October 22, 2001 ERI 2023QSR.L19

Mr. Steve Morse California Regional Water Quality Control Board San Francisco Bay Region 1515 Clay Street, Suite 1400 Oakland, California 94612

Subject:

Tosco Corporation, Quarterly Summary Reports, Third Quarter 2001.

Mr. Morse:

At the request of Tosco Corporation (Tosco), a subsidiary of Phillips Petroleum Company, Environmental Resolutions, Inc. (ERI) is submitting the attached third quarter 2001 summary reports for various Tosco facilities at which ERI is performing ongoing environmental work within the San Francisco Bay Region. Please call me at (415) 382-5994 with any questions.

Sincerely,

Environmental Resolutions, Inc.

Glenn L. Matteucci Program Manager

Attachments: Third Quarter 2001 Quarterly Summary Reports

cc: Mr. Dave DeWitt, Phillips 66 Company

Mr. Deno Milano, San Mateo County Department of Health Services

Mr. Mamdouh Awwad, City and County of San Francisco Department of Public Health - Environmental Health Section

Mr. Ted Trenholm, Alameda County Water District

Ms. Eva Chu, Alameda County Health Care Services Agency

Mr. Amir Gholami, Alameda County Health Care Services Agency

Mr. Bill Mitchell, City of Berkeley Planning & Economic Development Department - Toxics Management Division

Mr. Geoffrey A. Fiedler, R.G., City of Berkeley Planning & Economic Development Department – Toxics Management Division

Mr. Bradley Mark, San Rafael Fire Department



TRANSMITTAL

Ru 409

SEP 1 0 2001

August 23, 2001 G-R #180225

TO:

Mr. David B. De Witt

Tosco Marketing Company

2000 Crow Canyon Place, Suite 400

San Ramon, California 94583

CC: Mr. Paul Blank

ERI, Inc.

73 Digital Drive, Suite 100

Novato, California

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 **RE:** Tosco 76 Service Station

#1156

4276 MacArthur Boulevard

Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 9, 2001	Groundwater Monitoring and Sampling Report Third Quarter - Event of July 17, 2001

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by *September 6, 2001*, this report will be distributed to the following:

cc: Ms. Eva Chu, Alameda County Health Care Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502 Mr. Bob Hale, Alameda County Public Works Agency, Water Resources Section, 951 Turner Court, Suite 300, Hayward, CA 94545

Enclosure

trans/1156-DBD

August 9, 2001 G-R Job #180225

Mr. David B. De Witt Tosco Marketing Company 2000 Crow Canyon Place, Suite 400 San Ramon, California 94583

RE: Third Quarter Event of July 17, 2001

Groundwater Monitoring & Sampling Report

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

Dear Mr. De Witt:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are summarized in Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

No. 5577

Sincerely,

Deanna L. Harding

Project Coordinator

Stephen J. Carter

Senior Geologist, R.G. No. 5577

Figure 1:

Potentiometric Map

Figure 2:

Concentration Map

Table 1:

Groundwater Monitoring Data and Analytical Results

Table 2:

Groundwater Analytical Results

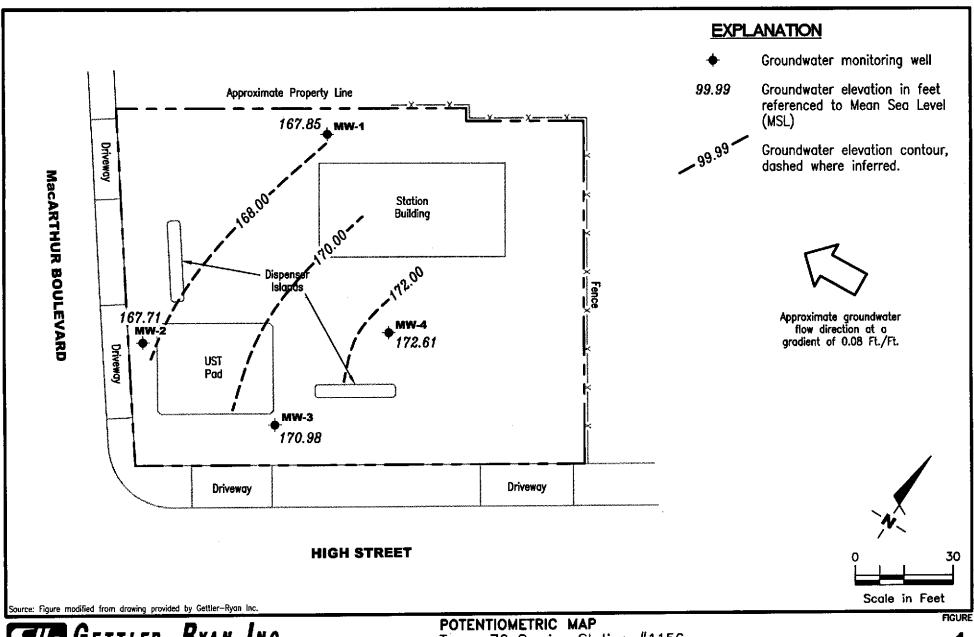
Attachments:

Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

1156.qml



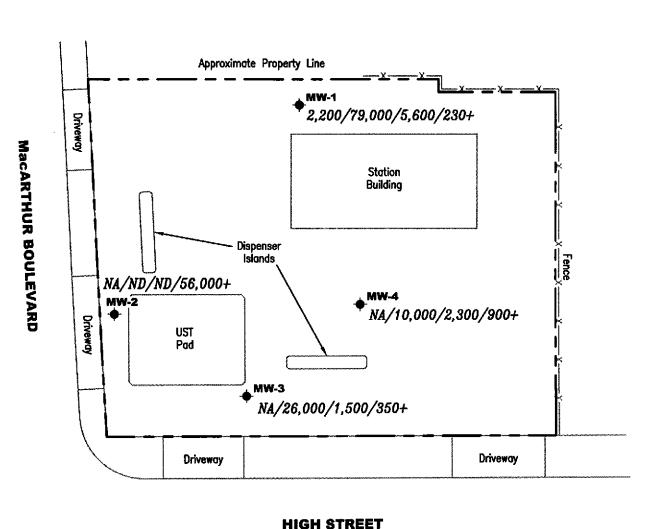


Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

REVISED DATE

PROJECT NUMBER REVIEWED BY 180225

DATE July 17, 2001



EXPLANATION

Groundwater monitoring well

A/B/C/D TPH(D) (Total Petroleum

Hydrocarbons as Diesel)/TPH(G) (Total Petroleum Hydrocarbons as Gasoline)/Benzene/MTBE concentrations in ppb

ND Not Detected

NA Not Analyzed

REVISED DATE

+ MTBE by EPA Method 8260

0 30
Scale in Feet

Source: Figure modified from drawing provided by Gettler-Ryan Inc.



REVIEWED BY

CONCENTRATION MAP

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

DATE

July 17, 2001

FIGUR

2

PROJECT NUMBER

180225

Table 1
Groundwater Monitoring Data and Analytical Results

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

DATE	DTW	S.I.	GWE	Product Thickness	TPH-D	TPH-G	В	Т	E	Х	MTBE
	(ft.)	(ft. bgs)	(msl)	(ft.)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(pph)	(ppb)
07/20/995	7.50	5.0-25.0	167.36		16 000 ²	120,000	11.000	27 000	3 300	18.000	ND ¹
		5.0-25.0									321/333 ³
											ND ¹
											ND ¹
											ND¹
											ND ¹
											2,200
					•						¹ ND/481 ³
											¹ ND/230 ³
	7.02		207102		,	ŕ	-,		,	,	
07/20/99	5.40	5.0-25.0	167.61			ND^1	ND^1	ND^1	ND_1	ND^1	4,500/11,000 ^{3,4}
09/28/99	5.60		167.41	0.00		1,390 ⁶	124	ND^1	62.9	43.1	5,280/6,150 ³
	5.92		167.09	0.00		1,450 ⁶	99.0	ND^1	23.8	16.0	33,100
						ND ¹	42	ND^1	ND^1	ND^{I}	17,000
						ND^1	44.7	ND^1	ND^1	ND^1	66,500
						ND^1	56.7	ND^1	ND^1	ND^{1}	57,500
						ND^1	ND ¹	$ND^{\mathfrak{l}}$	ND^{1}	ND^1	49,000
						ND^1	ND^1	ND^1	ND^{\dagger}	ND^{t}	38,700/37,800 ³
07/17/01	5.30		167.71	0.00		ND^1	ND ¹	ND¹	ND ¹	ND ¹	65,000/56,000 ³
07/20/00	0 50	50.250	160.04			1 000	76	52	79	76	330
		J.U-2J.U									443/288 ³
											1,940
											2,800
											548
07/14/00	8.61		109.83	0.00		24,000	1,000	2,030	4,100	3,700	J + 0
	07/20/99 ⁵ 09/28/99 01/07/00 03/31/00 07/14/00 10/03/00 01/03/01 04/04/01 07/17/01 07/20/99 09/28/99 01/07/00 03/31/00 07/14/00 10/03/00 01/03/01 04/04/01	07/20/99 ⁵ 7.50 09/28/99 8.75 01/07/00 9.05 03/31/00 7.18 07/14/00 7.68 10/03/00 7.99 01/03/01 9.18 04/04/01 8.05 07/17/01 7.01 07/20/99 5.40 09/28/99 5.60 01/07/00 5.92 03/31/00 5.23 07/14/00 5.52 10/03/01 6.42 04/04/01 6.14 07/17/01 5.30	(ft.) (ft. bgs) 07/20/99 ⁵ 7.50 5.0-25.0 09/28/99 8.75 01/07/00 9.05 03/31/00 7.18 07/14/00 7.68 10/03/00 7.99 01/03/01 9.18 04/04/01 8.05 07/17/01 7.01 07/20/99 5.40 5.0-25.0 09/28/99 5.60 01/07/00 5.92 03/31/00 5.52 10/03/01 6.42 04/04/01 6.14 07/17/01 5.30 07/20/99 8.50 5.0-25.0 09/28/99 8.31 01/07/00 8.56 03/31/00 8.42 8.42	(ft.) (ft. bgs) (msl) 07/20/99 ⁵ 7.50 5.0-25.0 167.36 09/28/99 8.75 166.11 01/07/00 9.05 165.83** 03/31/00 7.18 167.68 07/14/00 7.68 167.18 10/03/00 7.99 166.87 01/03/01 9.18 165.68 04/04/01 8.05 166.81 07/17/01 7.01 167.85 07/20/99 5.40 5.0-25.0 167.61 09/28/99 5.60 167.41 167.85 07/14/00 5.52 167.49 10/03/00 6.04 166.97 01/03/00 6.04 166.97 01/03/01 6.42 166.59 04/04/01 6.14 166.87 07/17/01 5.30 167.71 07/20/99 8.50 5.0-25.0 169.94 09/28/99 8.31 170.13 01/07/00 8.56 169.88 169.88 03/31/00 8.42 170.02 <td>DATE DTW (ft.) S.I. (ft. bgs) GWE (msl) Thickness (ft.) 07/20/995 7.50 5.0-25.0 167.36 09/28/99 8.75 166.11 <0.01</td> 01/07/00 9.05 165.83** 0.02 03/31/00 7.18 167.68 0.00 07/14/00 7.68 167.18 0.00 10/03/00 7.99 166.87 0.00 01/03/01 9.18 165.68 0.00 04/04/01 8.05 166.81 0.00 07/17/01 7.01 167.85 0.00 07/17/01 7.01 167.85 0.00 07/14/00 5.92 167.09 0.00 03/31/00 5.23 167.78 0.00 07/14/00 5.52 167.49 0.00 01/03/01 6.42 166.59 0.00 04/04/01 6.14 166.87 0.00 07/17/01 5.30 167.71 0.00 07/20/99 8	DATE DTW (ft.) S.I. (ft. bgs) GWE (msl) Thickness (ft.) 07/20/995 7.50 5.0-25.0 167.36 09/28/99 8.75 166.11 <0.01	DATE DTW (ft.) S.I. (ft. bgs) GWE (mst) Thickness (ft.) TPH-D (ppb) 07/20/995 7.50 5.0-25.0 167.36 16,000 ² 09/28/99 8.75 166.11 <0.01	DATE DTW S.I. GWE Thickness TPH-D TPH-G 07/20/99 ⁵ 7.50 5.0-25.0 167.36 16,000 ² 120,000 09/28/99 8.75 166.11 <0.01	DATE DTW S.I. GWE Thickness TPH-D TPH-G R 07/20/99 ⁵ 7.50 5.0-25.0 167.36 16,000 ² 120,000 11,000 09/28/99 8.75 166.11 <0.01	DATE DTW S.I. GWE Thickness TPH-D TPH-G B T 07/20/99 ⁶ 7.50 5.0-25.0 167.36 16,000 ² 120,000 11,000 27,000 09/28/99 8.75 166.11 <.0.01	DATE DTW S.I. GWE Thickness TPH-D TPH-G B T. E (f.) (DATE DTW S.1. GWE Thickness TPH-D TPH-G B T E X GPh (ft.) (ft. bgs) (mst) (ft.) (gph) (gph

Table 1
Groundwater Monitoring Data and Analytical Results

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

WELL ID/ FOC*	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	Product Thickness (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3	10/03/00	9.14	5.0-25.0	169.30	0.00		22,000 ⁶	1,910	2,020	2,400	2,680	965
(cont)	01/03/01	9.06		169.38	0.00		14,000 ⁶	1,600	1,100	2,300	1,400	3,300
	04/04/01	8.98		169.46	0.00	·	19,600 ⁶	1,150	1,470	2,100	1,820	1,050/450 ³
	07/17/01	7.46		170.98	0.00		26,000 ⁶	1,500	2,100	2,100	3,400	¹ ND/350 ³
MW-4												
179.10	07/20/99	7.40	5.0-25.0	171.70			69	2.7	0.77	ND	7.1	100
	09/28/99	7.19		171.91	0.00		4,050 ⁶	1,250	72.0	51.3	133	416/459 ³
	01/07/00	8.98		170.12	0.00		7,010 ⁶	2,260	167	271	276	764
	03/31/00	7.26		171.84	0.00		5,500 ⁶	1,800	230	330	400	1,000
	07/14/00	7.67		171.43	0.00		7,940 ⁶	2,810	332	450	247	1,530
	10/03/00	8.12		170.98	0.00		11,400 ⁶	3,110	437	519	816	1,040
	01/03/017	9.10		170.00	0.00		8,600 ⁶	2,500	340	480	960	850
	04/04/01	8.63		170.47	0.00		9,950 ⁶	2,380	126	416	725	1,140/819
	07/17/01	6.49		172.61	0,00		10,000 ⁶	2,300	110	410	800	1,200/900
Trip Blank												
TB-LB	07/20/99							: -				
	09/28/99						ND	ND	ND	ND	ND	ND
	01/07/00						ND	ND	ND	ND	ND	ND
	03/31/00						ND	ND	ND	ND	ND	ND
	07/14/00						ND	ND	ND	ND	ND	ND
	10/03/00						ND	ND	ND	ND	ND	ND
	01/03/01						ND	ND	ND	ND	ND	ND
	04/04/01						ND	ND	ND	ND	ND	ND
	07/17/01						ND	ND	ND	ND	ND	ND

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to September 28, 1999, were compiled from reports prepared by Environmental Resolutions, Inc.

TOC = Top of Casing

TPH-D = Total Petroleum Hydrocarbons as Diesel

(ppb) = Parts per billion

DTW = Depth to Water

TPH-G = Total Petroleum Hydrocarbons as Gasoline

ND = Not Detected

(ft.) = Feet

B = Benzene

-- = Not Measured/Not Analyzed

S.I. = Screen Interval

T = Toluene

(ft. bgs) = Feet Below Ground Surface

E = Ethylbenzene

GWE = Groundwater Elevation

X = Xylenes

(msl) = Mean sea level

MTBE = Methyl tertiary butyl ether

- * TOC elevations are based on City of Oakland Benchmark No. 3967, (Elevation = 174.40 feet, msl).
- ** GWE has been corrected due to the presence of free product; correction factor: [(TOC DTW) + (Product Thickness x 0.77)].
- Detection limit raised. Refer to analytical reports.
- ² Laboratory report indicates unidentified hydrocarbons C9-C24.
- MTBE by EPA Method 8260.
- Laboratory analyzed sample past EPA recommended holding time.
- 5 Total Recoverable Petroleum Oil was ND.
- 6 Laboratory report indicates gasoline C6-C12.
- This sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.
- 8 Laboratory report indicates unidentified hydrocarbons <C16.</p>

Table 2
Groundwater Analytical Results

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

MW-1 07/20/99 11,000³ 09/28/99 ND⁶ 333 01/07/00 03/31/00	(ppb) ND ⁶ 	(pph) ND ⁶ 	<i>(pph)</i> ND ⁶	(ppb) 	(ppb) 	(ppb)	<i>(ppb)</i> ND ²
09/28/99 ND ⁶ 333 01/07/00	ND ⁶	ND ⁶					
09/28/99 ND ⁶ 333 01/07/00	ND ⁶	ND ⁶					
01/07/00						ND^4	ND^5
						$ND^{7,8}$	ND^9
0.36.217(8)						[1	ND^{10}
07/14/00						ND^{12}	ND^{13}
10/03/00						ND ¹⁵	ND^{14}
01/03/01						ND ¹⁵	ND^{16}
04/04/01 ND ⁶ ND ⁶ 481	ND ⁶	ND^6	ND ⁶	ND ⁶	ND ⁶	ND ¹⁷	ND^{18}
07/17/01 ND ⁶ ND ⁶ 230	ND ⁶	ND ⁶	ND ⁶	ND^6	ND ⁶	ND^{20}	ND ¹⁹
MW-2 09/28/99 ND ⁶ 6,150	ND^6	ND^6	ND^6				
04/04/01 ND ⁶ ND ⁶ 37,800	ND^6	\mathtt{ND}^6	ND^6	ND^6	ND ⁶		
07/17/01 ND ⁶ ND ⁶ 56,000	ND ⁶	ND ⁶	ND^6	ND^6	ND ⁶		
MW-3 09/28/99 ND ⁶ 288	ND^6	ND ⁶	8.80	 .			
$04/04/01$ ND^6 ND^6 450	ND^6	ND^6	ND^6	ND^6	ND^6		
07/17/01 ND ⁶ ND ⁶ 350	ND ⁶	ND ⁶	ND ⁶	ND ⁶	ND ⁶		
						•	
MW-4 09/28/99 ND ⁶ 459	ND ⁶	ND ⁶	ND^6				
04/04/01 ND ⁶ ND ⁶ 819	ND^6	ND ⁶	ND^6	ND ⁶	ND ⁶		
07/17/01 ND ⁶ ND ⁶ 900	ND ⁶	ND ⁶	ND ⁶	ND ⁶	ND ⁶		

Table 2

Groundwater Analytical Results

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

EXPLANATIONS:

Groundwater laboratory analytical results prior to September 28, 1999, were compiled from reports prepared by Environmental Resolutions, Inc.

TBA = Tertiary butyl alcohol

HVOCs = Halogenated Volatile Organic Compounds

MTBE = Methyl tertiary butyl ether

SVOCs = Semi-Volatile Organic Compounds

DIPE = Di-isopropyl ether

(ppb) = Parts per billion

ETBE = Ethyl tertiary butyl ether

ND = Not Detected

TAME = Tertiary amyl methyl ether

-- = Not Analyzed

EDB = 1,2-Dibromoethane

- All HVOCs were ND except for Chlorobenzene at 12 ppb; 1,2-Dichlorobenzene (1,2-DCB) at 3.9 ppb; 1,1-Dichloroethane (1,1-DCA) at 2.0 ppb; 1,2-Dichloroethane (1,2-DCA) at 20 ppb; cis-1,2-Dichloroethene (cis-1,2-DCE) at 3.6 ppb and 1,2-Dichloropropane (1,2-DCP) at 0.92 ppb.
- ² All SVOCs were ND except for Benzyl alcohol at 37 ppb; 2,4-Dimethylphenol at 140 ppb; 2-Methylnaphthalene at 240 ppb; 4-Methylphenol at 27 ppb and Naphthalene at 600 ppb.
- Laboratory analyzed sample past EPA recommended holding time.
- All HVOCs were ND except for Benzene at 6,130 ppb; Ethylbenzene at 1,590 ppb; Naphthalene at 534 ppb; Toluene at 11,900 ppb; 1,2,4-Trimethylbenzene at 1,240 ppb; 1,3,5-Trimethylbenzene at 318 ppb and Total Xylenes at 7,360 ppb.
- All SVOCs were ND (with a raised detection limit) except for 2,4-Dimethylphenol at 13.6 ppb; 2-Methylphenol at 87.4 ppb; 2-Methylphenol at 26.4; 4-Methylphenol at 35.6 and Naphthalene at 292 ppb.
- Detection limit raised. Refer to analytical reports.
- All HVOCs were ND (with a raised detection limit) except for Benzene at 8,380 ppb; Ethylbenzene at 2,380 ppb; Naphthalene at 1,050 ppb; n-Propylbenzene at 371 ppb; Toluene at 17,600 ppb; 1,2,4-Trimethylbenzene at 2,210 ppb; 1,3,5-Trimethylbenzene at 597 ppb and Total Xylenes at 10,800 ppb.
- 8 EPA Method 8260 for HVOCs.
- All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 315 ppb and Naphthalene at 615 ppb.
- All SVOCs were ND except for Bis(2-ethylhexyl)phthalate at 10 ppb; 1,2-DCB at 6.2 ppb; 2-Methylnaphthalene at 73 ppb; 2-Methylphenol at 31 ppb; 4-Methylphenol at 18 ppb and Naphthalene at 140 ppb. Laboratory report indicates all SVOCs were analyzed outside the EPA recommended holding time.
- 11 Laboratory did not analyze for HVOCs.
- All HVOCs were ND (with a raised detection limit) except for Tetrachloroethene at 334 ppb.
- All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 300 ppb and Naphthalene at 690 ppb.
- All SVOCs were ND (with a raised detection limit) except for Benzoic acid at 362 ppb; Bis(2-ethylhexyl)phthalate at 51.6 ppb; 2-Methylnaphthalene at 98.1 ppb; 4-Methylphenol at 28.9 ppb and Naphthalene at 361 ppb.
- All HVOCs were ND (with a raised detection limit).
- All SVOCs were ND (with a raised detection limit) except for 2-Methylnaphthalene at 180 ppb and Naphthalene at 400 ppb.
- All HVOCs were ND except for cis-1,2-DCA at 3.4 ppb; 1,2-DCA at 5.7 ppb; Chlorobenzene at 5.6 ppb and 1,2-DCB at 4.6 ppb.
- All SVOCs were ND except for Benzoic acid at 28 ppb; Bis(2-ethylhexyl)phthalate at 55 ppb; 2-Methylnaphthalene at 78 ppb and Naphthalene at 490 ppb.

Table 2

Groundwater Analytical Results

Tosco 76 Service Station #1156 4276 MacArthur Boulevard Oakland, California

EXPLANATIONS: (cont)

- All SVOCs were ND except for Bis(2-ethylhexyl)phthalate at 400 ppb; 1,2-DCB at 18 ppb; 2,4-Dimethylphenol at 16 ppb; 2-Methylphenol at 47 ppb; 4-Methylphenol at 25 ppb; Naphthalene at 740 ppb and N-Nitrosodimethylamine at 7.7 ppb.
- Volatile Organic Compounds (VOCs) by EPA Method 8021B were ND with a raised detection limit.

ANALYTICAL METHODS:

EPA Method 8260 for Oxygenate Compounds EPA Method 8010 for HVOCs EPA Method 8270 for SVOCs

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

WELL MONITORING/SAMPLING FIFLD DATA SHEET

4						
ent/ cility # <u>1156</u>	,		Job#:	180225		
427	16 Mac Arth	or Blud	Date:	7-17-0	1	
~ 1	4	<u> </u>	Cample	er: Joe		
ty: <u>0</u> 8	Klano'		Sample	er:		
<u> </u>	1			o.k.	<u> </u>	•
Well ID		Well Con	dition:	0 1		-
ell Diameter	2 in	Hydrocar		- Amount Ba		
1 D	25.17	Thicknes		in (product/wat		(gel.)
tal Depth		Volume Factor (V	2" = 0.17 /F)	7 3" = 0.38 6" = 1.50	12" = 5.80	= 0.66
epth to Water	7.01	<u> </u>	·			
	18.16 x v	F 0.17 -3	09 X 3 (case vo	olume) = Estimated Pu	ırge Volume:	7.) toni
Purge	Disposable Bailer	•	Sampling	G: Ni B		•
quipment:	Bailer Stack		Equipment:	Disposable Ba Bailer	HET	y .
	Suction	٠,		Pressure Baile Grab Sample	er	
tarting Time:	1:35 Nister 2:20 P.m (1+2	<u>∞</u>) War	ather Conditions	s: Foggy	Odor: 42	<u> </u>
Sampling Time: Purging Flow Rat	Other:	war Sed	ather Conditions	s: Foggy Clea((gal)
Campling Time: Purging Flow Rat Did well de-wate	Other:	war Sed	ather Conditions ter Color: liment Descripti es; Time: vity \(\bigcircle{\cappa} \) Temper	s: Foggy Clea ion: Volumenture D.O.	Odor:y_	Alkalinity (ppm)
ampling Time: Furging Flow Rat Did well de-wate	1:35 NBUSO 2:20 P.m (1+2 e:lapor	Wan Sed	ather Conditions ter Color: liment Descripti es; Time: vity \(\bigcircle{\cappa} \) Temper	ion: Volumenture D.O. (mg/L)	Odor:	Alkalinity
tampling Time: rurging Flow Rat Did well de-wate	Other: 1.35 NBN 1.42 2.120 P.m (1+2) e: r? folume pH (gal.) 6	Conducting	ather Conditions ter Color: liment Descripti es; Time: vity Color Temper m X	other: S: Foggy Clea Clea Volum Tature D.O. (mg/L)	Odor:	Alkalinity
ampling Time: Furging Flow Rat Did well de-wate Time	Other: 1.35 NBN 1.20 2:20 9:m (1+2) e:	Conducting	ather Conditions ter Color: liment Descripti es; Time: vity O Temper m X F	other: S: Foggy Clea Clea Volum Tature D.O. (mg/L)	Odor:	Alkalinity
Sampling Time: Purging Flow Rat Did well de-wate Time 2:05	Other: 1.35 NBN 1.42 2.120 P.m (1+2) e: r? folume pH (gal.) 6	Conducting	ather Conditions ter Color: liment Descripti es; Time: vity Color Temper m X	other: S: Foggy Clea Clea Volum Tature D.O. (mg/L)	Odor:	Alkalinity
Sampling Time: Purging Flow Rat Did well de-wate Time 2:05	Other: 1.35 NBN 1.42 2.120 P.m (1+2) e: r? folume pH (gal.) 6	Conducting	ather Conditions ter Color: liment Descripti es; Time: vity Color Temper m X	other: S: Foggy Clea Clea Volum Tature D.O. (mg/L)	Odor:	Alkalinity
Campling Time: Purging Flow Rat Did well de-wate Time 2:05	Other: 1.35 NBN 1.42 2.120 P.m (1+2) e: r? folume pH (gal.) 6	Conducting minhos/c	ather Conditions ter Color: liment Descripti es; Time: vity Temper 7/ 77	other: S: Foggy Clea(ion: Volum Tature D.O. (mg/L) 7 2	Odor:	Alkalinity
ampling Time: rurging How Rat Did well de-wate Time 2:05 2:07	Other: 1.35 NBN 1.42 2.120 P.m (1+2) e: r? folume pH (gal.) 6	Conducting mhos/c	ather Conditions ter Color: liment Descripti es; Time: vity Color Temper m X	TION LABORATORY	Odor:	Alkalinity (ppm)
ampling Time: rurging Flow Rat Did well de-wate Time 2:05 2:07	Other: 1.35 NBUSD 2:20 P.m (1+2) e: gnr fr folume pH (gal.) 7.25 6 7.21 7.24 7.24 3 Yo A	Conducting mhos/c	ather Conditions ter Color: liment Descripti es; Time: vity Temper 7/ 77 77 ORY INFORMA	other: S: Feqqq Clea (ion: Volum Tature D.O. (mg/L) 7 2 6	Odor: 77	Alkalinity (ppm) YSES EX, MTBE
Sampling Time: Furging Flow Rat Did well de-wate Time 2:05 2:07 2:09 SAMPLE ID	Other: 1:35 Nikeso 2:20 P.m (1+2 e: gpr 77 70lume pH (gal.) 3 7.25 6 7.21 9.5 7.24	Conducting mhos/c 1 3 5 6 7 7 7 7 7 1 ABORAT REFRIG. P	ather Conditions ter Color: liment Descripti es; Time: vity Temper 7/ 7/ 7/ ORY INFORMA RESERV. TYPE	TION LABORATORY S: Foqqq Clea (Interpolation: Volum Volum LABORATORY Seq.	Odor:y_T	Alkalinity (ppm) YSES EX, MTBE
sampling Time: Furging Flow Rat Did well de-wate Time 2:05 2:07 2:07	Other: 1135 NBUSO 2120 P.m (1+2 e: gm 17 70iume pH (gal.) 3 7.25 6 7.21 9.5 7.24 12 VOA 2 VOA	LABORAT	ather Conditions ter Color: liment Descripti es; Time: vity Temper 7/ 7/ 7/ ORY INFORMA RESERV. TYPE	TION LABORATORY	ANAL TPHG. BT	Alkalinity (ppm) YSES EX, MTBE
Sampling Time: Furging Flow Rat Did well de-wate Time 2:05 2:07 2:09 SAMPLE ID	Other: 1:35 Nikeso 2:20 P.m (1+2 e: lgps 17 7:25 6 7:21 9:5 7.24 1 Aw b.	LABORAT REFRIG. P	ather Conditions ter Color: liment Descripti es; Time: vity Temper 7/ 7/ 7/ ORY INFORMA RESERV. TYPE	other: S: Feqqq Clea (ion: Volum Tion LABORATORY Seq.	Odor: 47 ORP (mV) ANAL TPHG, BT HVOC'S bu TPHO	YSES EX, MTBE 2 Oct /CDB
Sampling Time: Purging Flow Rat Did well de-wate Time 2:05 2:07 2:09 SAMPLE ID	Other: 1135 NBUSO 2120 P.m (1+2 e: gm 17 70iume pH (gal.) 3 7.25 6 7.21 9.5 7.24 12 VOA 2 VOA	LABORAT	ather Conditions ter Color: liment Descripti es; Time: vity Temper 7/ 7/ 7/ ORY INFORMA RESERV. TYPE	other: S: Foqqq Clea (ion: Volum Tion LABORATORY Seq.	ANAL TPHG. BT HVOC'S by TPHO SVOC'S	Alkalinity (ppm) YSES EX, MTBE

WELL MONITORING/SAMPLING FIELD DATA SHEET

						•
Client/ acility # <u>115</u>	6 _	_	Jobi	#: <u>18022</u>	5	
	76 Mac Art	hur Bl	vd. Date	<u> 7- 17-</u>	01	
City: Od				pler:	2	_
City:	71 100					
Weil ID	MW-2	Well	Condition: _	o.k.		· · · · · · · · · · · · · · · · · · ·
Well Diameter	2 in		ocarbon	Amount		
Total Depth	25.48 h	Volu	oness:	in (product/ 0.17 3" = 0 6" = 1.50		= 0.66
Depth to Water		<u> </u>		<u> </u>	.	
	20.18 x	VF 6.17	_3.43 x 3 (cas	e volume) = Estimated	Purge Volume:	10.5 (pal.)
Purge	Disposable Bailer Bailer		Sampling Equipmer	t: Disposable	Bailer	V
Equipment:	Stack	-	Equipmen	Bailer		
	Suction Grundfos	· ·		Pressure Ba Grab Samp		•
	Other:			Other:		
Sampling Time:	1:35em (1		Water Color: Sediment Descr		Odor/	<u> </u>
	te:		•		umai	(onl 3
Purging Flow Rate Did well de-wate			•	Vol	ume:	(Jaco)
Did well de-wate		Cond	•	Vol	ORP	Alkalinity (ppm)
Did well de-wate	Volume pH (gal.)	Cond umi	If yes; Time: Luctivity C Tennos/cm X	volume D.O. (mg/L	ORP	Alkalinity
Time 1:22 1:24	Volume pH (gal.) 7.31 7.26	Cond umb	If yes; Time: buctivity Tent nos/cm X 1 X 7 10 7	Volume D.O. (mg/L)	ORP	Alkalinity
Time 1:22 1:24	Volume pH (gal.)	Cond umb	If yes; Time: buctivity C Tent nos/cm X 1 X	volume D.O. (mg/L	ORP	Alkalinity
Time 1:22 1:24	Volume pH (gal.) 7.31 7.26	Cond umb	If yes; Time: buctivity Tent nos/cm X 1 X 7 10 7	Volume D.O. (mg/L)	ORP	Alkalinity
Time 1:22 1:24	Volume pH (gal.) 7.31 7.26	Cond umb	If yes; Time: buctivity Tent nos/cm X 1 X 7 10 7	Volume D.O. (mg/L)	ORP	Alkalinity
Time 1:22 1:24	Volume pH (gal.) 7.31 7.26	Cond pml 3.	If yes; Time: Inactivity P Tennesson X X	Volume D.O. (mg/L) 3 / (mg/L) 2 · 8	ORP	Alkalinity
Time 1:22 1:24	Volume pH (gal.) 7.31 7.26	Cond pml 3.	If yes; Time: buctivity Tent nos/cm X 1 X 7 10 7	Volume D.O. (mg/L) 2-8	ORP (mV)	Alkalinity
Time 1:22	Volume pH (gal.) 3. \(\frac{7.31}{7-26} \) 10. \(\frac{7.22}{20} \)	Cond unit	Hyes; Time: Luctivity C Tennos/cm X 10 7 12 7 RATORY INFORM PRESERV. TYPE HCL	Volume D.O. (mg/L) 2-8	ORP (mV)	Alkalinity (ppm) YSES
Time // 22 // 24 (/ 26 SAMPLE ID	Volume pH (gal.) 3. \(\frac{7.31}{7-26} \) (a) - CONTAINER	Cond ymit 3. 3. 1.ABOF REFRIG.	If yes; Time: Luctivity 7 Tent to s/cm x	NATION LABORATORY	ANAL TPHG, BT	Alkalinity (ppm)

WELL MONITORING/SAMPLING FIELD DATA SHEET

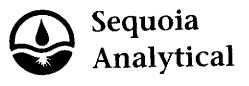
acility # 1156			Job#:	180225	1	_
ddress: 4276	6 Mac Aith	or Blud	Date:	7-17-0	1	_
City: <u>08 k</u>			Sample	er: Joe		
						_
Well ID	MW-3	Well Cor	ndition:	o.k.		_
Vell Diameter	2 in.	Hydroca: Thickness		Amount Ba	The same of the sa	<u>सर</u>
Total Depth	7.46	Volume Factor (7 3" = 0.38 6" = 1.50	4" = 0.66 12" = 5.80	
Depth to Water	1.46	<u> </u>				1
	17.57 × v	/F 0.17 =_	299 _X 3 (case w	olume) = Estimated Pi	urge Volume:	<u>al l</u>
Purge Equipment:	Disposable Bailer Bailer	•	Sampling Equipment:	Disposable Ba	iller	,
Edorbulenc.	Stack		-	Bailer Pressure Baile	er	
	Suction Grundfos	•		Grab Sample		
	Other:	-	(Other:	-	
Starting Time:	12:40 1:04 p.m (13		ather Condition	ن مام	Odor 4es	
Sampling Time: Purging Flow Rate Did well de-water	1:04 P.m (13 :lop		nter Color: diment Descript yes; Time:	clea(ne:	(gal.)
Sampling Time: Purging Flow Rate Did well de-water	1 04 f.m (13):		nter Color: diment Descript yes; Time: ivity 1 Tempe	clea(inity
Sampling Time: Purging Flow Rate Did well de water Time Vo	1:04 P.m (13 :lop	o d) Wa m. Se _ If y	nter Color: diment Descript yes; Time: ivity 1 Tempe cm x	Clea (cion: Volumenture D.O. (mg/L)	ORP Alkal	inity
Sampling Time: Purging Flow Rate Did well de-water Time Vo	1:04 P.m (13) 1:	Conduct umbos/	nter Color: diment Descript yes; Time: ivity 1 Tempe cm x	clea (ion: Volumentature D.O.	ORP Alkal	inity
Sampling Time: Purging Flow Rate Did well de water Time Vo	1:04 P.m (13) :lon olume pH gal.) 7 6.76	Conduct umbos/	nter Color: diment Descript yes; Time: ivity 1 Tempe cm x	Clea (cion: Volumenture D.O. (mg/L)	ORP Alkal	inity
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52	1:04 P.m (13) 1:	Conduct umbos/	nter Color: diment Descript yes; Time: ivity 1 Tempe cm x	Clea (cion: Volumenture D.O. (mg/L)	ORP Alkal	inity
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52	1:04 P.m (13) 1:	Conduct umbos/	nter Color: diment Descript yes; Time: ivity 1 Tempe cm x	Clea (cion: Volumenture D.O. (mg/L)	ORP Alkal	inity
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52	1:04 P.m (13) 1:	Conduct umbos/	diment Descriptors:	Clea (cion: Volumentature D.O. (mg/L) 3	ORP Alkal	inity
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52 12:54	1:04 P.m (13) 1:	Conduct Con	nter Color: diment Descript yes; Time: ivity 1 Tempe cm x	Clea (cion: Volumentature D.O. (mg/L) 3	ORP Alkali (mV) (pr	inity
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52 12:54 SAMPLE ID	1 04 P.m (13) 1 op 1 o	Conduct punbos/	riter Color: diment Descript /es; Time: ivity	Clea (ion: Volument D.O. (mg/L) 3	ORP Alkal (mV) (py	inity m)
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52 12:54	1 04 P.m (13) 1 on 7	Conduct punbos/	diment Descript ves; Time: ivity	Clea (ion: Volum Tature D.O. (mg/L) 3 2 4 CTION LABORATORY	ANALYSES TPHG, BTEX, M	ree
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52 12:54 SAMPLE ID	1:04 P.m (13) I on PH pH gal.) 7 6.76 6.80 9 6.82	Conduct punbos/	diment Descript ves; Time: ivity	Clea (ion: Volumenture D.O. (mg/L) 3 Volumenture D.O. (mg/L) ABORATORY Seq.	ORP Alkal (mV) (py	ree
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52 12:54 SAMPLE ID	1 04 P.m (13) 1 on 7	Conduct umbos/	riter Color: diment Descript yes; Time: ivity	Clea (sion: Volument Tature D.O. (mg/L) . 3 2. 4 CTION LABORATORY Seq	ANALYSES TPHG, BTEX, M	ree
Sampling Time: Purging Flow Rate Did well de water Time Vo 12:50 12:52 12:54 SAMPLE ID	1 04 P.m (13) 1 on 7	Conduct umbos/	riter Color: diment Descript yes; Time: ivity	Clea (sion: Volument Tature D.O. (mg/L) . 3 2. 4 CTION LABORATORY Seq	ANALYSES TPHG, BTEX, M	ree

WELL MONITORING/SAMPLING FIFI D DATA SHEET

N# 1						
Client/ Facility # <u> 15 </u>	6		Job#:	180225	<u> </u>	·
	76 Mac Ait	hur Blu	d Date:	7-17-0	91	
City: Oè			Sampl	ler: Joe		

Weil ID	MW-4	Well C	Condition:	o.k.		· ·
Well Diameter	2 in	Hydrod Thickn	carbon —	Amount E	_	(pel.)
Total Depth Depth to Water	25.32 th	Volum				= 0.66
Debut to water		VE 0.17	3.20 × 3 (case)	volume) = Estimated F	Purge Volume:	/ 0 (col.)
Purge Equipment:	Disposable Bailer Bailer Stack Suction Grundfos Other:	=	Sampling Equipment:	Disposable B Bailer Pressure Bail Grab Sample Other:	iaîler Ier	,
Sampling Time: Purging Flow Rate Did well de-water	12:30 A·m (12) te:1 er?	gnan_ S	Vater Color: lediment Descript f yes; Time:	•	Odor: 4	(cal.)
	Válume pH (gal.)	Condu	ctivity (⁷⁾ Tempe s/cm ^x		ORP (mV)	Alkalinity (ppm)
Time	, 16 1	_	_,			
12:10	3.5 <u>7.37</u> 7.5 <u>7.32</u>	3.0	16 -73	.6		,
12'.10	3.5 7.37	3.0		.6		
12:10	3.5 7.37 7.32 10 7.20	1 4.0	76 73. 74 73. ATORY INFORMA			
12:10 12:12 12:(4	3.5 7.37. 7.32 10 7.20	LABORA REFRIG.	TORY INFORMA	TION LABORATORY	ANAL	
12'.10 12:12 12:14	3.5 7.37 7.32 10 7.20	3.9 1 4.6	76 73. 74 73. ATORY INFORMA		TPHG, BT	

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					TO	osco (76)	SS#1	156						ontact	(Nome)		R. D	AVID	DEWI:	rt		· · · · ·
			Foolii	ly Numbe v Address	4276	MACARTH	UR,	OAKLA	ND	CA		_			(Phone)			277-				
18		Conet	Hant Pro	steet Num	ber	180225.8	<u>5</u>					_ Ն	boratory	r Name	Sec	<u>uoia</u>	Ana.	lytic	<u>al</u>			·
TOSC		Consu	illant Na	me_Ge	ttler	-Ryan_Inc	(G-	R_Inc	2.)			∟	borolon	Relaci	• Numt	.er						
		Ac	idrooo_b	747 S	ierra	Court. S	ulte.	J. Di	ւևԼվո	1 <u>,_</u> CA	9456	LL s	omples (Collecte	1 Бу (N	ame)	50€	ASEN	MIAN)		.,
Touce Marketing Co 2005 Crow Carryon P San Planton, Californ	M 2/F WOD	Pı	roject Co	intact (No	me) _D	eanna L.	<u>Hardi</u>	ng				0	olleation Ignoture	Date_	7-17	-01						
				(PI	10010) 92	<u>5-551-755</u>	5_(Fox	Humber	925-	<u>-551-</u>	7888	s			$\overline{}$							
			8					<u>:</u>		,		-	Analyse	• To B	Perfor	med						T BILL ANALYSIS
C10-7143	Lab Sample Number	Number of Containers	Metric S = Soll A = Air W = Water C = Charm	Type G = Grab C = Composite D = Discrete	Time	. Sample Preservation	load (Yes or No)	TPH G. + 8TEX WINTE (8016)	TPH Dissed (8015)	Oil and Grades (\$520)	Purgeable Halocarbors (8010)	Purgeable Arametics (8020)	Purgeable Organica (8240)	Extractoble Organics (8270)	Hetals C4.07,Pb.Zn.Ni (ICAP or AA)	HVOC5 64 8010	d2845 5005	(6) 0x4; 1,2 OCA			٠.	norke
TB-LB	01	JOA	W	Ç	-	HCL	Υ	V						ļ		<u></u>		ļ				<u>. </u>
WM-I	07.	70A	,	,	1420	,	,	1	✓						ļ. 	<u></u>	1	V	· · 	ļ		
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Relinquished By	Lows	.	G	ganization —R Inc	-	Date/Time 18 7-17-0 Date/Time		ocelyed ocelyed	hai	•	0 9 m		Organiza Organiza			le/Time	<u> </u>		iaur v	24 48 6	i Hre. B Hre. Daye	Ullulovy
Relinquished By	(Signature))	Or	ganization	,	Date/Time	n	bevelpe	For Lab	oralory	By (Slgr	nature)			Do	te/Time		1			ontracted	>



San Carlos, CA 94070-4111 (650) 232-9600

FAX (650) 232-9612 www.sequoialabs.com

1551 Industrial Road

GETTLEK-KYAN INC GENERAL CONTRACTOR

August 01, 2001

Deanna Harding Gettler-Ryan/Geostrategies(1) 6747 Sierra Court, Suite J Dublin, CA 94568 RE: Tosco(1) / L107143

Enclosed are the results of analyses for samples received by the laboratory on 07/17/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

onya K. Pelt atenya Pelt Project Manager

CA ELAP Certificate Number 2360

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

ANALYTICAL REPORT FOR SAMPLES

	Laboratory ID	Matrix	Date Sampled	Date Received
Sample ID	L107143-01	Water	07/17/01 00:00	07/17/01 18:00
TB-LB	L107143-02	Water	07/17/01 14:20	07/17/01 18:00
MW-1	L107143-03	Water	07/17/01 13:35	07/17/01 18:00
MW-2	L107143-04	Water	07/17/01 13:04	07/17/01 18:00
MW-3	L107143-05	Water	07/17/01 12:30	07/17/01 18:00
MW-4	2.0			

Gettler-Ryan/Geostrategies(1)

6747 Sierra Court, Suite J

Project: Tosco(1)

Project Manager: Deanna Harding

Project Number: Tosco (76) SS#1156, Oakland, CA

Reported: 08/01/01 14:30

Dublin CA, 94568

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
TB-LB (L107143-01) Water Sampled:	07/17/01 00:00	Received: 0	7/17/01	18:00					
Purgeable Hydrocarbons as Gasoline	ND ·	50	ug/l	1	1070131	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	0.50	#	n		w	Ħ	n	
Toluene	ND	0.50	**	н		**	Ħ	n	
Ethylbenzene	ND	0.50	**	Ħ	11	Ħ	*	•	
Xylenes (total)	ND	0.50	n	H	Ħ	R	ti	Ħ	
Methyl tert-butyl ether	ND	5.0	•	н	tr		H	**	
Surrogate: a,a,a-Trifluorotoluene		86.5 %	70-	130	"	Ħ	#	**	
MW-1 (L107143-02) Water Sampled: 0	7/17/01 14:20	Received: 0	7/17/01	18:00					
Purgeable Hydrocarbons as Gasoline	79000	20000	ug/l	400	1070132	07/29/01	07/29/01	DHS LUFT	P-01
Benzene	5600	200	n	H	*		#	**	
Toluene	11000	200	*	n	n	Ŧ	P	H	
Ethylbenzene	2800	200	-			*		•	
Xylenes (total)	12000	200	*		#1	#	-	*	
Methyl tert-butyl ether	ND	2000		**	#	H			
Surrogate: a,a,a-Trifluorotoluene		97.1 %	70-	130	u	n		н	
MW-2 (L107143-03) Water Sampled: (07/17/01 13:35	Received: 0	7/17/01	18:00					
Purgeable Hydrocarbons as Gasoline	ND	5000	ug/l	100	1070132	07/29/01	07/29/01	DHS LUFT	
Benzene	ND	50	H		**	n	11	**	
Toluene	ND	50	•	Ħ	н	•	#	**	
Ethylbenzene	ND	50	Ħ	#1	н	Ħ	"	n	
Xylenes (total)	ND	50	#	n	H	11	Ħ	•	
Methyl tert-butyl ether	65000	2500	H	500	u))	#		M-0
Surrogate: a,a,a-Trifluorotoluene		96.5 %	70	-130	"	н	н	н	

Gettler-Ryan/Geostrategies(1)

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Reported: 08/01/01 14:30

Project Manager: Deanna Harding

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
MW-3 (L107143-04) Water Sampled	1: 07/17/01 13:04	Received: 0	7/17/01	18:00					
Purgeable Hydrocarbons as Gasoline	26000	10000	ug/l	200	1070132	07/29/01	07/29/01	DHS LUFT	P-01
Benzene	1500	100	*	H	**	n	D	**	
Toluene	2100	100	**	H	**	**	₩	H	
Ethylbenzene	2100	100	11		**	. •	•	*	
Xylenes (total)	3400	100	n	*	U	ŧi	11	**	
Methyl tert-butyl ether	ND	1000	**	#	#	ti	#	# 	
Surrogate: a,a,a-Trifluorotoluene		96.8 %	70	0-130	ø	н	n	H	
MW-4 (L107143-05) Water Sampled	d: 07/17/01 12:30	Received: 0	7/17/01	18:00				<u>, , , , , , , , , , , , , , , , , , , </u>	
Purgeable Hydrocarbons as Gasoline	10000	2500	ug/l	50	1070132	07/29/01	07/29/01	DHS LUFT	P-01
Benzene	2300	25	Ħ	#	#	**	Ħ	•	
Toluene	110	25	#	n	H	Ħ	Ħ	н	
Ethylbenzene	410	25	ŧr	11		**	H	11	
Xylenes (total)	800	25	n	#1	*	n	Ħ	H*	
Methyl tert-butyl ether	1200	250	н	#	n				
Surrogate: a,a,a-Trifluorotoluene		97.0 %	70	0-130	#	n	n	•	

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager. Deanna Harding

Reported: 08/01/01 14:30

Volatile Organic Compounds by EPA Method 8021B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107143-02) Water	Sampled: 07/17/01 14:20	Received: 0	7/17/01	18:00					
Freon 113	ND	500	ug/l	500	1070124	07/26/01	07/27/01	EPA 8021B	
Bromodichloromethane	/ ND	250	*	-	*	*	**		
Bromoform	ND	250	n	=	Ħ	P			
Bromomethane	ND	500	#	7	H	#1	н		
Carbon tetrachloride	ND	250	11	H	•	**	*	**	
Chlorobenzene	ND	250		Ħ	*	*	₩	W .	
Chloroethane	ND	500	**	*	Ħ	π		н	
Chloroform	ND	250	**	u	н	Ħ		Ħ	
Chloromethane	ND	500	#	Ħ		#	**	**	
Dibromochloromethane	ND	250	n	Ħ	n		•	**	
1,3-Dichlorobenzene	ND	250		•	Ħ	•	H	п	
1,4-Dichlorobenzene	ND	250	*	•	H	Ħ		•	
1,2-Dichlorobenzene	ND	250	#1	n		*	#	*	
1,1-Dichloroethane	ND	250	*	#1	**	Ħ	н	Ħ	
1,2-Dichloroethane	ND	250	#	n	11	Ħ	Ħ	**	
1,1-Dichloroethene	ND	250	H	n	*	#	H	#	
cis-1,2-Dichloroethene	ND	250	-	**	n	*		*	
trans-1,2-Dichloroethene	ND	250	•	T	•	н	Ħ	н	
1.2-Dichloropropane	ND	250	*	*	r		#	*	
cis-1,3-Dichloropropene	ND	250	•	н	Ħ	n		•	
trans-1,3-Dichloropropene	ND	250	Ħ	-	"	Ħ	•	•	
Methylene chloride	ND	2500		**	₹	H		#	
1,1,2,2-Tetrachloroethane	ND	250	**	#1	н	•	н	**	
Tetrachloroethene	ND	250	**		**	#	"	H	
	ND	250	H	*	-	н	11	•	
I,1,1-Trichloroethane	ND	250		•		п	н	Ħ	
1,1,2-Trichloroethane	ND	250		#	•		#	11	
Trichloroethene	ND ND	250	41	Ħ	**	n	#	n	
Trichlorofluoromethane	ND ND	500	71	н	n	Ħ	**	-	
Vinyl chloride								и .	
Surrogate: 1-Chloro-2-fluoro	ohenzene	84.5 %	76	0-130	"	••			

Surrogate: 1-Chloro-2-fluorobenzene

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Dearma Harding

Reported: 08/01/01 14:30

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	No
MW-1 (L107143-02) Water	Sampled: 07/17/01 14:20	Received: 07	7/17/01 1	8:00					
Ethanol	ND	100000	ug/l	100	1070085	07/19/01	07/20/01	EPA 8260B	
,2-Dibromoethane	ND	200		Ħ	H	11	n	-	
,2-Dichloroethane	ND	200	u	n	TI TI	H	n	_	
i-isopropyl ether	ND	200	T	**	11	•	н	•	
M-180propyi emer	ND	200		#	*	11	π		
Ethyl tert-butyl ether	230	200		Ħ	*	#	•		
Methyl tert-butyl ether	ND	200	**	•	Ħ	n	#	#	
ert-amyl methyl ether	ND	10000	#1	**	**	11	н	n	
ert-butyl alcohol			76	114	p	n	"	"	
Surrogate: 1,2-Dichloroethan	e-d4	94.2 %		-114 -110		*	*	H	
Surrogate: Toluene-d8		99.4 %	00-	110					
4W-2 (L107143-03) Water	Sampled: 07/17/01 13:35	Received: 0	7/17/01	18:00					
	ND	500000	ug/l	500	1070085	07/19/01	07/20/01	EPA 8260B	
Ethanol	ND	1000	n	π	n	*		H	
,2-Dibromoethane	ND	1000	Ħ	*		Ħ	•	**	
,2-Dichloroethane	ND	1000	н		#	**	**	•	
Di-isopropyl ether	ND	1000	•	n	H	Ħ	#	H	
Ethyl tert-butyl ether	56000	1000	•	Ħ		•	#	*	
Methyl tert-butyl ether	ND	1000	, H		u	W	**	н	
Tert-amyl methyl ether	ND	50000		41	tr.	n	**		
Tert-butyl alcohol			76	-114					
Surrogate: 1,2-Dichloroethar	ne-d4	99.0 %		-114 -110		n	n	*	
Surrogate: Toluene-d8		102 %	88	-110					
	Sampled: 07/17/01 13:04	Received:	07/17/01	18:00					
	ND	25000	ug/l	25	1070104	07/23/01	07/23/01	EPA 8260B	
Ethanol 1,2-Dibromoethane	ND	50	*	Ħ		•	Ħ	п	
	ND	50	-	Ħ	*	#	n		
1,2-Dichloroethane	ND	50	ħ	n	Ħ	n		H	
Di-isopropyl ether	ND	50	n	**	n		11	•	
Ethyl tert-butyl ether	350	50		11	₩.	*	n	n	
Methyl tert-butyl ether	ND	50	#	n	н	Ħ		P	
Tert-amyl methyl ether	ND ND	2500	n	W	n	•	u _	71	
Tert-butyl alcohol				6-114		"	n	,	
Surrogate: 1,2-Dichloroetha	ne-d4	91.6%		0-114 8-110	,,	н	#	"	
Surrogate: Toluene-d8		93.4 %	ŏ	5-11 <i>0</i>					

Gettler-Ryan/Geostrategies(1)

6747 Sierra Court, Suite J Dublin CA, 94568 Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dílution	Batch	Prepared	Analyzęd	Method	Notes
MW-4 (L107143-05) Water	Sampled: 07/17/01 12:30	Received: 0	7/17/01	18:00					
Ethanol	ND	33000	ug/l	33.33	1070104	07/23/01	07/23/01	EPA 8260B	
1,2-Dibromoethane	ND	67	11	n	#1	Ħ	*	H	
1,2-Dichloroethane	ND	67	-	*	#	Ħ	**	**	
Di-isopropyl ether	ND	67		#	n	Ħ	**	11	
Ethyl tert-butyl ether	ND	67	*		n	"	11	н	
Methyl tert-butyl ether	900	67	•	m	H	н	н	Ħ	
Tert-amyl methyl ether	ND	67	•	₩	*		**	#	
Tert-butyl alcohol	ND	3300	u	11			11	H	
Surrogate: 1,2-Dichloroethan	e-d4	89.0 %	76	5-114	W	*	"	77	
Surrogate: Toluene-d8		106 %	88	3-110	"	*	n	"	

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

Diesel Hydrocarbons (C9-C24) by DHS LUFT

Sequoia Analytical - Walnut Creek

			<u> </u>						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107143-02) Water	Sampled: 07/17/01 14:20	Received: 0	7/17/01	18:00					·
Diesel Range Hydrocarbons		50	սջ/l	1	1G25004	07/25/01	07/25/01	EPA 8015M	D-11
Surrogate: n. Pentacosane		75.1 %	50-	150	Ŋ	#	n	n	

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

Semivolatile Organic Compounds by EPA Method 8270C

Sequoia Analytical - Walnut Creek

		Reporting					4 4	heart - a	%P. +
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (L107143-02) Water	Sampled: 07/17/01 14:20	Received: 0	7/17/01	18:00					
Acenaphthene	ND	5.0	ug/l	1	1G24007	07/24/01	07/25/01	EPA 8270C	
Acenaphthylene	ND	5.0	**	Ħ		#		**	
Aniline	ND	5.0	#	H	•	n			
Anthracene	ND	5.0	**	"	#1	"	11	"	
Benzoic acid	ND	10	H	n	Ħ	н	11	"	
Benzo (a) anthracene	ND	5.0			#	*	п	π	
Benzo (b) fluoranthene	ND	5.0	•	**	H	n	**	ıı .	
Benzo (k) fluoranthene	ND	5.0	-	**		#	н	H	
Benzo (ghi) perylene	ND	5.0	я	Ħ		н	h	H	
Benzo[a]pyrene	ND	5.0	#	π	*	n		7	
Benzyl alcohol	ND	5.0	•	Ħ	**	Þ	**	n	
Bis(2-chloroethoxy)methane	ND	5.0		**	**	n	n	Ħ	
Bis(2-chloroethyl)ether	ND	5.0	*	H	h		Ħ	#	
Bis(2-chloroisopropyl)ether	ND	5.0	**	n	Ħ	-	n	n	
Bis(2-ethylhexyl)phthalate	400	100	**	10	**	n	07/26/01	**	
4-Bromophenyl phenyl ether	ND	5.0	n	1	н	**	07/25/01	•	
Butyl benzyl phthalate	ND	50	n	•	H	Ħ	-	w	
4-Chloroaniline	ND	. 25	H		•	n	**	•	
2-Chloronaphthalene	ND	5.0		•	•	n	**	**	
4-Chloro-3-methylphenol	ND	5.0	n	11	₩	H	n	Ħ	
2-Chlorophenol	ND	5.0	**	Ħ	Ħ	79	#	11	
4-Chlorophenyl phenyl ether	ND	5.0	Ħ	n	#	11	n	н	
Chrysene	ND	5.0	**	D	11	Ħ	•	**	
Dibenz (a,h) anthracene	ND	10	Ħ	n	H	#	•		
Dibenzofuran	ND	5.0	**			н	Ħ	**	
Di-n-butyl phthalate	ND	10))	**	**	n	11	11	
1,2-Dichlorobenzene	18	5.0		11	41	*		11	
1,3-Dichlorobenzene	ND	5.0	H	Ħ	n		FF	#	
1,4-Dichlorobenzene	ND	10		**	ŧī	#	11	н .	
3,3'-Dichlorobenzidine	ND	10		**	1)	n		n	
2,4-Dichlorophenol	ND	5.0	Ħ	#	#	ri,	t+		
Diethyl phthalate	ND	5.0	*	n	H	n	•		
	16	5.0	u	H	**	н	च	Ħ	
2,4-Dimethylphenol	ND	5.0	11	**	**		н	H	
Dimethyl phthalate	ND ND	10	ft	**	et	**	#	Ħ	
4,6-Dinitro-2-methylphenol	ND ND	10	n	н	#	11	H	11	
2,4-Dinitrophenol	ND ND	10		Ħ	n	n	Ħ	n	
2,4-Dinitrotoluene				**			*		
2,6-Dinitrotoluene	ND	10		,,		,			
Di-n-octyl phthalate	ND	10		"	.11		. #	n	
Fluoranthene	ND	5.0	•	"	•				

Sequoia Analytical - San Carlos

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.

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

Volatile Organic Compounds by EPA Method 8021B - Quality Control Sequoia Analytical - San Carlos

Analysis	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte PD 4 COCOD (D/T)							<u> </u>	_		
Batch 1070124 - EPA 5030B (P/T)		· · ·			0 4 1	4. 07/26/0	1	•		
LCS (1070124-BS1)					& Anaiyza	ed: 07/26/0	70-130			
Chlorobenzene	22.7	0.50	ug/l	20.0		114	70-130			
1,1-Dichloroethene	25.3	0.50	fi	20.0		126	70-130			
Trichloroethene	21.5	0.50		20.0		108				
Benzene	22.3	0.50	н	20.0		112	70-130			
Toluene	23.0	0,50	#	20.0		115	70-130			
Surrogate: 1-Chloro-2-fluorobenzene	8.73		н —	10.0		87.3	70-130			
Matrix Spike (1070124-MS1)	Sou	rce: L10722	5-02	Prepared:	07/26/01	Analyzed	: 07/27/01			
Chlorobenzene	22.8	0.50	ug/i	20.0	ND	.114	60-140			
	22.6	0.50	H	20.0	ND	113	60-140			
1,1-Dichloroethene	21,1	0.50		20.0	ND	106	60-140			
Trichloroethene -	22.0	0.50	#	20.0	ND	110	60-140			
Benzene	22.6	0.50	ıı	20.0	ND	113	60-140			
Toluene	8.91		-	10.0		89.1	70-130			
Surrogate: 1-Chloro-2-fluorobenzene		urce: L10722	25_02	Prenared	: 07/26/01	Analyzed	1: 07/27/01			
Matrix Spike Dup (1070124-MSD1)	21.5	0.50	ug/l	20.0	ND	108	60-140	5.87	25	
Chlorobenzene	21.3	0.50	ug-1	20.0	ND	114	60-140	1.32	25	
1,1-Dichloroethene		0.50	n	20.0	ND	104	60-140	1.91	25	
Trichloroethene	20.7		•	20.0	ND	104	60-140	5.61	25	
Benzene	20.8	0.50	Ħ	20.0	ND	108	60-140	4.99	25	
Toluene	21.5	0.50				86./	70-130			
Surrogate: 1-Chloro-2-fluorobenzene	8.61		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	10.0		80.7	/0-130			

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Spike

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

RPD

%REC

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control Sequoia Analytical - San Carlos

		Reporting		Spike	Source		%REC		KFD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1070085 - EPA 5030B [P/T]										
Blank (1070085-BLK2)				Prepared .	& Analyze	d: 07/19/0	01			
Ethanol	ND	1000	ug/l							
,2-Dibromoethane	ND	2.0	N							
1,2-Dichloroethane	ND	2.0	n							
Di-isopropyl ether	ND	2.0								
Ethyl tert-butyl ether	ND	2.0	*							
Methyl tert-butyl ether	ND	2.0	**							
Fert-amyl methyl ether	מא	2.0	Ħ	*						
Tert-butyl alcohol	ND	100	**							
Surrogate: 1,2-Dichloroethane-d4	44.5		#	50.0		89.0	76-114			
Surrogate: Toluene-d8	49.8		#	50.0		99.6	88-110			
LCS (1070085-BS2)				Prepared	& Analyz	ed: 07/19/	01			
Methyl tert-butyl ether	42.7	2.0	ug/l	50.0		85.4	70-130		}	
	44.4		- "	50.0		88.8	76-114			····
Surrogate: 1,2-Dichloroethane-d4	49.4		,,	50.0		98.8	88-110			
Surrogate: Toluene-d8	72.4				_					
Matrix Spike (1070085-MS1)					& Analyz	ed: 07/19/				
Methyl tert-butyl other	48.0	2.0	ug/l	50.0		96.0	60-140			
Surrogate: 1,2-Dichloroethane-d4	46.9		#	50.0		93.8	76-114			
Surrogate: Toluene-d8	49.7		n	50.0		99.4	88-110			
Matrix Spike Dup (1070085-MSD1)				Prepared	& Analyz	zed: 07/19/	01			
Methyl tert-butyl ether	46.0	2.0	ug/l	50.0		92.0	60-140	4.26	25	
Surrogate: 1,2-Dichloroethane-d4	45.1		н	50.0		90.2	76-114			
Surrogate: 1,2-Dictior oct mane-a-	50.0		n	50.0		100	88-110			
Batch 1070104 - EPA 5030B [P/T]		·								
Blank (1070104-BLK1)				Prepared	& Analy	zed: 07/23	/01			
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0								
1,2-Dichloroethane	ND	2.0	•							
Di-isopropyl ether	ND	2.0	-							
Ethyl tert-butyl ether	ND	2.0	#							
Methyl tert-butyl ether	ND	2.0	•							
Tert-amyl methyl ether	ND	2.0	11							
Tert-butyl alcohol	ND	100	n							

Sequoia Analytical - San Carlos

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.

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Spike

Source

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

RPD

%REC

Volatile Organic Compounds by EPA Method 8021B - Quality Control Sequoia Analytical - San Carlos

Reporting

•		Reporting		Spike	Source	A/DEC	70REC	מממ	Limit	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	TROM	NOVES
Batch 1070124 - EPA 5030B (P/T)								··· -		
Blank (1070124-BLK1)				Prepared	& Analyze	d: 07/26/0	1			
Freon 113	ND	1.0	ug/l							
3romodichloromethane	ND	0.50	11							
Bromoform	ND	0.50	Ħ							
Bromomethane	ND	1.0	н							
Carbon tetrachloride	ND	0.50	*							
Chlorobenzene	ND	0.50	41							
Chloroethane	ND	1.0	T							
Chloroform	ND	0.50	n							
Chloromethane	ND	1.0	•							
Dibromochloromethane	ND	0.50	71			•				
1,3-Dichlorobenzene	ND	0.50	*							
1,4-Dichlorobenzene	ND	0.50	н							
1,2-Dichlorobenzene	ND	0.50	H							
1,1-Dichloroethane	ND	0.50	77							
1,2-Dichloroethane	ND	0.50	п							
1,1-Dichloroethene	ND	0.50	n							
cis-1,2-Dichloroethene	ND	0.50	*							
trans-1,2-Dichloroethene	ND	0.50	*							
1,2-Dichloropropane	ND	0.50	Ħ							
cis-1,3-Dichloropropene	ND	0.50								
trans-1,3-Dichloropropene	ND	0.50								
Methylene chloride	ND	5.0	н							
1,1,2,2-Tetrachloroethane	ND	0.50	.,							
Tetrachloroethene	ND	0.50	H							
1,1,1-Trichloroethane	ND	0.50								
1,1,2-Trichloroethane	ND	0.50	H							
Trichloroethene	ND	0.50	**							
Trichlorofluoromethane	ND	0.50								
Vinyl chloride	ND	1.0	**							
Benzene	ND	0.50	Ħ							
Ethylbenzene	ND	0.50	н							
Toluene	ND	0.50	*							
Total Xylenes	ND	0.50	Ħ							

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

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

	Reporting		Spike	Source		%REC		RPD	X I-4
Result	Limit	Units	Level	Result	%REC	Limits	RPD		Notes
							<u></u>		
			Prepared	& Analyze	d: 07/29/0)1			
ND	50								
ND	0.50								
ND	0.50	н							
ND	0.50								
ND	0.50	•							
ND	5.0	11	_						· · · · ·
11.2		н	10.0	-	112	70-130			
			Prepared	& Analyza	ed: 07/29/	01			
11.3	0.50	ug/l	10.0		113	70-130			
11.3	0.50	Ħ	10.0		113	70-130			
11.6	0.50	н	10.0		116	70-130			
35.6	0.50	#	30.0		119	70-130			
10.9		н	10.0		109	70-130		-	
			Prepared	& Analyz	ed: 07/29/	01			
266	50	ນg/l	250		106	70-130			
		"	10.0		104	70-130		•	
	rce: 1.1071	39-01	Prepared	& Analyz	ed: 07/29/	′ 01			
			250	ND	106	60-140			
			10.0		100	70-130			
				-		40.4			
Sou	rce: L1071	39-01					5.04	05	
282	50	ug/l	250	ND	113		5.84	25	
11.0			10.0	<u> </u>	110	70-130			
	ND ND ND ND ND 11.2 11.3 11.6 35.6 10.9 266 10.4 Sou 282	ND 50 ND 0.50 ND 0.50 ND 0.50 ND 0.50 ND 0.50 ND 5.0 11.2 11.3 0.50 11.4 0.50 35.6 0.50 10.9 266 50 10.4 Source: L1071. 266 50 10.0 Source: L1071. 282 50 50 10.0 1	ND 50 ug/l ND 0.50 " 11.2 " 11.3 0.50 ug/l 11.3 0.50 " 11.6 0.50 " 11.6 0.50 " 11.6 0.50 " 10.9 " 266 50 ug/l 10.4 " Source: L107139-01 266 50 ug/l 10.0 " Source: L107139-01 282 50 ug/l	ND 50 ug/l ND 0.50 " ND 5.0 " 10.0 11.2 " 10.0 11.3 0.50 " 10.0 11.3 0.50 " 10.0 11.6 0.50 " 10.0 11.6 0.50 " 10.0 35.6 0.50 " 30.0 10.9 " 10.0	Result Limit Units Level Result	ND Source: L107139-01 Prepared & Analyzed: 07/29/0 ND Source: L107139-01 Prepared & Analyzed: 07/29/0	ND SO Ug/l	Result Limit Units Level Result MAREC Limits RPD	ND SO ug/l ND 0.50 " 10.0 112 70-130 11.3 0.50 ug/l 10.0 113 70-130 11.3 0.50 " 10.0 113 70-130 11.6 0.50 " 10.0 116 70-130 11.6 0.50 " 10.0 119 70-130 10.9 70-130 10.9 70-130 10.9 70-130 10.0 10.0 10.0 70-130 10.0 10

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

Semivolatile Organic Compounds by EPA Method 8270C

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L107143-02) Water	Sampled: 07/17/01 14:20	Received: 0	7/17/01	18:00					
Fluorene	ND	5.0	ug/l	1	1G24007	07/24/01	07/25/01	EPA 8270C	
Hexachlorobenzene	ND	10		**	Ħ	**	**	**	
Hexachlorobutadiene	ND	10		*	*		**		
Hexachlorocyclopentadiene	ND	10	n	н	,	H	" B		
Hexachloroethane	ND	5.0	Ħ	11	*	**			
Indeno (1,2,3-cd) pyrene	ND	10	#	H	*	**	#		
Isophorone	ND	5.0	#		"	Ħ			
2-Methylnaphthalene	290	50	#	10	Ħ	n	07/26/01	"	
2-Methylphenol	47	5.0	**	1	H	m	07/25/01		
4-Methylphenol	25	5.0	•		=	Ħ			
Naphthalene	740	50	•	10	**	41	07/26/01		
2-Nitroaniline	ND	10	**	1	н	Ħ	07/25/01		
3-Nitroaniline	ND	10	*		**	n		*	
4-Nitroaniline	ND	20	**	*	"	H	-		
Nitrobenzene	ND	5.0	Ħ	#1	*	41		_	
2-Nitrophenol	ND	5.0	H	п	n	**	#		
4-Nitrophenol	ND	10		n	41	97	,,	. "	
N-Nitrosodimethylamine	7.7	5.0	**	н	#	"	*		
N-Nitrosodiphenylamine	ND	5.0	н	•	ji.	*	-		
N-Nitrosodi-n-propylamine	ND	5.0	Ħ	4	₩	"	#	-	
Pentachlorophenol	ND	10	P	н	**	Ħ	#	# ·	
Phenanthrene	, ND	5.0	n	**	#1	*	# #		
Phenol	ND	5.0	**	H .	H		" B		
Pyrene	ND	5.0	н	**	н	,	" "		
1,2,4-Trichlorobenzene	ND	5.0	**	**	**	Pi	,,	"	
2,4,5-Trichlorophenol	ND	10	n	"	**				
2,4,6-Trichlorophenol	ND	10	H	D					
Surrogate: 2-Fluorophenol		48.3 %	21	-110	"	*	n	н	S-04
Surrogate: Phenol-d6		30.5 %	10	110	n	"	"	*	
Surrogate: Nitrobenzene-d5		66.3 %	35	-114	**	"	-	*	
Surrogate: 2-Fluorobiphenyl		82.6 %	43	3-116	"	и	n	"	
Surrogate: 2,4,6-Tribromophe	nol	74.7 %	10)-123	n	77	**	pp.	
Surrogate: p-Terphenyl-d14	••••	98.0 %	33	3-141	п	. "	#	"	

Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Level

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

RPD

Limit

Notes

%REC

Limits

%REC

Result

RPD

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

Units

Reporting

Limit

Result

Analyte	Acsui									
Batch 1070131 - EPA 5030B (P/T)							'			
Blank (1070131-BLK1)	<u>-</u> .			Ргерагед &	Analyze	:d: 07/29/0)1			
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l							
Benzenc	ND	0.50	*							
Toluene	ND	0.50	**							
Ethylbenzene	ND	0.50	11							
Xylenes (total)	ND	0.50	'n							
Methyl tert-butyl ether	ND	5.0	**							
Surrogate: a,a,a-Trifluorotoluene	9.77			10.0		97.7	70-130			
LCS (1070131-BS1)				Prepared &	k Analyze	ed: 07/29/				
Benzene	10.6	0.50	ug/l	10.0		106	70-130			
Toluene	10.3	0.50	Ħ	10.0		103	70-130			
Ethylbenzene	10.5	0.50	#	10.0		105	70-130			
Xylenes (total)	30.9	0.50		30.0		103	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.85		,,	10.0		98.5	70-130			
LCS (1070131-BS2)				Prepared &	k Analyz	ed: 07/29/	01			
Purgeable Hydrocarbons as Gasoline	270	50	ug/l	250		108	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.87		'n	10.0		98.7	70-130	-		
Matrix Spike (1070131-MS1)	Sour	ce: L10713	5-03	Prepared &	& Analyz	ed: 07/29	/01			
Purgeable Hydrocarbons as Gasoline	253	50	ug/l	250	ND	101	60-140			
Surrogate: a,a,a-Trifluorotoluene	9.43		#	10.0		94.3	70-130			
Matrix Spike Dup (1070131-MSD1)	Sour	ce: L10713	5-03	Prepared	& Analyz	ed: 07/29				
Purgeable Hydrocarbons as Gasoline	275	50	ug/l	250	ND	110	60-140	8.33	25	
Surrogate: a,a,a-Trifluorotoluene	9.76		77	10.0	-	97.6	70-130			

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control Sequoia Analytical - San Carlos

		Reporting		Spike	Source	e/Brc	%REC	RPD	RPD Limit	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	KTD	Link	110623
Batch 1070104 - EPA 5030B [P/T]	<u></u>								_	
Blank (1070104-BLK1)				Prepared	& Analyze			 		
Surrogate: 1,2-Dichloroethane-d4	42.4		ug/l	50.0	-	84.8	76-114			
Surrogate: Toluene-d8	48.0		*	50.0		96.0	88-110			
Blank (1070104-BLK2)				Prepared	& Analyze	ed: 07/23/	01			
Ethanol	ND	1000	ug/l							
1,2-Dibromoethane	ND	2.0	-							
1,2-Dichloroethane	ND	2.0	**							•
Di-isopropyl ether	ND	2.0	**							
Ethyl test-butyl ether	ND	2.0	₩							
Methyl tert-butyl ether	ND	2.0	**							
Tert-amyl methyl ether	ND	2.0	*							
Tert-butyl alcohol	ND	100								
Surrogate: 1,2-Dichloroethane-d4	44.4		. "	50.0		88.8	76-114			
Surrogate: Toluene-d8	48.2		H	50.0		96.4	88-110			
LCS (1070104-BS1)				Prepared	& Analyz	ed: 07/23/				
Methyl tert-butyl ether	45.7	2.0	ug/i	50.0		91.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	44.7		*	50.0		89.4	76-114	· ·		
Surrogate: Toluene-d8	46.4		"	50.0		92.8	88-110			
LCS (1070104-BS2)				Prepared	& Analyz	ed: 07/23	/01			
Methyl tert-butyl ether	44.2	2.0	ug/l	50.0		88.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	44.4			50.0		88.8	76-114			
Surrogate: Toluene-d8	48.8		H	50.0		97.6	88-110			
Matrix Spike (1070104-MS1)	So	urce: L1071:	54-01	Prepared	& Analyz					
Methyl tert-butyl ether	48.3	2.0	ug/l	50.0	ND	96.6	60-140		<u>,</u>	
Surrogate: 1,2-Dichloroethane-d4	47.8		#	50.0		95.6	76-114			
Surrogate: Toluene-d8	48.4		*	50.0		96.8	88-110			

Gettler-Ryan/Geostrategies(1)

Matrix Spike Dup (1070104-MSD1)

Surrogate: 1,2-Dichloroethane-d4

Methyl tert-butyl ether

Surrogate: Toluene-d8

6747 Sierra Court, Suite J **Dublin CA, 94568**

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

50.0

50.0

50.0

Project Manager: Deanna Harding

Reported:

מממ

25

4.23

60-140

76-114

88-110

92.6

94.8

97.2

08/01/01 14:30

Volatile Organic 8 Oxygenated Compounds by EPA Method 8260B - Quality Control Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Notes	
Batch 1070104 - EPA 5030B [P/T]						<u></u>					
Matrix Spike Dun (1070104-MSD1)	Sou	rce: L107154	-01	Prepared	& Analyz	ed: 07/23/0)1				_

ug/I

46.3

47.4

48.6

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control

Sequoia Analytical -	Walnut	Creek
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G25004 - EPA 3510B										
Blank (1G25004-BLK1)				Prepared	& Analyz	ed: 07/25/	D1			
Diesel Range Hydrocarbons	ND	50	ug/l							
Surrogate: n-Pentacosane	27.3			33.3		82.0	50-150			
LCS (1G25004-BS1)				Prepared	& Analyz	ed: 07/25/				
Diesel Range Hydrocarbons	351	50	ug/l	500		70.2	60-140			
Surrogate: n-Pentacosane	30.7		,,	33.3		92.2	50-150			
-				Prepared	& Analyz	ed: 07/25/	01			
LCS Dup (1G25004-BSD1)	332	50	ug/l	500	<u></u>	66.4	60-140	5.56	50	
Diesel Range Hydrocarbons	27.3			33.3		82.0	50-150			
Surrogate: n-Pentacosane	27.3			55.5						

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Spike

Level

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

RPD

Limit

Notes

RPD

%REC

Limits

%REC

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Walnut Creek

Units

Reporting

Result

Analyte	Kesuk	Limit	UMG -	Teaci	KESIII	78REC		 	
Batch 1G24007 - EPA 3510B Se	p Funnel								
Blank (1G24007-BLK1)				Prepared:	07/24/01	Analyzed	07/25/01	 	
Acenaphthene	ND	5.0	ug/l						
Acenaphthylene	ND	5.0	н						
Aniline	ND	5.0							
Anthracene	ND	5.0							
Benzoic acid	ND	10	•					•	
Benzo (a) anthracene	ND	5.0	-						
Benzo (b) fluoranthene	ND	5.0	**						
Senzo (k) fluoranthene	ND	5.0	**						
Benzo (ghi) perylene	ND	5.0	n				•		
Benzo[a]pyrene	ND	5.0	. "						
Benzyl alcohol	ND	5.0	Ħ						
Bis(2-chloroethoxy)methane	ND	5.0	*						
Bis(2-chloroethyl)ether	ND	5.0	*						
3is(2-chloroisopropyl)ether	ND	5.0	#						
Bis(2-ethylhexyl)phthalate	ND	10	n						
-Bromophenyl phenyl ether	ND	5.0	н						
Butyl benzyl phthalate	ND	50	*						
-Chloroaniline	ND	25	*						
2-Chloronaphthalene	ND	5.0							
l-Chloro-3-methylphenol	ND	5.0	*						
2-Chlorophenol	ND	5.0	**						
I-Chlorophenyl phenyl ether	ND	5.0	11						
Chrysene	ND	5.0	н						
Dibenz (a,h) anthracene	מא	10	н						
Dibenzofuran	ND	5.0	H						
Di-n-butyl phthalate	ND	10	н						
,2-Dichlorobenzene	ND	5.0	*						
,3-Dichlorobenzene	ND	5.0	*						
,4-Dichlorobenzene	ND	10	Ħ						
3,3'-Dichlorobenzidine	ND	10	Ħ						
2,4-Dichlorophenol	ND	5.0	R						
Diethyl phthalate	ND	5.0							
2,4-Dimethylphenol	ND	5.0							
Dimethyl phthalate	ND	5.0							
4,6-Dinitro-2-methylphenol	ND	10							•
2,4-Dinitrophenol	ND	- 10	•						

Sequoia Analytical - San Carlos

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.

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Source

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

RPD

%REC

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Walnut Creek

		Reporting		Spike	Source Result	%REC	%REC Limits	RPD	KPD Limit	Notes
Analyte	Result	Limit	Units	Level	Result	744000				
Batch 1G24007 - EPA 3510B Sep Funn	iel									
Blank (1G24007-BLK1)				Prepared	07/24/01	Analyzed	: 07/25/01			
2,4-Dinitrotoluene	ND	10	ug/l							
2,6-Dinitrotoluene	ND	10	#							
Di-n-octyl phthalate	ND	10	*							
Fluoranthene	ND	5.0							•	
Fluorene	ND	5.0	*							
Hexachlorobenzene	ND	10	n							
Hexachlorobutadiene	ND	10	•							
Hexachlorocyclopentadiene	ND	10	*							
Hexachloroethane	ND	5.0	#							
Indeno (1,2,3-cd) pyrene	ND	10	#							
Isophorone	ND	5.0	н							
2-Methylnaphthalene	ND	5.0	•							
2-Methylphenol	ND	5.0	**							
4-Methylphenol	ND	5.0	11							
Naphthalene	ND	5.0	*							
2-Nitroaniline	ND	10	**							
3-Nitroaniline	ND	10	**							
4-Nitroaniline	ND	20								
Nitrobenzene	ND	5.0	#							
2-Nitrophenol	ND	5.0	**							
4-Nitrophenol	ND	10								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0	#							
N-Nitrosodi-n-propylamine	ND	5.0	n		7					
Pentachlorophenol	ND	10								
Phenanthrene	ND	5.0	#							
Phenol	ИD	5.0								
Pyrene	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10					21 112			
Surrogate: 2-Fluorophenol	75.2		*	150		50.1	21-110 10-110			
Surrogate: Phenol-d6	52.4		,	150		34.9	35-114			
Surrogate: Nitrobenzene-d5	69.9		*	100		69.9	33-114 43-116			
Surrogate: 2-Fluorobiphenyl	82.2		"	100		82.2	43-110			

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Spike

Level

Source

Result

%REC

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

RPD

Limit

Notes

%REC

Limits

RPD

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Walnut Creek

Units

Reporting

Limit

Result

Anaryte	Result	Dunt	Onto		100000				
Batch 1G24007 - EPA 3510B Sep I	Funnel								
Blank (1G24007-BLK1)				Prepared:	07/24/01 Analyzed	: 07/25/01			
Surrogate: 2,4,6-Tribromophenol	93.2		ug/l	150	62.1	10-123			
Surrogate: p-Terphenyl-d14	101		*	100	101	33- <i>141</i>			
LCS (1G24007-BS1)				Prepared:	07/24/01 Analyzed	1: 07/25/01			
Acenaphthene	84.2	5.0	ug/l	100	84.2	46-118			
I-Chloro-3-methylphenol	120	5.0	#	150	80.0	23-97			
2-Chlorophenol	112	5.0	n	150	74.7	27-123			
,4-Dichlorobenzene	68.6	10	н	100	68.6	36-97			
4-Dinitrotoluene	77.6	10	н	100	77.6	24-96			
-Nitrophenol	25.5	10		150	17.0	10-80			
N-Nitrosodi-n-propylamine	92.8	5.0		100	92.8	41-116			
Pentachlorophenol	120	10		150	80.0	9-103			
Phenol	47.6	5.0	•	150	31.7	12-110			
yrene	105	5.0	•	100	105	26-127			
,2,4-Trichlorobenzene	77.3	5.0	**	100	77.3	39-98			
Surrogate: 2-Fluorophenol	76.5		*	150	51.0	21-110			
Surrogate: Phenol-d6	48.5		*	150	32.3	10-110			
Surrogate: Nitrobenzene-d5	76.7		,	100	7 6 .7	35-114			
Surrogate: 2-Fluorobiphenyl	<i>83.7</i>		**	100	8 3 .7	43-116			
Surrogate: 2,4,6-Tribromophenol	102		"	150	68.0	10-123			
Surrogate: p-Terphenyl-d14	105		*	100	1 0 5	33-141			
LCS Dup (1G24007-BSD1)				Prepared:	07/24/01 Analyze	d: 07/25/01			
Acenaphthene	82.8	5.0	ug/l	100	82.8	46-118	1.68	30	
4-Chloro-3-methylphenol	120	5.0	H	150	80.0	23-97	0.00	30	
2-Chlorophenol	112	5.0	n ·	150	74.7	27-123	0.00	30	
1,4-Dichlorobenzene	66.5	10		100	66.5	36-97	3.11	30	
2,4-Dinitrotoluene	78.5	10		100	78.5	24-96	1.15	30	
4-Nitrophenol	32.0	10		150	21.3	10-80	22.6	30	
N-Nitrosodi-n-propylamine	92.7	5.0		100	92.7	41-116	0.108	30	
Pentachlorophenol	119	10	н	150	79.3	9-103	0.837	30	
Phenol	51.9	5.0	**	150	34.6	12-110	8.64	30	
Pyrene	97.3	5.0		100	97.3	26-127	7.61	30	
1,2,4-Trichlorobenzene	74.4	5.0	11	100	74.4	39-98	3.82	30	
Surrogate: 2-Fluorophenol	79.5		P	150	53.0	21-110			
Surrogate: Phenol-d6	51.8		*	150	<i>34.5</i>	10-110			

Sequoia Analytical - San Carlos

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Dublin CA, 94568

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported:

08/01/01 14:30

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Sequoia Analytical - Walnut Creek

								D.D.D.	
	Reporting		Spike	Source		%REC		RPD	1
	venounna		-p			7 1-14	RPD	Limit	Notes
Result	Limit	Units	Level	Result	%REC	Limits	KFD	T-MIN	110000
Analyte	- Line	0	_						

Batch 1G24007 - EPA 3510B Sep Funnel

Batch 1G24007 - El A 33102 Sep .		Prepared: 07/24/01 Analyzed: 07/25/01									
LCS Dup (1G24007-BSD1)	243	ug/l	100	74.2	35-114						
Surrogate: Nitrobenzene-d5	74,2	ugr.	100	78. 4	43-116						
Surrogate: 2-Fluorobiphenyl	78.4		150	69.3	10-123						
Surrogate: 2,4,6-Tribromophenol	104		100	97.8	33-141						
Surrogate: p-Terphenyl-d14	97.8	•	100	<i>77.0</i>							

Project: Tosco(1)

Project Number: Tosco (76) SS#1156, Oakland, CA

Project Manager: Deanna Harding

Reported: 08/01/01 14:30

Notes and Definitions

D-11 Chromatogram Pattern: Unidentified Hydrocarbons < C16

M-04 MTBE was reported from second analysis.

P-01 Chromatogram Pattern: Gasoline C6-C12

S-04 The surrogate recovery for this sample is outside control limits due to interference from the sample matrix.

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