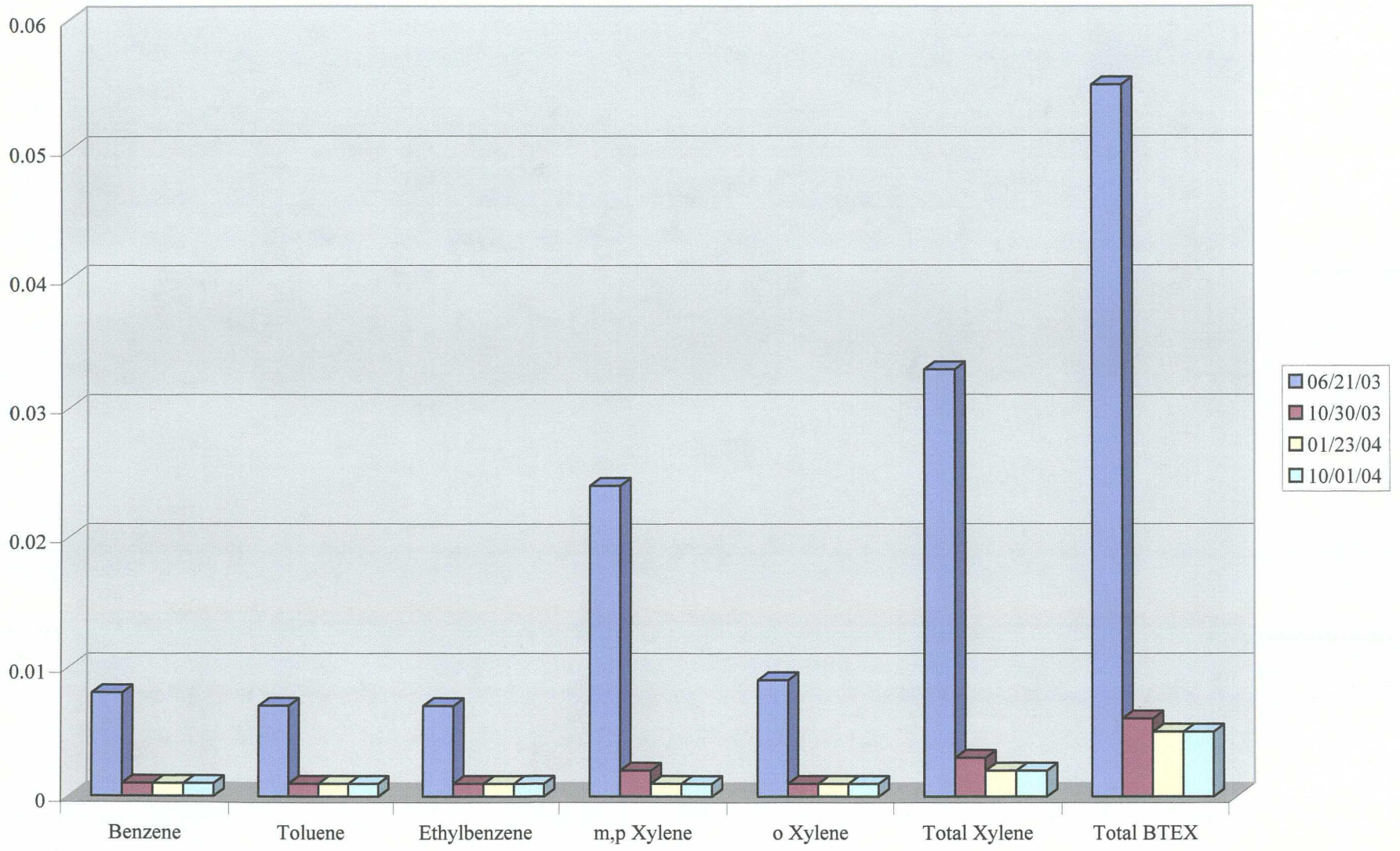
NBF MW #5


0.012
0.01
0.008
0.006
0.004
0.002
0
Benzene
Toluene
Ethylbenzene
m,p Xylene
o Xylene
Total Xylene
Total BTEX
06/15/02
10/19/02
01/04/03
04/17/03
06/20/03
10/30/03
01/23/04
10/01/04

Monitor Well # 6
State NBF # 1
Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
0306748-01	06/21/03	0.008	0.007	0.007	0.024	0.009	0.033	0.055
0307790-32	10/30/03	0.001	0.001	0.001	0.002	0.001	0.003	0.006
4A26008-06	01/23/04	0.001	0.001	0.001	0.001	0.001	0.002	0.005
4J04010-06	10/01/04	0.001	0.001	0.001	0.001	0.001	0.002	0.005

NBF MW #6


0.06
0.05
0.04
0.03
0.02
0.01
0
Benzene
Toluene
Ethylbenzene
m,p Xylene
o Xylene
Total Xylene
Total BTEX
06/21/03
10/30/03
01/23/04
10/01/04

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Mike Griffin

WHOLE EARTH ENVIRONMENTAL

2103 Arbor Cove

Katy, TX 77494

Project: NBF

Project Number: None Given

Location: None Given

Lab Order Number: 4J04010

Report Date: 10/17/04

WHOLE EARTH ENVIRONMENTAL	Project: NBF	Fax: (281) 394-2051
2103 Arbor Cove	Project Number: None Given	**Reported:**
Katy TX, 77494	Project Manager: Mike Griffin	10/17/04 17:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4J04010-01	Water	10/01/04 00:00	10/03/04 13:00
MW-2	4J04010-02	Water	10/01/04 00:00	10/03/04 13:00
MW-3	4J04010-03	Water	10/01/04 00:00	10/03/04 13:00
MW-4	4J04010-04	Water	10/01/04 00:00	10/03/04 13:00
MW-5	4J04010-05	Water	10/01/04 00:00	10/03/04 13:00
MW-6	4J04010-06	Water	10/01/04 00:00	10/03/04 13:00

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

WHOLE EARTH ENVIRONMENTAL	Project: NBF	Fax: (281) 394-2051
2103 Arbor Cove	Project Number: None Given	**Reported:**
Katy TX, 77494	Project Manager: Mike Griffin	10/17/04 17:14

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4J04010-01) Water									
Benzene	ND	0.00100	mg/L	1	EJ41205	10/11/04	10/11/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*89.2 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*86.3 %*	*80-120*		"	"	"	"	
MW-2 (4J04010-02) Water									
Benzene	**3.31**	0.0250	mg/L	25	EJ41205	10/11/04	10/12/04	EPA 8021B	
Toluene	**8.82**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**3.83**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**16.9**	0.0250	"	"	"	"	"	"	
Xylene (o)	**6.98**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*917 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		"	"	"	"	
MW-3 (4J04010-03) Water									
Benzene	**0.0595**	0.00100	mg/L	1	EJ41205	10/11/04	10/11/04	EPA 8021B	
Toluene	**0.00234**	0.00100	"	"	"	"	"	"	
Ethylbenzene	**0.00652**	0.00100	"	"	"	"	"	"	
Xylene (p/m)	**0.00612**	0.00100	"	"	"	"	"	"	
Xylene (o)	**0.00454**	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*101 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89.0 %*	*80-120*		"	"	"	"	
MW-4 (4J04010-04) Water									
Benzene	ND	0.00100	mg/L	1	EJ41205	10/11/04	10/11/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*86.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.4 %*	*80-120*		"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

WHOLE EARTH ENVIRONMENTAL	Project: NBF	Fax: (281) 394-2051
2103 Arbor Cove	Project Number: None Given	**Reported:**
Katy TX, 77494	Project Manager: Mike Griffin	10/17/04 17:14

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (4J04010-05) Water									
Benzene	**0.00121**	0.00100	mg/L	1	EJ41205	10/11/04	10/11/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*81.9 %*		*80-120*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.1 %*		*80-120*		"	"	"	
MW-6 (4J04010-06) Water									
Benzene	ND	0.00100	mg/L	1	EJ41205	10/11/04	10/12/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*82.5 %*		*80-120*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.1 %*		*80-120*		"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

WHOLE EARTH ENVIRONMENTAL	Project: NBF	Fax: (281) 394-2051
2103 Arbor Cove	Project Number: None Given	**Reported:**
Katy TX, 77494	Project Manager: Mike Griffin	10/17/04 17:14

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4J04010-01) Water									
Carbonate Alkalinity	ND	0.200	mg/L	2	EJ40902	10/09/04	10/09/04	EPA 310.2M	O-04
Bicarbonate Alkalinity	**126**	4.00	"	"	"	"	"	"	O-04
Hydroxide Alkalinity	ND	0.200	"	"	"	"	"	"	O-04
Chloride	**230**	5.00	"	1	EJ40908	10/09/04	10/09/04	EPA 325.3M	
Sulfate	**137**	1.25	"	2.5	EJ40905	10/09/04	10/09/04	EPA 375.4	
MW-2 (4J04010-02) Water									
Carbonate Alkalinity	ND	0.200	mg/L	2	EJ40902	10/09/04	10/09/04	EPA 310.2M	O-04
Bicarbonate Alkalinity	**352**	4.00	"	"	"	"	"	"	O-04
Hydroxide Alkalinity	ND	0.200	"	"	"	"	"	"	O-04
Chloride	**63.8**	5.00	"	1	EJ40908	10/09/04	10/09/04	EPA 325.3M	
Sulfate	**48.8**	1.25	"	2.5	EJ40905	10/09/04	10/09/04	EPA 375.4	
MW-3 (4J04010-03) Water									
Carbonate Alkalinity	ND	0.200	mg/L	2	EJ40902	10/09/04	10/09/04	EPA 310.2M	O-04
Bicarbonate Alkalinity	**228**	4.00	"	"	"	"	"	"	O-04
Hydroxide Alkalinity	ND	0.200	"	"	"	"	"	"	O-04
Chloride	**84.2**	5.00	"	1	EJ40908	10/09/04	10/09/04	EPA 325.3M	
Sulfate	**102**	1.25	"	2.5	EJ40905	10/09/04	10/09/04	EPA 375.4	
MW-4 (4J04010-04) Water									
Carbonate Alkalinity	ND	0.200	mg/L	2	EJ40902	10/09/04	10/09/04	EPA 310.2M	O-04
Bicarbonate Alkalinity	**108**	4.00	"	"	"	"	"	"	O-04
Hydroxide Alkalinity	ND	0.200	"	"	"	"	"	"	O-04
Chloride	ND	5.00	"	1	EJ40908	10/09/04	10/09/04	EPA 325.3M	
Sulfate	**39.8**	1.25	"	2.5	EJ40905	10/09/04	10/09/04	EPA 375.4	
MW-5 (4J04010-05) Water									
Carbonate Alkalinity	ND	0.200	mg/L	2	EJ40902	10/09/04	10/09/04	EPA 310.2M	O-04
Bicarbonate Alkalinity	**172**	4.00	"	"	"	"	"	"	O-04
Hydroxide Alkalinity	ND	0.200	"	"	"	"	"	"	O-04
Chloride	**60.3**	5.00	"	1	EJ40908	10/09/04	10/09/04	EPA 325.3M	
Sulfate	**160**	1.25	"	2.5	EJ40905	10/09/04	10/09/04	EPA 375.4	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

WHOLE EARTH ENVIRONMENTAL	Project: NBF	Fax: (281) 394-2051
2103 Arbor Cove	Project Number: None Given	**Reported:**
Katy TX, 77494	Project Manager: Mike Griffin	10/17/04 17:14

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (4J04010-06) Water									
Carbonate Alkalinity	ND	0.200	mg/L	2	EJ40902	10/09/04	10/09/04	EPA 310.2M	O-04
Bicarbonate Alkalinity	**156**	4.00	"	"	"	"	"	"	O-04
Hydroxide Alkalinity	ND	0.200	"	"	"	"	"	"	O-04
Chloride	**24.8**	5.00	"	1	EJ40908	10/09/04	10/09/04	EPA 325.3M	
Sulfate	**95.5**	1.25	"	2.5	EJ40905	10/09/04	10/09/04	EPA 375.4	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

WHOLE EARTH ENVIRONMENTAL	Project: NBF	Fax: (281) 394-2051
2103 Arbor Cove	Project Number: None Given	**Reported:**
Katy TX, 77494	Project Manager: Mike Griffin	10/17/04 17:14

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4J04010-01) Water									
Calcium	**94.3**	1.00	mg/L	100	EJ41305	10/12/04	10/12/04	EPA 6010B	
Magnesium	**10.5**	0.0100	"	10	"	"	"	"	
Potassium	**13.7**	0.500	"	"	"	"	"	"	
Sodium	**116**	1.00	"	100	"	"	"	"	
MW-2 (4J04010-02) Water									
Calcium	**100**	1.00	mg/L	100	EJ41305	10/12/04	10/12/04	EPA 6010B	
Magnesium	**8.66**	0.0100	"	10	"	"	"	"	
Potassium	**19.4**	0.500	"	"	"	"	"	"	
Sodium	**59.1**	1.00	"	100	"	"	"	"	
MW-3 (4J04010-03) Water									
Calcium	**102**	1.00	mg/L	100	EJ41305	10/12/04	10/12/04	EPA 6010B	
Magnesium	**11.4**	0.0100	"	10	"	"	"	"	
Potassium	**20.0**	0.500	"	"	"	"	"	"	
Sodium	**52.0**	1.00	"	100	"	"	"	"	
MW-4 (4J04010-04) Water									
Calcium	**22.0**	0.100	mg/L	10	EJ41305	10/12/04	10/12/04	EPA 6010B	
Magnesium	**0.608**	0.0100	"	"	"	"	"	"	
Potassium	**45.2**	0.500	"	"	"	"	"	"	
Sodium	**16.8**	0.100	"	"	"	"	"	"	
MW-5 (4J04010-05) Water									
Calcium	**92.3**	1.00	mg/L	100	EJ41305	10/12/04	10/12/04	EPA 6010B	
Magnesium	**13.1**	0.0100	"	10	"	"	"	"	
Potassium	**4.19**	0.100	"	2	"	"	"	"	
Sodium	**57.4**	1.00	"	100	"	"	"	"	
MW-6 (4J04010-06) Water									
Calcium	**51.8**	1.00	mg/L	100	EJ41303	10/12/04	10/12/04	EPA 6010B	
Magnesium	**6.15**	0.00200	"	2	"	"	"	"	
Potassium	**9.02**	0.100	"	"	"	"	"	"	
Sodium	**46.7**	1.00	"	100	"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ41205 - EPA 5030C (GC)										
Blank (EJ41205-BLK1)				Prepared & Analyzed: 10/11/04						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*85.4*		*ug/l*	*100*		*85.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*83.1*		*"*	*100*		*83.1*	*80-120*			
LCS (EJ41205-BS1)				Prepared & Analyzed: 10/11/04						
Benzene	91.9		ug/l	100		91.9	80-120			
Toluene	91.6		"	100		91.6	80-120			
Ethylbenzene	82.7		"	100		82.7	80-120			
Xylene (p/m)	176		"	200		88.0	80-120			
Xylene (o)	84.7		"	100		84.7	80-120			
Surrogate: a,a,a-Trifluorotoluene	*104*		*"*	*100*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*111*		*"*	*100*		*111*	*80-120*			
Calibration Check (EJ41205-CCV1)				Prepared: 10/11/04 Analyzed: 10/12/04						
Benzene	89.8		ug/l	100		89.8	80-120			
Toluene	91.6		"	100		91.6	80-120			
Ethylbenzene	82.5		"	100		82.5	80-120			
Xylene (p/m)	176		"	200		88.0	80-120			
Xylene (o)	83.6		"	100		83.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	*102*		*"*	*100*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*117*		*"*	*100*		*117*	*80-120*			
Matrix Spike (EJ41205-MS1)	**Source: 4J04013-02**			Prepared: 10/11/04 Analyzed: 10/12/04						
Benzene	88.4		ug/l	100	ND	88.4	80-120			
Toluene	89.2		"	100	ND	89.2	80-120			
Ethylbenzene	80.4		"	100	ND	80.4	80-120			
Xylene (p/m)	165		"	200	ND	82.5	80-120			
Xylene (o)	80.4		"	100	ND	80.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	*101*		*"*	*100*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*107*		*"*	*100*		*107*	*80-120*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ41205 - EPA 5030C (GC)										
Matrix Spike Dup (EJ41205-MSD1)	***Source: 4J04013-02***			Prepared: 10/11/04 Analyzed: 10/12/04						
Benzene	91.3		ug/l	100	ND	91.3	80-120	3.23	20	
Toluene	92.0		"	100	ND	92.0	80-120	3.09	20	
Ethylbenzene	82.3		"	100	ND	82.3	80-120	2.34	20	
Xylene (p/m)	174		"	200	ND	87.0	80-120	5.31	20	
Xylene (o)	83.2		"	100	ND	83.2	80-120	3.42	20	
Surrogate: a,a,a-Trifluorotoluene	*103*		"	*100*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*110*		"	*100*		*110*	*80-120*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ40902 - General Preparation (WetChem)										
Blank (EJ40902-BLK1)				Prepared & Analyzed: 10/09/04						
Carbonate Alkalinity	ND	0.200	mg/L							
Bicarbonate Alkalinity	ND	4.00	"							
Hydroxide Alkalinity	ND	0.200	"							
Duplicate (EJ40902-DUP1)	**Source: 4J04007-02**			Prepared & Analyzed: 10/09/04						
Carbonate Alkalinity	0.00	0.200	mg/L		0.00				20	O-04
Bicarbonate Alkalinity	174	4.00	"		172			1.16	20	O-04
Hydroxide Alkalinity	0.00	0.200	"		0.00				20	O-04
Reference (EJ40902-SRM1)				Prepared & Analyzed: 10/09/04						
Carbonate Alkalinity	0.0501		mg/L	0.0500		100	80-120			
Batch EJ40905 - General Preparation (WetChem)										
Blank (EJ40905-BLK1)				Prepared & Analyzed: 10/09/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EJ40905-CCV1)				Prepared & Analyzed: 10/09/04						
Sulfate	48.3		mg/L	50.0		96.6	80-120			
Duplicate (EJ40905-DUP1)	**Source: 4J04007-02**			Prepared & Analyzed: 10/09/04						
Sulfate	230	2.50	mg/L		222			3.54	20	
Batch EJ40908 - General Preparation (WetChem)										
Blank (EJ40908-BLK1)				Prepared & Analyzed: 10/09/04						
Chloride	ND	5.00	mg/L							

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ40908 - General Preparation (WetChem)										
Matrix Spike (EJ40908-MS1)	**Source: 4J04009-02**			Prepared & Analyzed: 10/09/04						
Chloride	638	5.00	mg/L	500	142	99.2	80-120			
Matrix Spike Dup (EJ40908-MSD1)	***Source: 4J04009-02***			Prepared & Analyzed: 10/09/04						
Chloride	629	5.00	mg/L	500	142	97.4	80-120	1.42	20	
Reference (EJ40908-SRM1)				Prepared & Analyzed: 10/09/04						
Chloride	4960		mg/L	5000		99.2	80-120			

Total Metals by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ41303 - 6010B/No Digestion										
Blank (EJ41303-BLK1)				Prepared & Analyzed: 10/12/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EJ41303-CCV1)				Prepared & Analyzed: 10/12/04						
Calcium	2.16		mg/L	2.00		108	85-115			
Magnesium	2.19		"	2.00		110	85-115			
Potassium	1.84		"	2.00		92.0	85-115			
Sodium	1.87		"	2.00		93.5	85-115			
Duplicate (EJ41303-DUP1)	**Source: 4J04012-01**			Prepared & Analyzed: 10/12/04						
Calcium	2320	10.0	mg/L		2390			2.97	20	
Magnesium	254	0.100	"		256			0.784	20	
Potassium	27.4	0.500	"		27.7			1.09	20	
Sodium	1600	10.0	"		1680			4.88	20	
Batch EJ41305 - 6010B/No Digestion										
Blank (EJ41305-BLK1)				Prepared & Analyzed: 10/12/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EJ41305-CCV1)				Prepared & Analyzed: 10/12/04						
Calcium	2.18		mg/L	2.00		109	85-115			
Magnesium	2.25		"	2.00		112	85-115			
Potassium	1.84		"	2.00		92.0	85-115			
Sodium	1.89		"	2.00		94.5	85-115			

Total Metals by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ41305 - 6010B/No Digestion										
Duplicate (EJ41305-DUP1)	**Source: 4J04009-02**			Prepared & Analyzed: 10/12/04						
Calcium	104	1.00	mg/L		102			1.94	20	
Magnesium	10.9	0.0100	"		10.7			1.85	20	
Potassium	33.9	0.500	"		36.4			7.11	20	
Sodium	79.8	1.00	"		79.8			0.00	20	

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
O-04	This sample was analyzed outside the EPA recommended holding time.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 10/17/04

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Biezugbe, Lab Tech.