



GETTLER-RYAN INC.

JUL 19 2002

TRANSMITTAL

June 28, 2002

G-R #180264

TO: Mr. David B. De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

CC: Mr. Douglas Lee
Gettler-Ryan, Inc.
Dublin, California

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: **Tosco (76) Service Station
#0018
6201 Claremont Avenue
Oakland, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	June 21, 2002	Groundwater Monitoring and Sampling Report Second Quarter - Event of May 8, 2002

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 **July 16, 2002**, this report will be distributed to the following:

cc: Mr. Don Huang, Alameda County Health Care Service Division, 1131 Harbor Bay Pkwy., Ste. 250,
Alameda, CA 94502

Enclosure

trans/0018-jbd

6747 Sierra Court, Suite J • Dublin, California 94568 • (925) 551-7555



GETTLER - RYAN INC.

JUL 19 2002

June 21, 2002
G-R Job #180264

Mr. David B. De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: Second Quarter Event of May 8, 2002
Groundwater Monitoring & Sampling Report
Tosco (76) Service Station #0018
6201 Claremont Avenue
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 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 and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

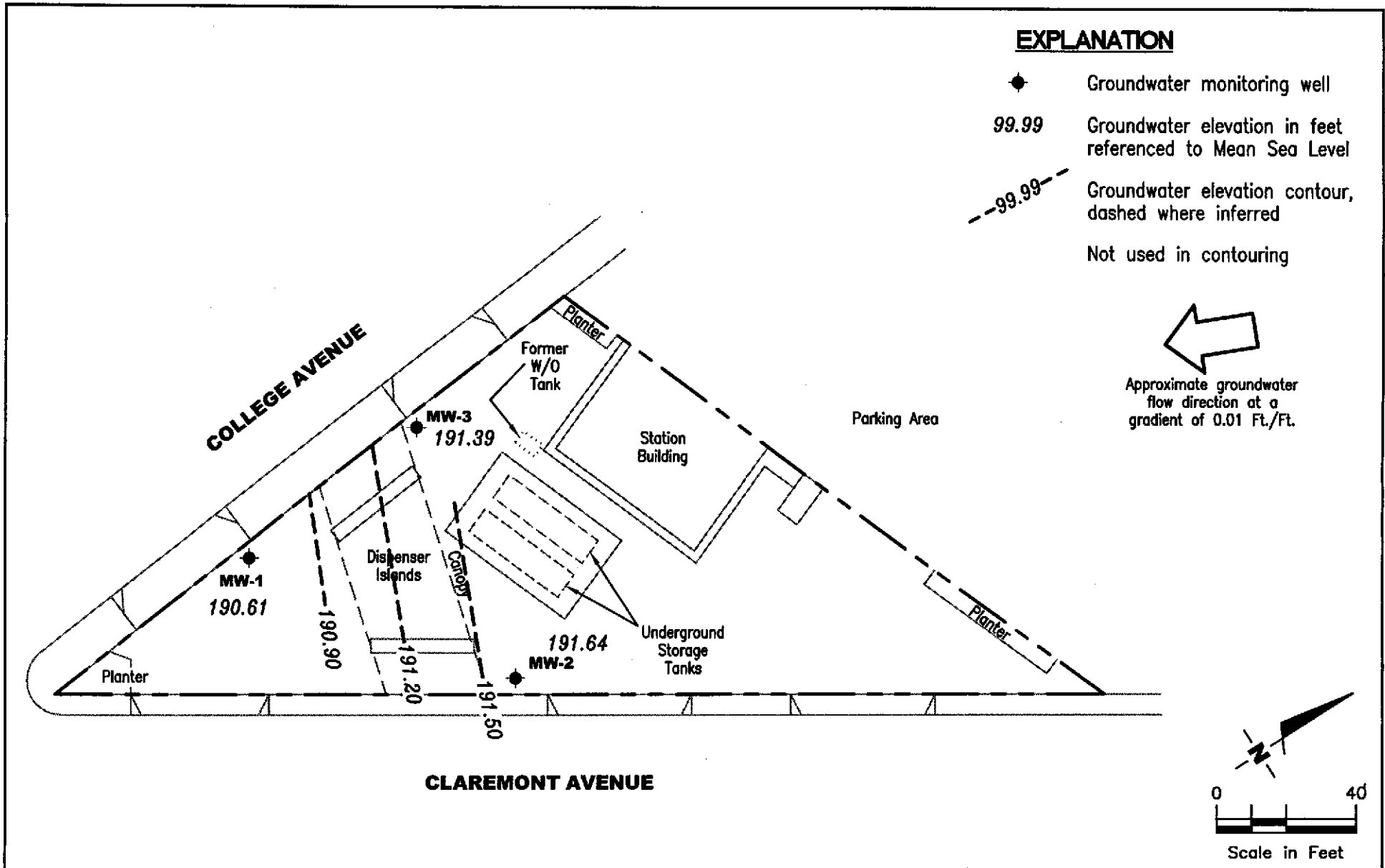
Deanna L. Harding
Project Coordinator

Hagop Kevork
P.E. No. C55734



- Figure 1: Potentiometric Map
- Figure 2: Concentration Map
- Table 1: Groundwater Monitoring Data and Analytical Results
- Table 2: Groundwater Analytical Results - Oxygenate Compounds
- Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

0018-qml



GETTLER - RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
 Tosco (76) Service Station #0018
 6201 Claremont Avenue
 Oakland, California

FIGURE
1

PROJECT NUMBER
 180264

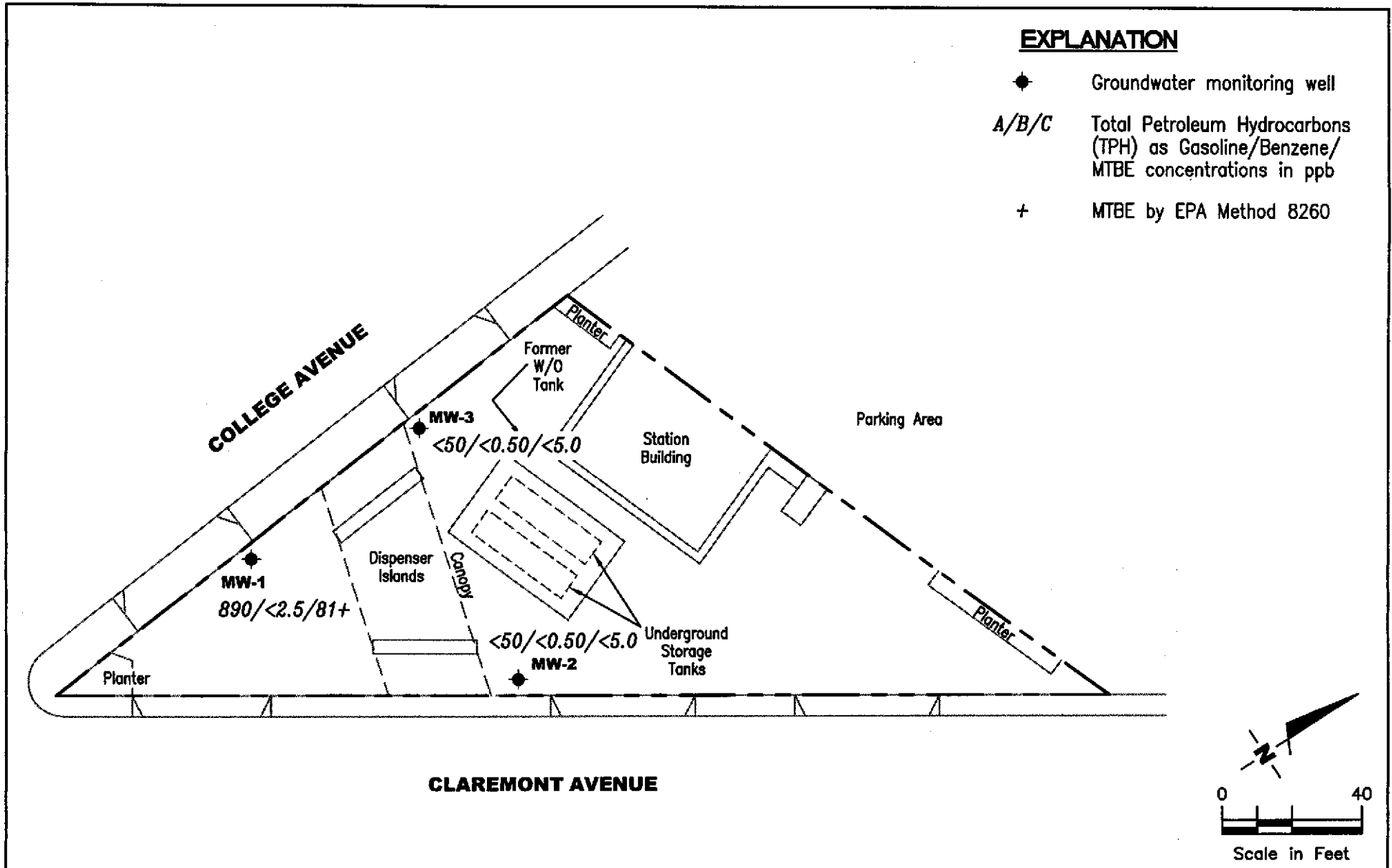
REVIEWED BY

DATE
 May 8, 2002

REVISED DATE

EXPLANATION

- ◆ Groundwater monitoring well
- A/B/C Total Petroleum Hydrocarbons (TPH) as Gasoline/Benzene/MTBE concentrations in ppb
- + MTBE by EPA Method 8260



GETTLER - RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

CONCENTRATION MAP
 Tosco (76) Service Station #0018
 6201 Claremont Avenue
 Oakland, California

FIGURE
2

PROJECT NUMBER 180264	REVIEWED BY	DATE May 8, 2002	REVISED DATE
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Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (76) Service Station #0018
6201 Claremont Avenue
Oakland, California

WELL ID/ TOC* (ft)	DATE	DTW (ft.)	S.I. (ft. bgs)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1										
208.15	08/24/00	18.55	10.0-30.0	189.60	120 ¹	0.67	ND	0.86	1.4	54/54 ²
	11/16/00	20.30		187.85	169 ³	ND	1.20	1.74	0.629	68.6/97.7 ²
	02/09/01	20.16		187.99	330 ³	1.3	ND	1.0	4.6	140/150 ²
	05/11/01	17.68		190.47	1,250 ³	ND ⁴	ND ⁴	ND ⁴	ND ⁴	145/122 ²
	08/10/01	20.38		187.77	580 ³	<0.50	<0.50	<0.50	<0.50	110/150 ²
	11/07/01	22.68		185.47	250 ³	<0.50	1.5	<0.50	<0.50	120/100 ²
	02/06/02	16.20		191.95	790	<2.5	12	8.8	<2.5	90/72 ²
	05/08/02	17.54		190.61	890 ³	<2.5	<2.5	<2.5	<2.5	78/81 ²
MW-2										
210.27	08/24/00	19.69	10.0-30.0	190.58	ND	ND	ND	ND	ND	ND/ND ²
	11/16/00	21.61		188.66	ND	ND	ND	ND	ND	ND/ND ²
	02/09/01	21.52		188.75	ND	ND	ND	ND	ND	ND/ND ²
	05/11/01	18.76		191.51	ND	ND	ND	ND	ND	ND/ND ²
	08/10/01	21.65		188.62	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<2.0 ²
	11/07/01	24.25		186.02	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<1.0 ²
	02/06/02	18.22		192.05	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	05/08/02	18.63		191.64	<50	<0.50	<0.50	<0.50	<0.50	<5.0
MW-3										
208.98	08/24/00	18.68	10.0-30.0	190.30	ND	ND	ND	ND	ND	4.7/2.3 ²
	11/16/00	20.56		188.42	ND	ND	ND	ND	ND	ND/ND ²
	02/09/01	20.45		188.53	ND	ND	ND	ND	ND	ND/ND ²
	05/11/01	17.75		191.23	ND	ND	ND	ND	ND	ND/ND ²
	08/10/01	20.70		188.28	<50	<0.50	<0.50	<0.50	<0.50	<5.0/<2.0 ²
	11/07/01	23.02		185.96	<50	<0.50	<0.50	<0.50	<0.50	<5.0/1.5 ²
	02/06/02	17.19		191.79	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	05/08/02	17.59		191.39	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (76) Service Station #0018
6201 Claremont Avenue
Oakland, California

WELL ID/ TOC*(ft)	DATE	DTW (ft.)	S.L. (ft. bgs)	GWE (mst)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
Trip Blank										
TB-LB	08/24/00	--	--	--	ND	ND	ND	ND	ND	ND
	11/16/00	--		--	ND	ND	ND	ND	ND	ND
	02/09/01	--		--	ND	ND	ND	ND	ND	ND
	05/11/01	--		--	ND	ND	ND	ND	ND	ND
	08/10/01	--		--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	11/07/01	--		--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	02/06/02	--		--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	05/08/02	--		--	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (76) Service Station #0018
6201 Claremont Avenue
Oakland, California

EXPLANATIONS:

TOC = Top of Casing

DTW = Depth to Water

(ft.) = Feet

S.I. = Screen Interval

(ft. bgs) = Feet Below Ground Surface

GWE = Groundwater Elevation

(msl) = Mean sea level

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl tertiary butyl ether

(ppb) = Parts per billion

ND = Not Detected

-- = Not Measured/Not Analyzed

* TOC elevations have been surveyed relative to msl; per the city of Oakland benchmark being a cut square in the top of curb, at the curb return at the northeast corner of College Avenue and Miles Avenue, (Benchmark Elevation = 179.075 feet, msl).

¹ Laboratory report indicates gasoline C6-C12.

² MTBE by EPA Method 8260.

³ Laboratory report indicates unidentified hydrocarbons C6-C12.

⁴ Detection limit raised. Refer to analytical reports.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (76) Service Station #0018
 6201 Claremont Avenue
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-1	08/24/00	ND	ND	54	ND	ND	ND	--	--
	11/16/00	ND	ND	97.7	ND	ND	ND	--	--
	02/09/01	ND	ND	150	ND	ND	ND	ND	ND
	05/11/01	ND	ND	122	ND	ND	ND	ND	ND
	08/10/01	<1,000	<100	150	<2.0	<2.0	<2.0	<2.0	<2.0
	11/07/01	<500	<20	100	<1.0	<1.0	<1.0	<1.0	<1.0
	02/06/02	<500	<100	72	<2.0	<2.0	<2.0	<2.0	<2.0
	05/08/02	<500	<100	81	<2.0	<2.0	<2.0	<2.0	<2.0
MW-2	08/24/00	ND	ND	ND	ND	ND	ND	--	--
	11/16/00	ND	ND	ND	ND	ND	ND	--	--
	02/09/01	ND	ND	ND	ND	ND	ND	ND	ND
	05/11/01	ND	ND	ND	ND	ND	ND	ND	ND
	08/10/01	<1,000	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	11/07/01	<500	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	08/24/00	ND	ND	2.3	ND	ND	ND	--	--
	11/16/00	ND	ND	ND	ND	ND	ND	--	--
	02/09/01	ND	ND	ND	ND	ND	ND	ND	ND
	05/11/01	ND	ND	ND	ND	ND	ND	ND	ND
	08/10/01	<1,000	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	11/07/01	<500	<20	1.5	<1.0	<1.0	<1.0	<1.0	<1.0

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Tosco (76) Service Station #0018
6201 Claremont Avenue
Oakland, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
(ppb) = Parts per billion
ND = Not Detected
-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

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 Phillips 66 Company, the purge water and decontamination water generated during sampling activities is transported to Phillips 66 - San Francisco Refinery, located in Rodeo, California.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 0018
Address: 6201 Claremont Blvd.
City: Oakland, CA

Job#: 180264
Date: 5-8-02
Sampler: Joe

Well ID MW-1

Well Condition: OK

Well Diameter 2 in.

Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 30.02 ft.

Depth to Water 17.54 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

12.48 x VF 0.17 = 2.12 x 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 8:28

Weather Conditions: clear

Sampling Time: 8:58 AM (0858)

Water Color: clear Odor: with some

Purging Flow Rate: 0.5 gpm

Sediment Description: _____

Did well de-water? _____

If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^2$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:36</u>	<u>2</u>	<u>7.96</u>	<u>6.87</u>	<u>65.8</u>	_____	_____	_____
<u>8:41</u>	<u>4</u>	<u>7.46</u>	<u>7.02</u>	<u>61.2</u>	_____	_____	_____
<u>8:52</u>	<u>6.5</u>	<u>7.41</u>	<u>6.93</u>	<u>61.4</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3V0A</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHG, BTEX, MTBE</u>
	<u>2V0A</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>(2) oxy's 62, 8260</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 0018
Address: 6201 Claremont Blvd.
City: Oakland, CA

Job#: 180264
Date: 5-8-02
Sampler: Joe

Well ID MW-2
Well Diameter 2 in
Total Depth 30.05 ft
Depth to Water 18.63 ft

Well Condition: OK
Hydrocarbon Thickness: 0 in
Amount Bailed (product/water): 0 (gal.)
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66
6" = 1.50 12" = 5.80

11.42 X VF 0.17 = 1.94 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 7:15
Sampling Time: 7:40 AM (0740)
Purging Flow Rate: 0.1 gpm
Did well de-water? _____

Weather Conditions: clear
Water Color: clear Odor: none
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^0$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
7:22	2	7.57	12.11	65.8			
7:25	4	7.64	11.83	66.3			
7:29	6	7.72	11.71	66.1			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	3 Vol	Y	HCL	Seq.	TPHG, BTEX, MTBE

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

Client/
Facility # 0018
Address: 6201 Claremont Blvd.
City: Oakland, CA

Job#: 180264
Date: 5-8-02
Sampler: Joc

Well ID MW-3
Well Diameter 2 in.
Total Depth 29.98 ft.
Depth to Water 17.59 ft.

Well Condition: OK
Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66
6" = 1.50 12" = 5.80

12.39 X VF 0.17 = 2.11 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 7:55
Sampling Time: 8:20 AM (0820)
Purging Flow Rate: 0.1 gpm
Did well de-water? _____

Weather Conditions: clear
Water Color: clear Odor: none
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\mu\text{mhos/cm} \times 10^0$	Temperature F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>8:03</u>	<u>2</u>	<u>7.43</u>	<u>12.08</u>	<u>65.9</u>	_____	_____	_____
<u>8:06</u>	<u>4</u>	<u>7.40</u>	<u>12.01</u>	<u>66.5</u>	_____	_____	_____
<u>8:11</u>	<u>6.5</u>	<u>7.29</u>	<u>11.83</u>	<u>66.5</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3Yot</u>	<u>Y</u>	<u>HCL</u>	<u>Seq.</u>	<u>TPHC, BTEX, MTBE</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS: _____



**Sequoia
Analytical**

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

23 May, 2002

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

RE: Tosco(1)
Sequoia Work Order: L205033

Enclosed are the results of analyses for samples received by the laboratory on 05/09/02 15:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Richard G. Yee For Wayne Stevenson
Project Manager

CA ELAP Certificate #2360



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #0018, Oakland
Project Manager: Deanna Harding

Reported:
05/23/02 15:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	L205033-01	Water	05/08/02 00:00	05/09/02 15:45
MW-1	L205033-02	Water	05/08/02 08:58	05/09/02 15:45
MW-2	L205033-03	Water	05/08/02 07:40	05/09/02 15:45
MW-3	L205033-04	Water	05/08/02 08:20	05/09/02 15:45

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.

Richard G. Yee For Wayne Stevenson, Project Manager

Gettler-Ryan/Geostrategies(1)
 6747 Sierra Court, Suite J
 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #0018, Oakland
 Project Manager: Deanna Harding

 Reported:
 05/23/02 15:46

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 (L205033-01) Water Sampled: 05/08/02 00:00 Received: 05/09/02 15:45									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2050047	05/21/02	05/21/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		99.4 %	70-130		"	"	"	"	
MW-1 (L205033-02) Water Sampled: 05/08/02 08:58 Received: 05/09/02 15:45									
Purgeable Hydrocarbons as Gasoline	890	250	ug/l	5	2050053	05/22/02	05/22/02	EPA 8021B	P-03
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	ND	2.5	"	"	"	"	"	"	
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	78	25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		127 %	70-130		"	"	"	"	
MW-2 (L205033-03) Water Sampled: 05/08/02 07:40 Received: 05/09/02 15:45									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2050047	05/21/02	05/22/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %	70-130		"	"	"	"	



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #0018, Oakland
Project Manager: Deanna Harding

Reported:
05/23/02 15:46

**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 (L205033-04) Water Sampled: 05/08/02 08:20 Received: 05/09/02 15:45									
Purgeable Hydrocarbons as Gasoline	ND	50	ug/l	1	2050047	05/21/02	05/22/02	EPA 8021B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %		70-130	"	"	"	"	



Gettler-Ryan/Geostrategies(1)
6747 Sierra Court, Suite J
Dublin CA, 94568

Project: Tosco(1)
Project Number: Tosco #0018, Oakland
Project Manager: Deanna Harding

Reported:
05/23/02 15:46

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (L205033-02) Water Sampled: 05/08/02 08:58 Received: 05/09/02 15:45									
Ethanol	ND	500	ug/l	1	2050016	05/13/02	05/13/02	EPA 8260B	
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	81	2.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		110 %		70-130	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94.0 %		70-130	"	"	"	"	



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05/23/02 15:46

**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
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Batch 2050047 - EPA 5030B (P/T)

Blank (2050047-BLK1)

Prepared & Analyzed: 05/21/02

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	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.22		"	10.0		92.2	70-130			

LCS (2050047-BS1)

Prepared & Analyzed: 05/21/02

Benzene	9.22	0.50	ug/l	10.0		92.2	70-130			
Toluene	8.81	0.50	"	10.0		88.1	70-130			
Ethylbenzene	8.09	0.50	"	10.0		80.9	70-130			
Xylenes (total)	24.2	0.50	"	30.0		80.7	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.1		"	10.0		101	70-130			

LCS (2050047-BS2)

Prepared & Analyzed: 05/21/02

Purgeable Hydrocarbons as Gasoline	243	50	ug/l	250		97.2	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.82		"	10.0		98.2	70-130			

Matrix Spike (2050047-MS1)

Source: L205032-05

Prepared & Analyzed: 05/21/02

Benzene	9.68	0.50	ug/l	10.0	ND	96.8	60-140			
Toluene	9.24	0.50	"	10.0	ND	92.4	60-140			
Ethylbenzene	8.70	0.50	"	10.0	ND	87.0	60-140			
Xylenes (total)	25.7	0.50	"	30.0	ND	85.7	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.98		"	10.0		99.8	70-130			

Matrix Spike Dup (2050047-MSD1)

Source: L205032-05

Prepared & Analyzed: 05/21/02

Benzene	10.2	0.50	ug/l	10.0	ND	102	60-140	5.23	25	
Toluene	9.63	0.50	"	10.0	ND	96.3	60-140	4.13	25	
Ethylbenzene	9.14	0.50	"	10.0	ND	91.4	60-140	4.93	25	

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.

Gettler-Ryan/Geostrategies(1)
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 Dublin CA, 94568

 Project: Tosco(1)
 Project Number: Tosco #0018, Oakland
 Project Manager: Deanna Harding

 Reported:
 05/23/02 15:46

**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
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Batch 2050047 - EPA 5030B (P/T)

Matrix Spike Dup (2050047-MSD1)	Source: L205032-05		Prepared & Analyzed: 05/21/02							
Xylenes (total)	26.8	0.50	ug/l	30.0	ND	89.3	60-140	4.19	25	
Surrogate: a,a,a-Trifluorotoluene	10.4		"	10.0		104	70-130			

Batch 2050053 - EPA 5030B (P/T)

Blank (2050053-BLK1)	Prepared & Analyzed: 05/22/02									
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: a,a,a-Trifluorotoluene	10.5		"	10.0		105	70-130			

LCS (2050053-BS1)	Prepared & Analyzed: 05/22/02									
Benzene	9.09	0.50	ug/l	10.0		90.9	70-130			
Toluene	8.60	0.50	"	10.0		86.0	70-130			
Ethylbenzene	7.95	0.50	"	10.0		79.5	70-130			
Xylenes (total)	23.9	0.50	"	30.0		79.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.6		"	10.0		106	70-130			

LCS (2050053-BS2)	Prepared & Analyzed: 05/22/02									
Purgeable Hydrocarbons as Gasoline	235	50	ug/l	250		94.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.6		"	10.0		106	70-130			

Matrix Spike (2050053-MS1)	Source: L205040-06		Prepared & Analyzed: 05/22/02							
Purgeable Hydrocarbons as Gasoline	253	50	ug/l	250	ND	101	60-140			
Surrogate: a,a,a-Trifluorotoluene	9.10		"	10.0		91.0	70-130			

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Reported:
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**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	%REC Limits	RPD	RPD Limit	Notes
Batch 2050053 - EPA 5030B (P/T)										
Matrix Spike Dup (2050053-MSD1)										
Source: L205040-06 Prepared & Analyzed: 05/22/02										
Purgeable Hydrocarbons as Gasoline	270	50	ug/l	250	ND	108	60-140	6.50	25	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	10.3		"	10.0		103	70-130			



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**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	%REC Limits	RPD	RPD Limit	Notes
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Batch 2050016 - EPA 5030B [P/T]

Blank (2050016-BLK1)

Prepared & Analyzed: 05/08/02

Ethanol	ND	500	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	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.1		"	50.0		104	70-130			
<i>Surrogate: Toluene-d8</i>	50.0		"	50.0		100	70-130			

Blank (2050016-BLK2)

Prepared & Analyzed: 05/10/02

Ethanol	ND	500	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	"							
Tert-butyl alcohol	ND	100	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.1		"	50.0		98.2	70-130			
<i>Surrogate: Toluene-d8</i>	47.4		"	50.0		94.8	70-130			

Blank (2050016-BLK3)

Prepared & Analyzed: 05/13/02

Ethanol	ND	500	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	"							
Tert-butyl alcohol	ND	100	"							

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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	%REC Limits	RPD	RPD Limit	Notes
Batch 2050016 - EPA 5030B [P/T]										
Blank (2050016-BLK3)										
Prepared & Analyzed: 05/13/02										
Surrogate: 1,2-Dichloroethane-d4	48.8		ug/l	50.0		97.6	70-130			
Surrogate: Toluene-d8	48.2		"	50.0		96.4	70-130			
LCS (2050016-BS1)										
Prepared & Analyzed: 05/08/02										
Methyl tert-butyl ether	44.3	2.0	ug/l	50.0		88.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	51.0		"	50.0		102	70-130			
Surrogate: Toluene-d8	51.6		"	50.0		103	70-130			
LCS (2050016-BS2)										
Prepared & Analyzed: 05/10/02										
Methyl tert-butyl ether	43.0	2.0	ug/l	50.0		86.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	49.0		"	50.0		98.0	70-130			
Surrogate: Toluene-d8	48.5		"	50.0		97.0	70-130			
LCS (2050016-BS3)										
Prepared & Analyzed: 05/13/02										
Methyl tert-butyl ether	51.1	2.0	ug/l	50.0		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	50.7		"	50.0		101	70-130			
Surrogate: Toluene-d8	50.2		"	50.0		100	70-130			
Matrix Spike (2050016-MS1)										
Source: L205016-05 Prepared & Analyzed: 05/08/02										
Methyl tert-butyl ether	47.1	2.0	ug/l	50.0	ND	94.2	60-140			
Surrogate: 1,2-Dichloroethane-d4	50.0		"	50.0		100	70-130			
Surrogate: Toluene-d8	51.2		"	50.0		102	70-130			
Matrix Spike Dup (2050016-MSD1)										
Source: L205016-05 Prepared & Analyzed: 05/08/02										
Methyl tert-butyl ether	45.8	2.0	ug/l	50.0	ND	91.6	60-140	2.80	25	
Surrogate: 1,2-Dichloroethane-d4	51.0		"	50.0		102	70-130			
Surrogate: Toluene-d8	52.0		"	50.0		104	70-130			



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Notes and Definitions

P-03 Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
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