



# GETTLER-RYAN INC.

---

January 21, 2002

Mr. Scott Seery  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, CA 94502

JAN 24 2002

**Subject: Dual-Phase Extraction Summary Report, Former Tosco (76) Service Station #7004, 15599 Hesperian Blvd., San Leandro, CA.**

Dear Mr. Seery:

At the request of Tosco Corporation, a subsidiary of Phillips Petroleum Company (Tosco), Gettler - Ryan Inc. (GR) is forwarding to you the enclosed Dual Phase Extraction Summary Report, dated January 3, 2002, for the subject site.

If you have any questions or comments, please do not hesitate to contact us in our Dublin Office at (925) 551-7555.

Sincerely,  
**Gettler-Ryan Inc.**

Andrew Smith  
Staff Geologist

Enclosures: Dual-Phase Extraction Summary Report, dated January 3, 2001

cc: Mr. David B. De Witt, Phillips 66 Company.

January 3, 2002  
Project 077.43850.416

Mr. Dave DeWitt  
Phillips 66 Company  
2000 Crow Canyon Place, Suite 200  
San Ramon, California 94583

RECEIVED

JAN 07 2002

**GETTLER-RYAN INC.**  
**GENERAL CONTRACTORS**

Re: **Dual-Phase Extraction Summary Report**  
Former Tosco Station #7004  
15599 Hesperian Blvd.  
San Leandro, California

JAN 24 2002

Dear Mr. DeWitt:

SECOR International Incorporated (SECOR), on behalf of Tosco Corporation (Tosco), a subsidiary of Phillips Petroleum Company, has prepared this report to document a five-day dual-phase extraction (DPE) event that was conducted at the site referenced above (Figure 1). Dual-phase extraction was performed at the site by SECOR on November 5<sup>th</sup> through November 10<sup>th</sup>, 2001. The objective of the DPE event was to reduce the amount of hydrocarbons in soil and groundwater beneath the site.

#### **SITE BACKGROUND**

The site is located at 15599 Hesperian Boulevard in San Leandro, California, and is formerly a Tosco service station. The site was most recently a Kragen auto parts store and is currently vacant. Gettler-Ryan is currently sampling groundwater at the site on a ~~quarterly~~ <sup>semi</sup> <sub>annual</sub> basis.

#### **DPE OPERATION**

##### **Pre-Test Activities**

Prior to initiation of field activities, SECOR obtained authorization to perform the DPE test from Bay Area Air Quality Management District. SECOR also prepared a site-specific Health and Safety Plan (HASP). The HASP is required by the Occupational Health and Safety Administration (OSHA) "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120), and by California Occupational Health and Safety Administration (Cal-OSHA) "Hazardous Waste Operations and Emergency Response" guidelines (CCR Title 8, Section 5192). The Health and Safety Plan was reviewed by field staff and contractors prior to the beginning of field operations at the site.

##### **DPE Summary**

SECOR performed DPE at the site on November 5<sup>th</sup> through November 10<sup>th</sup>, 2001. DPE was performed using a 20 hp liquid ring vacuum pump connected to a H2 Oil Thermal

Oxidizer (Therm-ox) for treatment of the extracted soil vapors prior to discharge to the atmosphere. DPE tests were performed on well MW-3 for 5.5 hours, RW-1 for 14 hours and simultaneously on wells MW-3 and RW-1 for 72 hours. The total DPE time was approximately 100 hours.

Physical and chemical parameters including applied vacuums; groundwater, soil vapor: total system and well field extraction flow rates; total depth to groundwater; and flame ionization detector (FID) readings were monitored throughout the DPE event. Vacuum gauges were placed at nearby monitoring wells in order to monitor the pressure gradient induced by each respective extraction well. DPE test data is summarized in Table 1.

During each day of testing, influent vapor samples were collected from the DPE system influent vapor stream. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX compounds), and methyl tert-butyl ether (MtBE) by EPA Methods 8015 and 8020. Results of the analyses are presented in Table 2. Groundwater samples were collected from monitoring wells MW-3 and RW-1 on the first day of the test, November 5<sup>th</sup>, 2001 and on the last day of the test, November 10<sup>th</sup>, 2001. The groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX compounds), and methyl tert-butyl ether (MtBE) by EPA Methods 8015 and 8020. Results of these analyses are presented in Table 3. Certified laboratory analytical reports and chain-of-custody documentation data are presented in Attachment A.

## **DPE RESULTS**

During the 5.5-hour DPE event for well MW-3, the applied vacuum was 25 inches of mercury (Hg") (measured at the vacuum blower) and vapor extraction flow rates ranged from 44.0 cubic feet per minute (cfm) to 51.25 cfm. The groundwater extraction flow rate was 0.25 gallons per minute. FID readings collected from the vapor extracted from well MW-3 ranged from 3,000 parts per million by volume (ppmv) to 4,000 ppmv. Applied vacuum, vapor extraction flow rates, groundwater extraction flow rates, and influent FID readings are presented in Table 2.

During the 14-hour DPE event for well RW-1, the applied vacuum was 25 inches of Hg" (measured at the vacuum blower) and vapor extraction flow rates ranged from 43.60 cfm to 58.86 cfm. The groundwater extraction flow rate ranged from 0.25 gpm to 0.5 gpm. FID readings collected from the vapor extracted from well RW-1 ranged from 1,000 ppmv to 2,000 ppmv. Applied vacuum, vapor extraction flow rates, groundwater extraction flow rates, and influent FID readings are presented in Table 2.

During the 72-hour DPE event for wells MW-3 and RW-1, the applied vacuum ranged from 24 in. of Hg to 25 in. of Hg (measured at the vacuum blower), and vapor extraction flow rates ranged from 21.80 cfm to 155.2 cfm. The groundwater extraction flow rates ranged from 0.05 gpm to 0.10 gpm. FID readings collected from the vapor extracted from all wells were initially 1,300 ppmv and declined to 250 ppmv by the end of the test. Applied vacuum, vapor extraction flow rates, groundwater extraction flow rates, and influent FID readings are presented in Table 2.

## LABORATORY ANALYTICAL DATA

Laboratory analyses of soil vapor samples collected during the DPE tests are summarized in Table 2 and shown graphically on Figure 2. As shown on Figure 2, influent concentrations declined during the 5-day test from 5,200 ppmv to 440 ppmv.

Groundwater samples were collected from wells MW-3 and RW-1 before and after DPE testing (Table 3). Below is a table showing the groundwater concentrations of TPHg, benzene, and MtBE in parts per billion (ppb) measured before and after the DPE event. The bolded values indicate significantly reduced analyte concentrations.

Well #	TPHg (ppb)		Benzene (ppb)		MtBE (ppb)	
	Before DPE	After DPE	Before DPE	After DPE	After DPE	Before DPE
MW-3	6,000	<b>4,700</b>	57	<b>26</b>	130	150
RW-1	<500	2,800*	<5.0	13	860	<b>800</b>

\* - The increased concentration of TPHg in the post DPE test sample collected from extraction well RW-1 may be the result of residual contamination from the area of well MW-3 drawn into well RW-1 during the test. This is supported by higher vapor and groundwater extraction flow rates observed in well RW-1 as compared to well MW-3.

### DPE Mass Removal Rates

The total mass of TPHg, benzene, and MTBE removed during the test were estimated using the influent air analytical results, an average well field flow rate, and the time duration of the test. The calculated TPHg, benzene, and MtBE mass removed during the DPE test were approximately 36.55 pounds, 0.56 pounds, and 0.47 pounds, respectively (Table 4 and Figure 3).

Additionally, during the tests approximately 13,060 gallons of groundwater were extracted from the site. Extracted groundwater was temporarily stored in a holding tank, prior to disposal at Tosco's Refinery in Rodeo, California.

### Soil Vapor Radius of Influence

The radius of influence was determined graphically by plotting the average lateral distance from the test well to the observation wells, versus the initial applied vacuum (in. Hg) and the resulting induced vacuums (in. of H<sub>2</sub>O), from Table 1. An induced vacuum of 0.1 inches H<sub>2</sub>O was used to represent the theoretical minimum induced vacuum defining "influence" from the applied vacuum. The distance at which a "best fit" line formed by the data crosses 0.1 inches H<sub>2</sub>O is the estimated radius of vacuum influence for each test well. Based upon this data, the estimated radius of influence for test well MW-3 ranged from 15 to 55 feet (Figure 4), for test well RW-1, the estimated radius of influence ranged from 48 to 85 feet (Figure 5), and for test wells MW-3 and RW-1, the combined estimated radius of influence ranged from 61 to 75 feet (Figure 6).

## SUMMARY OF FINDINGS

On November 5<sup>th</sup> through November 10<sup>th</sup>, 2001, SECOR performed DPE event at the site. The results of the DPE event are as follows:

- DPE was conducted at vapor extraction flow rates ranging between 19.38 cfm to 47.61 cfm, and at vacuums ranging between 24.5 inches of mercury to 25 inches of mercury.
- Groundwater extraction flow rates ranged from 0.25 gpm to 3.0 gpm.
- Influent concentrations declined from 5,200 ppmv to 440 ppmv during the 5-day test.
- During the DPE event approximately 36.55 pounds of TPHg, 0.56 pounds of benzene, and 0.47 pounds of MTBE were extracted from the soil and groundwater beneath the site.


### CONCLUSIONS AND RECOMENDATIONS

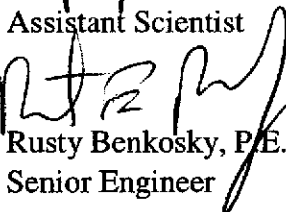
Based on the data collected during the DPE test, further remediation at this site does appear warranted at this time.

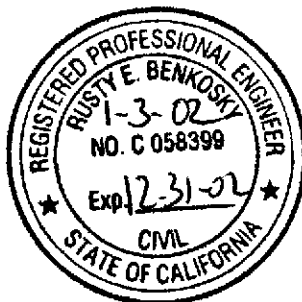
If you have any questions regarding this letter, please call us at (916) 861-0400.

Sincerely,

**SECOR International Incorporated**

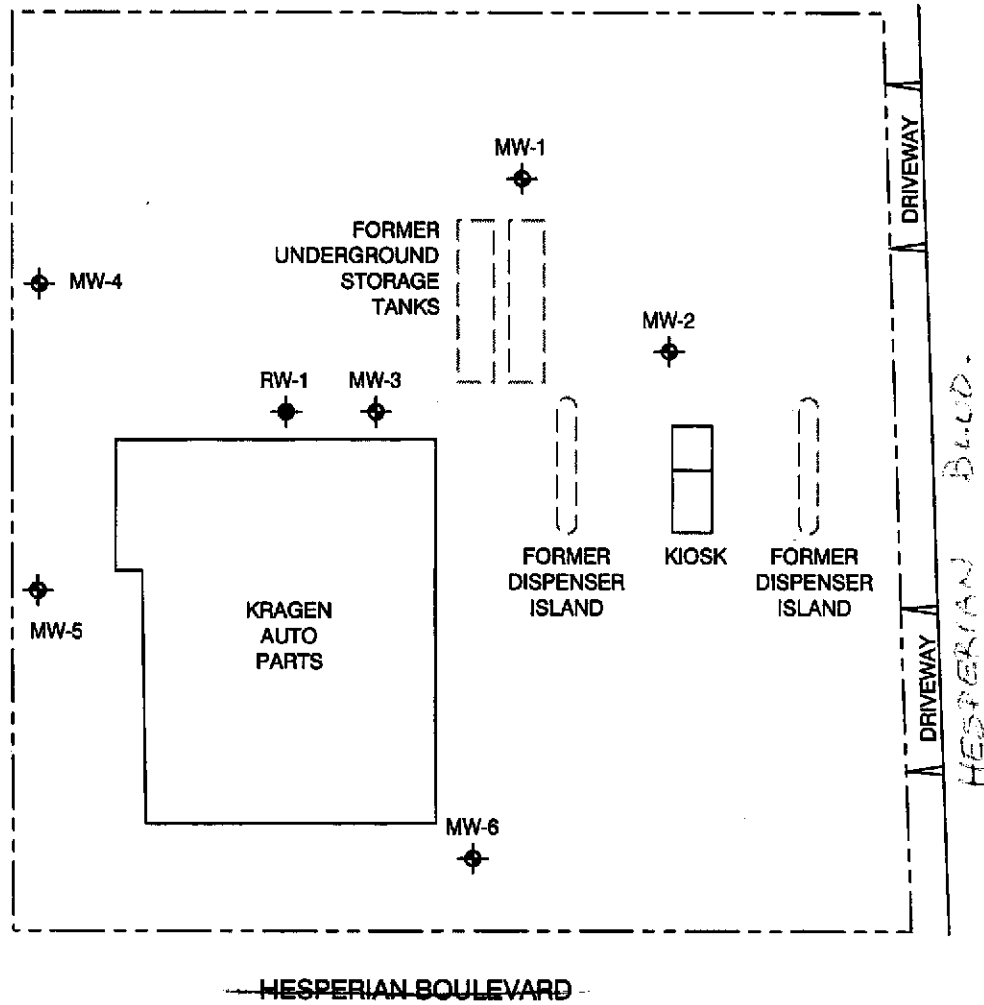
  
Molly Koch  
Assistant Scientist

  
Rusty Benkosky, P.E.  
Senior Engineer



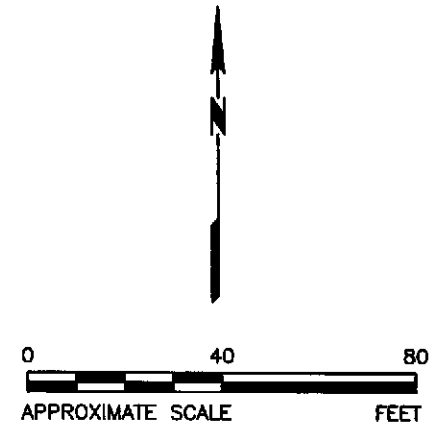
- Attachments:
- Figure 1 - Site Plan
  - Figure 2 - DPE System Influent Concentration Trends
  - Figure 3 - Estimated Cumulative Mass Removal
  - Figure 4 - DPE Test Well MW-3 - Estimated Radius of Influence
  - Figure 5 - DPE Test Well RW-1 - Estimated Radius of Influence
  - Figure 6 - DPE Test Wells RW-1 and MW-3 - Estimated Radius of Influence
  - Table 1 - Dual-Phase Extraction Operational Data
  - Table 2 - Dual-Phase Extraction System Soil Vapor Analytical Data
  - Table 3 - Dual-Phase Extraction System - Groundwater Analytical Data Before/After Test
  - Table 4 - Dual-Phase System Estimated Mass Removal
  - Attachment A - Certified Laboratory Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets

cc: Mr. Doug Lee, Gettler-Ryan



**LEGEND:**

- APPROXIMATE PROPERTY BOUNDARY
- ⊕ GROUNDWATER MONITORING WELL
- ⊙ AQUIFER TESTING WELL



REFERENCE: THIS FIGURE IS BASED ON A "SITE PLAN" PROVIDED BY GETTLER-RYAN INC., DATED JULY 2001, AND IS INTENDED FOR ILLUSTRATION ONLY.

M:\ACAD\TOSCO\7004\SITEPLAN.DWG

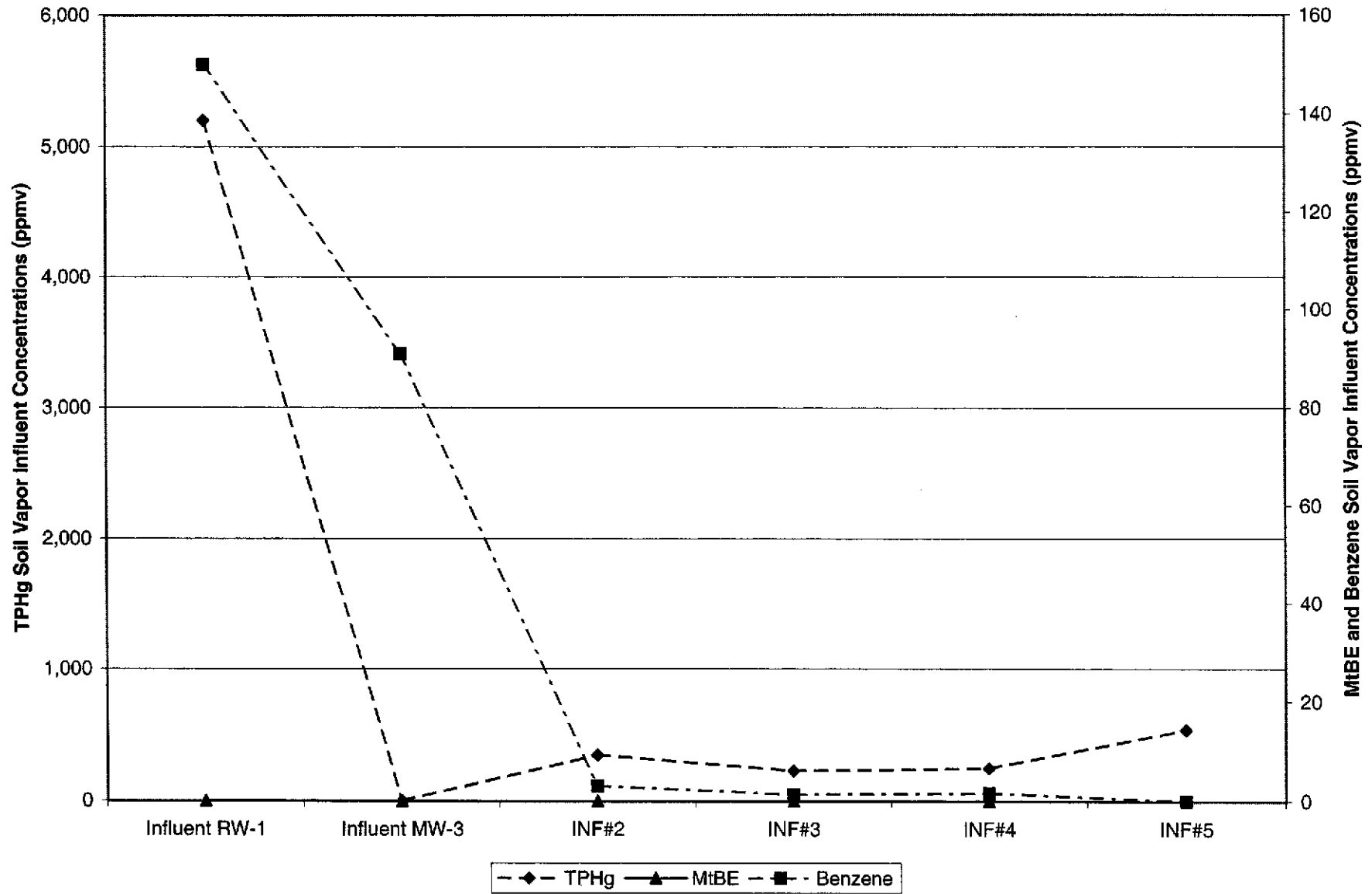
**SECOR**  
*International  
Incorporated*

DRAWN	PR
APPR	RB
DATE	3JAN2002
JOB NO.	077.43850.416

**FIGURE 1**  
FORMER TOSCO (UNOCAL) SERVICE STATION #7004  
15599 HESPERIAN BOULEVARD  
SAN LEANDRO, CALIFORNIA  
**SITE PLAN**

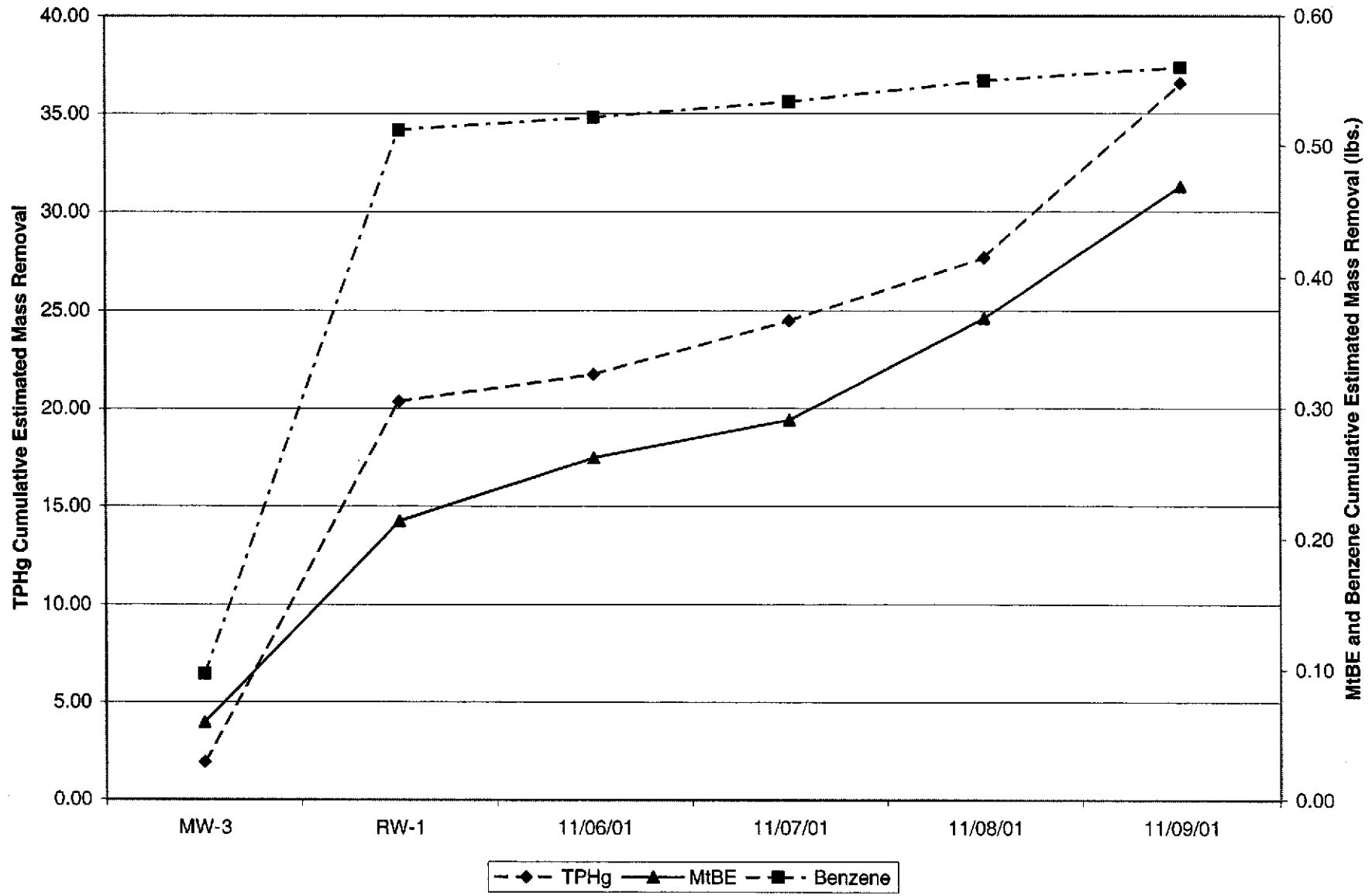
**Figure 2**  
**Influent Concentration Trends**

Tosco Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, CA



**Figure 3**  
**Estimated Mass Removal**

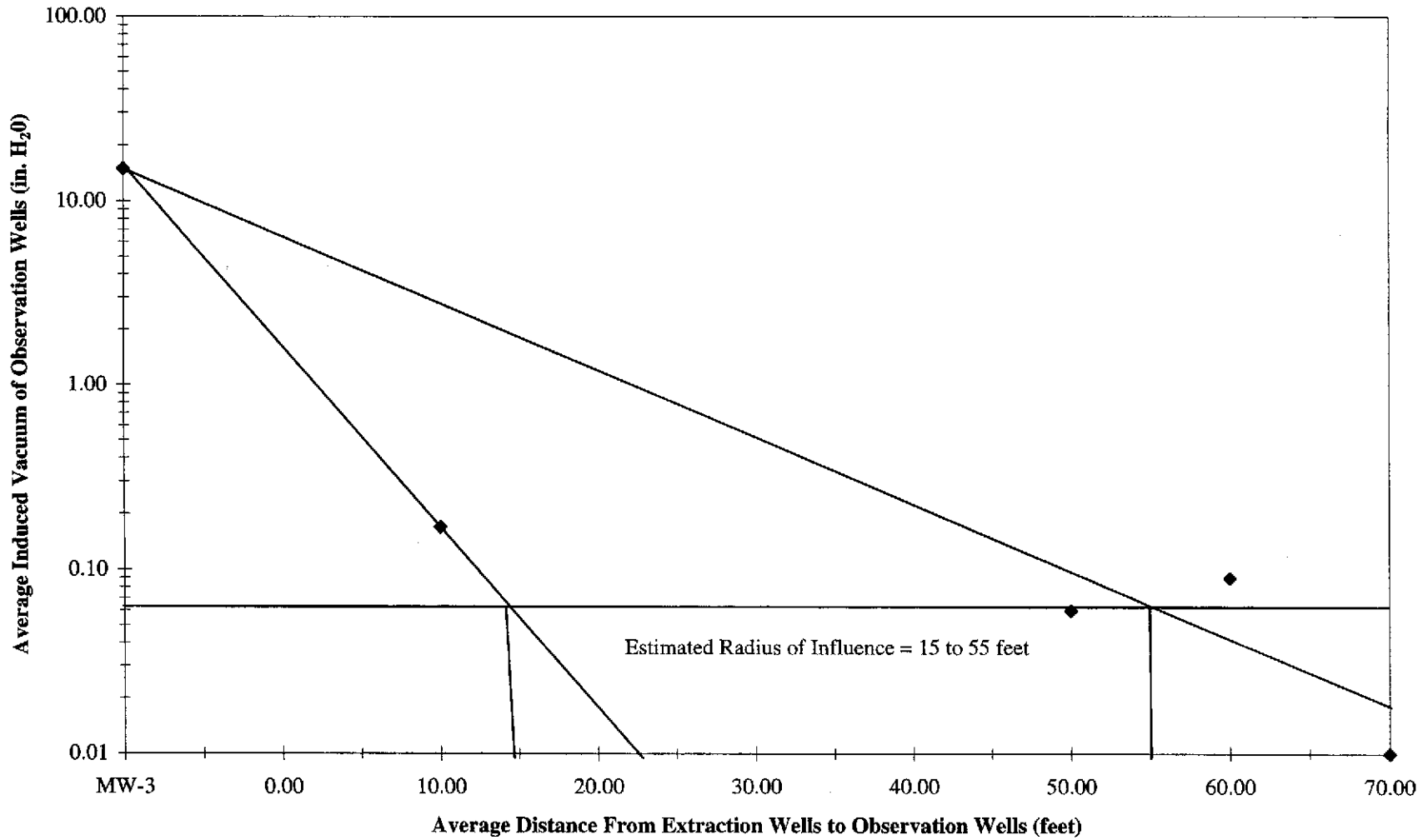
Tosco Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, CA





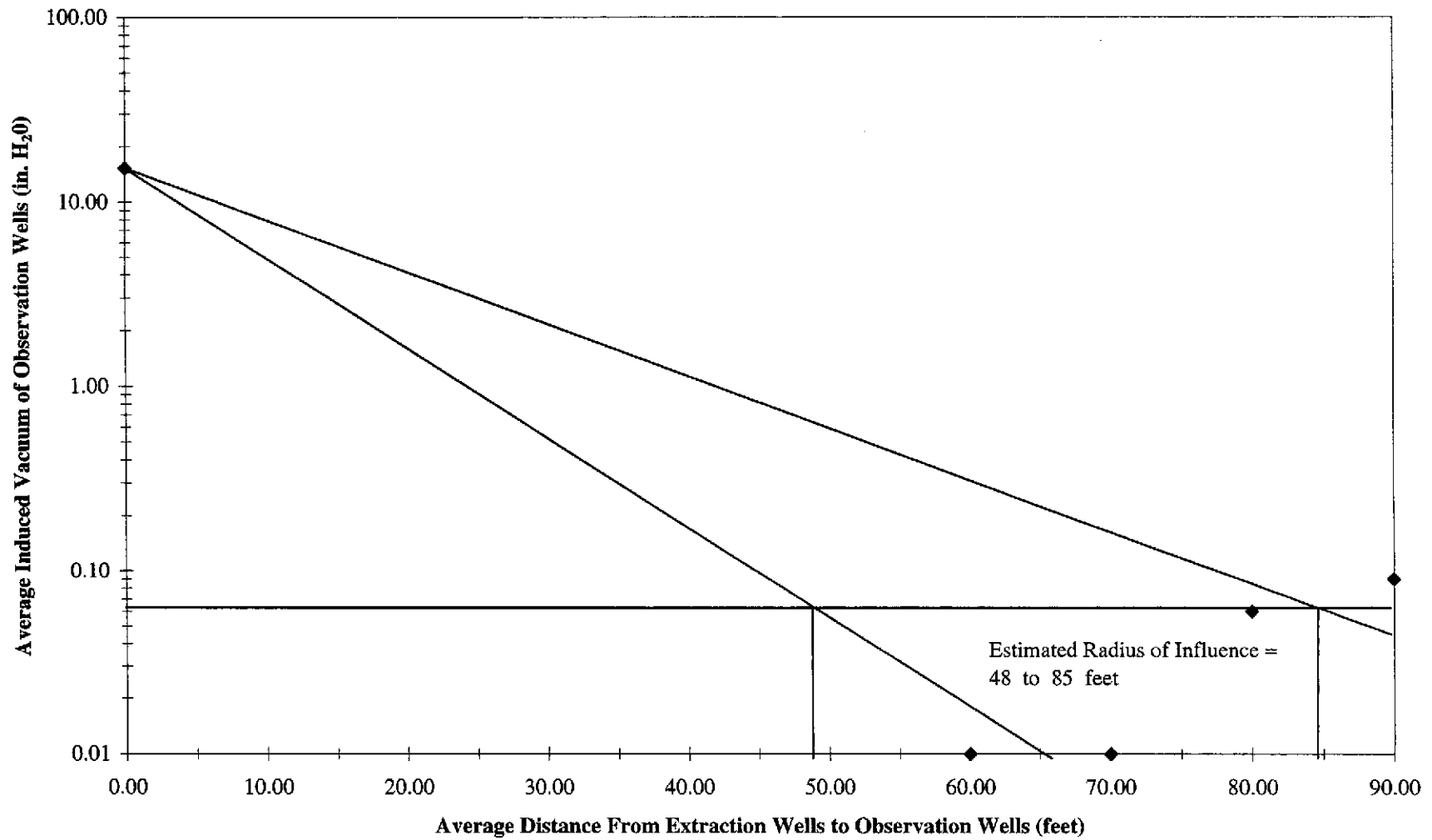
**Figure 4**  
**Estimated Radius of Influence - Well MW-3**

Tosco Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, CA



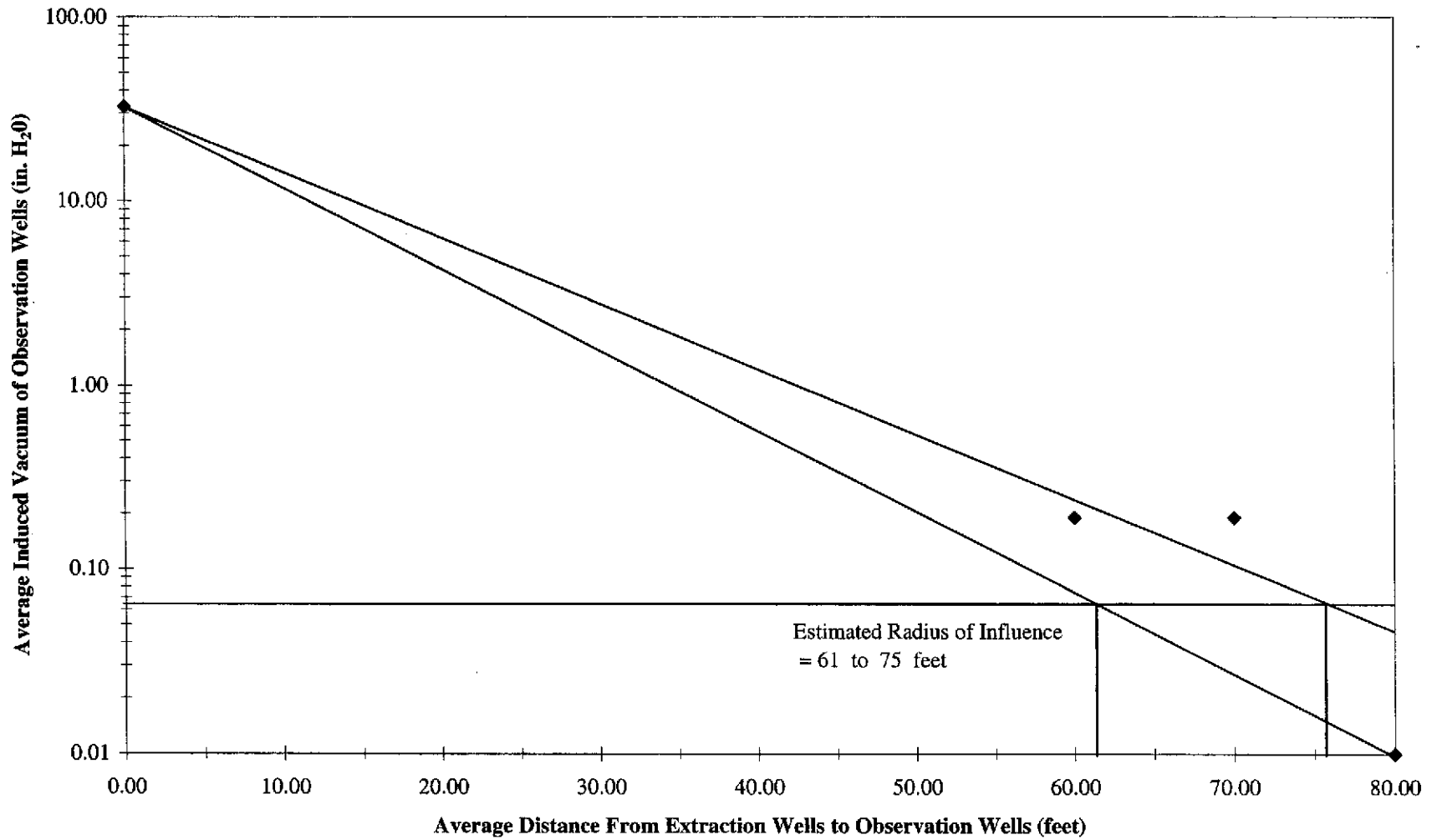
**Figure 5**  
**Estimated Radius of Influence - Well RW-1**

Tosco Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, CA



**Figure 6**  
**Estimated Radius of Influence - Well RW-1 and MW-3**

Tosco Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, CA



**Table 1**  
**Dual-Phase Extraction Operational Data**

Tosco Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, CA

DATE	TIME	FID (ppmv)	Applied Vacuum (Hg") <sup>1</sup>	Water Flow Rate (gpm)	Vapor Flow Rate (scfm)	Well field flow rate (scfm)	SVE Observation Wells										REMARKS
							MW-1		MW-2		MW-4		MW-5		RW-1		
							Pressure	DTW	Pressure	DTW	Pressure	DTW	Pressure	DTW	Pressure	DTW	
<b>Extraction Well MW-3</b>							"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	
11/5/2001	12:00	--	--	--	--	--	-0.01	15.29	-0.02	15.78	0	14.52	0	15.89	0	15.52	system background
11/5/2001	15:05	3,000	25	0.25	44.00	14.02	0.06	15.23	0.05	15.81	0.01	14.54	0.01	15.90	0.15	15.67	slurp tube at bottom of well
11/5/2001	15:15	3,200	25	0.25	44.12	14.29	0.06	15.23	0.04	15.81	0.02	14.54	0	15.90	0.15	15.70	
11/5/2001	15:30	4,000	25	0.25	51.25	16.39	0.06	15.24	0.05	15.81	0.02	14.56	0.01	15.91	0.17	15.71	sampled Effluent #1 @ 16:30
<b>Extraction Well RW-1</b>							--	--	--	--	--	--	--	--	--	--	
11/5/2001	16:00	flame out	25	0.25	56.75	16.22	0.06	15.24	0.04	15.81	0.02	14.55	0.01	15.91	0.17	15.72	sampled Influent MW-3 @ 16:35
11/5/2001	17:00	flame out	25	0.25	58.86	17.44	0.05	15.25	0.05	15.82	0.02	14.57	0.01	15.91	0.17	15.72	
11/5/2001	17:30	flame out	25	0.5	45.78	13.08	--	--	--	--	--	--	--	--	--	--	RW-1 now 100% open
11/5/2001	17:45	flame out	25	0.5	47.62	13.57	-0.06	15.25	-0.08	15.82	-0.01	14.59	-0.01	15.93	--	--	Slurp tube at 20.50 feet
11/5/2001	18:00	flame out	25	0.5	46.87	13.23	-0.06	15.25	-0.09	15.82	-0.01	14.59	-0.01	15.94	--	--	sampled Influent RW-1 @ 18:30
11/5/2001	18:30	1,000	25	0.5	45.19	13.08	--	--	--	--	--	--	--	--	--	--	
11/5/2001	19:00	2,000	25	0.5	43.60	21.80	--	--	--	--	--	--	--	--	--	--	parameters. System on overnight
<b>totalizer reading (start/end) = 5670/6680; Volume of groundwater extracted = 990 gallons</b>																	
11/6/2001	7:00	1,000	21.5	0.8	43.60	20.17	-0.1	15.27	-0.11	15.81	-0.02	14.61	0	15.97	--	--	
<b>Extraction Wells RW-1 and MW-3</b>							<b>MW-1</b>		<b>MW-2</b>		<b>MW-4</b>		<b>MW-5</b>				
11/6/2001	7:45	flame out	24	1.0	26.81	22.89	-0.1	15.27	-0.11	15.81	-0.02	14.61	-0.01	15.97	--	--	
11/6/2001	9:00	1,300	25	2.0	26.81	26.16	-0.18	15.29	-0.18	15.87	-0.01	14.64	0	16.00	--	--	
11/6/2001	10:00	1,300	25	2.9	26.16	26.02	-0.18	15.30	-0.19	15.89	-0.01	14.65	0	16.02	--	--	
11/6/2001	11:00	1,300	25	2.9	28.40	28.17	-0.19	15.30	-0.19	15.89	-0.01	14.65	0	16.02	--	--	
11/6/2001	12:00	1,300	25	3.0	31.61	30.97	-0.2	15.30	-0.20	15.89	-0.01	14.65	0	16.02	--	--	
11/6/2001	13:00	flame out	25	3.0	28.34	27.90	-0.19	15.30	-0.20	15.89	-0.01	14.66	-0.01	16.01	--	--	
11/6/2001	14:00	1,000	25	3.0	32.04	31.61	-0.2	15.31	-0.20	15.90	-0.01	14.66	-0.01	16.02	--	--	
11/6/2001	15:00	900	25	3.0	31.87	31.29	-0.19	15.31	-0.19	15.90	-0.01	14.67	-0.01	16.02	--	--	
11/6/2001	16:00	1,000	25	3.0	33.41	33.09	-0.19	15.31	-0.20	15.90	-0.01	14.67	-0.01	16.03	--	--	sampled Influent #2 @ 4:00pm
11/6/2001	17:00	1,000	25	3.0	36.62	35.97	-0.19	15.32	-0.21	15.91	-0.01	14.68	-0.01	16.04	--	--	
11/6/2001	18:00	1,000	25	3.0	24.63	24.29	-0.19	15.32	-0.21	15.91	-0.01	14.68	-0.01	16.04	--	--	
<b>totalizer reading (start/end) = 6660/11020; Volume of groundwater extracted = 4,360 gallons</b>																	

**Table 1**  
**Dual-Phase Extraction Operational Data**

Tosco Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, CA

DATE	TIME	FID (ppmv)	Applied Vacuum (Hg") <sup>1</sup>	Water Flow Rate (gpm)	Vapor Flow Rate (scfm)	Well field flow rate (scfm)	SVE Observation Wells										REMARKS	
							MW-1		MW-2		MW-4		MW-5		Pressure	DTW		
							Pressure	DTW	Pressure	DTW	Pressure	DTW	Pressure	DTW				
<b>Extraction Wells RW-1 and MW-3</b>							"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs		
11/7/2001	7:00	400	25	3.0	19.62	19.38	-0.19	15.35	-0.19	15.93	-0.01	14.71	-0.01	16.06	--	--		
11/7/2001	8:00	400	25	3.0	21.80	21.57	-0.19	15.36	-0.19	15.94	-0.01	14.73	-0.01	16.06	--	--		
11/7/2001	9:00	400	25	3.0	26.16	25.87	-0.19	15.36	-0.20	15.94	-0.01	14.72	-0.01	16.07	--	--		
11/7/2001	10:00	400	25	3.0	32.70	32.16	-0.19	15.36	-0.20	15.94	-0.01	14.73	-0.01	16.08	--	--		
11/7/2001	11:00	500	25	3.0	33.61	33.46	-0.19	15.36	-0.20	15.94	-0.01	14.73	-0.01	16.08	--	--		
11/7/2001	12:00	650	25	3.0	34.22	33.96	-0.19	15.36	-0.20	15.94	-0.01	14.72	-0.01	16.08	--	--		
11/7/2001	13:00	400	25	3.0	28.34	28.12	-0.20	15.36	-0.20	15.94	-0.01	14.71	-0.01	16.08	--	--		
11/7/2001	14:00	450	25	2.5	29.87	29.42	-0.20	15.36	-0.20	15.94	-0.01	14.71	-0.01	16.08	--	--		
11/7/2001	15:00	450	25	2.5	36.21	35.92	-0.20	15.36	-0.20	15.95	-0.01	14.72	-0.01	16.08	--	--		sampled influent #3 @ 3:40pm
11/7/2001	16:00	500	25	2.5	41.42	41.03	-0.20	15.36	-0.20	15.95	-0.01	14.72	-0.01	16.08	--	--		
11/7/2001	17:00	400	25	2.5	38.15	37.92	-0.20	15.36	-0.20	15.95	-0.01	14.72	-0.01	16.08	--	--		
11/7/2001	18:00	300	25	2.5	37.06	36.69	-0.20	15.37	-0.20	15.96	-0.01	14.73	-0.01	16.08	--	--		
<b>totalizer reading (start/end) = 11650/13150; Volume of groundwater extracted = 1,500 gallons</b>																		
11/8/2001	7:00	180	25	2.5	23.98	23.61	-0.20	15.39	-0.19	15.97	-0.01	14.73	-0.01	16.10	--	--		
11/8/2001	8:00	190	25	2.5	24.71	24.42	-0.20	15.40	-0.19	15.98	-0.01	14.74	-0.01	16.10	--	--		
11/8/2001	9:00	250	25	2.5	28.86	28.47	-0.20	15.40	-0.19	15.98	-0.01	14.74	-0.01	16.10	--	--		
11/8/2001	10:00	250	25	2.5	33.35	32.70	-0.20	15.40	-0.19	15.98	-0.01	14.74	-0.01	16.10	--	--		
11/8/2001	11:00	300	25	2.5	37.51	37.16	-0.19	15.40	-0.19	15.98	-0.01	14.74	-0.01	16.10	--	--		
11/8/2001	12:00	350	25	2.5	45.26	44.97	-0.19	15.40	-0.19	15.98	-0.01	14.74	-0.01	16.10	--	--		
11/8/2001	13:00	400	25	2.5	37.06	36.85	-0.19	15.40	-0.19	15.98	-0.01	14.74	-0.01	16.10	--	--		
11/8/2001	14:00	450	25	2.5	38.80	38.59	-0.19	15.40	-0.19	15.98	-0.01	14.74	-0.01	16.10	--	--		sampled influent #4 @ 2:00 pm
11/8/2001	15:00	400	25	2.5	39.24	38.96	-0.19	15.40	-0.18	15.98	-0.01	14.74	-0.01	16.11	--	--		
11/8/2001	16:00	350	25	2.5	43.60	43.17	-0.19	15.40	-0.18	15.98	-0.01	14.74	-0.01	16.11	--	--		
11/8/2001	17:00	250	25	2.1	45.78	45.36	-0.19	15.40	-0.18	15.98	-0.01	14.74	-0.01	16.11	--	--		
11/8/2001	18:00	200	25	2.1	47.96	47.61	-0.19	15.41	-0.20	15.98	-0.01	14.75	-0.01	16.11	--	--		
<b>totalizer reading (start/end) = 13150/16290; Volume of groundwater extracted = 3,140 gallons</b>																		

**Table 1**  
**Dual-Phase Extraction Operational Data**

Tosco Service Station #7004  
15599 Hesperian Blvd.  
San Leandro, CA

DATE	TIME	FID (ppmv)	Applied Vacuum (Hg") <sup>1</sup>	Water Flow Rate (gpm)	Vapor Flow Rate (scfm)	Well field flow rate (scfm)	SVE Observation Wells										REMARKS
							MW-1		MW-2		MW-4		MW-5		Pressure	DTW	
							"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs			
<b>Extraction Wells RW-1 and MW-3</b>							"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	"H <sub>2</sub> O	feet, bgs	
11/9/2001	7:00	150	25	2.1	26.16	25.92	-0.18	15.42	-0.21	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	8:00	170	25	2.1	28.34	28.12	-0.18	15.42	-0.20	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	9:00	250	25	2.1	29.43	29.16	-0.18	15.42	-0.20	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	10:00	200	25	2.1	32.70	32.47	-0.19	15.42	-0.19	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	11:00	220	25	2.1	37.06	36.87	-0.18	15.42	-0.19	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	12:00	200	25	2.1	43.60	43.21	-0.18	15.42	-0.19	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	13:00	250	25	2.1	39.24	38.79	-0.18	15.42	-0.19	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	14:00	350	24.5	2.1	37.06	36.63	-0.18	15.42	-0.20	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	15:00	400	25	2.1	42.51	42.08	-0.18	15.42	-0.20	16.00	-0.01	14.76	-0.01	16.12	--	--	
11/9/2001	16:00	400	25	2.1	41.42	41.12	-0.19	15.42	-0.20	16.00	-0.01	14.76	-0.01	16.13	--	--	sampled Influent #5 @ 4:00 pm
11/9/2001	17:00	300	25	2.1	39.24	38.89	-0.20	15.42	-0.20	16.00	-0.01	14.76	-0.01	16.13	--	--	sampled Influent MW-3 @ 5:00pm
11/9/2001	18:00	250	25	2.1	37.06	36.71	-0.20	15.42	-0.20	16.00	-0.01	14.76	-0.01	16.13	--	--	sampled Influent RW-1 @ 5:15 pm
<b>totalizer reading (start/end) = 16290/19140; Volume of groundwater extracted = 2,850 gallons</b>																	
11/10/2001	7:00	100	25	2.1	29.43	29.16	-0.20	15.44	-0.20	16.01	-0.01	14.78	-0.01	16.14	--	--	
11/10/2001	8:00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	system shut-down
<b>totalizer reading (start/end) = 19140/19360; Volume of groundwater extracted = 220 gallons</b>																	
<b>Total volume of Water Extracted:</b>				<b>13,690 gallons</b>													<b>end of test</b>
<b>Date of test: 11/5/01 to 11/10/01</b>							<b>Notes:</b>										
<b>Explanations:</b>							MW-3 to:					RW-1 to:					
Hg" = Inches of mercury							RW-1 = 20 feet					MW-1 = 74 feet					
H <sub>2</sub> O" = Inches of water							MW-1 = 59 feet					MW-2 = 84 feet					
scfm = Standard cubic feet per minute							MW-2 = 65 feet					MW-4 = 59 feet					
gpm = Gallons per minute							MW-4 = 78 feet					MW-5 = 65 feet					
ppmv = Parts per million by volume							MW-5 = 82 feet										
DTW = Depth to water																	
-- = Data not available or not applicable																	
bgs = below ground surface																	

**Table 2**  
**Dual-Phase Extraction System Soil Vapor Analytical Data**

Tosco Service Station #7004  
 15599 Hesperian Blvd.  
 San Leandro, CA

Date and Time	Sample ID	FID (ppmv)	TPHg (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	MtBE (ppmv)
11/5/2001 18:30	Influent RW-1	flame out	5,200	150	60	22	41	370
11/5/2001 16:35	Influent MW-3	flame out	<1,400	91	150	31	96	300
11/6/2001 16:00	INF#2	1,000	350	3.1	1.7	2.7	<1.2	<14
11/7/2001 15:40	INF#3	450	230	1.3	0.34	1.5	<0.24	<2.8
11/8/2001 14:00	INF#4	450	250	1.6	<0.65	2.2	<0.60	<7.0
11/9/2001 16:00	INF#5	400	540	<0.80	3.1	14	3.0	<7.0
11/9/2001 17:00	Influent MW-3	300	140	<0.16	1.1	3.8	1.0	<1.4
11/9/2001 17:15	Influent RW-1	300	440	1.2	2.8	12	3.6	8.1

**Explanations:**

FID = Flame Ionization Detector

TPHg = Total Petroleum Hydrocarbons calculated as gasoline

MtBE = Methyl-tertiary butyl ether

ppmv = Parts per million by volume

**Table 3**  
**Dual-Phase Extraction System - Groundwater Analytical Data Before/After Test**

Tosco Service Station #7004  
 15599 Hesperian Blvd.  
 San Leandro, CA

Well ID	TPHg (ppb)		Benzene (ppb)		Toluene (ppb)		Ethylbenzene (ppb)		Total Xylenes (ppb)		MtBE (ppb)	
	11/05/01	11/10/01	11/05/01	11/10/01	11/05/01	11/10/01	11/05/01	11/10/01	11/05/01	11/10/01	11/05/01	11/10/01
RW-1	<500	2,800	<5.0	13	<5.0	<10	<5.0	130	<5.0	<10	860	800
MW-3	6,000	4,700	57	26	50	<5.0	920	84	65	9.3	130	150

**Explanations:**

TPHg/TPHd = Total Petroleum Hydrocarbons calculated as gasoline/as diesel

MtBE = Methyl-tertiary butyl ether

ppb = parts per billion



**Table 4**  
**Dual-Phase Extraction System Estimated Mass Removal**

Tosco Service Station #7004  
 15599 Hesperian Blvd.  
 San Leandro, CA

Date of Multi-well SVE test or Test Well ID	Hours Extracted (hours)	Average Flow Rate (scfm)	<u>TPH as Gasoline</u>			<u>Benzene</u>			<u>MtBE</u>		
			Average Influent Concentration (ppmv)	Pounds Removed Daily (lbs)	Cumulative pounds Removed (lbs)	Average Influent Concentration (ppmv)	Pounds Removed During Test (lbs)	Cumulative pounds Removed (lbs)	Average Influent Concentration (ppmv) <sup>a</sup>	Pounds Removed During Test (lbs)	Cumulative pounds Removed (lbs)
MW-3	5.5	14.90	1,400	1.91	1.91	91	0.10	0.10	300	0.06	0.06
RW-1	14	15.19	5,200	18.45	20.36	150	0.42	0.51	370	0.15	0.21
11/06/01	8.3	28.68	350	1.38	21.75	3.1	0.01	0.52	<14	0.05	0.26
11/07/01	23.8	30.10	230	2.74	24.49	1.3	0.01	0.53	<2.8	0.03	0.29
11/08/01	22.5	34.14	250	3.20	27.69	1.6	0.02	0.55	<7.0	0.08	0.37
11/09/01	26.0	37.82	540	8.86	36.55	<0.80	0.01	0.56	<7.0	0.10	0.47
<b>TOTAL HOURS EXTRACTED:</b>			<b>100</b>								
<b>TOTAL POUNDS REMOVED:</b>			<b>36.55</b>			<b>0.56</b>			<b>0.47</b>		
<b>Explanations:</b>											
scfm = standard cubic feet per minute											
ppmv = parts per million per volume											
MtBE = Methyl-tertiary butyl ether											
lbs. = pounds											
TPH = Total Petroleum Hydrocarbons											
<b>Note:</b>											
Density of benzene = 7.3 pounds per gallon											
Density of gasoline = 6.1 pounds per gallon											
Density of MtBE = 6.2 pounds per gallon											
Values reported as non-detect were assumed to be the detection limit for calculation purposes.											
Anticipated mass removal calculations based on 20 scfm per well											

**ATTACHMENT A**

**CERTIFIED LABORATORY ANALYTICAL REPORTS,  
CHAIN-OF-CUSTODY DOCUMENTATION,  
AND FIELD DATA SHEETS**



**Sequoia  
Analytical**

819 Striker Avenue, Suite 8  
Sacramento, CA 95834  
(916) 921-9600  
FAX (916) 921-0100  
www.sequoialabs.com

---

28 November, 2001

Rusty Benkosky  
SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

RE: Tosco 7004, San Leandro, CA  
Sequoia Report: S111156

Enclosed are the results of analyses for samples received by the laboratory on 11/12/01 08:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ronald W. Bobel  
Client Services Representative

CA ELAP Certificate #1624



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: DPE Test  
Project Manager: Rusty Benkosky

**Reported:**  
11/28/01 18:31

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INF #5	S111156-01	Air	11/09/01 16:00	11/12/01 08:05
INF MW-3	S111156-02	Air	11/09/01 17:00	11/12/01 08:05
INF RW-1	S111156-03	Air	11/09/01 17:15	11/12/01 08:05
EFF #2	S111156-04	Air	11/10/01 07:30	11/12/01 08:05
RW-1	S111156-05	Water	11/10/01 10:00	11/12/01 08:05
MW-3	S111156-06	Water	11/10/01 10:10	11/12/01 08:05

Sequoia Analytical - Sacramento

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Ronald W. Bobel, Client Services Representative



819 Striker Avenue, Suite 8  
 Sacramento, CA 95834  
 (916) 921-9600  
 FAX (916) 921-0100  
 www.sequoialabs.com

SECOR International - Rancho Cordova 3017 Kilgore Road, Suite 100 Rancho Cordova CA, 95670	Project: Tosco 7004, San Leandro, CA Project Number: DPE Test Project Manager: Rusty Benkosky	Reported: 11/28/01 18:31
--	---	-----------------------------

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INF #5 (S111156-01) Air Sampled: 11/09/01 16:00 Received: 11/12/01 08:05</b>									
Purgeable Hydrocarbons	2200	500	mg/m <sup>3</sup> Air	50	1110139	11/12/01	11/12/01	DHS LUFT	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	12	2.5	"	"	"	"	"	"	
Ethylbenzene	63	2.5	"	"	"	"	"	"	
Xylenes (total)	13	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		78.5 %	60-140		"	"	"	"	
<b>INF MW-3 (S111156-02) Air Sampled: 11/09/01 17:00 Received: 11/12/01 08:05</b>									
Purgeable Hydrocarbons	590	100	mg/m <sup>3</sup> Air	10	1110139	11/12/01	11/12/01	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	4.0	0.50	"	"	"	"	"	"	
Ethylbenzene	17	0.50	"	"	"	"	"	"	
Xylenes (total)	4.4	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.0 %	60-140		"	"	"	"	
<b>INF RW-1 (S111156-03) Air Sampled: 11/09/01 17:15 Received: 11/12/01 08:05</b>									
Purgeable Hydrocarbons	1800	500	mg/m <sup>3</sup> Air	50	1110139	11/12/01	11/12/01	DHS LUFT	
Benzene	3.7	2.5	"	"	"	"	"	"	
Toluene	11	2.5	"	"	"	"	"	"	
Ethylbenzene	53	2.5	"	"	"	"	"	"	
Xylenes (total)	16	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	29	25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		73.0 %	60-140		"	"	"	"	



SECOR International - Rancho Cordova 3017 Kilgore Road, Suite 100 Rancho Cordova CA, 95670	Project: Tosco 7004, San Leandro, CA Project Number: DPE Test Project Manager: Rusty Benkosky	Reported: 11/28/01 18:31
--	---	-----------------------------

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>EFF #2 (S111156-04) Air - Sampled: 11/10/01 07:30 Received: 11/12/01 08:05</b>									
Purgeable Hydrocarbons	ND	10	mg/m <sup>3</sup> Air	1	1110139	11/12/01	11/12/01	DHS LUFT	
Benzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Xylenes (total)	ND	0.050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		78.0 %		60-140	"	"	"	"	



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: DPE Test  
Project Manager: Rusty Benkosky

Reported:  
11/28/01 18:31

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air (ppmv) by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INF #5 (S111156-01) Air</b> Sampled: 11/09/01 16:00 Received: 11/12/01 08:05									
<b>Purgeable Hydrocarbons</b>	<b>540</b>	140	ppmv	50	1110139	11/12/01	11/12/01	DHS LUFT	
Benzene	ND	0.80	"	"	"	"	"	"	
Toluene	3.1	0.65	"	"	"	"	"	"	
Ethylbenzene	14	0.60	"	"	"	"	"	"	
Xylenes (total)	3.0	0.60	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	7.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		78.5 %	60-140		"	"	"	"	
<b>INF MW-3 (S111156-02) Air</b> Sampled: 11/09/01 17:00 Received: 11/12/01 08:05									
<b>Purgeable Hydrocarbons</b>	<b>140</b>	28	ppmv	10	1110139	11/12/01	11/12/01	DHS LUFT	
Benzene	ND	0.16	"	"	"	"	"	"	
Toluene	1.1	0.13	"	"	"	"	"	"	
Ethylbenzene	3.8	0.12	"	"	"	"	"	"	
Xylenes (total)	1.0	0.12	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.4	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.0 %	60-140		"	"	"	"	
<b>INF RW-1 (S111156-03) Air</b> Sampled: 11/09/01 17:15 Received: 11/12/01 08:05									
<b>Purgeable Hydrocarbons</b>	<b>440</b>	140	ppmv	50	1110139	11/12/01	11/12/01	DHS LUFT	
Benzene	1.2	0.80	"	"	"	"	"	"	
Toluene	2.8	0.65	"	"	"	"	"	"	
Ethylbenzene	12	0.60	"	"	"	"	"	"	
Xylenes (total)	3.6	0.60	"	"	"	"	"	"	
Methyl tert-butyl ether	8.1	7.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		73.0 %	60-140		"	"	"	"	



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: DPE Test  
Project Manager: Rusty Benkosky

**Reported:**  
11/28/01 18:31

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air (ppmv) by DHS LUFT**

**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>EFF #2 (S111156-04) Air</b> Sampled: 11/10/01 07:30 Received: 11/12/01 08:05									
Purgeable Hydrocarbons	ND	2.8	ppmv	1	1110139	11/12/01	11/12/01	DHS LUFT	
Benzene	ND	0.016	"	"	"	"	"	"	
Toluene	ND	0.013	"	"	"	"	"	"	
Ethylbenzene	ND	0.012	"	"	"	"	"	"	
Xylenes (total)	ND	0.012	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.14	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		78.0 %		60-140	"	"	"	"	





SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: DPE Test  
Project Manager: Rusty Benkosky

Reported:  
11/28/01 18:31

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>RW-1 (S111156-05) Water</b> Sampled: 11/10/01 10:00 Received: 11/12/01 08:05									
<b>Purgeable Hydrocarbons</b>	<b>2800</b>	<b>1000</b>	ug/l	20	1110225	11/19/01	11/19/01	DHS LUFT	
<b>Benzene</b>	<b>13</b>	<b>10</b>	"	"	"	"	"	"	
<b>Toluene</b>	<b>ND</b>	<b>10</b>	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>130</b>	<b>10</b>	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>ND</b>	<b>10</b>	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>800</b>	<b>50</b>	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		<i>93.8 %</i>	<i>60-140</i>		"	"	"	"	
<b>MW-3 (S111156-06) Water</b> Sampled: 11/10/01 10:10 Received: 11/12/01 08:05									
<b>Purgeable Hydrocarbons</b>	<b>4700</b>	<b>500</b>	ug/l	10	1110225	11/19/01	11/19/01	DHS LUFT	
<b>Benzene</b>	<b>26</b>	<b>5.0</b>	"	"	"	"	"	"	
<b>Toluene</b>	<b>ND</b>	<b>5.0</b>	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>84</b>	<b>5.0</b>	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>9.3</b>	<b>5.0</b>	"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>150</b>	<b>25</b>	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		<i>95.2 %</i>	<i>60-140</i>		"	"	"	"	



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: DPE Test  
Project Manager: Rusty Benkosky

Reported:  
11/28/01 18:31

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 1110139 - EPA 5030B (P/T)**

**Blank (1110139-BLK1)**

Prepared & Analyzed: 11/12/01

Purgeable Hydrocarbons	ND	10	mg/m <sup>3</sup> Air							
Benzene	ND	0.050	"							
Toluene	ND	0.050	"							
Ethylbenzene	ND	0.050	"							
Xylenes (total)	ND	0.050	"							
Methyl tert-butyl ether	ND	0.50	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1.88		"	2.00		94.0	60-140			

**LCS (1110139-BS1)**

Prepared & Analyzed: 11/12/01

Benzene	1.92	0.050	mg/m <sup>3</sup> Air	2.00		96.0	70-130			
Toluene	1.97	0.050	"	2.00		98.5	70-130			
Ethylbenzene	2.01	0.050	"	2.00		100	70-130			
Xylenes (total)	5.47	0.050	"	6.00		91.2	70-130			
Methyl tert-butyl ether	2.12	0.50	"	2.00		106	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1.98		"	2.00		99.0	60-140			

**LCS Dup (1110139-BSD1)**

Prepared & Analyzed: 11/12/01

Benzene	1.91	0.050	mg/m <sup>3</sup> Air	2.00		95.5	70-130	0.522	25	
Toluene	2.00	0.050	"	2.00		100	70-130	1.51	25	
Ethylbenzene	2.02	0.050	"	2.00		101	70-130	0.496	25	
Xylenes (total)	5.54	0.050	"	6.00		92.3	70-130	1.27	25	
Methyl tert-butyl ether	2.04	0.50	"	2.00		102	70-130	3.85	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	2.07		"	2.00		104	60-140			



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: DPE Test  
Project Manager: Rusty Benkosky

Reported:  
11/28/01 18:31

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air (ppmv) by DHS LUFT - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1110139 - EPA 5030B (P/T)</b>									
<b>Blank (1110139-BLK1)</b>					Prepared & Analyzed: 11/12/01				
Purgeable Hydrocarbons	ND	2.8	ppmv						
Benzene	ND	0.016	"						
Toluene	ND	0.013	"						
Ethylbenzene	ND	0.012	"						
Xylenes (total)	ND	0.012	"						
Methyl tert-butyl ether	ND	0.14	"						
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.00188		"	0.00200		94.0	60-140		
<b>LCS (1110139-BS1)</b>					Prepared & Analyzed: 11/12/01				
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.00198		ppmv	0.00200		99.0	60-140		
<b>LCS Dup (1110139-BSD1)</b>					Prepared & Analyzed: 11/12/01				
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.00207		ppmv	0.00200		104	60-140		



SECOR International - Rancho Cordova 3017 Kilgore Road, Suite 100 Rancho Cordova CA, 95670	Project: Tosco 7004, San Leandro, CA Project Number: DPE Test Project Manager: Rusty Benkosky	Reported: 11/28/01 18:31
--	---	-----------------------------

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 1110225 - EPA 5030B (P/T)**

**Blank (1110225-BLK1)**

Prepared & Analyzed: 11/19/01

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.32		"	10.0		93.2	60-140			

**LCS (1110225-BS1)**

Prepared & Analyzed: 11/19/01

Benzene	9.31	0.50	ug/l	10.0		93.1	70-130			
Toluene	9.68	0.50	"	10.0		96.8	70-130			
Ethylbenzene	9.79	0.50	"	10.0		97.9	70-130			
Xylenes (total)	26.9	0.50	"	30.0		89.7	70-130			
Methyl tert-butyl ether	11.5	2.5	"	10.0		115	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.65		"	10.0		96.5	60-140			

**Matrix Spike (1110225-MS1)**

Source: S111289-02

Prepared & Analyzed: 11/19/01

Benzene	9.18	0.50	ug/l	10.0	ND	91.8	60-140			
Toluene	9.60	0.50	"	10.0	ND	96.0	60-140			
Ethylbenzene	9.76	0.50	"	10.0	ND	97.6	60-140			
Xylenes (total)	28.0	0.50	"	30.0	ND	93.3	60-140			
Methyl tert-butyl ether	11.6	2.5	"	10.0	ND	116	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.17		"	10.0		91.7	60-140			

**Matrix Spike Dup (1110225-MSD1)**

Source: S111289-02

Prepared & Analyzed: 11/19/01

Benzene	9.17	0.50	ug/l	10.0	ND	91.7	60-140	0.109	25	
Toluene	9.79	0.50	"	10.0	ND	97.9	60-140	1.96	25	
Ethylbenzene	9.95	0.50	"	10.0	ND	99.5	60-140	1.93	25	
Xylenes (total)	28.5	0.50	"	30.0	ND	95.0	60-140	1.77	25	
Methyl tert-butyl ether	11.4	2.5	"	10.0	ND	114	60-140	1.74	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.60		"	10.0		96.0	60-140			



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: DPE Test  
Project Manager: Rusty Benkosky

Reported:  
11/28/01 18:31

#### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference



Sequoia  
Analytical

1551 Industrial Road  
San Carlos, CA 94070  
(650) 232-9600  
FAX (650) 232-9612  
www.sequoialabs.com

26 November, 2001

Rusty Benkosky  
Secor  
3017 Kilgore Rd, Suite 100  
Rancho Cordova, CA 95670

RE: Tosco  
Sequoia Report: L111043

Enclosed are the results of analyses for samples received by the laboratory on 11/08/01 15:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt  
Project Manager

CA ELAP Certificate #2360



Secor  
3017 Kilgore Rd, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco  
Project Number: TOSCO #7004, San Leandro, CA  
Project Manager: Rusty Benkosky

**Reported:**  
11/26/01 14:08

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INF#2	L111043-01	Air	11/06/01 16:00	11/08/01 15:30
INF#3	L111043-02	Air	11/07/01 15:40	11/08/01 15:30
INF#4	L111043-03	Air	11/08/01 13:00	11/08/01 15:30

Sequoia Analytical - San Carlos

Latonya Pelt, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Secor  
3017 Kilgore Rd, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco  
Project Number: TOSCO #7004, San Leandro, CA  
Project Manager: Rusty Benkosky

Reported:  
11/26/01 14:08

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INF#2 (L111043-01) Air</b> Sampled: 11/06/01 16:00 Received: 11/08/01 15:30									
Purgeable Hydrocarbons as Gasoline	1200	500	ug/l	10	1110034	11/09/01	11/09/01	EPA 8021B	P-01
Benzene	9.9	5.0	"	"	"	"	"	"	
Toluene	6.3	5.0	"	"	"	"	"	"	
Ethylbenzene	12	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		127 %	70-130	"	"	"	"	"	
<b>INF#3 (L111043-02) Air</b> Sampled: 11/07/01 15:40 Received: 11/08/01 15:30									
Purgeable Hydrocarbons as Gasoline	820	100	ug/l	2	1110034	11/09/01	11/09/01	EPA 8021B	P-01
Benzene	4.1	1.0	"	"	"	"	"	"	
Toluene	1.3	1.0	"	"	"	"	"	"	
Ethylbenzene	6.6	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		150 %	70-130	"	"	"	"	"	S-04
<b>INF#4 (L111043-03) Air</b> Sampled: 11/08/01 13:00 Received: 11/08/01 15:30									
Purgeable Hydrocarbons as Gasoline	870	250	ug/l	5	1110034	11/09/01	11/09/01	EPA 8021B	P-01
Benzene	5.0	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	9.7	2.5	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		118 %	70-130	"	"	"	"	"	





Secor  
3017 Kilgore Rd, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco  
Project Number: TOSCO #7004, San Leandro, CA  
Project Manager: Rusty Benkosky

Reported:  
11/26/01 14:08

**Total Purgeable Hydrocarbons (C6-C12) and BTEX in Air by EPA 8021B  
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INF#2 (L111043-01) Air</b> Sampled: 11/06/01 16:00 Received: 11/08/01 15:30									
Purgeable Hydrocarbons as Gasoline	350	140	ppmv	10	1110034	11/09/01	11/09/01	8021B	P-01
Benzene	3.1	1.6	"	"	"	"	"	"	
Toluene	1.7	1.3	"	"	"	"	"	"	
Ethylbenzene	2.7	1.2	"	"	"	"	"	"	
Xylenes (total)	ND	1.2	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	14	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		126 %	70-130		"	"	"	"	
<b>INF#3 (L111043-02) Air</b> Sampled: 11/07/01 15:40 Received: 11/08/01 15:30									
Purgeable Hydrocarbons as Gasoline	230	28	ppmv	2	1110034	11/09/01	11/09/01	8021B	P-01
Benzene	1.3	0.32	"	"	"	"	"	"	
Toluene	0.34	0.26	"	"	"	"	"	"	
Ethylbenzene	1.5	0.24	"	"	"	"	"	"	
Xylenes (total)	ND	0.24	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.8	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		149 %	70-130		"	"	"	"	S-04
<b>INF#4 (L111043-03) Air</b> Sampled: 11/08/01 13:00 Received: 11/08/01 15:30									
Purgeable Hydrocarbons as Gasoline	250	70	ppmv	5	1110034	11/09/01	11/09/01	8021B	P-01
Benzene	1.6	0.80	"	"	"	"	"	"	
Toluene	ND	0.65	"	"	"	"	"	"	
Ethylbenzene	2.2	0.60	"	"	"	"	"	"	
Xylenes (total)	ND	0.60	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	7.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		118 %	70-130		"	"	"	"	



Sccor  
3017 Kilgore Rd, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco  
Project Number: TOSCO #7004, San Leandro, CA  
Project Manager: Rusty Benkosky

Reported:  
11/26/01 14:08

**Total Purgeable Hydrocarbon (C6-C12) by EPA 8015M and BTEX/MTBE by EPA 8021B - Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 1110034 - EPA 5030B (P/T)**

**Blank (1110034-BLK1)**

Prepared & Analyzed: 11/09/01

Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	5.0	"							
Surrogate: <i>a,a,a</i> -Trifluorotoluene	11.0		"	10.0		110	70-130			

**LCS (1110034-BS1)**

Prepared & Analyzed: 11/09/01

Benzene	8.29	0.50	ug/l	10.0		82.9	70-130			
Toluene	7.99	0.50	"	10.0		79.9	70-130			
Ethylbenzene	8.13	0.50	"	10.0		81.3	70-130			
Xylenes (total)	24.2	0.50	"	30.0		80.7	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	10.4		"	10.0		104	70-130			

**LCS (1110034-BS2)**

Prepared & Analyzed: 11/09/01

Purgeable Hydrocarbons as Gasoline	208	50	ug/l	250		83.2	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	11.0		"	10.0		110	70-130			

**Matrix Spike (1110034-MS1)**

Source: L111015-02

Prepared: 11/09/01

Analyzed: 11/10/01

Purgeable Hydrocarbons as Gasoline	350000	50000	ug/l	250000	110000	96.0	60-140			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	11.1		"	10.0		111	70-130			

**Matrix Spike Dup (1110034-MSD1)**

Source: L111015-02

Prepared: 11/09/01

Analyzed: 11/10/01

Purgeable Hydrocarbons as Gasoline	350000	50000	ug/l	250000	110000	96.0	60-140	0.00	25	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	11.7		"	10.0		117	70-130			



Secor  
3017 Kilgore Rd, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco  
Project Number: TOSCO #7004, San Leandro, CA  
Project Manager: Rusty Benkosky

Reported:  
11/26/01 14:08

**Total Purgeable Hydrocarbons (C6-C12) and BTEX in Air by EPA 8021B - Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 1110034 - EPA 5030B (P/T)**

**Blank (1110034-BLK1)**

Prepared & Analyzed: 11/09/01

Purgeable Hydrocarbons as Gasoline	ND	14	ppmv							
Benzene	ND	0.16	"							
Toluene	ND	0.13	"							
Ethylbenzene	ND	0.12	"							
Xylenes (total)	ND	0.12	"							
Methyl tert-butyl ether	ND	1.4	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.84</i>		"	<i>1.68</i>		<i>110</i>	<i>70-130</i>			

**LCS (1110034-BS1)**

Prepared & Analyzed: 11/09/01

Benzene	2.60	0.16	ppmv	3.14		82.8	70-130			
Toluene	2.12	0.13	"	2.66		79.7	70-130			
Ethylbenzene	1.88	0.12	"	2.31		81.4	70-130			
Xylenes (total)	5.58	0.12	"	6.92		80.6	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.74</i>		"	<i>1.68</i>		<i>104</i>	<i>70-130</i>			

**LCS (1110034-BS2)**

Prepared & Analyzed: 11/09/01

Purgeable Hydrocarbons as Gasoline	59.1	14	ppmv	70.9		83.4	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.85</i>		"	<i>1.68</i>		<i>110</i>	<i>70-130</i>			

**Matrix Spike (1110034-MS1)**

Source: L111015-02

Prepared: 11/09/01 Analyzed: 11/10/01

Purgeable Hydrocarbons as Gasoline	99400	14000	ppmv	70900	32000	95.1	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.87</i>		"	<i>1.68</i>		<i>111</i>	<i>70-130</i>			

**Matrix Spike Dup (1110034-MSD1)**

Source: L111015-02

Prepared: 11/09/01 Analyzed: 11/10/01

Purgeable Hydrocarbons as Gasoline	99300	14000	ppmv	70900	32000	94.9	60-140	0.101	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.95</i>		"	<i>1.68</i>		<i>116</i>	<i>70-130</i>			



Secor  
3017 Kilgore Rd, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco  
Project Number: TOSCO #7004, San Leandro, CA  
Project Manager: Rusty Benkosky

**Reported:**  
11/26/01 14:08

### Notes and Definitions

- P-01 Chromatogram Pattern: Gasoline C6-C12
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

# N<sup>o</sup> 007242 TOSCO

885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 776-9600 • FAX (408) 782-6308  
 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100  
 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673  
 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342  
 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: <u>Secor</u>		Tosco Engineer: <u>Dave Dewitt</u>	
Address: <u>3017 Kilgore Rd. STE 100</u>		Site #: <u>7004</u>	
City: <u>Rancho Cordova</u> State: <u>CA</u> Zip Code: <u>95670</u>		Site Address: <u>15599 Hesperian Blvd.</u>	
Telephone: <u>(916) 861-0400</u> Fax #: <u>(916) 861-0430</u>		City, State: <u>San Leandro CA.</u>	
Report To: <u>Rusty Bankosky</u>	Sampler: <u>Mike Dana</u>	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Turnaround  10 Work Days  5 Work Days  3 Work Days  
 Time:  2 Work Days  1 Work Day  2-8 Hours

Drinking Water  
 Wasto Water  
 Other  
 Air

Analyses Requested

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TPH/MTX/MTBE	TPH Diesel (80/15)	TOG (419.1)	Oxygenates (9) 8220	Oxygenates (9) 8220	1,2-DCA (8220)		

Project Coding:

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH/MTX/MTBE	TPH Diesel (80/15)	TOG (419.1)	Oxygenates (9) 8220	Oxygenates (9) 8220	1,2-DCA (8220)	Comments
1. <u>INF#2</u>	<u>11-06-01 4:00P</u>	<u>Air</u>	<u>1</u>	<u>Redlar</u>	<u>01</u>	<u>X</u>						
2. <u>INF#3</u>	<u>11-7-01 3:40P</u>	<u>Air</u>	<u>1</u>	<u>Redlar</u>	<u>02</u>	<u>X</u>						
3. <u>INF#4</u>	<u>11-9-01 1:00P</u>	<u>Air</u>	<u>1</u>	<u>Redlar</u>	<u>03</u>	<u>X</u>						<u>L1110477</u>
4.												
5.												
6.												
7.												
8.												
9.												
10.												

Relinquished By: <u>Mike Dana</u>	Date: <u>11-9-01</u>	Time: <u>1:50 PM</u>	Received By: <u>[Signature]</u>	Date: <u>11/8</u>	Time: <u>1:50 PM</u>
Relinquished By: <u>[Signature]</u>	Date: <u>11/8</u>	Time: <u>3:30</u>	Received By: <u>[Signature]</u>	Date: <u>11/8/01</u>	Time: <u>3:30pm</u>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received in Good Condition?  Yes  No    
 Samples on Ice?  Yes  No    
 Method of Shipment \_\_\_\_\_    
 Page \_\_\_\_\_ of \_\_\_\_\_

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported?  Yes  No    
 If no, what analyses are still needed? \_\_\_\_\_

2) Was the report issued within the requested turnaround time?  Yes  No    
 If no, what was the turnaround time? \_\_\_\_\_

Approved by: \_\_\_\_\_    
 Signature: \_\_\_\_\_    
 Company: \_\_\_\_\_    
 Date: \_\_\_\_\_



**Sequoia  
Analytical**

819 Striker Avenue, Suite 8  
Sacramento, CA 95834  
(916) 921-9600  
FAX (916) 921-0100  
www.sequoialabs.com

---

19 November, 2001

Rusty Benkosky  
SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

RE: Tosco 7004, San Leandro, CA  
Sequoia Report: S111063

Enclosed are the results of analyses for samples received by the laboratory on 11/06/01 08:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ronald W. Bobel  
Client Services Representative

CA ELAP Certificate #1624



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: N/A  
Project Manager: Rusty Benkosky

Reported:  
11/19/01 17:40

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
INF RW-1	S111063-01	Air	11/05/01 18:30	11/06/01 08:55
INF MW-3	S111063-02	Air	11/05/01 16:35	11/06/01 08:55
EFF #1	S111063-03	Air	11/05/01 16:30	11/06/01 08:55
MW-3	S111063-04	Water	11/05/01 10:10	11/06/01 08:55
RW-1	S111063-05	Water	11/05/01 10:20	11/06/01 08:55

Sequoia Analytical - Sacramento

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Ronald W. Bobel, Client Services Representative

Page Page 1 of 9



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: N/A  
Project Manager: Rusty Benkosky

**Reported:**  
11/19/01 17:40

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INF RW-1 (S111063-01) Air</b> Sampled: 11/05/01 18:30 Received: 11/06/01 08:55									
Purgeable Hydrocarbons	2800	1000	mg/m <sup>3</sup> Air	100	1110091	11/06/01	11/06/01	DHS LUFT	HC-12
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	9.5	5.0	"	"	"	"	"	"	
Xylenes (total)	31	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	54	50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		77.0 %	60-140	"	"	"	"	"	
<b>INF MW-3 (S111063-02) Air</b> Sampled: 11/05/01 16:35 Received: 11/06/01 08:55									
Purgeable Hydrocarbons	40	10	mg/m <sup>3</sup> Air	1	1110091	11/06/01	11/06/01	DHS LUFT	HC-12
Benzene	0.15	0.050	"	"	"	"	"	"	
Toluene	0.21	0.050	"	"	"	"	"	"	
Ethylbenzene	0.56	0.050	"	"	"	"	"	"	
Xylenes (total)	0.42	0.050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		72.0 %	60-140	"	"	"	"	"	
<b>EFF #1 (S111063-03) Air</b> Sampled: 11/05/01 16:30 Received: 11/06/01 08:55									
Purgeable Hydrocarbons	7000	500	mg/m <sup>3</sup> Air	50	1110091	11/06/01	11/06/01	DHS LUFT	HC-12
Benzene	30	2.5	"	"	"	"	"	"	
Toluene	47	2.5	"	"	"	"	"	"	
Ethylbenzene	56	2.5	"	"	"	"	"	"	
Xylenes (total)	41	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	46	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		86.5 %	60-140	"	"	"	"	"	





SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: N/A  
Project Manager: Rusty Benkosky

Reported:  
11/19/01 17:40

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air (ppmv) by DHS LUFT**

**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>INF RW-1 (S111063-01) Air</b> Sampled: 11/05/01 18:30 Received: 11/06/01 08:55									
Purgeable Hydrocarbons	690	280	ppmv	100	1110091	11/06/01	11/06/01	DHS LUFT	HC-12
Benzene	ND	1.6	"	"	"	"	"	"	"
Toluene	ND	1.3	"	"	"	"	"	"	"
Ethylbenzene	2.2	1.2	"	"	"	"	"	"	"
Xylenes (total)	7.3	1.2	"	"	"	"	"	"	"
Methyl tert-butyl ether	15	14	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		77.0 %	60-140	"	"	"	"	"	"
<b>INF MW-3 (S111063-02) Air</b> Sampled: 11/05/01 16:35 Received: 11/06/01 08:55									
Purgeable Hydrocarbons	9.9	2.8	ppmv	1	1110091	11/06/01	11/06/01	DHS LUFT	HC-12
Benzene	0.049	0.016	"	"	"	"	"	"	"
Toluene	0.057	0.013	"	"	"	"	"	"	"
Ethylbenzene	0.13	0.012	"	"	"	"	"	"	"
Xylenes (total)	0.098	0.012	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.14	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		72.0 %	60-140	"	"	"	"	"	"
<b>EFF #1 (S111063-03) Air</b> Sampled: 11/05/01 16:30 Received: 11/06/01 08:55									
Purgeable Hydrocarbons	1700	140	ppmv	50	1110091	11/06/01	11/06/01	DHS LUFT	HC-12
Benzene	9.5	0.80	"	"	"	"	"	"	"
Toluene	12	0.65	"	"	"	"	"	"	"
Ethylbenzene	13	0.60	"	"	"	"	"	"	"
Xylenes (total)	9.5	0.60	"	"	"	"	"	"	"
Methyl tert-butyl ether	13	7.0	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		86.5 %	60-140	"	"	"	"	"	"



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: N/A  
Project Manager: Rusty Benkosky

Reported:  
11/19/01 17:40

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT**

**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 (S111063-04) Water</b> Sampled: 11/05/01 10:10 Received: 11/06/01 08:55									
Purgeable Hydrocarbons	6000	1000	ug/l	20	1110094	11/06/01	11/06/01	DHS LUFT	
Benzene	57	10	"	"	"	"	"	"	
Toluene	50	10	"	"	"	"	"	"	
Ethylbenzene	920	10	"	"	"	"	"	"	
Xylenes (total)	65	10	"	"	"	"	"	"	
Methyl tert-butyl ether	130	50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		87.8 %	60-140		"	"	"	"	
<b>RW-1 (S111063-05) Water</b> Sampled: 11/05/01 10:20 Received: 11/06/01 08:55									
Purgeable Hydrocarbons	ND	500	ug/l	10	1110103	11/08/01	11/08/01	DHS LUFT	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	860	25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		102 %	60-140		"	"	"	"	



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: N/A  
Project Manager: Rusty Benkosky

Reported:  
11/19/01 17:40

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 1110091 - EPA 5030B (P/T)**

**Blank (1110091-BLK1)**

Prepared & Analyzed: 11/06/01

Purgeable Hydrocarbons	ND	10	mg/m <sup>3</sup> Air							
Benzene	ND	0.050	"							
Toluene	ND	0.050	"							
Ethylbenzene	ND	0.050	"							
Xylenes (total)	ND	0.050	"							
Methyl tert-butyl ether	ND	0.50	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1.94		"	2.00		97.0	60-140			

**LCS (1110091-BS1)**

Prepared & Analyzed: 11/06/01

Benzene	1.87	0.050	mg/m <sup>3</sup> Air	2.00		93.5	70-130			
Toluene	1.97	0.050	"	2.00		98.5	70-130			
Ethylbenzene	1.99	0.050	"	2.00		99.5	70-130			
Xylenes (total)	5.52	0.050	"	6.00		92.0	70-130			
Methyl tert-butyl ether	2.14	0.50	"	2.00		107	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1.87		"	2.00		93.5	60-140			

**LCS Dup (1110091-BSD1)**

Prepared & Analyzed: 11/06/01

Benzene	1.92	0.050	mg/m <sup>3</sup> Air	2.00		96.0	70-130	2.64	25	
Toluene	1.99	0.050	"	2.00		99.5	70-130	1.01	25	
Ethylbenzene	2.02	0.050	"	2.00		101	70-130	1.50	25	
Xylenes (total)	5.58	0.050	"	6.00		93.0	70-130	1.08	25	
Methyl tert-butyl ether	2.07	0.50	"	2.00		104	70-130	3.33	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	2.06		"	2.00		103	60-140			



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: N/A  
Project Manager: Rusty Benkosky

Reported:  
11/19/01 17:40

**Total Purgeable Hydrocarbons, BTEX and MTBE in Air (ppmv) by DHS LUFT - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1110091 - EPA 5030B (P/T)</b>										
<b>Blank (1110091-BLK1)</b>										
Prepared & Analyzed: 11/06/01										
Purgeable Hydrocarbons	ND	2.8	ppmv							
Benzene	ND	0.016	"							
Toluene	ND	0.013	"							
Ethylbenzene	ND	0.012	"							
Xylenes (total)	ND	0.012	"							
Methyl tert-butyl ether	ND	0.14	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.00194		"	0.00200		97.0	60-140			
<b>LCS (1110091-BS1)</b>										
Prepared & Analyzed: 11/06/01										
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.00187		ppmv	0.00200		93.5	60-140			
<b>LCS Dup (1110091-BSD1)</b>										
Prepared & Analyzed: 11/06/01										
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.00206		ppmv	0.00200		103	60-140			



819 Striker Avenue, Suite 8  
 Sacramento, CA 95834  
 (916) 921-9600  
 FAX (916) 921-0100  
 www.sequoialabs.com

SECOR International - Rancho Cordova 3017 Kilgore Road, Suite 100 Rancho Cordova CA, 95670	Project: Tosco 7004, San Leandro, CA Project Number: N/A Project Manager: Rusty Benkosky	Reported: 11/19/01 17:40
--	--	-----------------------------

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------	-----	-----------	-------

**Batch 1110094 - EPA 5030B (P/T)**

<b>Blank (1110094-BLK1)</b>				Prepared & Analyzed: 11/06/01						
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.1</i>		<i>"</i>	<i>10.0</i>		<i>101</i>	<i>60-140</i>			

<b>LCS (1110094-BS1)</b>				Prepared & Analyzed: 11/06/01						
Benzene	9.37	0.50	ug/l	10.0		93.7	70-130			
Toluene	9.12	0.50	"	10.0		91.2	70-130			
Ethylbenzene	9.06	0.50	"	10.0		90.6	70-130			
Xylenes (total)	27.3	0.50	"	30.0		91.0	70-130			
Methyl tert-butyl ether	10.8	2.5	"	10.0		108	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>11.0</i>		<i>"</i>	<i>10.0</i>		<i>110</i>	<i>60-140</i>			

**Batch 1110103 - EPA 5030B (P/T)**

<b>Blank (1110103-BLK1)</b>				Prepared & Analyzed: 11/08/01						
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>9.83</i>		<i>"</i>	<i>10.0</i>		<i>98.3</i>	<i>60-140</i>			



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: N/A  
Project Manager: Rusty Benkosky

Reported:  
11/19/01 17:40

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch 1110103 - EPA 5030B (P/T)**

**LCS (1110103-BS1)**

Prepared & Analyzed: 11/08/01

Benzene	9.40	0.50	ug/l	10.0		94.0	70-130			
Toluene	9.17	0.50	"	10.0		91.7	70-130			
Ethylbenzene	9.25	0.50	"	10.0		92.5	70-130			
Xylenes (total)	27.8	0.50	"	30.0		92.7	70-130			
Methyl tert-butyl ether	10.2	2.5	"	10.0		102	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.1</i>		<i>"</i>	<i>10.0</i>		<i>101</i>	<i>60-140</i>			

**Matrix Spike (1110103-MS1)**

Source: S111111-01

Prepared & Analyzed: 11/08/01

Benzene	9.77	0.50	ug/l	10.0	ND	97.7	60-140			
Toluene	9.76	0.50	"	10.0	ND	97.6	60-140			
Ethylbenzene	9.68	0.50	"	10.0	ND	96.8	60-140			
Xylenes (total)	29.0	0.50	"	30.0	ND	96.7	60-140			
Methyl tert-butyl ether	25.3	2.5	"	10.0	19	63.0	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>9.51</i>		<i>"</i>	<i>10.0</i>		<i>95.1</i>	<i>60-140</i>			

**Matrix Spike Dup (1110103-MSD1)**

Source: S111111-01

Prepared & Analyzed: 11/08/01

Benzene	10.2	0.50	ug/l	10.0	ND	102	60-140	4.31	25	
Toluene	10.2	0.50	"	10.0	ND	102	60-140	4.41	25	
Ethylbenzene	10.1	0.50	"	10.0	ND	101	60-140	4.25	25	
Xylenes (total)	30.2	0.50	"	30.0	ND	101	60-140	4.05	25	
Methyl tert-butyl ether	28.2	2.5	"	10.0	19	92.0	60-140	10.8	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>9.69</i>		<i>"</i>	<i>10.0</i>		<i>96.9</i>	<i>60-140</i>			



SECOR International - Rancho Cordova  
3017 Kilgore Road, Suite 100  
Rancho Cordova CA, 95670

Project: Tosco 7004, San Leandro, CA  
Project Number: N/A  
Project Manager: Rusty Benkosky

**Reported:**  
11/19/01 17:40

**Notes and Definitions**

HC-12 Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

# MOBILE TREATMENT SYSTEM FIELD DATA SHEET

Site # & Project Location: Tosco/Phillips #7004, 15599 Hesperian Blvd., San Leandro Hourmeter Reading (start/end): 136292/13631.9 Page: 1 of 5

Client: Tosco/Phillips Technician: MD Totalizer Reading (start/end): 5670/5870 Date: 11-5-01

DATE	TIME	FID (ppmv)	Applied Vacuum (Hg")	Water Flow Rate (gpm)	Total System Flow Rate (scfm)	Well Field Flow Rate (scfm)	Extraction Wells	Observation Wells										Comments		
								MW-1		MW-2		MW-3		MW-4		MW-5			RW-1	
								Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW		Vacuum	DTW
11/5	18:00		0				MW-3	.01	15.19	.02	15.77	0	14.52	0	15.84	0	15.52	- STATIC SLURP TUBE AT BOTTOM		
	3:05	3000	25	0.25	44.0	14.0	MW-3	.06	15.23	.05	15.81	.01	14.54	.01	15.90	.15	15.67			
	3:15	320	25	.25	44.17	14.29		.06	15.23	.04	15.81	.01	14.54	0	15.90	.15	15.70			
	3:30	4K FINE	25	.25	51.25	16.39		.06	15.24	.05	15.82	.02	14.56	.01	15.91	.17	15.71			
	4:10	05	27	.25	56.75	16.22		.06	15.24	.04	15.81	.02	14.55	.01	15.91	.17	15.72			
	5:10	4K FINE	25"	.25	58.56	17.44	MW-3	.05	15.25	.05	15.82	.02	14.57	.01	15.91	.17	15.72			
	5:30	FID	25"	.5	45.78	13.08	RW-1	SLURP TUBE AT 20.50' 100' 700ppm												
	5:45	FINE OUT	25	.5	47.62	13.57		.08	15.25	.08	15.82	.01	14.59	.01	15.93					
	6:10	↓	25	.5	46.87	13.23		.06	15.25	.09	15.82	.01	14.59	.01	15.94					
	6:50	1000 FINE OUT		.5	45.19	13.08	MW-3	SLURP TUBE AT 20.50' 100' 700ppm												
	7:00	2000	25	.5	43.60	8.80	RW-1	SLURP TUBE AT 20.50' VALUE 100ppm												
SYST TO RUN OVERNITE																				

W/ILL WELLS



# MOBILE TREATMENT SYSTEM FIELD DATA SHEET

Site # & Project Location: Tosco/Phillips #7004, 15599 Hesperian Blvd., San Leandro Hourmeter Reading (start/end): 13644.3 / 13655.2 Page: 2 of 5  
 Client: Tosco/Phillips Technician: MD Totalizer Reading (start/end): 6660 / 8200 Date: 11-6-07

DATE	TIME	FID (ppmv)	Applied Vacuum (Hg")	Water Flow Rate (gpm)	Total System Flow Rate (scfm)	Well Field Flow Rate (scfm)	Extraction Wells	Observation Wells								Comments	
								MW-1		MW-2		MW-3		MW-5			
								Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW		
11/6	7:00	1000	21.5"	.8	43.60	20.17	Rw-1	-1	15.27	-11	15.91	-02	14.61	-01	15.97		
	7:30		<del>21.5"</del>	SYST	CHANGE		Rw-1 100% open Mw-3 100% open										
	7:45	1KFO	24"	1.0	26.81	22.89		-1	15.27	-11	15.91	-02	14.61	-01	15.97		→ dropped Rw-1 3 more inches
	9:00	1300	25"	2.9	26.81	26.16		-18	15.29	-18	15.87	-01	14.64	-01	16.00		→ dropped Rw-1 to 21.8 ft. (DTB 25.75)
	10:00	1300	25"	2.9	26.16	26.02		-18	15.30	-19	15.89	-01	14.65	-01	16.02		→ zero dilution
	11:00	1300	25"	3.0	28.40	28.17		-19	15.30	-19	15.89	-01	14.65	-01	16.02		→ Rw-1 now 23ft Down
	12:00	1300	25"	3.0	31.61	30.97		-20	15.30	-20	15.89	-01	14.65	-01	16.02		→ Rw-1 Bottomed out. (25.75)
	1:00	1.2KFO	25"	3.0	28.34	27.80		-19	15.30	-20	15.89	-01	14.66	-01	16.01		
	2:00	1000	25"	3.0	32.04	31.61		-20	15.31	-20	15.90	-01	14.66	-01	16.02		
	3:00	900	25"	3.0	31.87	31.29		-19	15.31	-19	15.90	-01	14.67	-01	16.02		
	4:00	1000	25"	3.0	33.41	33.09		-19	15.31	-20	15.90	-01	14.67	-01	16.03		
	5:00	1000	25"	3.0	36.62	35.97		-19	15.32	-21	15.91	-01	14.68	-01	16.04		
	6:00	1000	25"	3.0	24.63	24.29	✓	-19	15.32	-21	15.91	-01	14.68	-01	16.04		
SYST to run over nite																	

F.O. = Filtrate out

## MOBILE TREATMENT SYSTEM FIELD DATA SHEET

Site # & Project Location: Tosco/Phillips #7004, 15599 Hesperian Blvd., San Leandro Hourmeter Reading (start/end): 13668.3 / 13679.1 Page: 3 of 5

Client: Tosco/Phillips Technician: MD Totalizer Reading (start/end): 10020 / 11650 - New BT Date: 11-7-01

DATE	TIME	FID (ppmv)	Applied Vacuum (Hg")	Water Flow Rate (gpm)	Total System Flow Rate (scfm)	Well Field Flow Rate (scfm)	Extraction Wells	Observation Wells								Comments
								mw 1		mw 2		mw 4		mw 5		
								Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	
11-7	7:00	400	25"	3.0	19.62	19.38	mw 3, Rm 1	-19	15.35	-19	15.93	-01	14.70	-01	16.06	Both wells still 100% open. Zero drawdown. Both slump. Tubes bottomed out.
	8:00	400	25"	3.0	21.80	21.57		-19	15.36	-19	15.94	-01	14.73	-01	16.06	
	9:00	400	25"	3.0	26.16	25.87		-19	15.36	-20	15.94	-01	14.72	-01	16.07	
	10:00	400	25"	3.0	32.70	32.16		-19	15.36	-20	15.94	-01	14.73	-01	16.08	
	11:00	500	25"	3.0	33.61	33.46		-19	15.36	-20	15.94	-01	14.73	-01	16.08	
	12:00	650	25"	3.0	34.22	33.96		-19	15.36	-20	15.94	-01	14.72	-01	16.08	
	1:00	400	25"	3.0	28.34	28.12		-20	15.36	-20	15.94	-01	14.71	-01	16.08	
	2:00	450	25"	2.5	29.87	29.42		-20	15.36	-20	15.94	-01	14.71	-01	16.08	
	3:00	450	25"	2.5	36.21	35.92		-20	15.36	-20	15.95	-01	14.72	-01	16.08	
	4:00	500	25"	2.5	41.42	41.03		-20	15.36	-20	15.95	-01	14.72	-01	16.08	
	5:00	400	25"	2.5	38.15	37.92		-20	15.36	-20	15.95	-01	14.72	-01	16.08	
	6:00	300	25"	2.5	37.06	36.69		-20	15.37	-20	15.96	-01	14.73	-01	16.08	
					SYS to Run overnight											
6:30	Re fueled Gen w/ 55 Gall Diesel															
6:45 PM	switched BT from 6900 to 18000 BT															

Both wells still 100% open. Zero drawdown. Both slump. Tubes bottomed out.  
  
Air Sample ITM #3 3140P

**MOBILE TREATMENT SYSTEM FIELD DATA SHEET**

Site # & Project Location: \_\_\_\_\_

Tosco/Phillips #7004, 15599 Hesperian Blvd., San Leandr

Hourmeter Reading (start/end):

13692.1/15201.0

Page: 4 of 5

Client: Tosco/Phillips

Technician: MD

Totalizer Reading (start/end):

13150/14600

Date: 11-8-07

DATE	TIME	FID (ppmv)	Applied Vacuum (Hg")	Water Flow Rate (gpm)	Total System Flow Rate (scfm)	Well Field Flow Rate (scfm)	Extraction Wells	Observation Wells								Comments	
								mw 1		mw 2		mw 4		mw 5			
								Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW		Vacuum
11-8	7:00	180	25"	2.5	23.98	23.61	mw 3	-20	15.39	-19	15.97	-20	14.73	-20	16.10		NO SYST CHANGE
	8:00	180	25"	2.5	24.71	24.42		-20	15.40	-19	15.98	-20	14.74	-20	16.10		
	9:00	250	25"	2.5	28.46	28.47		-20	15.40	-19	15.98	-20	14.74	-20	16.10		
	10:00	250	25"	2.5	33.35	32.20		-20	15.40	-19	15.98	-20	14.74	-20	16.10		
	11:00	300	25"	2.5	37.51	37.16		-19	15.40	-19	15.98	-20	14.74	-20	16.10		
	12:00	350	25"	2.5	45.26	44.97		-19	15.40	-19	15.98	-20	14.74	-20	16.10		
	1:00	400	25"	2.5	37.06	36.85		-19	15.40	-19	15.98	-20	14.74	-20	16.10		
	2:00	450	25"	2.5	38.80	38.59		-19	15.40	-19	15.98	-20	14.74	-20	16.10		
	3:00	400	25"	2.5	39.24	38.26		-19	15.40	-19	15.98	-20	14.74	-20	16.11		
	4:00	350	25"	2.5	43.60	43.17		-19	15.40	-18	15.98	-20	14.74	-20	16.11		
	5:00	260	25"	2.1	45.78	45.36		-19	15.40	-18	15.98	-20	14.74	-20	16.11		
	6:00	200	25"	2.1	47.96	47.61	✓	-19	15.41	-20	15.98	-20	14.75	-20	16.11		

SYST to turn over

# MOBILE TREATMENT SYSTEM FIELD DATA SHEET

Site # & Project Location: Tosco/Phillips #7004, 15599 Hesperian Blvd., San Leandro Hourmeter Reading (start/end): 13716.0 / 13727.0 Page: 5 of 5  
 Client: Tosco/Phillips Technician: MD Totalizer Reading (start/end): 16290 / 17280 Date: 11-9-01

DATE	TIME	FID (ppmv)	Applied Vacuum (Hg")	Water Flow Rate (gpm)	Total System Flow Rate (scfm)	Well Field Flow Rate (scfm)	Extraction Wells	Observation Wells								Comments
								Mw 1		Mw 2		Mw 4		Mw 5		
								Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	Vacuum	DTW	
11/9	7:00	150	25"	2.1	26.16	28.92	Mw 3 Rw 1	-18	15.42	-21	16.00	-01	14.76	-01	16.12	
	8:00	170	25"	2.1	28.34	28.12		-18	15.42	-20	16.00	-01	14.76	-01	16.12	
	9:00	250	25"	2.1	29.43	28.16		-18	15.42	-20	16.00	-01	14.76	-01	16.12	
	10:00	200	25"	2.1	32.70	32.47		-19	15.42	-19	16.00	-01	14.76	-01	16.12	
	11:00	220	25"	2.1	37.06	36.87		-18	15.42	-19	16.00	-01	14.76	-01	16.12	
	12:00	200	25"	2.1	43.60	43.21		-18	15.42	-19	16.00	-01	14.76	-01	16.12	
	1:00	250	25"	2.1	39.24	38.79		-18	15.42	-19	16.00	-01	14.76	-01	16.12	
	2:00	380	24.5"	2.1	37.06	36.65		-18	15.42	-20	16.00	-01	14.76	-01	16.12	
	3:00	400	25"	2.1	42.51	42.08		-18	15.42	-20	16.00	-01	14.76	-01	16.12	
	4:00	400	25"	2.1	41.42	41.12		-19	15.42	-20	16.00	-01	14.76	-01	16.13	
	5:00	300	25"	2.1	39.24	38.99		-20	15.42	-20	16.00	-01	14.76	-01	16.13	
	6:00	250	25"	2.1	37.06	36.71		-20	15.42	-20	16.00	-01	14.76	-01	16.13	
					SYS + TO Pump OVERHAUL											

→ Lost 1/2 inch of vac. still at zero Dilution  
 → VAC CAME BACK TO 25"

