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REPORTS

DATE:

2001



Tipperary
CORPORATION

**Tipperary Corporation
September 2001
Sampling Results
Annual Report**

RECEIVED

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ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION



Whole Earth Environmental
19606 San Gabriel
Houston, Tx. 77084



Executive Summary Tipperary Corporation Water Monitoring Program

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 within 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, two sites have been remediated to closure and a third is pending final approval.

Individual Site Descriptions

Iva COM

The Iva site includes a recovery well. Criteria contaminant concentrations within the well have shown a 94% reduction since installation and a 48% reduction over the past year. A review of the test results over the past three years indicates that the contaminant concentrations appear to be reduced at the rate of approximately 50% per year. If the trend continues, the concentrations will be within NMWQCC standards within the next two years. Two down gradient monitor wells at the site have never shown concentrations in excess of standards.

Mable COM

The Mable site includes a recovery well. Criteria contaminant concentrations within the well have shown a 73% reduction since installation and a 50% reduction over the past year. The primary contaminant compounds within this well are benzene and xylene. Only the xylene and ethylbenzene fractions have shown any significant improvement over previous sampling periods within the source well. Both down-gradient monitor wells generally fall within NMWQCC standards but are subject to periodic spikes in all tested fractions. LNAPL's are present within both monitor wells but appear to have

the viscous appearance and odor characteristics of fatty acids resulting from the aerobic degradation of hydrocarbons.

Bell State "A"

This site has no active recovery well but does contain a series of four monitor wells. The criteria contaminant concentrations within these wells have collectively dropped 92% from the initial concentrations however have shown no significant improvement over the past year. Benzene is the only fraction falling outside of NMWQCC standards.

NBF

This site has no active recovery well but does contain a series of four monitor wells. The criteria contaminant concentrations within these wells have collectively dropped 16% from the initial concentrations however have shown no significant improvement over the past year. Monitor wells nos. 15 and 16 continue to show elevated benzene concentrations and occasional spikes of xylene.

G.S. State

The G.S. site has an active recovery well and four down gradient monitor wells. The contaminant concentrations within the recovery well have been reduced by 78% over the life of the installation however the concentrations within the monitor wells have remained somewhat static. We introduced a program last year of installing absorbent socks within those wells having LNAPL's. The program did show significant reductions within those bores in which they were used however the BTEX concentrations came back to previous levels when their use was discontinued.

Sohio # 1

This site has no active recovery well but does contain a series of five monitor wells. The general trend within these wells is for an overall reduction in BTEX values-especially if the most recent results within Monitor Well # 18 are ignored due to our inability to bail a sufficient volume of fluids as a result of silting. Once again the absorbent sock program introduced last year proved effective until discontinued.

Sohio "A"

This site has no active recovery well but does contain a series of five monitor wells. The site has a gradient of .58' per 100' distance and may be considered quite static hydrologically. The BTEX concentrations have once again increased with the cessation of the absorbent sock program.



QP-78

WHOLE EARTH ENVIRONMENTAL QUALITY PROCEDURE

Procedure for Obtaining Water Samples (Cased Wells) Using Enviro-Tech ES-60 Pump

Completed By: _____ Approved By: _____ Effective Date: / /

1.0 Purpose

This procedure outlines the methods to be employed in obtaining water samples from cased monitoring wells.

2.0 Scope

This procedure shall be used for developed, cased water monitoring wells. It is not to be used for standing water samples such as ponds or streams.

3.0 Preliminary

3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the water. The shipment should include a Certificate of Compliance from the manufacturer of the collection bottle or vial and a Serial Number for the lot of containers. Retain this Certificate for future documentation purposes.

3.2 The following table shall be used to select the appropriate sampling container, preservative method and holding times for the various elements and compounds to be analyzed.

Compound to be Analyzed	Sample Container Size	Sample Container Description	Cap Requirements	Preservative	Maximum Hold Time
BTEX	40 ml.	VOA Container	Teflon Lined	HCl	7 days
TPH	1 liter	clear glass	Teflon Lined	HCl	28 days
PAH	1 liter	clear glass	Teflon Lined	Ice	7 days
Cation / Anion	1 liter	clear glass	Teflon Lined	None	48 Hrs.
Metals	1 liter	HD polyethylene	Any Plastic	Ice / HNO ₃	28 Days
TDS	300 ml.	clear glass	Any Plastic	Ice	7 Days

4.0 Chain of Custody

- 4.1 Prepare a Sample Plan. The plan will list the well identification and the individual tests to be performed at that location. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.
- 4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.
- 4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label). Affix the labels to the jars.

5.0 Bailing Procedure

- 5.1 Identify the well from the site schematics. Place pre-labeled jar(s) next to the well. Remove the bolts from the well cover and place the cover with the bolts nearby. Remove the plastic cap from the well bore by first lifting the metal lever and then unscrewing the entire assembly.
- 5.2 Lower the ES-60 pump into the monitor well bore taking care to insure that the pump and first 10' of hose and cable does not touch the ground or become cross-contaminated by contact with anything containing hydrocarbon residues. When the pump reaches the bottom of the well bore you will feel the hose and cable assembly go slack. Lift the pump a minimum distance of 18" above the bottom of the well bore and clamp the hose assembly to the top of the well bore by means of vice grips. (Take care to insure that the vice grips are adjusted so as not to "choke" the hose.
- 5.3 Attach the electrical cable leads to an automobile battery and begin pumping the well bore. If the pump does not bring fluid to the surface within one minute, disconnect the electrical leads, and re-connect for four seconds three times to remove air cavitation.
- 5.4 The pump has a minimum volume of 2.8 gallons per minute at 60'. Purge the well by pumping for a minimum of 10 minutes before taking a sample.

6.0 Sampling Procedure

- 6.1 Once the well has been bailed in accordance with 5.2 of this procedure, a sample may be decanted into the appropriate sample collection jar directly from the bailer. The collection jar should be filled to the brim. Once the jar is sealed, turn the jar over to detect any bubbles that may be present. Add additional water to remove all bubbles from the sample container.

- 6.2 Note the time of collection on the sample collection jar with a fine Sharpie.
- 6.3 Place the sample directly on ice for transport to the laboratory. The preceding table shows the maximum hold times between collection and testing for the various analyses.
- 6.4 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

7.0 Decontamination

- 7.1 After removing the pump from the well, use an aerosol spray pump bottle filled with denatured isopropyl alcohol to clean the pump and first 10' of the cable and hose assembly. Rinse the sprayed portion with distilled water to remove the alcohol and dry with a clean rag. Discard the rag after each use. During transport, the pump assembly should be carried in a 2" PVC protective sleeve.

8.0 Documentation

- 8.1 The testing laboratory shall provide the following minimum information:
 - A. Client, Project and sample name.
 - B. Signed copy of the original Chain of Custody Form including data on the time the sample was received by the lab.
 - C. Results of the requested analyses
 - D. Test Methods employed
 - E. Quality Control methods and results

Tipperary Corporation

Tatum Bagley Field

Monitor Well Depth to Water Chart

Well Name	Well No.	Water Depth 8/9/99	Water Depth 10/21/99	Water Depth 1/8/00	Water Depth 4/13/00	Water Depth 7/20/00	Water Depth 9/26/00	Water Depth 1/5/01	Water Depth 4/5/01	Water Depth 7/5/01	Water Depth 9/26/01
Iva COM	Source Well										
	1	48.8	51.8	51.7	51.6	51.7	51.8	51.8	51.7	51.8	51.7
Mable COM	2	49.2	51.5	51.4	51.5	51.6	51.7	51.8	51.7	51.8	51.8
	Source Well										
	3	48.8	52.5	52.4	53.7	53.7	53.7	51.6	51.7	51.8	51.9
	4	48.6	51.8	51.6	52.8	51.8	51.8	51.8	51.7	51.6	51.6
Bell State	6	42.1	43.0	51.6	44.3	44.4	44.5	44.6	44.5	44.4	44.3
	13	40.8	43.7	43.7	44.0	43.9	44.0	44.1	44.0	44.0	43.9
	14	43.0	43.5	44.2	44.2	44.3	44.2	44.3	44.2	44.1	44.1
	25	43.5	43.5	43.9	44.0	44.0	44.0	44.2	44.0	43.9	43.8
NBF	8	35.8	35.8	36.1	37.1	35.6	35.9	36.1	36.1	36.1	36.0
	15	34.8	37.0	37.1	37.9	37.5	36.3	36.3	36.1	36.2	36.0
	16	36.0	36.1	36.2	36.2	36.2	36.2	36.2	36.1	36.2	36.0
	26	34.8	34.6	34.9	35.9	35.1	35.2	35.2	35.4	35.6	35.8
Sohio A	11	38.3	38.5	37.8	38.3	38.3	38.8	38.7	37.5	36.8	35.6
	19	32.5	35.2	37.9	38.2	38.3	38.4	38.4	38.4	38.4	38.3
	20	38.0	38.7	38.0	38.4	38.5	38.4	38.5	38.5	38.6	38.6
	27	36.8	38.2	37.9	38.2	38.1	38.6	38.7	38.5	38.3	38.1
Sohio # 1	31	37.5	38.9	39.7	38.5	38.5	38.1	38.4	38.6	38.6	38.8
	10	44.5	44.9	43.9	44.2	45.0	44.9	45.1	45.0	45.0	44.9
	17	44.0	44.5	44.4	44.7	44.5	44.7	44.8	44.6	44.5	44.4
	18	43.8	44.1	45.4	46.4	45.7	45.4	45.8	46.0	45.9	46.6
	28	35.0	44.2	45.8	44.9	44.9	45.1	45.1	45.1	45.2	45.0
	30	45.3	44.1	44.2	44.8	44.3	44.3	44.3	44.2	44.3	44.2
G.S. State	Source Well										
	12	42.8	42.9	44.1	43.2	44.7	44.2	44.2	44.6	44.8	45.1
	21	43.3	43.7	43.9	44.0	44.2	44.3	44.3	44.2	44.3	44.2
	22	43.5	43.9	44.0	44.0	44.0	44.1	44.2	44.2	44.2	44.1
	29	44.0	44.3	44.2	44.3	44.7	44.7	44.7	44.5	44.6	44.4

Tipperary Corporation
Tatum Bagley Field
Monitor Well Gradient Chart

Well Name	Well No.	Surface Elevation	Water Elevation	Distance to Pit Center	Gradient (Ft. / Ft.)	Gradient (Ft. / 100Ft.)
Iva COM	Source Well	4,298.42	4,246.42			
	1	4,292.10	4,237.20	115.00	0.080174	8.02
Mable COM	2	4,291.93	4,238.93	140.00	0.053500	5.35
	Source Well	4,290.55	4,238.55			
Bell State	3	4,287.22	4,235.22	148.00	0.022500	2.25
	4	4,287.86	4,235.46	160.00	0.019313	1.93
	6	4,281.12	4,230.12	93.00	0.021183	2.12
	13	4,280.84	4,233.04	51.00	0.044118	4.41
	14	4,280.80	4,232.50	47.00	0.048723	4.87
	25	4,280.37	4,232.97	154.00	0.017662	1.77
	8	4,259.41	4,211.41	165.00	0.045152	4.52
NBF	15	4,259.68	4,212.68	198.00	0.036263	3.63
	16	4,259.06	4,211.96	247.00	0.031579	3.16
	26	4,258.04	4,215.04	387.00	0.022791	2.28
	11	4,285.88	4,235.88	115.00	0.011835	0.83
Sohio A	19	4,285.97	4,237.27	164.00	0.005305	0.53
	20	4,285.96	4,236.46	151.00	0.005822	0.58
	27	4,285.61	4,245.61	264.00	0.004659	0.47
	31	4,283.54	4,246.09	624.00	0.005288	0.53
	10	4,283.63	4,233.63	110.00	0.016273	1.63
Sohio # 1	17	4,283.31	4,233.91	262.00	0.000805	0.81
	18	4,283.59	4,234.99	176.00	0.010398	1.04
	28	4,283.21	4,236.96	552.00	0.004004	0.40
	30	4,281.13	4,235.82	776.00	0.005528	0.55
	Source Well	4,307.00	4,259.00			
G.S. State	12	4,303.27	4,255.27	52.00	0.071731	7.17
	21	4,303.08	4,255.08	151.00	0.025960	2.60
	22	4,302.77	4,255.27	148.00	0.025203	2.52
	29	4,303.20	4,254.14	295.00	0.016475	1.65



Calculation for Determining the Minimum Bailing Volume for Monitor Wells

Formula $V = (\pi r^2 h)$

V= volume

π = pi

r= inside radius of the well bore

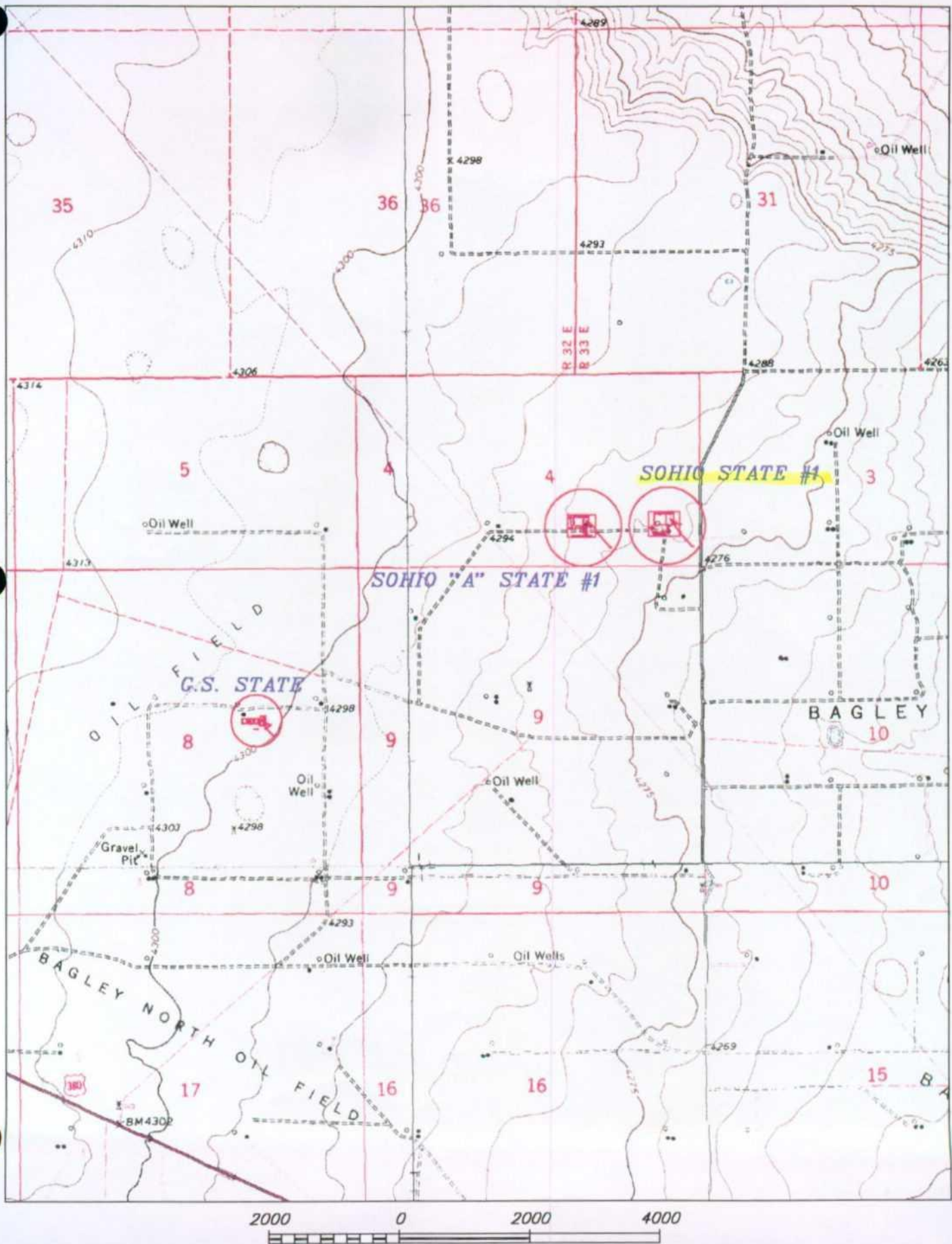
h= maximum height of well bore in water table

π	r^2	h (in)	V (cu. in)	V (gal)	X 3 Volumes	Actual
3.1416	1	180	565.488	2.448	7.344	>10

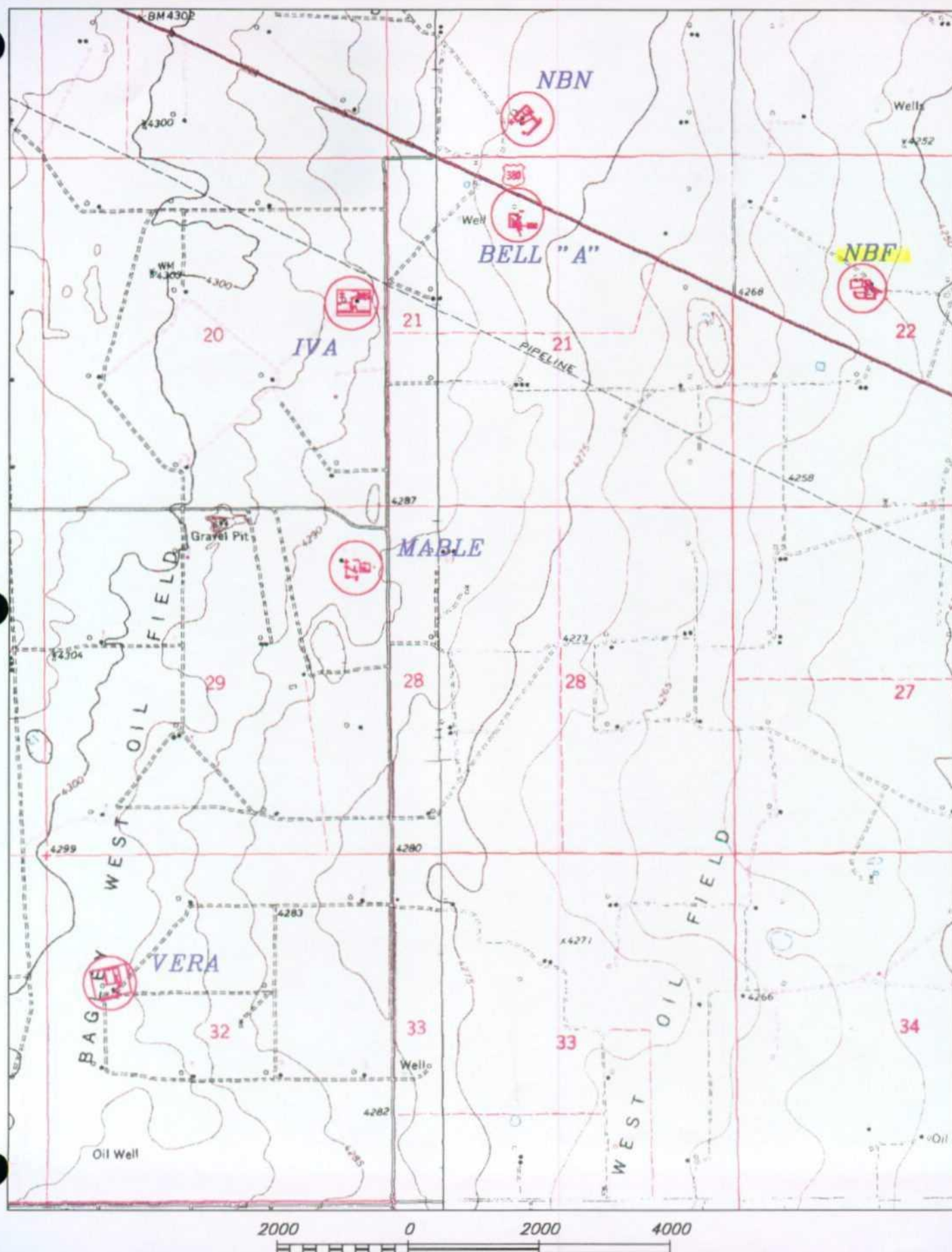
Tipperary Corporation
Tatum Bagley Field
LPNAL / DNAPL Depth Chart

Well Name	Well No.	LNAPL Top	LNAPL Bottom	LNAPL Thickness	DNAPL Top	DNAPL Bottom
Iva COM	Source Well					
	1	N/A	N/A	N/A	N/A	N/A
Mable COM	2	N/A	N/A	N/A	N/A	N/A
	Source Well					
Bell State	3	51.90	52.60	0.70	N/A	N/A
	4	51.60	51.90	0.30	N/A	N/A
	6	N/A	N/A	N/A	N/A	N/A
	13	N/A	N/A	N/A	N/A	N/A
	14	N/A	N/A	N/A	N/A	N/A
	25	N/A	N/A	N/A	N/A	N/A
NBF	8	N/A	N/A	N/A	N/A	N/A
	15	36.00	36.15	0.15	N/A	N/A
	16	36.00	36.15	0.15	N/A	N/A
	26	N/A	N/A	N/A	N/A	N/A
	11	35.60	36.20	0.60	N/A	N/A
Sohio A	19	38.30	38.70	0.40	N/A	N/A
	20	38.60	38.70	0.10	N/A	N/A
	27	N/A	N/A	N/A	N/A	N/A
	31	N/A	N/A	N/A	N/A	N/A
	10	44.90	45.00	0.10	N/A	N/A
Sohio # 1	17	44.40	44.55	0.15	N/A	N/A
	18	46.60	46.70	0.10	N/A	N/A
	28	N/A	N/A	N/A	N/A	N/A
	30	N/A	N/A	N/A	N/A	N/A
	Source Well					
G.S. State	12	45.10	46.20	1.10	N/A	N/A
	21	44.20	45.10	0.90	N/A	N/A
	22	44.10	44.90	0.80	N/A	N/A
	29	44.40	44.55	0.15	N/A	N/A

WHOLE EARTH ENVIROMENTAL, INC.



WHOLE EARTH ENVIROMENTAL, INC.



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

Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name:

Project #:

PO #:

Fax No:

[illegible]

**12600 West 20 East
Odessa, Texas 79763**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

ELLIOT WESNER

Project Name:

TIPPERARY

Whole Earth 533

Project #:

Company Address:

Project Loc:

City/State/Zip:

PO #:

Telephone No.:

Fax No:

Sampler Signature ✓

No: _____
Signature: _____

[illegible]

Special Instructions:

Relinquished by: <u>S. A.</u>	Date	Time	Received by
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Relinquished by:

Received by

Date	Time
------	------

Time

Relinquished by:

Received by ELOF

Date	Time
------	------

其他

James McManus

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

Environmental Lab of Texas, Inc.

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Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Elliot Werner

Company Name

Whole Earth Environment

Company Address:

Project Name:

TIPPOPAR ✓

Project #:

Project Loc:

City/State/Zip:

PO#:

Telephone No:

Fax No:

Sampler Signature:

e No: _____

Signature: _____

[illegible]

Special Instructions:

Reinstated by:

Date :	Time :
--------	--------

Received by:

Date _____ Time _____

Reinquished by:

Date	Time
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Received by Editor

Date	Time
------	------

Sample Containers Intact?
Temperature Upon Receipt
Laboratory Comments

7000

**12600 West 42nd East
Odessa, Texas 79763**
Phone: 915-563-1800
Fax: 915-563-1713

Project Manager:

ELLIOT WISNER
Whole Earth Ecol

Company Name

Company Address:

City/State/Zip:

Telephone No:

Sampler Signature:

Fax No:

Project Name:

Project #:

Project Loc:

३०३

Analyze For:

RUSH TAT (Pre-Schedule)

[illegible]

Special Instructions:

Relinquished by:	Date	Time	Received by:
			

Retained by:

Received by ELOI

Date	Time
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Date	Time
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Sample Containers Intact?

Temperature Upon Receipt

Laboratory Comments:

Environmental Lab of Texas, Inc.

**12600 West I-20 East
Odessa, Texas 79763**
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Curior Wenzler

TIPPLAR

W. H. W. + W. H. W.

Project #:

Project Loc:

PO#:

Fax No:

No: _____
Signature: _____

[illegible]

LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

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

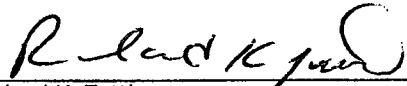
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 4.0 deg. C
Project #: Quarterly Sampling
Project Name: Tipperary
Project Location: None Given

Sampling Date: 01/10/01
Receiving Date: 01/11/01
Analysis Date: 01/11/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
36195	IUA Com. Source Well	0.533	0.168	0.015	0.067	0.044

%IA	87	87	86	91	88
%EA	86	87	87	93	91
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030


Raland K. Tuttle

1-11-01
Date

LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

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

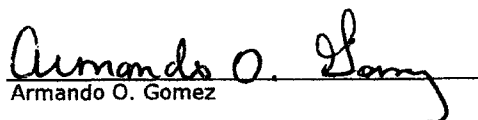
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 2.5 deg. C
Project #: None Given
Project Name: Tipperary
Project Location: None Given

Sampling Date: 01/05/01
Receiving Date: 01/10/01
Analysis Date: 01/11/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
36132	MW 3	<0.010	1.21	1.21	5.50	0.894

%IA	87	87	86	91	88
%EA	86	87	87	93	91
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030


Armando O. Gomez

1-16-01
Date

LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

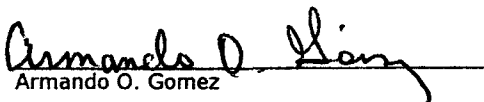
TIPPERARY
ATTN: MR. VICTOR A. VICE
P.O. BOX 857
TATUM, N.M. 88267
FAX: 505-398-6510
FAX: 281-646-8996

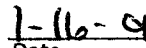
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 2.5 deg. C
Project #: None Given
Project Name: Tipperary
Project Location: None Given

Sampling Date: 01/05/01
Receiving Date: 01/10/01
Analysis Date: 01/12/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
36133	MW 1	<0.001	0.004	0.006	0.014	0.007
36134	MW 2	<0.001	0.003	0.005	0.011	0.005
36135	MW 4	<0.010	0.038	0.020	0.063	0.021
36136	MW 6	0.014	<0.001	0.005	0.007	0.003
36137	Mable Source	0.590	0.475	0.127	0.927	0.768
36138	MW 9	0.037	0.032	0.014	0.051	0.037
36139	MW 12	1.07	1.71	0.945	5.66	1.58
36140	MW 13	<0.001	0.002	0.004	0.009	0.004
36141	MW 14	0.024	<0.001	0.004	0.007	0.003
36142	MW 11	0.043	0.005	0.004	0.013	0.008
36143	MW 10	2.43	0.011	0.153	0.251	0.089
36144	MW 28	0.156	0.115	0.034	0.175	0.120
36145	MW 15	2.79	1.36	0.249	0.612	0.493
36146	MW 26	0.044	0.016	0.006	0.012	0.009
36147	MW 8	0.001	0.001	0.002	0.005	0.002
36148	MW 20	0.009	0.006	0.005	0.016	0.008
36149	MW 18	2.95	1.84	0.364	1.54	1.22
36150	MW 21	0.019	0.010	0.019	0.027	0.013
36151	MW 23	0.031	0.032	0.013	0.050	0.034
36152	MW 25	<0.001	<0.001	<0.001	<0.001	<0.001
%IA		103	100	101	96	101
%EA		105	98	100	97	103
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030


Armando O. Gomez


Date

LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

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

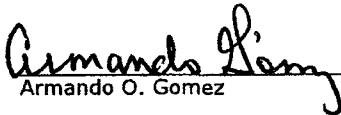
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 2.5 deg. C
Project #: None Given
Project Name: Tipperary
Project Location: None Given

Sampling Date: 01/05/01
Receiving Date: 01/10/01
Analysis Date: 01/13/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
36153	MW 27	0.355	0.004	0.003	0.020	0.009
36154	MW 19	0.248	0.002	0.002	0.006	0.003
36155	MW 17	1.42	0.036	0.140	0.428	0.287
36156	MW 16	1.32	0.023	0.083	0.110	0.055
36157	MW 24	0.004	0.004	0.002	0.008	0.005
36158	MW 22	0.140	0.036	0.057	0.092	0.085
36159	MW 29	0.019	0.010	0.010	0.034	0.014
36160	GS Source	0.805	0.292	0.136	0.692	0.414
36161	MW 30	0.036	0.030	0.009	0.036	0.026
36162	MW 31	0.130	0.004	0.003	0.010	0.005

%IA	93	90	89	86	90
%EA	100	98	98	95	100
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030


Armando O. Gomez

1-16-01
Date

**12800 West I-20 East
Odessa, Texas 79763**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Project Name: Quarterly Sampling

Company Name Whole Earth Environmental, Inc.

Project #:

Company Address: 19806 San Gabriel

Project Loc: Tatum, New Mexico

City/State/Zip: Houston, Tx. 77084

●●●

Telephone No: (800) 854-4358

Fax No: (281) 846-8996

Sampler Signature:

[illegible]

Special Instructions:

Relinquished by:

Received by:

Date	Time
------	------

Retinquished by:

Received by ELOTT

THE

James Mcmenis

10-01-0925

100

100

100

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763

Phone: 915-663-1800
Fax: 915-663-1713

Project Manager:

Project Name: Quarterly Sampling

Company Name Whole Earth Environmental, Inc.

Project #:

Company Address: 18808 San Gabriel

Project Loc: Tatum, New Mexico

City/State/Zip: Houston, Tx. 77064

PO #:

Telephone No: (800) 854-4388

Fax No: (281) 648-8986

Sampler Signature:

FIELD CODE	Date Sampled	Time Sampled	Preservative					Matrix					Analyze For										
			HNO ₃	HCl	NaOH	H ₂ SO ₄	None	Other (Specify)	Water	Sedg	Soil	Other (Specify)	TDS/CL/SAR/EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M CHORO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 80218/5030	RUSH TAT (Pre-Schedule)	Standard TAT	
NBF MW 8	4-5	11:58	X	X				X				X											
NBF MW 15		12:20	X	X				X				X											
NBF MW 16		12:12	X	X				X				X											
NBF MW 26		11:45	X	X				X				X											
Sohio #1 MW 10		1:50	X	X				X				X											
Sohio #1 MW 17		1:37	X	X				X				X											
Sohio #1 MW 18		1:22	X	X				X				X											
Sohio #1 MW 28		1:10	X	X				X				X											
Sohio #1 MW 30		12:55	X	X				X				X											
Sohio "A" MW 11		2:20	X	X				X				X											

Special Instructions:

Relinquished by: M. C. [Signature] Date: 4-6-01 Time: 9:25

Relinquished by: [Signature] Date: 4-6-01 Time: 9:25

Sample Containers Used: 100 mL

Temperature: 25°C

Lab. Name: Environmental Lab of Texas, Inc.

Environmental Lab of Texas, Inc.

**12600 West I-20 East
Odessa, Texas 79763**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Project Name: Quarterly Sampling - Tippet

Company Name **Whole Earth Environmental, Inc.**

Project #:

Company Address: 19806 San Gabriel

Project Loc: Tatum, New Mexico

City/State/Zip: Houston, Tx. 77084

PO#:

Telephone No: (800) 854-4368

Fax No: (281) 648-8986

Sampler Signature:

FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative							Matrix				Analyze For									
				K ₂ Cr ₂ O ₇	HNO ₃	HCl	NaOH	H ₂ SO ₄	None	Other (Specify)	Water	Sediment	Soil	Other (Specify)	TDS / Cl / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015A GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 80219/5030	RUSH TAT (Pre-Schedule)	
Sohio "A" MW 19	4-5	2:30		X	X	X						X												
Sohio "A" MW 20		2:32		X	X	X						X												
Sohio "A" MW 27		2:10		X	X	X						X												
Sohio "A" MW 31		2:00		X	X	X						X												
GS Source Well		2:40		X	X	X						X												
GS MW 12		2:57		X	X	X						X												
GS MW 21		3:10		X	X	X						X												
GS MW 22		3:25		X	X	X						X												
GS MW 29		3:45		X	X	X						X												
Sat 4 MW 9		9:55		X	X	X						X												

Relinquished by: MAI

Relinquished by: _____

Date: 4-6-89

Date: _____

Time: 9:25

Time: _____

Received by: _____

Received by: EICOT

Date: _____

Date: 4-6-89

Time: _____

Time: 9:25

Special Instructions: _____

Sample Control (Pre-Schedule) _____

Temperature (Pre-Schedule) _____

Volatiles (Pre-Schedule) _____

Metals (Pre-Schedule) _____

TPH (Pre-Schedule) _____

TPH TX (Pre-Schedule) _____

TPH 8015A GRO/DRO (Pre-Schedule) _____

Metals: As Ag Ba Cd Cr Pb Hg Se (Pre-Schedule) _____

Volatiles (Pre-Schedule) _____

Semivolatiles (Pre-Schedule) _____

BTEX 80219/5030 (Pre-Schedule) _____

RUSH TAT (Pre-Schedule) _____

**12600 West I-20 East
Odessa, Texas 79763**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Project Name: Quarterly Sampling

Company Name

Whole Earth Environments

Project #:

Company Address:

Project Loc: Tatum NM

City/State/Zip: Houston Tx. 77084

FOR

Telephone No: (800) 854-4358

Fax No: (28) 71046-8996

Sampler Signature:

[illegible]

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL INC.
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

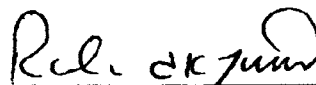
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 2.5 deg. C
Project #: None Given
Project Name: Quarterly Sampling
Project Location: Tatum, New Mexico

Sampling Date: 04/05/01
Receiving Date: 04/06/01
Analysis Date: 04/06/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
38917 ✓	Iva Source Well	0.666	0.599	0.141	1.05	0.824
38918 ✓	Iva MW 1	<0.001	<0.001	<0.001	<0.001	<0.001
38919 ✓	Iva MW 2	<0.001	<0.001	<0.001	<0.001	<0.001
38920 ✓	Mable Source Well	0.509	0.435	0.128	1.09	0.816
38921 ✓	Mable MW 3	<0.010	0.047	0.088	0.270	0.049
38922 ✓	Mable MW 4	<0.001	<0.001	0.006	0.015	0.004
38923 ✓	Bell MW 6	0.024	<0.001	0.002	0.001	<0.001
38924 ✓	Bell MW 13	<0.001	<0.001	<0.001	<0.001	<0.001
38925 ✓	Bell MW 14	0.047	<0.001	0.006	0.001	<0.001
38926 ✓	Bell MW 25	<0.001	<0.001	<0.001	<0.001	<0.001
38927 ✓	NBF MW 8	<0.001	<0.001	0.003	0.007	0.002

%IA	99	102	102	100	101
%EA	88	93	97	95	97
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030


Raland K. Tuttle

4-10-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL INC.
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

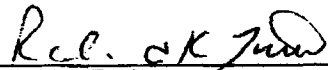
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 2.5 deg. C
Project #: None Given
Project Name: Quarterly Sampling
Project Location: Tatum, New Mexico

Sampling Date: 04/05/01
Receiving Date: 04/06/01
Analysis Date: 04/08/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
38928 ✓	NBF MW 15	2.57	1.46	0.308	0.821	0.481
38929 ✓	NBF MW 16	1.55	<0.005	0.101	0.104	0.039
38930 ✓	NBF MW 26	<0.001	<0.001	0.003	0.009	0.003
38931 ✓	Sohio #1 MW 10	2.08	0.031	0.179	0.342	0.074
38932 ✓	Sohio #1 MW 17	1.49	0.038	0.199	0.606	0.348
38933 ✓	Sohio #1 MW 18	1.41	0.179	0.095	0.449	0.306
38934 ✓	Sohio #1 MW 28	0.014	0.010	0.007	0.016	0.006
38935 ✓	Sohio #1 MW 30	0.007	0.008	0.005	0.010	0.004
38936 ✓	Sohio "A" MW 11	0.033	0.006	0.007	0.024	0.013
38937 ✓	Sohio "A" MW 19	0.325	0.007	0.009	0.030	0.016
38938 ✓	Sohio "A" MW 20	0.020	0.006	0.009	0.029	0.016
38939 ✓	Sohio "A" MW 27	0.324	0.012	0.016	0.069	0.035

%IA	90	93	94	93	93
%EA	88	92	91	89	94
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030


Raland K. Tuttle

4-11-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL INC.
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

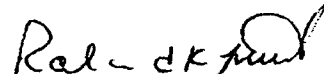
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 2.5 deg. C
Project #: None Given
Project Name: Quarterly Sampling
Project Location: Tatum, New Mexico

Sampling Date: 04/05/01
Receiving Date: 04/06/01
Analysis Date: 04/09/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
38940	Sohio "A" MW 31	0.105	0.008	0.013	0.042	0.023
38941 ✓	GS Source Well	0.417	0.148	0.091	0.582	0.254
38942 ✓	GS MW 12	0.394	0.022	0.180	0.767	0.200
38943 ✓	GS MW 21	0.014	0.011	0.012	0.021	0.009
38944 ✓	GS MW 22	0.085	0.038	0.060	0.076	0.099
38945 ✓	GS MW 29	0.009	0.007	0.007	0.022	0.011
38946 ✓	Sat 4 MW 9	<0.001	<0.001	<0.001	<0.001	<0.001
38947 ✓	23	<0.001	<0.001	<0.001	<0.001	<0.001
38948 ✓	24	<0.001	<0.001	<0.001	<0.001	<0.001

%IA	93	98	100	99	100
%EA	102	106	106	104	105
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030


Raland K. Tuttle

4-11-01
Date

**West 1-20 East
sa, Texas 79763**

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Quarterly Sampling

Project #:

Project Loc: Tatum, New Mexico

第 2 章

Fax No: (281) 646-8888

11. Jan.

Instructions:

Date		Time	Received by:
11/11/11		11:11	11/11/11

Date	Time
------	------

Date	Time
7-7-a	11:30

Date	Time
------	------

**0 West I-20 East,
USA, Texas 79763**
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Project Name: Quarterly Sampling

Company Name **Whole Earth Environmental, Inc.**

Project #:

Company Address: 19606 San Gabriel

Project Loc: Tatum, New Mexico

City/State/Zip: Houston, Tx. 77084

社説

Telephone No: (800) 854-4358

Fax No: (281) 648-8996

Sampler Signature:

[illegible]

Instructions:

Shed by:

Received by:

Date	Time
------	------

Time

shed by:

Date	Time
------	------

Time

Time

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

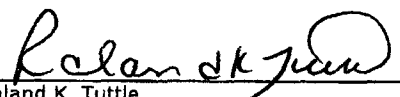
WHOLE EARTH ENVIRONMENTAL
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996
FAX: 505-397-3591 (motel)

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl 2 deg C
Project #: None Given
Project Name: Quarterly Sampling
Project Location: Tatum, N.M.

Sampling Date: See Below
Receiving Date: 07/07/01
Analysis Date: 07/07/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L	SAMPLE DATE
0101098-01	Iva Source Well	0.371	0.252	0.075	0.574	0.474	07/06/01
0101098-02	Iva MW 1	<0.001	<0.001	0.003	0.008	0.002	07/05/01
0101098-03	Iva MW 2	<0.001	<0.001	0.002	0.006	<0.001	07/05/01
0101098-04	Mable Source Well	0.459	0.343	0.118	0.928	0.735	07/05/01
0101098-05	Mable MW 3	0.003	0.007	0.025	0.057	0.021	07/05/01
0101098-06	Mable MW 4	0.004	0.014	0.006	0.014	0.005	07/05/01
0101098-07	Bell MW 6	0.056	<0.001	0.002	0.005	<0.001	07/05/01
0101098-08	Bell MW 13	0.001	<0.001	0.002	0.005	0.002	07/05/01
0101098-09	Bell MW 14	0.034	0.001	0.005	0.007	0.002	07/05/01
0101098-10	Bell MW 25	<0.001	<0.001	0.003	0.006	0.002	07/05/01
0101098-11	NBF MW 8	<0.001	<0.001	0.001	0.004	0.001	07/05/01
0101098-12	NBF MW 15	1.80	0.948	0.250	0.598	0.409	07/05/01
0101098-13	NBF MW 16	1.65	0.026	0.097	0.159	0.069	07/05/01
0101098-14	NBF MW 26	<0.001	<0.001	0.002	0.004	<0.001	07/05/01
0101098-15	Sohio #1 MW 10	2.20	<0.010	0.190	0.455	0.052	07/06/01
0101098-16	Sohio #1 MW 17	1.22	0.017	0.166	0.583	0.303	07/06/01
0101098-17	Sohio #1 MW 18	1.10	0.077	0.082	0.364	0.257	07/06/01
QUALITY CONTROL		0.110	0.108	0.112	0.224	0.114	
TRUE VALUE		0.100	0.100	0.100	0.200	0.100	
% INSTRUMENT ACCURACY		110	108	112	112	114	
SPIKED AMOUNT		0.100	0.100	0.100	0.200	0.100	
ORIGINAL SAMPLE		<0.001	<0.001	<0.001	<0.001	<0.001	
SPIKE		0.092	0.088	0.087	0.171	0.089	
SPIKE DUP		0.088	0.084	0.085	0.167	0.086	
% EXTRACTION ACCURACY		92	88	87	86	89	
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001	
RPD		4	4	2	2	3	

METHODS: EPA SW 846-8021B ,5030


Raland K. Tuttle

7-13-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

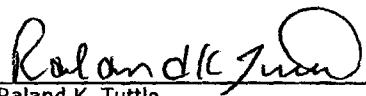
WHOLE EARTH ENVIRONMENTAL
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996
FAX: 505-397-3591 (motel)

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl 2 deg C
Project #: None Given
Project Name: Quarterly Sampling
Project Location: Tatum, N.M.

Sampling Date: 07/06/01
Receiving Date: 07/07/01
Analysis Date: 07/09/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
0101098-18	Sohio #1 MW 28	0.009	0.002	0.006	0.025	0.007
0101098-19	Sohio #1 MW 30	0.005	0.001	0.004	0.017	0.005
0101098-20	Sohio "A" MW 11	0.035	0.002	0.005	0.018	0.007
0101098-21	Sohio "A" MW 19	0.307	0.001	0.004	0.017	0.005
0101098-22	Sohio "A" MW 20	0.005	<0.001	0.004	0.014	0.004
0101098-23	Sohio "A" MW 27	0.073	<0.001	0.004	0.012	0.004
0101098-24	Sohio "A" MW 31	0.275	0.003	0.007	0.039	0.014
0101098-25	GS Source Well	0.318	0.180	0.133	0.722	0.368
0101098-26	GS MW 12	0.350	0.026	0.150	0.483	0.150
0101098-27	GS MW 21	0.009	0.002	0.007	0.004	0.002
0101098-28	GS MW 22	0.062	0.020	0.046	0.047	0.069
0101098-29	GS MW 29	0.005	0.002	0.004	0.005	0.004
0101098-30	Sat. 4 MW 9	<0.001	<0.001	0.001	0.003	<0.001
0101098-31	Satellite #4 MW 23	<0.001	<0.001	<0.001	<0.001	<0.001
0101098-32	Satellite #4 MW 24	<0.001	<0.001	<0.001	<0.001	<0.001
0101098-33	Collier MW 32	0.537	0.054	0.073	0.077	0.078
0101098-34	Collier MW 33	0.043	0.003	0.005	0.007	0.005
QUALITY CONTROL		0.092	0.098	0.095	0.186	0.097
TRUE VALUE		0.100	0.100	0.100	0.200	0.100
% INSTRUMENT ACCURACY		92	90	95	93	97
SPIKED AMOUNT		0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE		0.005	0.001	0.004	0.017	0.005
SPIKE		0.097	0.090	0.098	0.202	0.101
SPIKE DUP		0.097	0.091	0.090	0.185	0.090
% EXTRACTION ACCURACY		92	89	94	93	96
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001
RPD		0	1	8	9	11

METHODS: EPA SW 846-8021B ,5030


Roland K. Tuttle

7-13-01
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763

Phone: 916-563-1800
Fax: 916-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Project Name: Quarterly Sampling

Company Name: Whole Earth Environmental, Inc.

Project #:

Company Address: 19506 San Gabriel

Project Loc: Tatum, New Mexico

City/State/Zip: Houston, Tx. 77064

PO #:

Telephone No: (800) 854-4369

Fax No: (281) 648-4906

Sampler Signature:

FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative					Matrix			Analyze For									
				HCl as per Method 914	HNO ₃ (Trace)	NaOH	H ₂ SO ₄	None	Other (Specify)	Water	Sludge	Soil	TDS / Cl / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GROUNDRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/500	Standard TAT
NBF MW 8	9/24/01		2	X	X																
NBF MW 15	9/24/01		2	X	X																
NBF MW 16	9/24/01		2	X	X																
NBF MW 26	9/24/01		2	X	X																
Sohio #1 MW 10	9/24/01		2	X	X																
Sohio #1 MW 17	9/24/01		2	X	X																
Sohio #1 MW 18	9/24/01		2	X	X																
Sohio #1 MW 28	9/24/01		2	X	X																
Sohio #1 MW 30	9/24/01		2	X	X																
Sohio "A" MW 11	9/24/01		2	X	X																

Special Instructions:

Relinquished by

Date 9-26-01 Time 8:18

Received by

Date Time

Relinquished by

Date Time

Received by

Date Time

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENATL
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

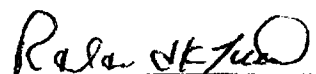
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 0.0 deg C
Project Name: Quarterly Sampling
Project #: None Given
Project Location: Tatum, NM

Sampling Date: 09/24/01
Receiving Date: 09/26/01
Analysis Date: 10/04/01

FLT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
0101642-01	Iva Source Well	0.430	0.204	0.048	0.486	0.359
0101642-02	Iva MW 1	<0.001	<0.001	<0.001	0.003	<0.001
0101642-03	Iva MW 2	0.004	0.003	0.001	0.006	0.004
0101642-04	Mable Source Well	0.550	0.425	0.148	1.36	0.904
0101642-05	Mable MW 3	0.053	0.163	0.173	0.826	0.154
0101642-06	Mable MW 4	0.039	0.038	0.102	0.273	0.091
0101642-07	Bell MW 6	0.038	<0.001	<0.001	<0.001	<0.001
0101642-08	Bell MW 13	0.002	0.002	0.003	0.009	0.003
0101642-09	Bell MW 14	0.054	0.001	0.005	0.011	0.004

QUALITY CONTROL	0.091	0.090	0.088	0.170	0.087
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% IA	91	90	88	85	87
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.001	<0.001	<0.001	<0.001	<0.001
SPIKE	0.093	0.089	0.082	0.160	0.077
SPIKE DUP	0.086	0.104	0.090	0.171	0.087
%EA	86	104	90	86	87
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001
RPD	4.51	0.79	2.97	1.26	1.69

METHODS: SW 846-8021B, 5030


Ralanda K. Tuttle

10-05-01
Date

ENVIRONMENTAL LAB OF , INC.

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HOUSTON, TEXAS 77084
FAX: 281-646-8996

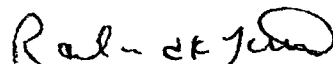
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 0.0 deg C
Project Name: Quarterly Sampling
Project #: None Given
Project Location: Tatum, NM

Sampling Date: 09/24/01
Receiving Date: 09/26/01
Analysis Date: 10/04/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
0101642-10	Bell MW 25	<0.001	<0.001	0.005	0.016	0.006
0101642-11	NBF MW 8	0.041	0.044	0.018	0.040	0.026
0101642-12	NBF MW 15	2.52	1.34	0.331	0.960	0.562
0101642-13	NBF MW 16	1.39	0.001	0.058	0.041	0.005
0101642-14	NBF MW 26	0.027	0.002	0.003	0.008	0.003
0101642-15	Sohio #1 MW 10	2.15	0.131	0.189	0.510	0.137
0101642-16	Sohio #1 MW 17	1.03	0.035	0.035	0.381	0.108
0101642-17	Sohio #1 MW 18	2.81	2.22	0.554	3.15	1.65
0101642-18	Sohio #1 MW 28	<0.005	0.031	0.010	0.020	0.014

QUALITY CONTROL	0.099	0.099	0.092	0.179	0.086
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% IA	99	99	92	90	86
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.001	<0.001	0.005	0.016	0.006
SPIKE	0.093	0.092	0.089	0.181	0.087
SPIKE DUP	0.090	0.089	0.086	0.173	0.083
%EA	93	90	84	83	81
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001
RPD	4	4	4	5	5

METHODS: SW 846-8021B, 5030


Randal K. Tuttle

10-5-01
Date

ENVIRONMENTAL LAB OF , INC.

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HOUSTON, TEXAS 77084
FAX: 281-646-8996

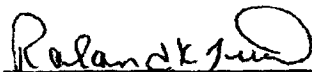
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 0.0 deg C
Project Name: Quarterly Sampling
Project #: None Given
Project Location: Tatum, NM

Sampling Date: 09/24/01
Receiving Date: 09/26/01
Analysis Date: 10/04/01

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
0101642-19	Sohio #1 MW 30	0.040	0.033	0.007	0.045	0.010
0101642-20	Sohio "A" MW 11	0.045	0.015	0.007	0.034	0.020
0101642-21	Sohio "A" MW 19	0.250	0.013	0.006	0.032	0.016
0101642-22	Sohio "A" MW 20	0.037	0.025	0.011	0.052	0.026
0101642-23	Sohio "A" MW 27	0.123	0.036	0.018	0.082	0.039
0101642-24	Sohio "A" MW 31	0.406	0.038	0.014	0.083	0.040
0101642-25	GS Source Well	0.350	0.141	0.097	0.430	0.226
0101642-26	GS MW 12	0.533	0.078	0.267	1.12	0.309
0101642-27	GS MW 21	0.016	0.009	0.012	0.015	0.006
0101642-28	GS MW 22	0.041	0.019	0.038	0.032	0.042
0101642-29	GS MW 29	0.016	0.007	0.007	0.015	0.007

QUALITY CONTROL	0.104	0.100	0.092	0.185	0.088
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% IA	104	100	92	92	88
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	0.037	0.025	0.011	0.052	0.026
SPIKE	0.155	0.130	0.111	0.270	0.126
SPIKE DUP	0.129	0.114	0.098	0.236	0.113
%EA	92	89	87	92	86
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001
RPD	25	16	14	17	15

METHODS: SW 846-8021B, 5030

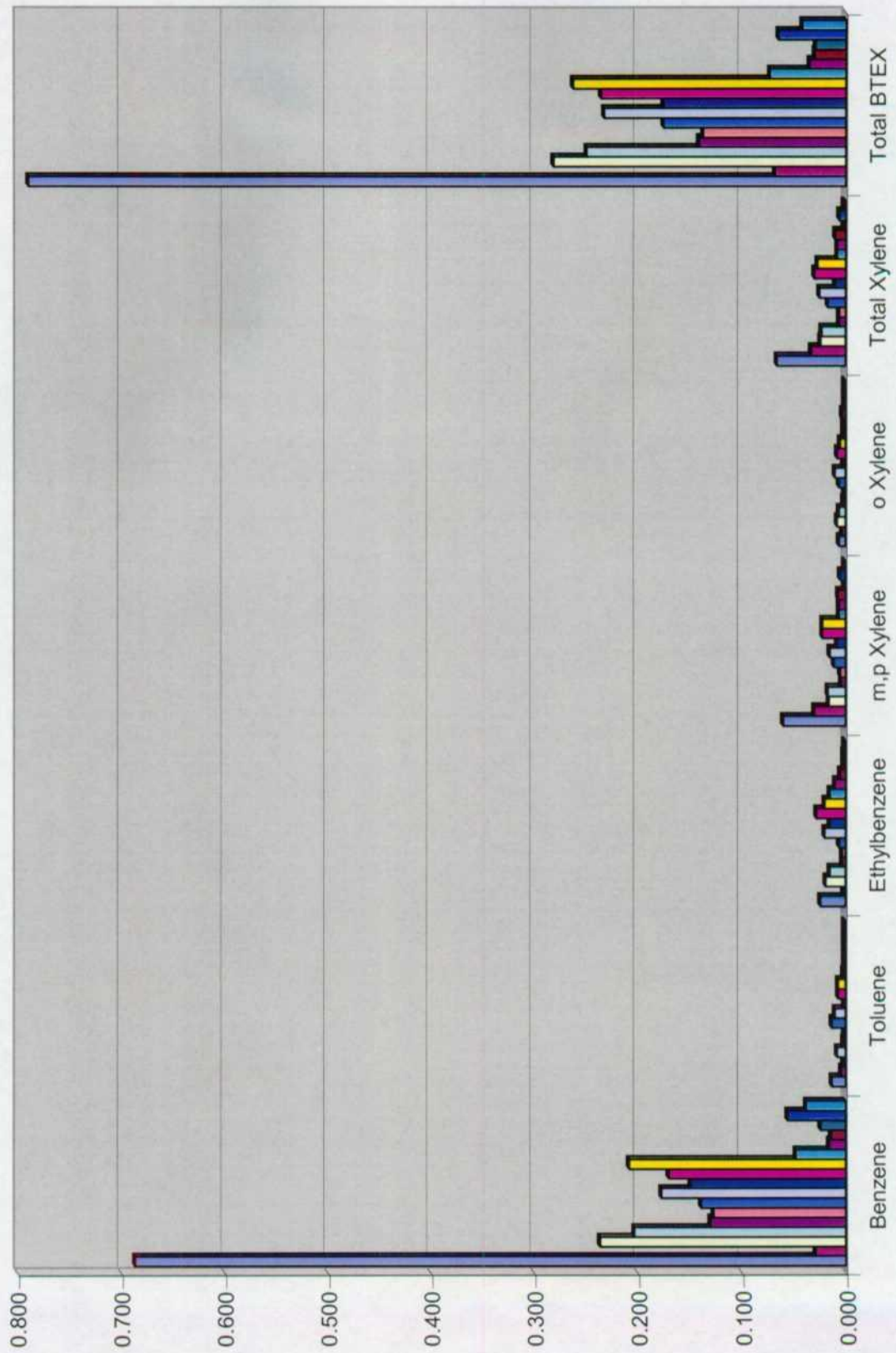

Roland K. Tuttle

10-5-01
Date

Monitor Well # 6
Bell State "A"
Sampling Results

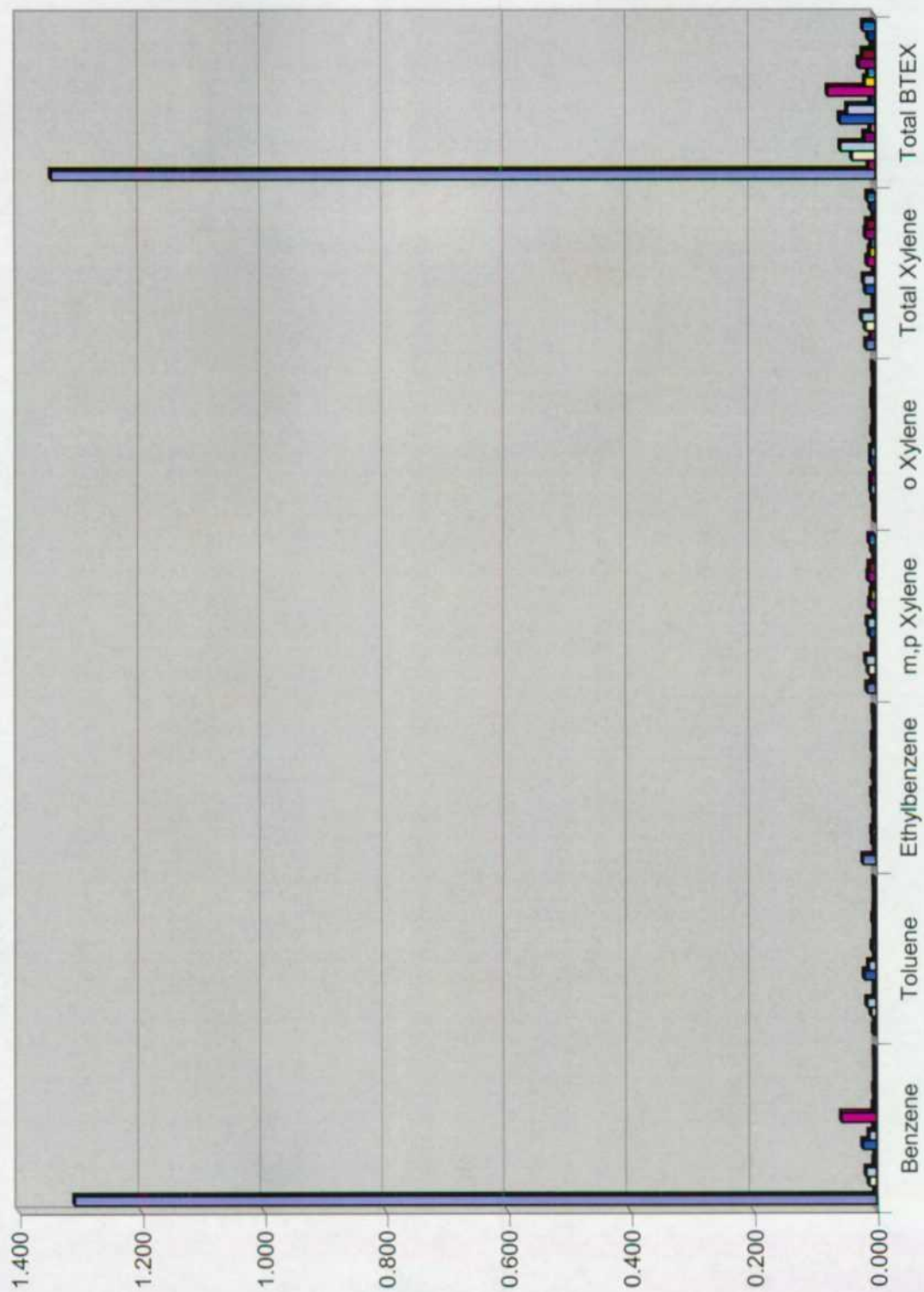
Lab. #	12481	13179	14062	14661	15593	16600	17431	18593	20599	22765	25167	28440	31507	36136	38923	0101098-07	0101642-07
Sample Date	9/5/97	12/3/97	3/23/98	6/25/98	10/1/98	1/6/99	4/5/99	7/14/99	10/6/99	1/8/00	4/13/00	7/20/00	9/26/00	1/5/01	4/5/01	7/5/01	9/26/01
Benzene	0.687	0.029	0.236	0.203	0.130	0.127	0.139	0.177	0.149	0.170	0.208	0.048	0.016	0.014	0.024	0.056	0.038
Toluene	0.013	0.004	0.002	0.008	0.002	0.001	0.013	0.010	0.001	0.007	0.007	0.002	0.001	0.001	0.001	0.001	0.001
Ethylbenzene	0.024	0.002	0.019	0.015	0.003	0.003	0.006	0.020	0.015	0.028	0.020	0.015	0.010	0.005	0.002	0.002	0.001
m,p Xylene	0.060	0.03	0.016	0.017	0.004	0.005	0.011	0.015	0.008	0.022	0.022	0.006	0.006	0.007	0.001	0.005	0.001
o Xylene	0.006	0.003	0.008	0.006	0.002	0.001	0.006	0.010	0.002	0.008	0.005	0.002	0.002	0.003	0.001	0.001	0.001
Total Xylene	0.066	0.033	0.024	0.023	0.006	0.006	0.017	0.025	0.010	0.030	0.027	0.008	0.008	0.010	0.002	0.006	0.002
Total BTEX	0.790	0.068	0.281	0.249	0.141	0.137	0.175	0.232	0.175	0.235	0.262	0.073	0.035	0.030	0.029	0.065	0.042

9/5/97	12/3/97	3/23/98	6/25/98	10/1/98	1/6/99	4/5/99	7/14/99	10/6/99	1/8/00	4/13/00	7/20/00	9/26/00	1/5/01	4/5/01	7/5/01	9/26/01
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Monitor Well # 13
Bell State "A"
Sampling Results

Lab. #	12731	13180	13180	14667	15599	16606	17432	18599	20609	22779	25168	28443	31487	36140	38924	0101098-08	0101642-08
Sample Date	9/5/97	12/3/97	3/23/98	6/25/98	10/1/98	1/6/99	4/5/99	7/14/99	10/6/99	1/8/00	4/13/00	7/20/00	9/26/00	1/5/01	4/5/01	7/7/01	9/26/01
Benzene	1.309	0.002	0.011	0.016	0.003	0.001	0.021	0.011	0.003	0.056	0.004	0.002	0.003	0.001	0.001	0.001	0.002
Toluene	0.003	0.001	0.007	0.014	0.002	0.001	0.018	0.011	0.001	0.005	0.002	0.002	0.004	0.002	0.001	0.001	0.002
Ethylbenzene	0.02	0.001	0.004	0.005	0.002	0.001	0.003	0.005	0.001	0.004	0.002	0.001	0.004	0.004	0.001	0.002	0.003
m,p Xylene	0.013	0.005	0.011	0.015	0.004	0.003	0.009	0.012	0.001	0.008	0.006	0.004	0.011	0.009	0.001	0.005	0.009
o Xylene	0.001	0.001	0.004	0.006	0.006	0.001	0.006	0.006	0.001	0.004	0.002	0.002	0.004	0.004	0.001	0.002	0.003
Total Xylene	0.014	0.006	0.015	0.021	0.002	0.002	0.015	0.018	0.002	0.012	0.008	0.006	0.015	0.013	0.002	0.007	0.012
Total BTEX	1.346	0.010	0.037	0.056	0.017	0.007	0.057	0.045	0.007	0.077	0.016	0.011	0.026	0.020	0.005	0.011	0.019

[illegible]

Monitor Well # 14
Bell State "A"
Sampling Results

Lab. #	12732	13181	14048	14668	15607	16607	17433	18600	20610	22770	25169	28444	31488	36141	38925	01010098-09	0101642-09
Sample Date	9/5/97	12/3/97	3/23/98	6/25/98	10/1/98	1/6/99	4/1/99	7/14/99	10/6/99	1/8/00	4/13/00	7/20/00	9/26/00	1/5/00	4/5/01	7/7/01	9/26/01
Benzene	0.001	1.147	0.904	0.735	0.175	0.154	0.108	0.132	0.109	0.003	0.195	0.038	0.024	0.024	0.047	0.034	0.054
Toluene	0.001	0.007	0.002	0.009	0.002	0.001	0.015	0.005	0.005	0.002	0.004	0.002	0.001	0.001	0.001	0.001	0.001
Ethylbenzene	0.001	0.017	0.004	0.005	0.001	0.002	0.004	0.002	0.004	0.002	0.004	0.003	0.006	0.004	0.006	0.005	0.005
m,p Xylene	0.001	0.010	0.006	0.011	0.002	0.003	0.009	0.005	0.024	0.006	0.009	0.005	0.011	0.007	0.001	0.007	0.011
o Xylene	0.001	0.002	0.002	0.004	0.004	0.001	0.005	0.002	0.013	0.002	0.003	0.002	0.004	0.003	0.001	0.002	0.004
Total Xylene	0.002	0.012	0.008	0.015	0.001	0.001	0.014	0.007	0.037	0.008	0.012	0.007	0.015	0.010	0.002	0.009	0.015
Total BTEX	0.005	1.183	0.918	0.764	0.184	0.161	0.141	0.146	0.155	0.015	0.215	0.050	0.046	0.039	0.056	0.049	0.075

Monitor Well # 25
Bell State "A"
Sampling Results

Lab. #	17265	18601	20611	22784	25170	28454	31489	36152	38926	0101098-10	101642.1
Sample Date	4/1/99	7/14/99	10/6/99	1/8/00	4/13/00	7/20/00	9/26/00	1/5/01	4/5/01	7/7/01	9/26/01
Benzene	0.006	0.012	0.001	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001
Toluene	0.004	0.010	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001
Ethylbenzene	0.004	0.002	0.001	0.001	0.002	0.002	0.003	0.001	0.001	0.003	0.005
m,p Xylene	0.005	0.006	0.001	0.004	0.005	0.005	0.010	0.001	0.001	0.006	0.016
o Xylene	0.004	0.004	0.001	0.002	0.002	0.002	0.004	0.001	0.001	0.002	0.006
Total Xylene	0.009	0.010	0.002	0.006	0.007	0.007	0.014	0.002	0.002	0.008	0.022
Total BTEX	0.023	0.034	0.005	0.010	0.013	0.011	0.019	0.005	0.005	0.013	0.029

HWY 380

BELL "A"

