

1R - 266

REPORTS

DATE:

4/27/1999



Tipperary
CORPORATION

633 Seventeenth Street
Suite 1550
Denver, Colorado 80202

April 27, 1999

CERTIFIED MAIL

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

**RE: April 1999 Progress Report
Tatum Pit Closure Project
Lea County, NM**

RECEIVED

MAY 06 1999

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Dear Mr. Olson:

Please find enclosed additional results from our monitor wells in the subject project area. These results are from water samples taken on April 1, 1999. These samples represent the seventh quarter of monitoring. We will continue to analyze water samples quarterly.

In our January 1999 progress report, we requested final closure for these projects: Vera (pit and monitor well #5) and State NBN (pit and monitor well #7). In your letter dated March 29, 1999, you requested a water table potentiometric map as well as the magnitude of the hydraulic gradient at these sites to complete your review of our request. Please be advised that we are currently constructing this data and it will be forwarded to you as soon as it is completed.

Additional monitor wells were constructed March 15-16 at the following pit sites: Bell A, State NBF, Sohio 1, Sohio A, and GS State. Complete water analyses from these new monitor wells are included in this report. It appears that an additional monitor well will be necessary for the Sohio 1 and Sohio A pit sites. These will be installed accordingly.

If you have any questions, please call me at (303) 293-9379.

Very truly yours,

Larry G. Sugano
Vice President - Engineering

cc: NMOCD Hobbs Office

Enclosures



Tipperary
CORPORATION

TATUM PIT CLOSURE PROJECT
WATER SAMPLING RESULTS
APRIL, 1999

Executive Summary

Iva COM

Having completed six consecutive quarters of sampling monitor wells 1 & 2 with no BTEX component exceeding WQCC standards, we began a sampling program from the source well. The results are presented in this report. We do not plan to continue to sample wells 1 & 2.

Mable COM

Monitor well #3 has passed six consecutive quarters with no BTEX component exceeding WQCC standards. We do not plan to continue monitoring the location, but will provide complete analyses (RCRA 8 metals, BTEX, and major cation / anions) at the conclusion of the sampling program for the source well. Monitor well #4 showed a slight increase in BTEX concentrations reflecting a normal seasonal increase in water table levels. The source well shows moderate benzene and xylene concentrations.

Vera

The analytical results of six consecutive quarterly samplings described in our February 16th summary revealed no BTEX component concentration in excess of WQCC standards. Tipperary requests final closure of this pit.

Bell A

Monitor wells 6, 13 & 14 show normal increases in BTEX concentrations due to seasonal changes within the water table. An additional delineation well (#25) was drilled a distance of 150' southeast of the mid-point of wells 13 & 14. The drilling log is included within this report. The analytical results of water samples obtained from this new well reflect no BTEX, RCRA 8 metals or cation / anion concentrations in excess of WQCC standards. (See Environmental Labs of Texas log no. 17265).

NBF

Monitor wells 8, 15 & 16 show normal increases in BTEX concentrations due to seasonal changes within the water table. An additional delineation well (#26) was drilled at a distance of 150' southeast of the mid-point of wells 15 & 16. The drilling log is included within this report. The analytical results of water samples obtained from this new well reflect no BTEX, RCRA 8 metals or cation / anion concentrations in excess of WQCC standards. (See Environmental Labs of Texas log no. 17266).

NBN

The analytical results of six consecutive quarterly samplings described in our February 16th summary revealed no BTEX component concentration in excess of WQCC standards. Tipperary requests final closure of this pit.

Sohio State #1

Monitor wells 10, 17 & 18 show normal increases in BTEX concentrations due to seasonal changes within the water table. An additional delineation well (#28) was drilled at a distance of 150' southeast of the mid-point of wells 17 & 18. The drilling log is included within this report. The analytical results of water samples obtained from this new wells reflect acceptable RCRA 8 metals and cation / anion concentrations however the BTEX concentrations are in excess of WQCC standards. (See Environmental Labs of Texas log no. 17268). A fifth monitor well will be drilled, cased, developed and tested.

Sohio State A

Monitor wells 10, 19 & 20 show normal increases in BTEX concentrations due to seasonal changes within the water table. An additional delineation well (#27) was drilled at a distance of 150' southeast of the mid-point of wells 19 & 20. The drilling log is included within this report. The analytical results of water samples obtained from this new well reflect acceptable RCRA 8 metals and cation / anion concentrations however the BTEX concentrations are in excess of WQCC standards. (See Environmental Labs of Texas log no. 17267). A fifth monitor well will be drilled, cased, developed and tested.

G.S. State

Monitor wells 21 & 22 show normal increases in BTEX concentrations due to seasonal changes within the water table. An additional delineation well (#29) was drilled at a distance of 150' southeast of the mid-point of wells 21 & 22. The drilling log is included within this report. The analytical results of water samples obtained from this new well reflect no BTEX, RCRA 8 metals or cation / anion concentrations in excess of WQCC standards. (See Environmental Labs of Texas log no. 17269).

Satellite #4

BTEX concentrations within monitor wells 9 & 23 remain essentially unchanged from the January, 1999 sampling round.

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TIPPERARY
ATTN: MR. VICTOR A. VICE
P.O. BOX 857
TATUM, NM 88267
FAX: 505-398-6510
FAX: 281-646-8996

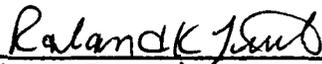
Receiving Date: 04/02/99
Sample Type: Water
Project : None Given
Project Location: None Given

Analysis Date: 4/05 & 4/06/99
Sampling Date: 04/01/99
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	m,p-XYLENE (mg/l)	o-XYLENE (mg/l)
17428	Iva Corn Source Well	2.05	4.15	0.902	5.50	3.80
17429	Mable Corn Source Well	0.486	0.432	0.066	1.00	0.713
17430	Mable Corn #4	0.012	0.008	0.002	0.010	0.006
17431	Bell A #6	0.139	0.013	0.006	0.011	0.006
17432	Bell A #13	0.021	0.018	0.003	0.009	0.006
17433	Bell A #14	0.108	0.015	0.004	0.009	0.005
17434	NBF #8	0.032	0.002	0.004	0.003	0.001
17435	NBF #15	3.11	1.98	0.214	0.767	0.435
17436	NBF #16	3.15	0.164	0.078	0.219	0.098
17437	Sohio St. #1- #10	2.34	0.067	0.168	0.203	0.100
17438	Sohio St. #1- #17	1.35	0.092	0.079	0.248	0.138
17439	Sohio St. #1- #18	3.35	0.331	0.114	0.469	0.280
17440	Sohio St. #1- #28	0.446	0.065	0.011	0.041	0.058
17441	Sohio St. A - #11	0.048	0.008	0.004	0.014	0.010
17442	Sohio St. A - #19	0.026	0.010	0.006	0.016	0.010
17443	Sohio St. A - #20	0.547	0.011	0.005	0.030	0.009
17444	Sohio St. A - #27	0.056	0.007	0.006	0.007	0.013
17445	G.S. State #21	0.124	0.008	0.042	0.012	0.007
17446	G.S. State #22	0.059	0.010	0.036	0.022	0.014
17447	G.S. State #29	0.004	<0.001	<0.001	0.035	<0.001
17448	Satellite #4 - #9	0.027	0.005	0.004	0.004	0.002
17449	Satellite #4 - #23	0.004	0.004	0.001	0.003	0.002

% IA	102	99	97	97	99
% EA	100	97	97	91	95
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8020,5030


Raland K. Tuttle

4-7-99
Date

**Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763
 (915) 563-1800 FAX (915) 563-1713**

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: TIPPECAN DICKS Phone #: 505-398-6509
 Company Name & Address: PO BOX 111 FAX #:
MIKE GRIFFIN
 Project #: Project Name:
 Project Location: Sampler Signature:

ANALYSIS REQUEST

<input checked="" type="checkbox"/>	TCLP Metals Ag As Ba Cd Cr Pb Hg Se
<input checked="" type="checkbox"/>	Total Metals Ag As Ba Cd Cr Pb Hg Se
<input checked="" type="checkbox"/>	TCLP Volatiles
<input checked="" type="checkbox"/>	TCLP Semi Volatiles
<input checked="" type="checkbox"/>	TOS
<input checked="" type="checkbox"/>	RCI
<input checked="" type="checkbox"/>	TPH 138.1
<input checked="" type="checkbox"/>	BTEX #020(S/D)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING			
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	IN03	ICE	NONE	OTHER	DATE	TIME
17428	IVA Com Source Well	2		X				X						4-1	
17429	Mable Com Source Well	2		X				X						4-1	
17430	Mable Com # 4	2		X				X						4-1	
17431	Bell A # 6 # 13 # 14	2	2EA	X				X						4-1	
17432	NBF # 8 # 15 # 16	2	2EA	X				X						4-1	
17433	Sohio ST # 10 # 17 # 18 # 28	2	2EA	X				X						4-1	
17434	Sohio ST # A # 11 # 19 # 20 # 27	2	2EA	X				X						4-1	
17435	SS. STAR # 21 # 22 # 29	2	2EA	X				X						4-1	
17436	SATELLITE # 4 - M bell # 9 # 23														

Retrieved by: D.A. Rice Date: 4-2-99 Thru: 1010 Remarks: Lab Use Found
 Retrieved by: Date: Thru:
 Retrieved by: Date: Thru:

Environmental Lab of Texas, Inc. 12600 West I-2 at Odessa, Texas 79763
 (915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Phone #:

FAX #:

Company Name & Address:

Tipperary

Project #:

Project Name:

Project Location:

Sampler Signature:

ANALYSIS REQUEST

BTEX 8020/5030	
TPH 418.1	
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
Total Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
TDS	
RCI	

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						PRESERVATIVE METHOD				SAMPLING		
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	NONE	OTHER	DATE	TIME	
17431	BELLA #6															
17432	#13															
17433	#14															
17434	NBF #8															
17435	#15															
17436	#16															
17437	Sohio St#1 #10															
17438	#17															
17439	#18															
17440	#28															
17441	Sohio St. #A #11															

REMARKS

Relinquished by:	Date:	04-02-99	Times:	1010	Received by:
Relinquished by:	Date:		Times:		Received by:
Relinquished by:	Date:		Times:		Received by Laboratory:

Environmental Lab of Texas, Inc. 12600 West I-21st Odessa, Texas 79763
 (915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Phone #: FAX #:
Company Name & Address: Tipperary
Project #:
Project Name:
Project Location: Sampler Signature:

ANALYSIS REQUEST

TPH 418.1	
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
Total Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
TDS	
RCI	

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX			PRESERVATIVE METHOD					SAMPLING			
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	NONE	OTHER	DATE	TIME
17442	Sonios. #A #19														
17443	↓ #20														
17444	↓ #27														
17445	G.S.State #21														
17446	↓ #22														
17447	↓ #29														
17448	Satellite #4 #9														
17449	↓ #23														

Relinquished by:	Date:	Times:	Received by:	REMARKS
Relinquished by:	Date: 04-02-99	Times: 1010	Received by:	
Relinquished by:	Date:	Times:	Received by Laboratory:	

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TIPPERARY OIL & GAS
633 17TH
DENVER, COLORADO 80202
FAX: 281-646-8996 (Mike Griffin)

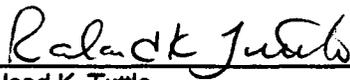
Receiving Date: 03/17/99
Sample Type: Water
Project: Tatum Dileneation
Project Location: Tatum, New Mexico

Analysis Date: 03/17/99
Sampling Date: 03/17/99
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	m,p-XYLENE (mg/l)	o-XYLENE (mg/l)
17265	#25 Bell	0.006	0.004	0.004	0.005	0.004
17266	#26 NBF	0.002	0.003	0.001	0.002	0.001
17267	#27 Sohio A	0.118	0.019	0.005	0.004	0.008
17268	#28 Sohio #1	0.156	0.008	0.003	0.010	0.005
17269	#29 G.S. State	0.012	0.012	0.004	0.021	0.041

% IA	104	100	99	98	99
% EA	108	104	101	102	103
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8020,5030


Ralank K. Tuttle

3-26-99
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TIPPERARY OIL & GAS
633 17TH
DENVER, COLORADO 80202
FAX: 281-646-8996(Mike Griffin)

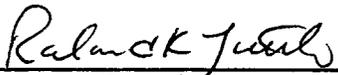
Receiving Date: 03/17/99
Sample Type: Water
Project : Tatum Dileneation
Project Location: Tatum, N.M.

Analysis Date: See below
Sampling Date: 3/17/99
Sample Condition: Intact/Iced

ELT#	Field Code	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	CO3 (mg/L)	HCO3 (mg/L)
17265	#25 Bell	189	46	281	8.7	851	300	0	159
17266	#26 NBF	31.4	16	65	6.4	53	175	0	159
17267	#27 Sohio A	144	78	377	16.2	1028	195	0	329
17268	#28 Sohio #1	715	140	4660	20.8	8685	195	0	329
17269	#29 G.S. State	178	44	102	8.1	487	150	0	281

ANALYSIS DATE	3/24/99	3/24/99	3/24/99	3/24/99	3/18/99	3/18/99	3/18/99	3/18/99
QUALITY CONTROL	53.9	5.1	55.9	5.2	5140	48	*	*
TRUE VALUE	50.0	5.0	50.0	5.0	5000	50	*	*
% PRECISION	108	102	111	104	103	96	*	*

METHODS: EPA 4.1.1, 215.1, 242.1, 273.1, 258.1, 325.3, 375.4, 310.2.


Raland K. Tuttle

3-26-99
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TIPPERARY OIL & GAS
633 17TH
DENVER, COLORADO 80202
FAX: 281-646-8996(Mike Griffin)

Receiving Date: 03/17/99
Sample Type: Water
Project : Tatum Dileneation
Project Location: Tatum, N.M.

Analysis Date: Hg 3/23/99
Analysis Date: 3/25/99
Sampling Date: 3/17/99
Sample Condition: Intact/Iced

TOTAL METALS (mg/L)

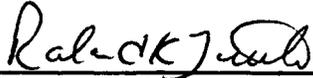
ELT#	Field Code	Ag	As	Ba	Cd	Cr	Hg	Pb	Se
17265	#25 Bell	ND	ND	0.250	ND	0.0110	ND	ND	ND
17266	#26 NBF	ND	ND	0.201	ND	0.0060	ND	ND	ND
17267	#27 Sohio A	ND	ND	0.276	ND	0.0110	ND	ND	ND
17268	#28 Sohio #1	ND	0.028	0.709	ND	0.0220	ND	0.0090	ND
17269	#29 G.S. State	ND	ND	0.369	ND	0.0080	ND	ND	ND

REPORTING LIMIT 0.0050 0.005 0.010 0.0010 0.0050 0.00020 0.0030 0.0050

ND = Not detected at the reporting limit.

% INSTRUMENT ACCURACY	100	106	95	100	94	103	98	112
% EXTRACTION ACCURACY	96	104	97	100	96	96	99	102

METHODS: EPA 200.7, 245.2


Raland K. Tuttle

3-26-99
Date



GULF STATES JALYTICAL
 6310 Rothway, Houston, Texas 77040
 (713) 690-4444, Fax (713) 690-5646

Company: **Denver, CO** Tele #: **80208**
 Address: **Tipperary 086** 633 17th
 Reports Sent To: **Whole Earth** P.O. #:
 Project #: **Tatum, NM**

Project Name: **Tatum Dismantment**
 Project Location: **Tatum, NM**

Sampler(s) Name: (Signature) **M. Giff**
 Courier: **M. Giff**

Field Sample ID	Sampling		Matrix					Haz. Sample (Y/N)
	Date	Time	Water	Soil	Sludge	Oil	Other	
1. # 25 Bell (17265)	3-17	8:10	✓					3 N
2. # 26 NBF (17264)	3-17	8:26	✓					3 N
3. # 27 Sahio A (17267)	3-17	8:44	✓					3 N
4. # 28 Sahio #1 (17268)	3-17	9:05	✓					3 N
5. # 29 G.S. State (17269)	3-17	9:25	✓					3 N
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								

BTEX
 RCRA & Metals
 Major cat & anions
 Chlorides
 Carb/biscarb
 SO₄²⁻
 Ca, Mg, K, Na

Request for Analysis

Relinquished by: (Signature) **M. Giff** Date: **3-17-99** Time: **1345**
 Received by: (Signature) **Ruback** Date: **3-17-99** Time: **1345**

Relinquished by: (Signature) Date: Time:
 Received by: (Signature) Date: Time:

Relinquished by: (Signature) Date: Time:
 Received by Laboratory: (Signature) Date: Time:

Requested Turnaround: **M. H. H. H.**
 GSAI Group:

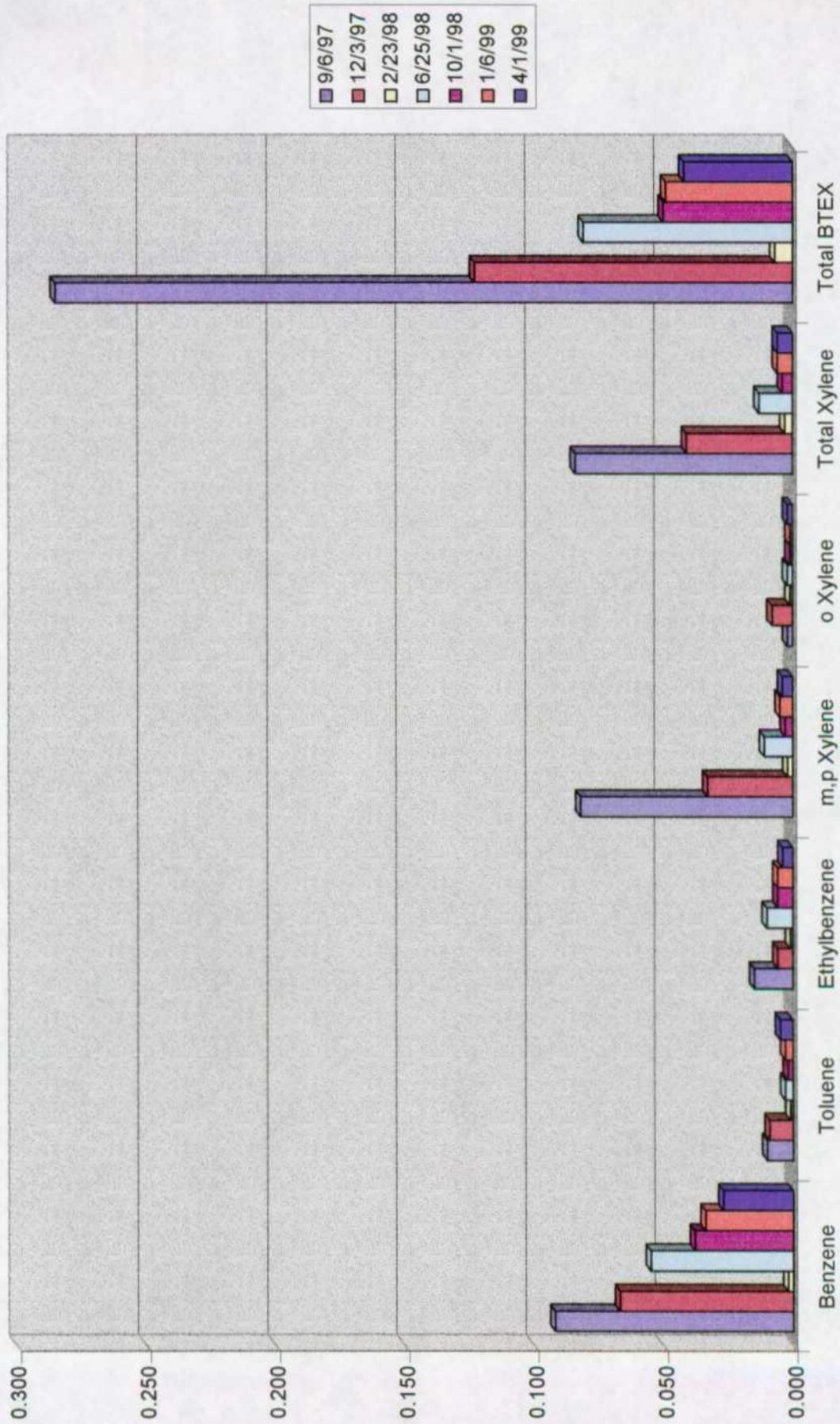
Special Detection Limits

QC Package: (check one)
 CLP Site Specific
 Tier 1 Tier 2 QC Summary

**Monitor Well # 9
Satellite # 4
Sampling Results**

Lab. #	12485	13191	14065	14664	15596	16603	17448
Sample Date	9/6/97	12/3/97	2/23/98	6/25/98	10/1/98	1/6/99	4/1/99
Benzene	0.092	0.067	0.002	0.055	0.038	0.034	0.027
Toluene	0.010	0.009	0.001	0.003	0.002	0.003	0.005
Ethylbenzene	0.015	0.006	0.001	0.010	0.006	0.006	0.004
m,p Xylene	0.082	0.033	0.002	0.011	0.003	0.005	0.004
o Xylene	0.002	0.008	0.001	0.002	0.001	0.001	0.002
Total Xylene	0.084	0.041	0.003	0.013	0.004	0.006	0.006
Total BTEX	0.285	0.123	0.007	0.081	0.050	0.049	0.042

Satellite 4 # 9



Monitor Well # 23
Satellite # 4
Sampling Results

Lab. #	12727	13192	14045	14677	15603	16593	17449
Sample Date	10/2/97	12/3/97	3/23/98	6/25/98	10/1/98	1/6/99	4/1/99
Benzene	0.001	0.040	0.071	0.002	0.048	0.004	0.004
Toluene	0.001	0.012	0.004	0.001	0.023	0.003	0.004
Ethylbenzene	0.001	0.009	0.012	0.001	0.001	0.001	0.001
m,p Xylene	0.002	0.042	0.017	0.003	0.004	0.004	0.003
o Xylene	0.001	0.019	0.002	0.001	0.002	0.002	0.002
Total Xylene	0.003	0.061	0.019	0.004	0.006	0.006	0.005
Total BTEX	0.009	0.122	0.106	0.008	0.078	0.014	0.014

Satellite 4 # 23

