TRC

Customer-Focused Solutions

May 24, 2005

TRC Project No. 42-0138-04

Mr. Don Hwang
Alameda County Health Services
1131 Harbor Bay Parkway, Suite 250
Oakland, California 94502

SITE: 76 SERVICE STATION NO. 3135
845 66th AVENUE
OAKLAND, CALIFORNIA
ALAMEDA COUNTY

SUBJECT: DUAL-PHASE EXTRACTION REPORT

Dear Mr. Hwang:

On behalf of ConocoPhillips Company (ConocoPhillips), TRC submits this report of dual-phase extraction (DPE) activities for ConocoPhillips Station No. 3135, located at 845 66th Avenue in Oakland, California. This action was performed in accordance with the workplan submitted by TRC on September 23, 2004. The work was conducted on April 10, 2005, and consisted of 8 continuous hours of DPE.

1.0 FIELD ACTIVITIES

1.1 Scope of Work

An 8-hour DPE event was performed on April 10, 2005. The DPE event was implemented to attempt to remove residual vapor-phase, adsorbed-phase and dissolved-phase hydrocarbons remaining in site soils. The event was originally scheduled to last 24-hours, but was terminated after 8 hours due to insufficient hydrocarbon recovery.

1.2 Pre-Field Activities

A notification letter dated March 30, 2005 was sent to the Bay Area Air Quality Management District (BAAQMD). A site-specific health and safety plan was prepared for TRC personnel.

1.3 Procedures

TRC used a mobile treatment system (MTS) to extract hydrocarbon vapors from monitoring well MW-6. Liquid- and vapor-phase hydrocarbons were removed from the extraction well and separated at the MTS. The liquids were automatically transferred into an aboveground storage

tank and the hydrocarbon vapors were abated using a catalytic/thermal oxidizer. The exclusion zone was constructed with consideration of the station refueling activities. As a result, refueling activities continued without interruption during the DPE event.

The extraction well was fitted with a custom wellhead seal and connected with flexible hose to convey soil vapors to the MTS unit. The MTS consists of a truck-mounted high vacuum (28 inches of Hg) liquid ring pump and thermal oxidizer, moisture knockout tank, air particulate filters, and all necessary piping and gauges. Abated soil vapors were discharged to the atmosphere.

A TRC operator was onsite throughout the course of the event to record system airflow rates [cubic feet per minute (cfm)], applied vacuum in the conveyance piping [inches of mercury (inches Hg)], and influent soil vapor screening data [parts per million by volume (ppmv)]. A Horiba™ organic vapor analyzer (OVA) was used to screen influent soil vapor concentrations.

Three influent soil vapor samples were collected in Tedlar™ bags and submitted to a certified analytical laboratory under chain-of-custody documentation. Samples were analyzed for the presence of total petroleum hydrocarbons calculated as gasoline (TPH-g), benzene, toluene, ethyl benzene, and total xylenes (BTEX compounds), methyl tertiary butyl ether (MTBE), and ethanol using Environmental Protection Agency (EPA) Method 8260B.

1.4 Results

During the event, the MTS unit operated continuously for a total of 8 hours. Extraction was limited to well MW-6 as it had exhibited consistently high dissolved-phase hydrocarbon concentrations during monitoring and sampling events.

Refer to Table 1 for tabulated MTS data, and Appendix A for field data sheets. The average flow rate was 6 cfm and average applied vacuum was 23 inches Hg. OVA screening for influent concentrations of total petroleum hydrocarbons was performed during the event. Total petroleum hydrocarbon concentrations were measured with the OVA at the beginning and conclusion of the event at 780 ppmv and 400 ppmv, respectively. Total estimated hydrocarbon mass removal and hydrocarbon concentration are plotted versus time in Figure 3.

Laboratory analytical results are presented in Table 2, *Summary Sheet.* All certified analytical reports and chain-of-custody documentation are presented in Appendix B. Vapor-phase TPH-g concentrations ranged from 310 ppmv to 20 ppmv. Benzene concentrations ranged from 0.87 ppmv 0.53 ppmv. MTBE concentrations range from 0.88 ppmv to 0.18 ppmv. Laboratory analytical TPH-g and benzene concentrations are plotted versus time in Figure 4. Vapor-phase TPH and benzene concentrations decreased during the event.

Influent soil vapor concentration data (measured every 30 minutes throughout the course of the event) was used to calculate mass removed during the DPE event. Table 1 presents the results.

Approximately 0.37 pounds of hydrocarbons were removed from the extraction wells in 8 hours of operation. A total of 5,000 gallons of groundwater were removed from the subsurface.

1.5 Waste Disposal

Groundwater generated during the course of DPE activities was transported by Onyx Environmental to the ConocoPhillips refinery in Rodeo, California for treatment and disposal. A copy of the waste manifest is included in Appendix C.

2.0 EVALUATION OF FINDINGS

The 8-hour DPE event was not successful at removing vapor-phase petroleum hydrocarbons from the subsurface. Influent vapor concentrations were low and remained low throughout the course of the event. Due to the low permeability soils in the subsurface, flow rates could not be elevated to a productive level.

The influent concentrations and mass removal rates suggest that DPE is not a viable remedial alternative for removing source hydrocarbons from this site.

Dissolved-phase hydrocarbon concentrations in the extraction well (MW-6) were lower after the MTS event. The decrease could be a result of the of the groundwater extraction activity, but the data is not conclusive.

3.0 RECOMMENDATIONS

Given the lack of productivity of DPE activities during this test, TRC recommends that DPE not be considered a viable potential remediation technique at the site.

TRC recommends investigation of alternative remedial methods to obtain site closure.

4.0 LIST OF ATTACHMENTS

Figures:
1) Vicinity Map
2) Site Plan
3) System Concentration and Hydrocarbon Recovery Versus Time
4) Vapor-Phase TPH and Benzene Concentrations Versus Time

Tables:
1) Mobile Treatment System Vacuum Extraction Data
2) Vacuum Extraction Event Report - Summary Sheet

Appendices:
A) MTS Field Sheets
B) Laboratory Analytical Reports

C) Waste Manifest

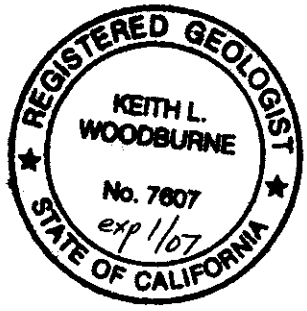
Should you have any questions regarding this report, please contact us at (925) 688-1200.

Sincerely,
TRC

Mark Trevor
Project Geologist

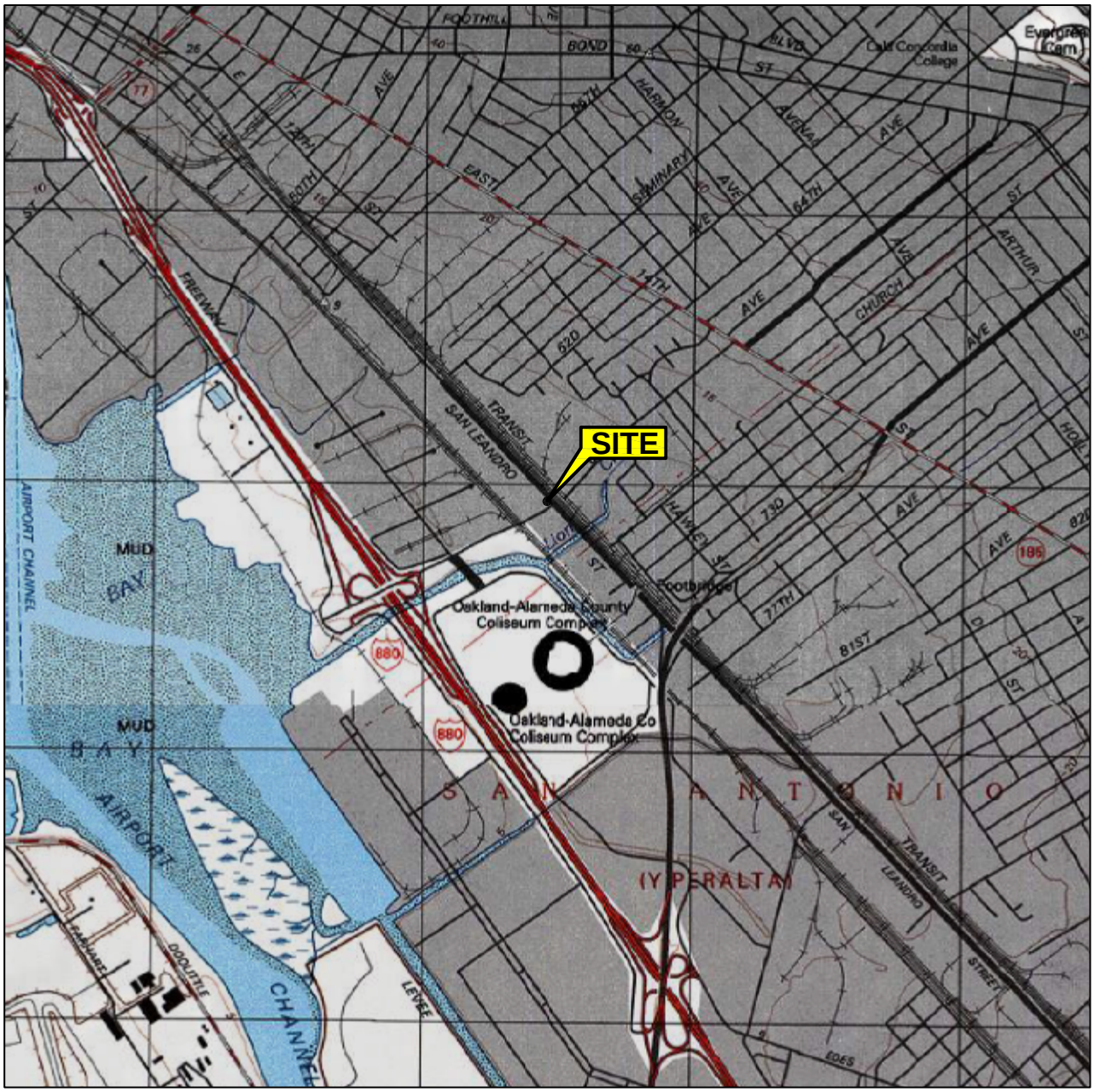
Keith Woodburne, R.G.
Senior Project Geologist

Roger Batra
Senior Project Manager



cc: Mr. Thomas Kosel, ConocoPhillips (electronic upload only)

FIGURES



SOURCE:

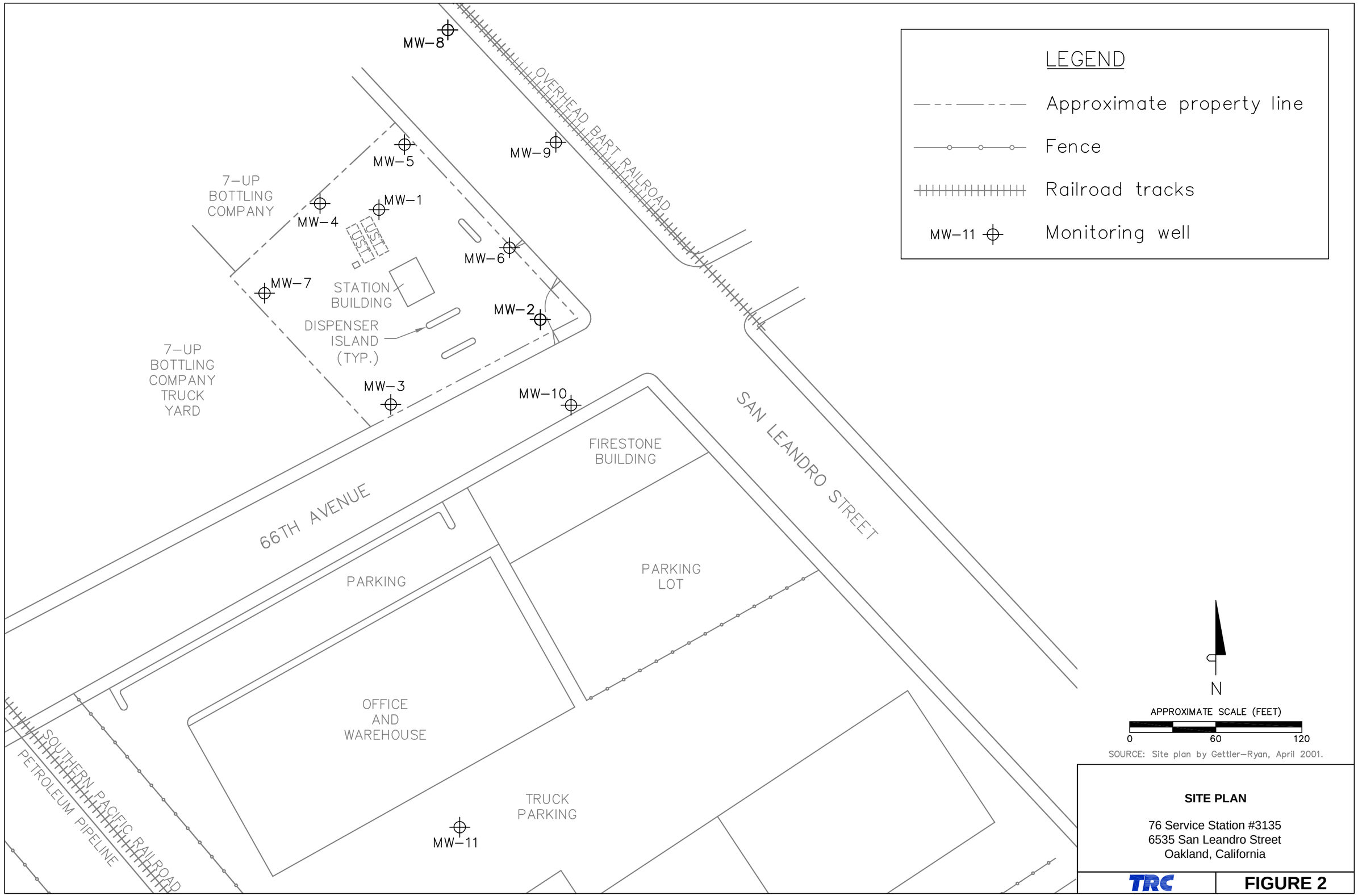
United States Geological Survey
7.5 Minute Topographic Maps:
Oakland East and San Leandro
Quadrangles
California

VICINITY MAP

76 Service Station #3135
6535 San Leandro Street
Oakland, California

TRC

FIGURE 1



SOURCE: Site plan by Gettler–Ryan, April 2001.

SITE PLAN

76 Service Station #3135
6535 San Leandro Street
Oakland, California

TRC

FIGURE 2

SYSTEM CONCENTRATION AND HYDROCARBON RECOVERY VERSUS TIME

ConocoPhillips 3135

845 66th Avenue, Oakland CA

April 10, 2005

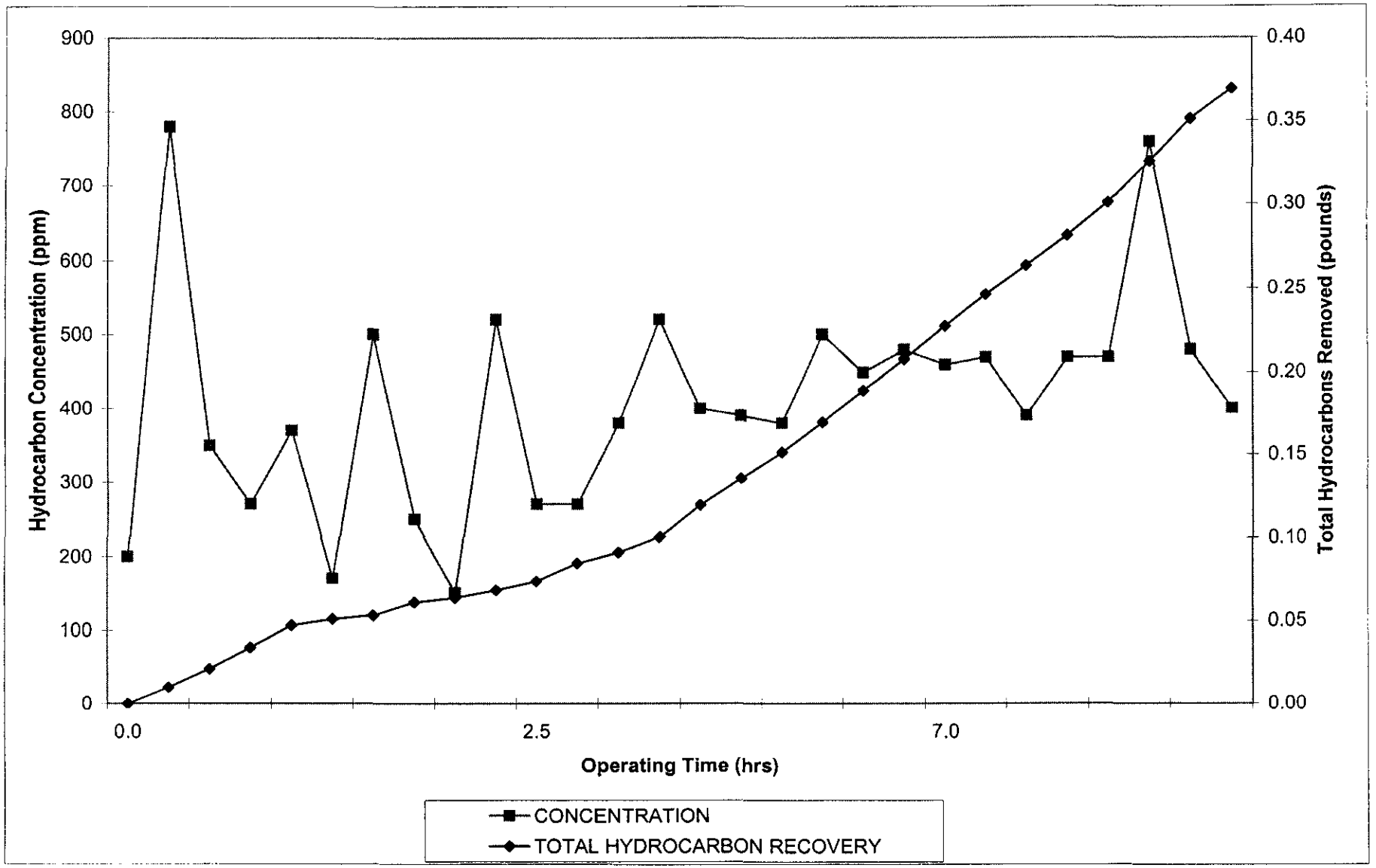


FIGURE 3

Vapor - Phase TPH and Benzene Concentrations Versus Time
ConocoPhillips 3135
845 66th Avenue, Oakland, CA
April 10, 2005

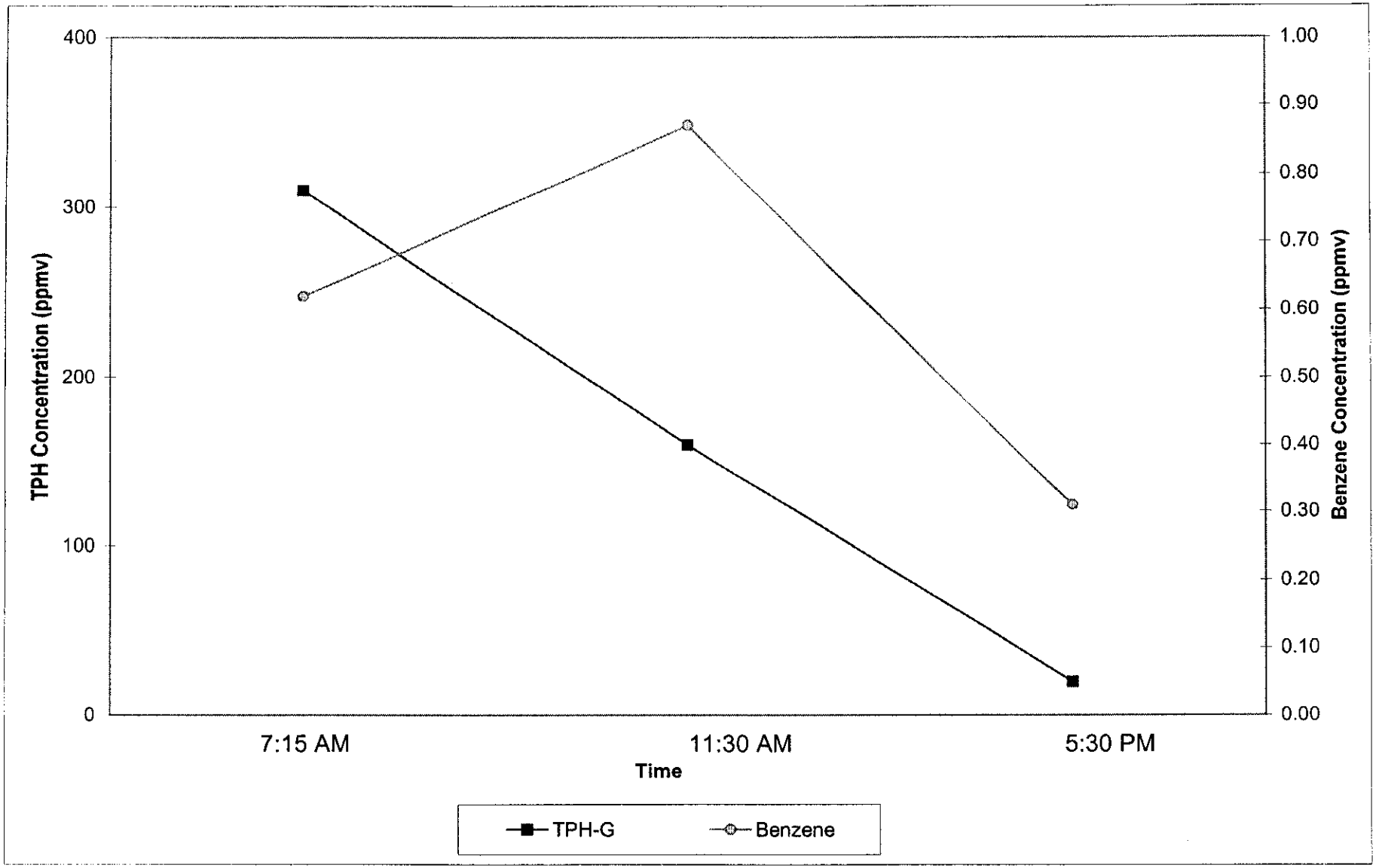


FIGURE 4

TABLES

Table 1

MOBILE TREATMENT SYSTEM VACUUM EXTRACTION DATA

ConocoPhillips 3135

845 66th Avenue, Oakland CA

April 10, 2005

				TOTAL SYSTEM MEASUREMENTS					
							CUMULATIVE HYDROCARBON RECOVERY		
DATE	TIME	ELAPSED TIME (MINUTES)	TOTAL TIME (HOURS)	INLET BLOWER VACUUM (IN OF Hg)	SYSTEM INLET FLOW* (CFM)	CONCENTRATION** (PPMV)	POUNDS	GALLONS*	EXTRACTION WELL OPEN
10-Apr-05	7:00	0.0	0.0	24.5	6	200	0.00	0.00	MW-6
10-Apr-05	7:15	15.00	0.25	26.0	6	780	0.01	0.00	MW-6
10-Apr-05	7:30	15.00	0.50	25.5	6	350	0.02	0.00	MW-6
10-Apr-05	8:00	30.00	1.00	24.1	6	270	0.03	0.01	MW-6
10-Apr-05	8:30	30.00	1.50	23.0	6	370	0.05	0.01	MW-6
10-Apr-05	8:40	10.00	1.67	22.5	6	170	0.05	0.01	MW-6
10-Apr-05	8:45	5.00	1.75	22.0	6	500	0.05	0.01	MW-6
10-Apr-05	9:00	15.00	2.00	21.6	6	250	0.06	0.01	MW-6
10-Apr-05	9:10	10.00	2.17	20.5	6	150	0.06	0.01	MW-6
10-Apr-05	9:20	10.00	2.33	20.6	6	520	0.07	0.01	MW-6
10-Apr-05	9:30	10.00	2.50	20.6	6	270	0.07	0.01	MW-6
10-Apr-05	10:00	30.00	3.00	20.4	6	270	0.08	0.01	MW-6
10-Apr-05	10:15	15.00	3.25	25.0	6	380	0.09	0.01	MW-6
10-Apr-05	10:30	15.00	3.50	24.5	6	520	0.10	0.02	MW-6
10-Apr-05	11:00	30.00	4.00	23.3	6	400	0.12	0.02	MW-6
10-Apr-05	11:30	30.00	4.50	21.5	6	390	0.14	0.02	MW-6
10-Apr-05	12:00	30.00	5.00	20.5	6	380	0.15	0.02	MW-6
10-Apr-05	12:30	30.00	5.50	23.0	6	500	0.17	0.03	MW-6
10-Apr-05	13:00	30.00	6.00	22.0	6	450	0.19	0.03	MW-6
10-Apr-05	13:30	30.00	6.50	24.3	6	480	0.21	0.03	MW-6
10-Apr-05	14:00	30.00	7.00	23.7	6	460	0.23	0.04	MW-6
10-Apr-05	14:30	30.00	7.50	22.2	6	470	0.25	0.04	MW-6
10-Apr-05	15:00	30.00	8.00	22.2	6	390	0.26	0.04	MW-6
10-Apr-05	15:30	30.00	8.50	22.0	6	470	0.28	0.04	MW-6
10-Apr-05	16:00	30.00	9.00	22.0	6	470	0.30	0.05	MW-6
10-Apr-05	16:30	30.00	9.50	24.5	6	760	0.33	0.05	MW-6
10-Apr-05	17:00	30.00	10.00	24.0	6	480	0.35	0.06	MW-6
10-Apr-05	17:30	30.00	10.50	23.0	6	400	0.37	0.06	MW-6
				TOTAL HYDROCARBONS RECOVERED			0.37	0.06	
				TOTAL WATER RECOVERED (GALLONS)			5,000		

Notes

TPH = total petroleum hydrocarbons

CFM = cubic feet per minute

IN of Hg = inches of mercury

ppmv = i per million by volume

-- = Unit down for extraction well transfer

* = Based on hydrocarbon density of 6.26 pounds per gallon.

** = Based on field Horiba OVA readings.

Table 2

TRC

Vacuum Extraction Event Report — *Summary Sheet*

76 Station 3135
845 66th Avenue
Oakland, California

BAAQMD # 262
NPDES# NA

VACUUM EXTRACTION PERFORMANCE

Date(s) of Event(s):	**10-Apr-05**
Total Operating Hours:	**8.00**
Technology Used:	**High-vacuum liquid-ring pump with Thermal Oxidizer**
Total Sytem Max/Min Influent Vapor Concentration (ppmv):	**780 / 150**
Total System Max/Min Flow Rate (cfm):	**6 / 6**
Total Max/Min Vacuum (in Hg):	**26.0 / 20.4**
Total Recovery Volume by Vapor (pounds/gallons):	**0.37 / 0.06**

LABORATORY ANALYSIS OF VAPOR SAMPLES

			Sample Result (ppmv)						
Well ID	Date	Time Sampled	TPH-G *	Benzene*	Toluene*	Ethyl Benzene*	Total Xylenes*	MTBE*	Comments
MW-6	10-Apr-05	7:15 AM	310	ND<0.62	1.8	1.7	5.3	ND<0.28	Influent
MW-6	10-Apr-05	11:.30 AM	160	0.87	1.8	2.3	8.6	0.88	Influent
MW-6	10-Apr-05	5:30 PM	160	0.53	0.89	1.2	4.1	0.18	Influent

LABORATORY ANALYSIS OF GROUNDWATER SAMPLES

			Sample Result (ug/L)						
Well ID	Date	Time Sampled	TPH-G *	Benzene*	Toluene*	Ethyl Benzene*	Total Xylenes*	MTBE*	Comments
MW-6	14-Feb-05	12:36 PM	6,600	44	9	640	750	160	pre MTS
MW-1	09-May-05	2:12 PM	5,400	26	12	480	1,900	35	post MTS

ADDITIONAL INFORMATION:

* = Analyzed by EPA method 8260B
PPMV = parts per million by volume
ug/L = micrograms per liter
cfm = cubic feet per minute
in Hg = inches of mercury
TPH-g = total petroleum hydrocarbons as gasoline
MtBE = Methyl tert-Butyl Ether
N.D. = not detectable
NA = not tested

Note: Total system concentration and flow measurements are taken on the pressure side of the blower after dilution.

Prepared by: _____ Mark Trevor, Project Geologist

TRC Project No: 42-0138-04

APPENDIX A

TRC MTS FIELD DATA

Customer-Focused Solutions

Client: CONOCO PHILLIPS
Site: (76) 3135
Date: 4/10/05
MTS Unit #: 0934
Laptop Unit #: 3
Sheet: 1 / 1
Project No.: 42-0138-04
Task No.: UA03
Technician: LEE RG

CUMULATIVE WELLS		
TOTALIZER START (gallons):	Time:	
TOTALIZER END (gallons):	Time:	
STACK HC CONCENTRATION (ppmv): Manifold	Time:	

EXTRACTION WELL # 1	
WELL ID:	MW-6
DTW (ft):	5.01'
DEPTH to FP (ft):	– NO –
TOTAL DEPTH(ft.):	25.65
CASING DIAM. (in):	2"

EXTRACTION WELL # 2: (blank)

Time (24 hr.)	VACUUM SIDE DATA: Total Well Flow DP (in. H2O)	Total Well Flow Rate (scfm)	Total Well Inf. Conc. (ppmv)	Manifold Vacuum (in. of Hg)	H2O Temp	Temp	PRESSURE SIDE DATA: System Flow DP (in. H2O)	System Flow Rate (scfm)	System Inf. Conc. (ppm)	System Temp (deg. F)	Extraction wells open:	EXTRACTION WELL # 1: Flow DP (in. H2O)	Flow Rate (scfm)	HC Conc. (ppmv)	Vacuum (in. of Hg)	Stinger Depth (ft)	EXTRACTION WELL # 2: Flow DP (in. H2O)	Flow Rate (scfm)	HC Conc. (ppmv)	Vacuum (in. of Hg)	Stinger Depth (ft)
7:00	62°			24.5	71	96	.01	6	200	1449	#1		Dilution was open								
7:15	63			26.0	75	86'	.01	6	780	1449						13'					
0730	65			25.5	82	88	.01	6	350	1447						↓					
8:00	65			24.1	105°	85°	.01	6	270	1449						↓					
8:30	65°			23.0	120°	105°	.01	6	370	1450						15'	Nearly Dead Heading				
8:40	—			22.5	—	—	.01	6	170	1449						15'	5-10 min Later				
8:45	—			22.0	130°	110°	.01	6	500	1448						10'					
9:00	66°			21.6	137°	132°	.01	6	250	1448						10'	Venting at wellhead				
9:10	66°			20.5	145°	135°	.01	6	150	1449						10'	NO Venting				
9:20	66°			20.6	148°	146°	.01	6	520	1451						7'	Venting				
9:30	66°			20.6	153°	156°	.01	6	270	1448						7'	Venting				
10:00	66°			20.4	160°	158	.01	6	270	1448						7'					
10:15	66°			25.0	86°	132	.01	6	380	1448						13'	(cooled down some H2O)				
10:30	67°			24.5	100°	122	.01	6	520	1448											
11:00	67°			23.3	117°	115°	.01	6	400	1445											
11:30	67			21.5	140	130	.01	6	390	1454											
1200	65			20.5	150	151	.01	6	380	1444											
1230	65			23.0	118	119	.01	6	500	1446											
1300	65			22.0	135	133	.01	6	450	1447											
1330	68°			24.3	100	136	.01	6	480	1457						↓					

NOTES: Trying to find optimum (Flow + PPM) 7:00 Am to 10 Am (RG Stinger Depths).
Taking on over 350 gals an hr Expect this job to be 12hrs. Lee called.
Took Starting Teddlar AND teddlar after 4hrs

Client: Conoco Phillips
Site: 26 3135
Date: 4/10/05

TRC MTS FIELD DATA

Customer-Focused Solutions

MTS Unit #: 0934
Laptop Unit #: 3

Sheet: 2 / 1
Project No.: 42 0138 04
Task No.: UA03
Technician: RG Lee

CUMULATIVE WELLS		EXTRACTION WELL # 1		EXTRACTION WELL # 2
TOTALIZER START (gallons):	Time:	WELL ID:	MW-6	
TOTALIZER END (gallons):	Time:	DTW (ft):		
STACK HC CONCENTRATION (ppmv):	Time:	DEPTH to FP (ft):		
		TOTAL DEPTH(ft.):		
		CASING DIAM. (in):	2"	

	VACUUM SIDE DATA						PRESSURE SIDE DATA					EXTRACTION WELL # 1					EXTRACTION WELL # 2				
Time (24 hr.)	Total Well Flow DP (in. H2O)	Total Well Flow Rate (scfm)	Total Well Inf. Conc. (ppmv)	Manifold Vacuum (in. of Hg)	#20 Temp	Temp	System Flow DP (in. H2O)	System Flow Rate (scfm)	System Inf. Conc. (ppm)	System Temp (deg. F)	Extraction wells open:	Flow DP (in. H2O)	Flow Rate (scfm)	HC Conc. (ppmv)	Vacuum (in. of Hg)	Stinger Depth (ft)	Flow DP (in. H2O)	Flow Rate (scfm)	HC Conc. (ppmv)	Vacuum (in. of Hg)	Stinger Depth (ft)
1400	66			23.7	113	112	.01	6	460	1452	1	VENTILATE AT WELL				13'					
1430	66			22.2	128	120	.01	6	470	1448		↓									
1500	66			22.2	120	138°	.01	6	390	1457										8.0	
1530	66			22.0	125	110	.01	6	470	1453		NOT VENTING								6.0	
1600	67			22.0	130	110	.01	6	470	1451										5.0	
1630	66			24.5	125	100	.01	6	760	1452										7.0	
1700	65			24.0	120	116	.01	6	480	1453										6.0	
1730				23.0	125	118	.01	6	400	1450										6.0	

NOTES: 17:30 Baker tank full Took Effluent Sample and Field Technician!

APPENDIX B

SEVERN TRENT STL

Submission#: 2005-04-0262

TRC/Alton Geoscience-Concord

April 21, 2005

1590 Solano Way
Concord, CA 94520

Attn.: Amy Wilson
Project: Conoco Phillips #3135
Site: 845 66th Ave., Oakland

Attached is our report for your samples received on 04/11/2005 10:25
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 05/26/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: dsharma@stl-inc.com

Sincerely,

Dimple Sharma
Project Manager

SEVERN TRENT STL

Submission: 2005-04-0262

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25

Site: 845 66th Ave., Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
INFLUENT VAPOR MW-6	04/10/2005 07:15	Air	1
INFLUENT VAPOR MW-6	04/10/2005 11:30	Air	2
EFFLUENT VAPOR MW-6	04/10/2005 17:30	Air	3
INFLUENT VAPOR MW-6	04/10/2005 17:30	Air	4

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord

Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25

Site: 845 66th Ave., Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**INFLUENT VAPOR MW-6**	Lab ID:	2005-04-0262 - 1
Sampled:	04/10/2005 07:15	Extracted:	4/12/2005 19:16 4/12/2005 20:16
Matrix:	Air	QC Batch#:	2005/04/12-2A.64 2005/04/12-2A.66

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	310	28	ppmv	2.00	04/12/2005 20:16	
Benzene	ND	0.62	ppmv	2.00	04/12/2005 19:16	
Toluene	1.8	0.52	ppmv	2.00	04/12/2005 19:16	
Ethylbenzene	1.7	0.46	ppmv	2.00	04/12/2005 19:16	
Total xylenes	5.3	0.46	ppmv	2.00	04/12/2005 19:16	
Methyl tert-butyl ether (MTBE)	ND	0.28	ppmv	2.00	04/12/2005 19:16	
Ethanol	ND	50	ppmv	2.00	04/12/2005 19:16	
Surrogate(s)						
1,2-Dichloroethane-d4	92.4	72-128	%	2.00	04/12/2005 20:16	
1,2-Dichloroethane-d4	104.7	72-128	%	2.00	04/12/2005 19:16	
Toluene-d8	97.6	80-113	%	2.00	04/12/2005 20:16	
Toluene-d8	91.8	80-113	%	2.00	04/12/2005 19:16	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord

Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25

Site: 845 66th Ave., Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**INFLUENT VAPOR MW-6**	Lab ID:	2005-04-0262 - 2
Sampled:	04/10/2005 11:30	Extracted:	4/12/2005 19:38 4/13/2005 03:51
Matrix:	Air	QC Batch#:	2005/04/12-2A.64 2005/04/12-2A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	160	14	ppmv	1.00	04/13/2005 03:51	
Benzene	0.87	0.31	ppmv	1.00	04/12/2005 19:38	
Toluene	1.8	0.26	ppmv	1.00	04/12/2005 19:38	
Ethylbenzene	2.3	0.23	ppmv	1.00	04/12/2005 19:38	
Total xylenes	8.6	0.23	ppmv	1.00	04/12/2005 19:38	
Methyl tert-butyl ether (MTBE)	0.88	0.14	ppmv	1.00	04/12/2005 19:38	
Ethanol	ND	25	ppmv	1.00	04/12/2005 19:38	
Surrogate(s)						
1,2-Dichloroethane-d4	105.6	72-128	%	1.00	04/12/2005 19:38	
1,2-Dichloroethane-d4	101.6	72-128	%	1.00	04/13/2005 03:51	
Toluene-d8	89.3	80-113	%	1.00	04/12/2005 19:38	
Toluene-d8	95.5	80-113	%	1.00	04/13/2005 03:51	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**EFFLUENT VAPOR MW-6**	Lab ID:	2005-04-0262 - 3
Sampled:	04/10/2005 17:30	Extracted:	4/12/2005 19:59 4/13/2005 04:17
Matrix:	Air	QC Batch#:	2005/04/12-2A.64 2005/04/12-2A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	20	14	ppmv	1.00	04/13/2005 04:17	
Benzene	ND	0.31	ppmv	1.00	04/12/2005 19:59	
Toluene	0.57	0.26	ppmv	1.00	04/12/2005 19:59	
Ethylbenzene	0.43	0.23	ppmv	1.00	04/12/2005 19:59	
Total xylenes	1.8	0.23	ppmv	1.00	04/12/2005 19:59	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	04/12/2005 19:59	
Ethanol	ND	25	ppmv	1.00	04/12/2005 19:59	
Surrogate(s)						
1,2-Dichloroethane-d4	103.5	72-128	%	1.00	04/12/2005 19:59	
1,2-Dichloroethane-d4	97.3	72-128	%	1.00	04/13/2005 04:17	
Toluene-d8	92.5	80-113	%	1.00	04/12/2005 19:59	
Toluene-d8	97.6	80-113	%	1.00	04/13/2005 04:17	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**INFLUENT VAPOR MW-6**	Lab ID:	2005-04-0262 - 4
Sampled:	04/10/2005 17:30	Extracted:	4/12/2005 20:21 4/13/2005 11:05
Matrix:	Air	QC Batch#:	2005/04/12-2A.64 2005/04/13-1A.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	160	0.31	ppmv	1.00	04/13/2005 11:05	
Benzene	0.53	0.31	ppmv	1.00	04/12/2005 20:21	
Toluene	0.89	0.26	ppmv	1.00	04/12/2005 20:21	
Ethylbenzene	1.2	0.23	ppmv	1.00	04/12/2005 20:21	
Total xylenes	4.1	0.23	ppmv	1.00	04/12/2005 20:21	
Methyl tert-butyl ether (MTBE)	0.18	0.14	ppmv	1.00	04/12/2005 20:21	
Ethanol	ND	25	ppmv	1.00	04/12/2005 20:21	
Surrogate(s)						
1,2-Dichloroethane-d4	104.1	72-128	%	1.00	04/12/2005 20:21	
1,2-Dichloroethane-d4	95.2	72-128	%	1.00	04/13/2005 11:05	
Toluene-d8	91.7	80-113	%	1.00	04/12/2005 20:21	
Toluene-d8	95.5	80-113	%	1.00	04/13/2005 11:05	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2005/04/12-2A.64-049

Water

Test(s): 8260B
QC Batch # 2005/04/12-2A.64
Date Extracted: 04/12/2005 18:49

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	04/12/2005 18:49	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/12/2005 18:49	
Benzene	ND	0.5	ug/L	04/12/2005 18:49	
Toluene	ND	0.5	ug/L	04/12/2005 18:49	
Ethylbenzene	ND	0.5	ug/L	04/12/2005 18:49	
Total xylenes	ND	1.0	ug/L	04/12/2005 18:49	
Ethanol	ND	50	ug/L	04/12/2005 18:49	
Surrogates(s)					
1,2-Dichloroethane-d4	105.2	73-130	%	04/12/2005 18:49	
Toluene-d8	96.2	81-114	%	04/12/2005 18:49	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord

Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25

Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/04/12-2A.66

MB: 2005/04/12-2A.66-015

Date Extracted: 04/12/2005 19:15

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	04/12/2005 19:15	
Benzene	ND	0.5	ug/L	04/12/2005 19:15	
Toluene	ND	0.5	ug/L	04/12/2005 19:15	
Ethylbenzene	ND	0.5	ug/L	04/12/2005 19:15	
Total xylenes	ND	1.0	ug/L	04/12/2005 19:15	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/12/2005 19:15	
Ethanol	ND	50	ug/L	04/12/2005 19:15	
Surrogates(s)					
1,2-Dichloroethane-d4	95.6	73-130	%	04/12/2005 19:15	
Toluene-d8	102.0	81-114	%	04/12/2005 19:15	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord

Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25

Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/04/13-1A.66

MB: 2005/04/13-1A.66-049

Date Extracted: 04/13/2005 08:49

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	04/13/2005 08:49	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/13/2005 08:49	
Benzene	ND	0.5	ug/L	04/13/2005 08:49	
Toluene	ND	0.5	ug/L	04/13/2005 08:49	
Ethylbenzene	ND	0.5	ug/L	04/13/2005 08:49	
Total xylenes	ND	1.0	ug/L	04/13/2005 08:49	
Ethanol	ND	50	ug/L	04/13/2005 08:49	
Surrogates(s)					
1,2-Dichloroethane-d4	99.0	73-130	%	04/13/2005 08:49	
Toluene-d8	102.8	81-114	%	04/13/2005 08:49	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/04/12-2A.64**

LCS 2005/04/12-2A.64-005 Extracted: 04/12/2005 Analyzed: 04/12/2005 18:05
LCSD 2005/04/12-2A.64-027 Extracted: 04/12/2005 Analyzed: 04/12/2005 18:27

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	26.5	29.2	25	106.0	116.8	9.7	65-165	20		
Benzene	26.4	27.0	25	105.6	108.0	2.2	69-129	20		
Toluene	26.0	27.2	25	104.0	108.8	4.5	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	512	541	500	102.4	108.2		73-130			
Toluene-d8	471	500	500	94.2	100.0		81-114			

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/04/12-2A.66**

LCS 2005/04/12-2A.66-050 Extracted: 04/12/2005 Analyzed: 04/12/2005 18:50
LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	25.6		25	102.4			65-165	20		
Benzene	23.3		25	93.2			69-129	20		
Toluene	27.7		25	110.8			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	454		500	90.8			73-130			
Toluene-d8	499		500	99.8			81-114			

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/04/13-1A.66**

LCS 2005/04/13-1A.66-023 Extracted: 04/13/2005 Analyzed: 04/13/2005 08:23
LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	26.2		25	104.8			65-165	20		
Benzene	22.2		25	88.8			69-129	20		
Toluene	27.1		25	108.4			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	447		500	89.4			73-130			
Toluene-d8	505		500	101.0			81-114			

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/04/12-2A.64**

MS/MSD

Lab ID: 2005-04-0164 - 001

MS: 2005/04/12-2A.64-004 Extracted: 04/12/2005 Analyzed: 04/12/2005 21:04
Dilution: 1.00

MSD: 2005/04/12-2A.64-026 Extracted: 04/12/2005 Analyzed: 04/12/2005 21:26
Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	23.2	24.1	ND	25	92.8	96.4	3.8	65-165	20		
Benzene	22.2	24.6	ND	25	88.8	98.4	10.3	69-129	20		
Toluene	20.8	22.8	ND	25	83.2	91.2	9.2	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	526	514		500	105.1	102.7		73-130			
Toluene-d8	446	455		500	89.3	91.1		81-114			

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/04/12-2A.66**

MS/MSD

Lab ID: 2005-04-0285 - 001

MS: 2005/04/12-2A.66-041 Extracted: 04/12/2005 Analyzed: 04/12/2005 20:41
Dilution: 1.00

MSD: 2005/04/12-2A.66-006 Extracted: 04/12/2005 Analyzed: 04/12/2005 21:06
Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	24.9	25.1	ND	25	99.6	100.4	0.8	65-165	20		
Benzene	22.7	23.1	ND	25	90.8	92.4	1.7	69-129	20		
Toluene	27.2	27.5	ND	25	108.8	110.0	1.1	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	447	457		500	89.4	91.4		73-130			
Toluene-d8	507	508		500	101.4	101.6		81-114			

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25
Site: 845 66th Ave., Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/04/13-1A.66**

MS/MSD

Lab ID: 2005-04-0055 - 016

MS: 2005/04/13-1A.66-015 Extracted: 04/13/2005 Analyzed: 04/13/2005 10:15
Dilution: 1.00

MSD: 2005/04/13-1A.66-040 Extracted: 04/13/2005 Analyzed: 04/13/2005 10:40
Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	25.5	24.7	ND	25	102.0	98.8	3.2	65-165	20		
Benzene	22.2	21.4	ND	25	88.8	85.6	3.7	69-129	20		
Toluene	27.6	26.0	ND	25	110.4	104.0	6.0	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	447	449		500	89.5	89.8		73-130			
Toluene-d8	495	504		500	99.0	100.8		81-114			

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Amy Wilson

1590 Solano Way
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: Conoco Phillips #3135

Received: 04/11/2005 10:25

Site: 845 66th Ave., Oakland

Legend and Notes

Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.

Chain of Custody Record

STL 4124 (0901)

SEVERN TRENT STL
Severn Trent Laboratories, Inc.

2005-04-0262

114-050

Client	Project Manager	Date	Chain of Custody Number
CONOCO PHILLIPS	ROGER BARTA	4/10/05	164398

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page
6535 SAN LEANDRO	925-688-2466		1 of 1

City	State	Zip Code	Site Contact	Lab Contact
OAKLAND	CA		MARK TREVOR	BETH RILEY

Project Name and Location (State): 76-STATION-3135

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	TEDLAR	TPPH	BETEX	MTBE	ETHANOL (8260B)
INFLUENT VAPOR MW-6	4/10/05	0715	X										X	X	X	X	X
INFLUENT VAPOR MW-6	4/10/05	1130	X										X	X	X	X	X
EFFLUENT VAPOR MW-6	4/10/05	1730	X										X	X	X	X	X
INFLUENT VAPOR MW-6	4/10/05	1730	X										X	X	X	X	X

Special Instructions/Conditions of Receipt:

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other NORMAL

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/11/05	1025	1. Received By: [signature]	4/11/05	1025
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

SEVERN TRENT STL

Submission#: 2005-05-0294

TRC/Alton Geoscience-Concord

May 16, 2005

1590 Solano Way, Suite A
Concord, CA 94520

Attn.: Roger Batra

Project#: 42013808
Project: Conoco Phillips # 3135
Site: 845 66th Avenue, Oakland

Attached is our report for your samples received on 05/10/2005 17:10
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 06/24/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: dsharma@stl-inc.com

Sincerely,

Dimple Sharma
Project Manager

SEVERN TRENT STL

Submission: 2005-05-0294

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Roger Batra

1590 Solano Way, Suite A
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: 42013808
Conoco Phillips # 3135

Received: 05/10/2005 17:10

Site: 845 66th Avenue, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-6	05/09/2005 14:12	Water	1

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord

Attn.: Roger Batra

1590 Solano Way, Suite A
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: 42013808
Conoco Phillips # 3135

Received: 05/10/2005 17:10

Site: 845 66th Avenue, Oakland

Prep(s): 5030B
Test(s): 8260B

Sample ID: **MW-6**
Lab ID: 2005-05-0294 - 1

Sampled: 05/09/2005 14:12
Extracted: 5/14/2005 01:57

Matrix: Water
QC Batch#: 2005/05/13-2A.62

Analysis Flag: L2, pH: <2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	5400	250	ug/L	5.00	05/14/2005 01:57	
Benzene	26	2.5	ug/L	5.00	05/14/2005 01:57	
Toluene	12	2.5	ug/L	5.00	05/14/2005 01:57	
Ethylbenzene	480	2.5	ug/L	5.00	05/14/2005 01:57	
Total xylenes	1900	5.0	ug/L	5.00	05/14/2005 01:57	
Methyl tert-butyl ether (MTBE)	35	2.5	ug/L	5.00	05/14/2005 01:57	
Ethanol	ND	250	ug/L	5.00	05/14/2005 01:57	
Surrogate(s)						
1,2-Dichloroethane-d4	104.1	73-130	%	5.00	05/14/2005 01:57	
Toluene-d8	95.8	81-114	%	5.00	05/14/2005 01:57	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord

Attn.: Roger Batra

1590 Solano Way, Suite A
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: 42013808
Conoco Phillips # 3135

Received: 05/10/2005 17:10

Site: 845 66th Avenue, Oakland

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2005/05/13-2A.62**

MB: 2005/05/13-2A.62-044 — Date Extracted: 05/13/2005 20:44

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	05/13/2005 20:44	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	05/13/2005 20:44	
Benzene	ND	0.5	ug/L	05/13/2005 20:44	
Toluene	ND	0.5	ug/L	05/13/2005 20:44	
Ethylbenzene	ND	0.5	ug/L	05/13/2005 20:44	
Total xylenes	ND	1.0	ug/L	05/13/2005 20:44	
Ethanol	ND	50	ug/L	05/13/2005 20:44	
Surrogates(s)					
1,2-Dichloroethane-d4	104.8	73-130	%	05/13/2005 20:44	
Toluene-d8	94.0	81-114	%	05/13/2005 20:44	

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord

Attn.: Roger Batra

1590 Solano Way, Suite A
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: 42013808
Conoco Phillips # 3135

Received: 05/10/2005 17:10

Site: 845 66th Avenue, Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/05/13-2A.62**

LCS 2005/05/13-2A.62-018 Extracted: 05/13/2005 Analyzed: 05/13/2005 20:18

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	26.5		25	106.0			65-165	20		
Benzene	22.9		25	91.6			69-129	20		
Toluene	21.9		25	87.6			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	511		500	102.2			73-130			
Toluene-d8	484		500	96.8			81-114			

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord

Attn.: Roger Batra

1590 Solano Way, Suite A
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: 42013808
Conoco Phillips # 3135

Received: 05/10/2005 17:10

Site: 845 66th Avenue, Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/05/13-2A.62**

MS/MSD

Lab ID: 2005-05-0072 - 001

MS: 2005/05/13-2A.62-006 Extracted: 05/13/2005 Analyzed: 05/13/2005 22:06

Dilution: 1.00

MSD: 2005/05/13-2A.62-032 Extracted: 05/13/2005 Analyzed: 05/13/2005 22:32

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	50.5	55.5	24.7	25	103.2	123.2	17.7	65-165	20		
Benzene	25.3	27.3	ND	25	101.2	109.2	7.6	69-129	20		
Toluene	23.6	24.5	ND	25	94.4	98.0	3.7	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	484	525		500	96.8	105.0		73-130			
Toluene-d8	470	495		500	94.0	99.0		81-114			

Gas/BTEX Fuel Oxygenates by 8260B

TRC/Alton Geoscience-Concord
Attn.: Roger Batra

1590 Solano Way, Suite A
Concord, CA 94520
Phone: (925) 688-1200 Fax: (925) 688-0388

Project: 42013808
Conoco Phillips # 3135

Received: 05/10/2005 17:10

Site: 845 66th Avenue, Oakland

Legend and Notes

Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.

114964

ConocoPhillips Chain Of Custody Record

STL-San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 484-1919 (925) 484-1096 fax

ConocoPhillips Site Manager: Shelby Lathrop

INVOICE REMITTANCE ADDRESS: 2005-05-0294

CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA. 92704

ConocoPhillips Work Order Number

ConocoPhillips Cost Object

DATE: 5/9/05

PAGE 1 of 1

SAMPLING COMPANY	Valid Value ID*	CONOCOPHILLIPS SITE NUMBER	GLOBAL ID No.:
TRC	TRCC	3135	TO600101488

ADDRESS: 1590 Solano Way , Suite A Concord, CA 94520

PROJECT CONTACT (Hardcopy or PDF Report to): Roger Batra

TELEPHONE:	FAX:	E-MAIL:
(925)688-2466	(925)688-0388	rbatra@trcsolutions.com

SITE ADDRESS (Street and City): 845 66th Avenue, Oakland

CONOCOPHILLIPS SITE MANAGER: Shelby Lathrop

EDF DELIVERABLE TO (PP or Designee): PHONE NO.: EMAIL: LAB USE ONLY

SAMPLER NAME(S) (Print): Tim Johnson

CONSULTANT PROJECT NUMBER: 42013808

TURNAROUND TIME (CALENDAR DAYS): ☐ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☑ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☐

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015m - TPHd Extractable	8260B - TPHg/BTEX/MtBE	8260B - TPHg / BTEX / 6 Oxygenates	8260B - MTBE/BTEX / 6 oxygenates + methanol (8015M)	8260B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MtBE	Lead ☐Total ☐STLC ☐TCLP	Ethanol by 8260B	TEMPERATURE ON RECEIPT C°
	MW-6	5/9/05	1412	GW	8		X							X	

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

3 ice

Relinquished by (Signature)	Received by (Signature)	Date	Time
	Refrigerator	5/9/05	1630
		5-10-05	1550
		5-10-05	1710

Table 1

CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

February 14, 2005

76 Station 3135

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (µg/l)	TPPH 8260B (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE 8021B (µg/l)	MTBE 8260B (µg/l)	Comments
MW-1														
02/14/05	4.96	6.53	0.00	-1.57	1.07	--	230	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	26	
MW-2														
02/14/05	3.56	5.39	0.00	-1.83	0.47	--	290	ND<0.50	ND<0.50	1.8	1.9	--	5.7	
MW-3														
02/14/05	3.12	4.98	0.00	-1.86	0.63	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	5.2	
MW-4														
02/14/05	5.01	5.33	0.00	-0.32	2.35	--	240	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-5														
02/14/05	4.31	5.83	0.00	-1.52	1.07	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	1.4	
MW-6														
02/14/05	4.05	5.75	0.00	-1.70	1.01	--	6600	44	8.5	640	750	--	160	
MW-7														
02/14/05	4.45	6.19	0.00	-1.74	0.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-8														
02/14/05	4.43	6.09	0.00	-1.66	1.24	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-9														
02/14/05	4.60	5.92	0.00	-1.32	1.21	--	ND<50	ND<0.50	ND<0.50	0.72	1.0	--	ND<0.50	
MW-10														
02/14/05	2.69	4.81	0.00	-2.12	0.64	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	10	
MW-11														
02/14/05	2.63	5.12	0.00	-2.49	0.23	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

APPENDIX C

ESD STANDARD OPERATING PROCEDURES			
WATER QUALITY & COMPLIANCE		Remediation Wastewater from Petroleum Product Facilities	
Responsible Dept: ESD	Orig. Issue: 12/1/94	Latest Revision: 12/17/03	Page: 1

Form R-149: Authorization for Receipt of Remediation Wastewater @ ConocoPhillips's San Francisco Refinery at Rodeo

WASTEWATER TREATMENT PLANT (UNIT 100) OPERATORS:
This form below, if approved, serves as an acceptance document to process the wastewater at the San Francisco Refinery Wastewater Treatment Plant, Unit 100. The Requester is required to supply all of the necessary analytical and completely fill out the following table:

Requester's Name/Signature:	Name: Ed Ralston	Signature: Ed Ralston
Company:	ConocoPhillips	Date of Request: 5/12/2005
Address:	76 Broadway, Sacramento, CA. 95818	
Telephone/Fax:	Phone: 916-558-7633	FAX: 916-558-7639
Station No. and Location:	COP #253135, 845 66th Avenue, Oakland, CA	
Description of Water Source:	Purge Water – DPE test	
Total Volume of Water/Solids Expected:	Water: 5,000 gallons	Solids: minimal
Expected per-Delivery Volume/Frequency:	Volume: 5,000 gallons	Frequency: one time discharge
Pesticides/Fish Toxicity Expected:	Pesticides: Yes (No)	Fish Tox: Yes (No)
Maximum Rate of Disposal (ESD)	5000	Gallons per Week

The remediation wastewater described above has been reviewed for Federal and California Hazardous Waste characteristics.

This water is *(circle one):* (recommended) / **not recommended for processing at the WWTP.**

This form is valid until: 8/16/05

ESD Signature: [signature] **Date Recommended:** 5/16/05

Operations Signature: S.C. Watkins **Date Approved:** 5/17/05

TRUCK DRIVERS: Please provide a copy of this R-149 form upon delivery of wastewater to Unit 100.

Driver's info:

Truck No. _____	**pH at site** _____

UNIT 100 OPERATORS: Please fill out the portion below and forward this completed form to ESD in Room 111 of the Administration Building.

Date and time of delivery:	**Delivered on:** ____/____/____	@ _____ **AM / PM**
Volume delivered:	_____**gallons or** _____**bbl.**	**pH** _____

NO FREE PRODUCT ACCEPTED **GRAVITY OFF-LOAD ONLY**

Any questions? Call: (510) 245-4403, (510); (510) 245-4465 or FAX (510) 245-4476.
ONYX/Mark Laliberte: FAX: (707) 745-0510; DIRECT: (707) 748-3722; CELL: (510) 715-6532
TRC: Dennis Jensen; 21 Technology Drive, Irvine, CA 92618; (949) 753-0101 (office); (949) 753-0111 (fax); djensen@trcsolutions.com