

Rec'd May 17, 2002

May 14, 2002
Project No. 06TO.03996.00Ms. Eva Chu
Hazardous Materials Specialist
Alameda County Environmental Health Services Department
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577**GROUNDWATER MONITORING WELL INSTALLATION, TOSCO SERVICE STATION NO. 7124, 10151 EAST 14TH STREET, OAKLAND, CALIFORNIA**

Dear Ms. Chu,

SECOR International Incorporated (SECOR) is pleased to submit this Letter Report on behalf of Tosco Corporation (Tosco), a subsidiary of Phillips 66 Company (Phillips), describing recently completed groundwater monitoring well installation activities at Tosco Service Station No. 7124, located at 10151 East 14th Street in Oakland, California (the Site, see Figure 1). This Letter Report is submitted to the Alameda County Environmental Health Services Department (ACEHSD) and describes the activities performed during the installation of four groundwater-monitoring wells. The work described herein was performed in response to the ACEHSD letter dated January 30, 2002 approving the installation of the four monitoring wells to verify groundwater flow direction and to assess the extent of petroleum hydrocarbons and methyl tertiary butyl ether (MtBE) previously detected in soil beneath the Site during station upgrade activities.

BACKGROUND

The Site is currently an active Tosco Service Station located on the northwestern corner of the intersection of 14th Street and 102nd Avenue in Oakland, California. Site facilities include three underground storage tanks (USTs), and associated piping and fuel dispensers.

On March 22, 2000, SECOR supervised the removal and replacement of product lines and dispensers by Balch Petroleum (Balch) of Milpitas, California. Soil samples collected from beneath the dispensers and product lines revealed the presence of total petroleum hydrocarbons as gasoline (TPHg) at a maximum concentration of 6,200 milligrams per kilogram (mg/kg), MtBE at a maximum concentration of 120 mg/kg, and benzene at a maximum concentration of 7.4 mg/kg. Excavation and sampling activities were observed and approved by Inspector Gomez of the City of Oakland Fire Services Agency (COFSA).

On March 27, 2000, SECOR observed the over-excavation of approximately 60 cubic yards of soil from the beneath those portions of the dispensers and product lines where previously collected soil samples revealed elevated concentrations of petroleum hydrocarbons. Areas measuring approximately 8 to 10 feet long by 8 to 10 feet wide were over-excavated to an approximate depth of 8 feet below ground surface (bgs) in each of these areas. Additional over-excavation in these areas was not possible due to their proximity to the footings of the service station canopy. TPHg was detected in 2 of the 3 samples at a maximum concentration of 108 mg/kg, benzene was detected in 1 of the 3 samples at a maximum concentration of 0.162 mg/kg, and MtBE was detected in all 3 samples at a maximum concentration of 43.8 mg/kg. Lead was not detected at or above laboratory reporting limits in any samples.

SCOPE OF WORK

Task 1 - Preliminary Field Activities

Prior to conducting the investigation, SECOR obtained groundwater monitoring well installation permits from the Alameda County Public Works Department (ACPWD). A Site-specific Health and Safety Plan (HASP) was prepared for use by personnel implementing the Work Plan. The HASP addressed the proposed Work Plan activities, and a copy of the HASP was available on-site at all times. The subcontractor performing the field activities was provided with a copy of the HASP prior to initiating work.

Prior to mobilization, SECOR marked the proposed monitoring well locations, contacted Underground Service Alert (USA) 48 hours in advance, and utilized SECOR's Borehole Clearance Checklist to clear the proposed monitoring well locations of subsurface obstructions. In addition, SECOR contracted a private utility locator (Cruz Brothers Subsurface Utility Locators) to clear subsurface utilities prior to drilling.

Task 2 – Field Investigation

Groundwater Monitoring Well Installation

On February 28 and March 1, 2002, SECOR supervised the installation of four groundwater monitoring wells at the locations depicted on Figure 2. Subsequent to hand augering each boring location to a minimum of 5 feet bgs, the well borings were advanced to 26.5 feet bgs by Woodward Drilling (Woodward) of Rio Vista, California using truck-mounted hollow-stem augers under the supervision of a SECOR field geologist, and under the direction of a State of California Registered Geologist. Soil samples were collected at 5-foot intervals using a split spoon sampler lined with two-inch diameter by six-inch-long brass tubes. The borings were periodically monitored for odor, staining, volatile organic compounds (VOCs) using a photo-ionization detector (PID), color, grain size, and moisture content of the soil collected from the borings. Observations were recorded onto boring logs, which are attached as Appendix A. Each sample for possible chemical analysis was collected in 1 ½ inch diameter six-inch long brass tubes, covered at each end with Teflon™ sheeting, capped with plastic end caps, labeled, and placed in an ice-filled cooler for preservation.

After the wellbores were advanced to desired depths, monitoring wells MW-1 through MW-4 were constructed with four-inch diameter, flush threaded Schedule 40 PVC well casings. The wells were each completed to a total depth of 25 feet bgs with 15 feet of 0.020-inch slotted screen placed between 10 and 25 feet bgs to intercept the water-bearing interval. All wells were completed to ground surface with Schedule 40 blank PVC casing. Monterey #3 sand was placed into the annular space adjacent to the well screens and was installed to approximately two feet above the top of the well screens. Two feet of bentonite pellets were placed above the sand, followed by a 5 to 10% bentonite-cement mixture to ground surface. Table 1 presents a summary of well construction details.

The wellheads were completed at ground surface with locking well caps and traffic-rated, bolt-down Christy boxes. The Christy boxes were installed slightly above the surrounding grade and finished with cement aprons to provide positive relief away from the wellheads. A California-licensed land surveyor then surveyed the wellheads with respect to mean sea level (msl) (see Appendix A for survey data). The wellhead elevations were measured from an existing permanent monument, and compared with depth to groundwater measurements to calculate groundwater elevation above msl as well as a groundwater flow

direction and gradient.

Gettler-Ryan Incorporated (GR) of Dublin, California developed the wells by alternately swabbing and surging each well using a surge block, removing 10 casing volumes of water from the wells by pumping and/or bailing, and monitoring the removed water for parameters such as pH, turbidity, temperature, and conductivity (Appendix A). After developing each well, GR collected one groundwater sample using a dedicated disposable bailer, decanting the groundwater directly into laboratory-supplied glassware.

Selected soil samples and one groundwater sample from each well were submitted for analysis to Sequoia Analytical (Sequoia) of Morgan Hill, California, a California-certified analytical laboratory, under Chain-of-Custody protocol. The soil samples were analyzed for the following compounds: Gasoline Range Organics (GRO), BTEX compounds (benzene, toluene, ethylbenzene, and total xylenes), and eight fuel oxygenates (including MtBE) by EPA Method 8260. The groundwater samples were analyzed for the following compounds: TPHg, BTEX compounds, and MtBE by EPA method 8015 / 8020.

Decontamination and Material Containment

To minimize the potential for cross-contamination between boreholes and sampling locations, all non-disposable down-hole drilling and soil sampling equipment was thoroughly decontaminated prior to initiating work between sampling locations with a low-phosphorous soap solution and double rinsed in potable and deionized water. All drilling equipment was steam cleaned prior to use at each boring location. Soil cuttings generated during drilling activities were temporarily stored in 55-gallon drums on-site pending the results of chemical analysis. Upon receipt of analytical results, the waste was profiled and transported by Den Beste Trucking (DBT) of Windsor, California. The waste materials were profiled with Forward Landfill of Manteca, California, a State-certified disposal facility, and disposed as non-hazardous waste under a bill of lading.

SUBSURFACE CONDITIONS

Stratigraphy and Hydrogeology

The Site investigation activities encountered clayey and sandy silts from approximately 1 to 15 feet bgs. Silty clays were encountered from approximately 10 to 26.5 feet bgs, the total depth explored. Interbedded lenses of silt were also encountered within the silty clays.

Consistency of encountered soils was generally loose to very stiff. Groundwater was encountered at depths between 17 and 21 feet bgs. The estimated groundwater flow is to the west at an approximate gradient of 0.015 ft/ft. Table 2 presents groundwater elevations. Figure 3 depicts groundwater flow direction.

Soil Analytical Results

Unsaturated soil samples were submitted to Sequoia on February 28 and March 1, 2002 for chemical analysis. Soil analytical results are presented in Table 3, and the Certified Analytical Reports and Chain-of-Custody documentation are included in Appendix B. GRO were detected in wellbores MW-2, MW-3, and MW-4 at a maximum concentration of 42 mg/kg at a depth of 16 feet bgs in wellbore MW-3. MtBE was detected in the said wellbores at a maximum concentration of 1.2 mg/kg at a depth of 16 feet bgs in wellbore MW-3. Trace concentrations of ethylbenzene and total xylenes were also detected in wellbore MW-3 at a depth of 16 feet bgs.

Groundwater Analytical Results

Groundwater samples were submitted to Sequoia by GR on April 8, 2002 for chemical analysis. Groundwater analytical results for wells MW-1 through MW-4 are presented in Table 4, and Certified Analytical Reports and Chain-of-Custody documentation are included in Appendix B. TPHg were detected in monitoring wells MW-2 through MW-4 at a maximum concentration of 13,000 micrograms per liter ($\mu\text{g/L}$) in well MW-4. Benzene was detected at 65 $\mu\text{g/L}$ in well MW-3, and ethylbenzene was detected in wells MW-2 through MW-4, with a maximum concentration of 400 $\mu\text{g/L}$ in well MW-3. Toluene and total xylenes were not detected above laboratory method detection limits (LMDLs) in any of the wells. MtBE was detected in wells MW-2 through MW-4 at a maximum concentration of 8,300 $\mu\text{g/L}$ in well MW-3. Other fuel oxygenates were not detected above the corresponding LMDLs.

SUMMARY AND CONCLUSIONS

- SECOR supervised the installation of four groundwater monitoring wells (MW-1 through MW-4) at the Site. Soil and groundwater samples were collected and chemically analyzed to characterize potential hydrocarbon and fuel oxygenate impact in the subsurface of the Site.
- GRO were detected in soil samples collected from three of the four borings at a maximum concentration of 42 mg/kg in wellbore MW-3. BTEX compounds were detected in wellbore MW-3 at maximum concentrations of 0.36 and 0.26 mg/kg in wellbore MW-3. MtBE was detected in three of the four borings at a maximum concentration of 1.2 mg/kg in wellbore MW-3. Other fuel oxygenates were not detected above LMDLs.
- TPHg, benzene, ethylbenzene, and MtBE were detected in three of the four monitoring wells at maximum concentrations of 13,000 $\mu\text{g/L}$, 65 $\mu\text{g/L}$, 400 $\mu\text{g/L}$, and 8,300 $\mu\text{g/L}$, respectively.

RECOMMENDATIONS

- Monitoring of the newly-installed wells should commence on a quarterly basis, and results should be included in future Quarterly Groundwater Monitoring Reports.
- SECOR recommends analyzing groundwater samples for TPHg, BTEX compounds, and MtBE (including other fuel oxygenates) by EPA Methods 8015, 8021, and 8260, respectively.


We greatly appreciate the opportunity to submit this Letter Report on behalf of Tosco and trust that this document meets with your approval. Please do not hesitate to contact us at 650-691-0131 with any questions or comments.

Sincerely,

SECOR International Incorporated



Forrest McFarland
Senior Staff Geologist



Jack C. Hardin
Principal

Attachments:

- Table 1 – Summary of Monitoring Well Construction Details
- Table 2 – Summary of Groundwater Elevations
- Table 3 – Soil Analytical Results
- Table 4 – Groundwater Analytical Results
- Figure 1 – Site Location Map
- Figure 2 – Site Plan with Monitoring Well Locations
- Figure 3 – Potentiometric Map
- Appendix A – Soil Boring and Well Construction Logs, Survey Data, and Well Development Field Data Sheets
- Appendix B – Certified Analytical Reports and Chain-of-Custody Documentation

cc: Mr. David B. DeWitt, Phillips 66 Company

TABLE 1
SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS
 Tosco Service Station No. 7124
 10151 E. 14th Street Oakland, California

Well Number	Date Installed	Depth of Boring (ft bgs)	Depth of Well (ft bgs)	Casing Diameter (in)	Screened Interval (ft bgs)	Well Head Elevation	Groundwater Elevation	First Encountered Groundwater (ft bgs)	Stabilized Groundwater (ft bgs)	Interval of Cement/Grout (ft bgs)	Interval of Benonite Seal (ft bgs)	Interval of Sand Pack (ft bgs)
MW-1	2/28/02	26.5	25	4	10.0-25.0	37.73	22.37	17	15	0 - 6	6.0 - 8.0	8.0 - 26.5
MW-2	3/1/02	26.5	25	4	10.0-25.0	38.27	19.37	18.5	18.5	0 - 6	6.0 - 8.0	8.0 - 26.5
MW-3	2/28/02	26.5	25	4	10.0-25.0	38.03	21.72	17	16	0 - 6	6.0 - 8.0	8.0 - 26.5
MW-4	3/1/02	26.5	25	4	10.0-25.0	38.77	20.36	21	18	0 - 6	6.0 - 8.0	8.0 - 26.5

Abbreviations:

- ft bgs = feet below ground surface
- in = inches
- (ft BTOC) = feet below top of casing
- * Bentonite backfilled from 45-50'

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS
Tosco Service Station No. 7124
10151 E. 14th Street Oakland, California

Well Number	Date	Top of Casing Elevation (ft msl)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft msl)
MW-1	4/8/02	37.37	14.27	23.10
MW-2	4/8/02	37.87	15.86	22.01
MW-3	4/8/02	37.72	15.86	21.86
MW-4	4/8/02	38.36	16.59	21.77

Abbreviations:

ft BTOC = feet below top of casing

ft msl = feet above mean sea level

TABLE 3
SOIL ANALYTICAL RESULTS
Tosco Service Station No. 7124
10151 E. 14th Street
Oakland, California

Well ID	Sample Depth (ft bgs)	Date Collected	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MtBE	TAME	EtBE	DIPE	TBA	EDB	1,2-DCA	Ethanol
MW-1	6.5'	2/28/02	<5.0	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-1	16.5'	2/28/02	<5.0	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-1	26.5'	2/28/02	<5.0	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-2	6.5'	3/1/02	<5.0	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-2	16.5'	3/1/02	<5.0	<0.050	<0.050	<0.050	<0.050	0.085	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-2	26.5'	3/1/02	16	<0.050	<0.050	<0.050	<0.050	0.16	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-3	6.0'	2/28/02	<5.0	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-3	16.0'	2/28/02	42	<0.20	<0.20	0.36	0.26	1.2	<0.10	<0.10	<0.10	<2.0	<0.10	<0.10	<20
MW-3	26.5'	2/28/02	<5.0	<0.050	<0.050	<0.050	<0.050	0.23	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-4	6.5'	3/1/02	5.6	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-4	11.5'	3/1/02	<5.0	<0.050	<0.050	<0.050	<0.050	<0.025	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0
MW-4	26.5'	3/1/02	<5.0	<0.050	<0.050	<0.050	<0.050	0.028	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<5.0

Notes:

(1) all concentrations are reported in milligrams per kilogram (mg/kg)

Abbreviations:

ft bgs = feet below ground surface
GRO = gasoline range organics
MtBE = Methyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
EtBE = Ethyl tertiary butyl ether
DIPE = Di-isopropyl ether
TBA = Tertiary butyl alcohol
EDB = Ethylene dibromide
1,2-DCA = 1,2-Dichloroethane

< 1.0 = Not detected above specified laboratory reporting limit

**TABLE 4
GROUNDWATER ANALYTICAL RESULTS**

Tosco Service Station No. 7124

10151 E. 14th Street

Oakland, California

Monitoring Well	Date Collected	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MtBE	TAME	EtBE	DIPE	TBA	1,2-DBA	1,2-DCA	Ethanol
MW-1	4/8/02	<50.0	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0 ³	<2.0	<2.0	<2.0	<100	<2.0	<2.0	<500
MW-2	4/8/02	4,400	<2.5	<2.5	6.4	<2.5	380/490 ³	<40	<40	<40	<2,000	<40	<40	<10,000
MW-3	4/8/02	8,700	65	<25	400	<25	6,500/8,300 ³	<1,000	<1,000	<1,000	<50,000	<1,000	<1,000	<250,000
MW-4	4/8/02	13,000	<5.0	<5.0	28.0	<5.0	790/980 ³	<100	<100	<100	<5,000	<100	<100	<25,000

Notes:

- (1) all concentrations are reported in micrograms per liter
- (2) TPHg, BTEX, and MtBE by EPA Methods 8015 and 8020
- (3) MtBE confirmatory value by EPA Method 8260

Abbreviations:

TPHg = Total petroleum hydrocarbons as gasoline

MtBE = Methyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

EtBE = Ethyl tertiary butyl ether

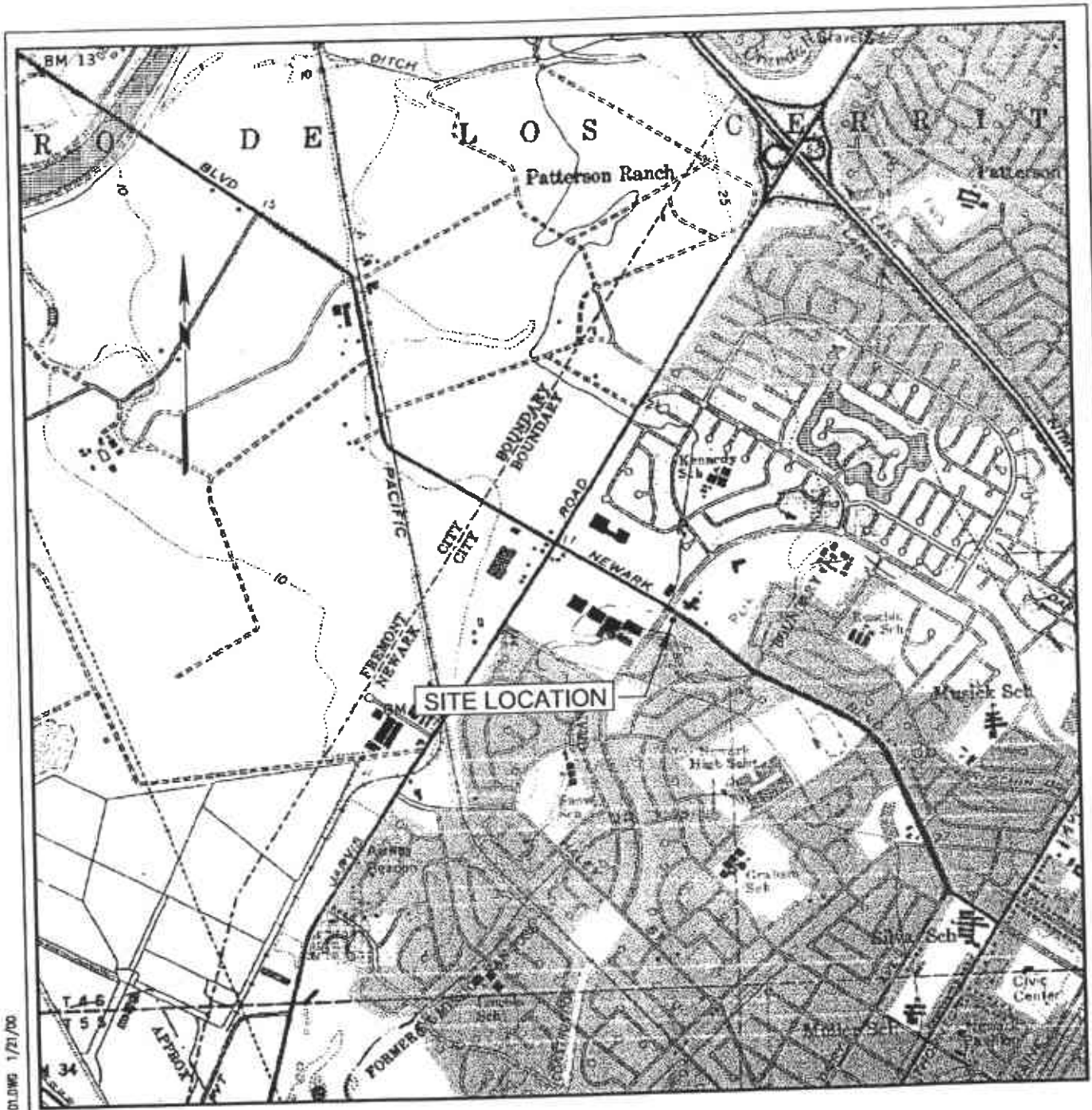
DIPE = Di-isopropyl ether

TBA = Tertiary butyl alcohol

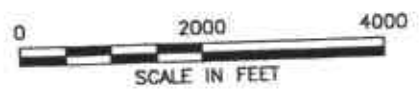
1,2-DBA = 1,2-Dibromoethane

1,2-DCA = 1,2-Dichloroethane

< 50.0 = Not detected above specified laboratory reporting limit



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP
 NEWARK, CALIFORNIA
 (1959, PHOTOREVISED 1980)

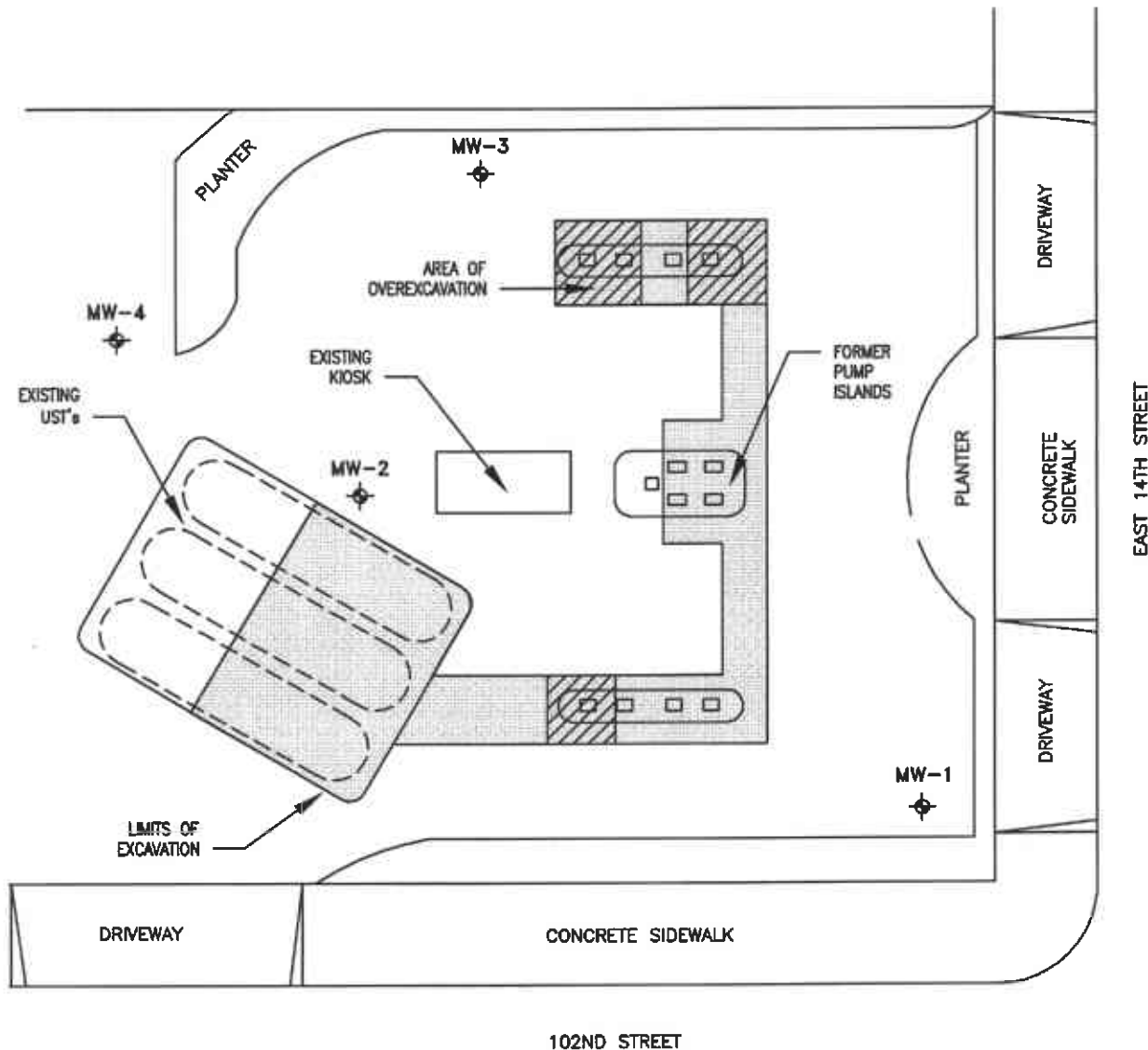


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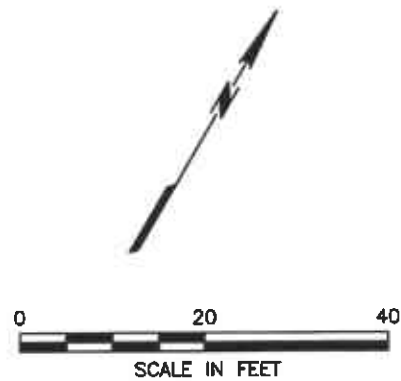
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FIGURE 1
TOSCO (FORMER BP OIL)
 SERVICE STATION NO. 11113
 35425 NEWARK BOULEVARD
 NEWARK, CALIFORNIA
SITE LOCATION MAP



LEGEND:

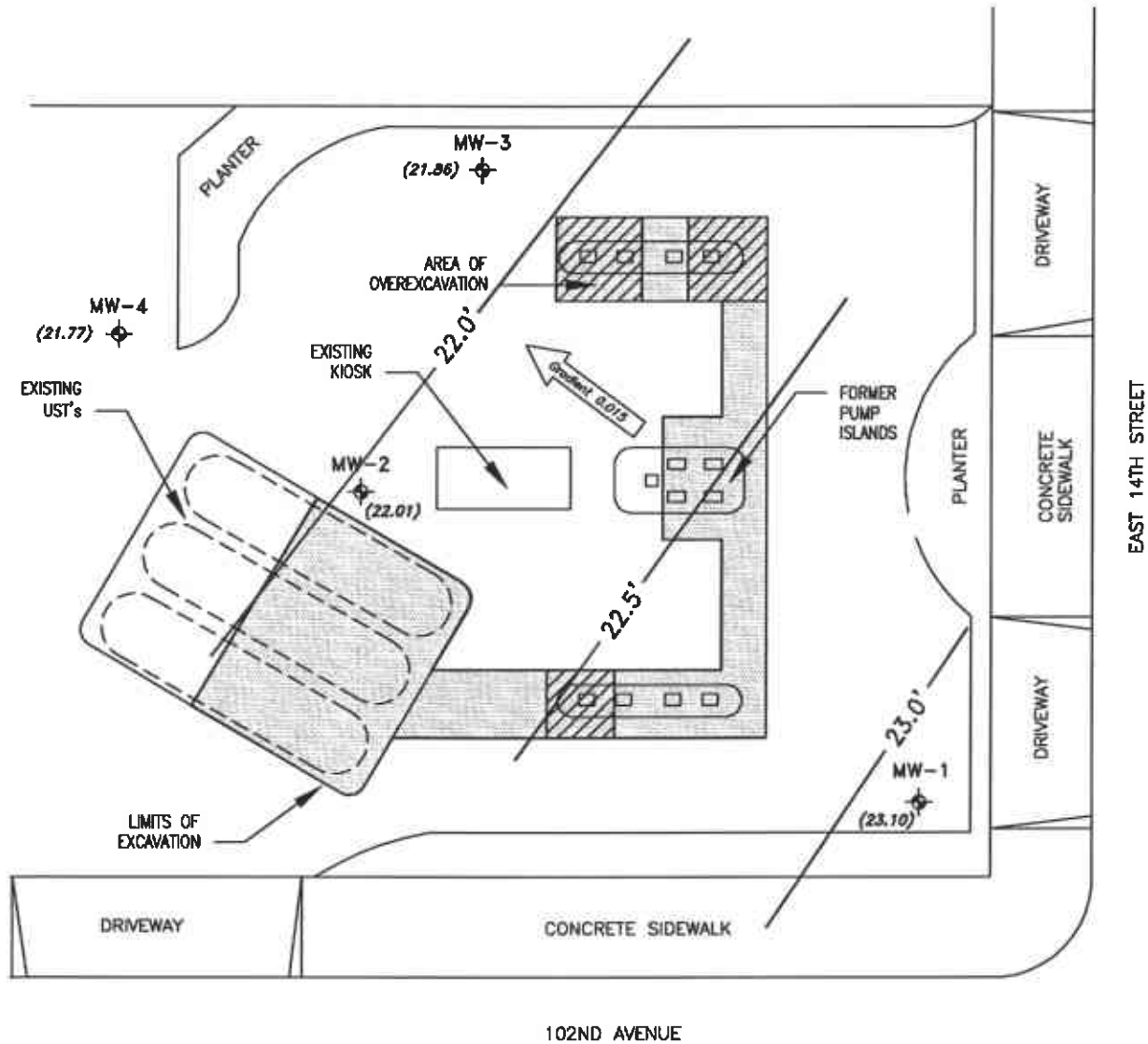
- MW-1  MONITORING WELL LOCATION
-  EXCAVATION AREA
-  AREA OF OVEREXCAVATION







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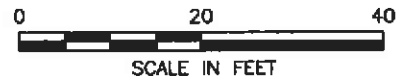
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FIGURE 2
TOSCO (UNOCAL) SS #7124
10151 EAST 14th STREET
OAKLAND, CALIFORNIA
**SITE PLAN WITH
MONITORING WELL LOCATIONS**



LEGEND:

- MW-1
 MONITORING WELL LOCATION
- (22.01)
 GROUNDWATER ELEVATION ABOVE MEAN SEA LEVEL IN FEET
-  GROUNDWATER FLOW DIRECTION & GRADIENT (FT/FT)
-  EXCAVATION AREA
-  AREA OF OVEREXCAVATION



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DRAWN BY:	LG	APP. BY:	JH
DATE:	04-18-02		
JOB NO.:	06TO.03996.00		
DRAWING NO.	7124-3-041802	REV.	A

FIGURE 3
TOSCO (UNOCAL) SS #7124
10151 EAST 14th STREET
OAKLAND, CALIFORNIA
POTENTIOMETRIC MAP

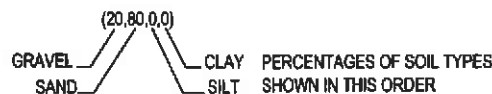
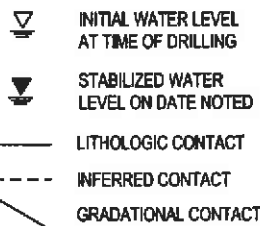
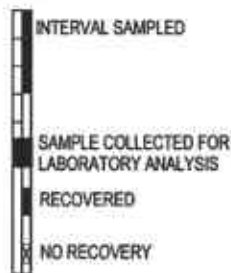
APPENDIX A

Soil Boring and Well Construction Logs, Survey Data, and Well Development Field Data Sheets

SOIL CLASSIFICATION CHART

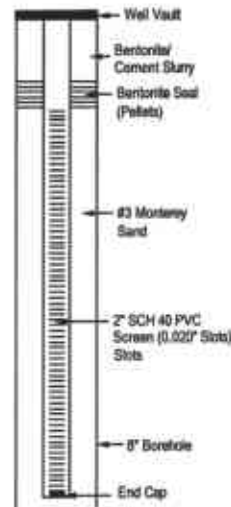
MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPH	LETTER		
COARSE-GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
		CLEAN SANDS (LITTLE OR NO FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES	
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES	
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
		FINE-GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
					CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
	OL			ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		
SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS		
			CH	INORGANIC CLAYS OF HIGH PLASTICITY		
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS		
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

SAMPLE



NOTE: SOIL CONDITIONS INDICATED BY BORING LOGS APPLY AT THE LOCATION OF THE PARTICULAR BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THE BORING LOCATION WITH THE PASSAGE OF TIME. DATA PRESENTED IN THE LOGS REPRESENTS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED. SOIL CONDITIONS INDICATED BETWEEN SAMPLE INTERVALS ARE INFERRED.

WELL CONSTRUCTION



UNIFIED SOIL CLASSIFICATION, BORING LOG, AND WELL CONSTRUCTION SYMBOLS

SECOR

International Incorporated

Logged By: LF	Date Drilled: 2/28/02	Drilling Contractor: Woodward Drilling	Project Name: Tosco #7124	Method/Equipment: CA Split Spoon 580B OVM	Well Number: MW-1		
See "Soil Classification Chart" for USCS Soil Classifications		Boring Diam. (in.): 10	Surface Elev. (ft.): 37.73	Groundwater Depth (ft.): ∇ 17 First Water ∩ 15 Stabilized Water	Total Depth (ft.): 26.5	Drive wt. (lbs.): 140	Drop Dist. (in.): 30

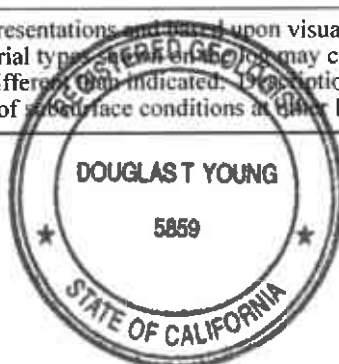
Well Construction	Depth, (ft.)	Sample Recovery	Blows/12"	Lithologic Description	PID (ppm)
Casing Elev.: 37.37					
Christy Box				Asphalt	
Grout				Fill - YELLOWISH BROWN (10 YR 5/4) SANDY GRAVEL (GP) trace silt, fine grained sand, damp, loose (70, 25, 5, 0)	
4" Sch. 40 PVC Blank				YELLOWISH BROWN (10 YR 5/4) SANDY SILT (ML) trace clay, fine grained sand, loose, damp (0, 20, 75, 5)	
Bentonite Seal	5		6	Hand augered to 5 feet below ground surface Grades BROWN (7.5 YR 4/2) increasing sand content (0, 30, 65, 5)	0.4
#3 Monterey Sand	10		17	BROWN (10 YR 4/3) SILTY CLAY (CL) trace fine grained sand, stiff, moist, dark brown mottling (0, 5, 30, 65)	7
4" Sch. 40 0.020" Slotted PVC Screen	15		15	Grades BLACK (5 Y 2.5/2) increasing clay content, orange veins (0, 5, 20, 75)	1
End Cap #3	20		16	Grades OLIVE BROWN (2.5 Y 4/4) increasing fine grained sand and silt content, wet (0, 20, 30, 50)	0
Monterey Sand	25		20	Grades DARK BROWN (2.5 Y 4/4) increasing clay content (0, 0, 20, 80)	1
				Bottom of boring @ 26.5 feet below ground surface	

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on this log may contain different materials and the change from one predominant material type to another could be different than indicated. Interpretations on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **6TO.03996.00**

Date **3/12/02**

MW'S.GPJ
LOG OF BOREHOLE



Log of Well: **MW-1**

Approved by

Figure

(sheet 1 of 1)

SECOR

International Incorporated

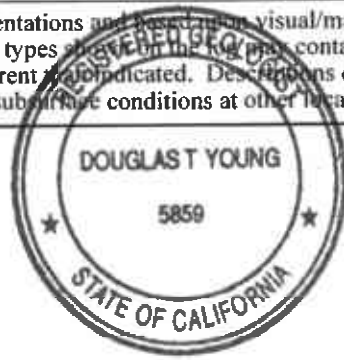
Logged By: LF	Date Drilled: 3/1/02	Drilling Contractor Woodward Drilling	Project Name: Tosco #7124	Method/Equipment: CA Split Spoon 580B OVM	Well Number: MW-2	
See "Soil Classification Chart" for USCS Soil Classifications	Boring Diam. (in.): 10	Surface Elev. (ft.): 38.27	Groundwater Depth (ft.): ▽ 18.5 First Water ▼ 18.5 Stabilized Water	Total Depth (ft.): 26.5	Drive wt. (lbs.): 140	Drop Dist. (in.): 30

Well Construction	Depth, (ft.)	Sample Recovery	Blows/12"	Lithologic Description	PID (ppm)
Casing Elev.: 37.87					
Christy Box				Asphalt	
Grout				Fill - YELLOWISH BROWN (10 YR 5/4) SANDY GRAVEL (GP) trace silt, fine grained sand, loose, damp (70, 25, 5, 0)	
4" Sch. 40 PVC Blank	5			LIGHT OLIVE BROWN (2.5 Y 5/4) SANDY SILT (ML) trace clay, fine grained sand, loose, damp (0, 20, 75, 5)	
Bentonite Seal	18			Grades VERY DARK GRAYISH BROWN (2.5 Y 3/2)	
				Hand augered to 5 feet below ground surface	0
	10			Grades LIGHT OLIVE BROWN (2.5 Y 5/6) increasing fine grained sand content (0, 30, 65, 5)	
#3 Monterey Sand	15			OLIVE BROWN (2.5 Y 2/2) SILT CLAY (CL) trace fine subangular gravel, very stiff, damp (5, 0, 15, 80)	1.6
				Grades DARK OLIVE GRAY (5 Y 3/2) increasing clay content, orange mottling, petroleum odor (0, 0, 10, 90)	0.1
4" Sch. 40 0.020" Slotted PVC Screen	20			Grades with increasing silt, wet (0, 0, 20, 80)	0
End Cap #3	25			Grades with increasing clay (0, 0, 10, 90)	
Monterey Sand	28			Bottom of boring @ 26.5 feet below ground surface	6.9


The substrata descriptions above are generalized representations and based on visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **6TO.03996.00** Date **3/12/02**

MW'S.GPJ
LOG OF BOREHOLE



Log of Well: **MW-2**

Approved by 
Figure (sheet 1 of 1)

SECOR

International Incorporated

Logged By: LF	Date Drilled: 2/28/02	Drilling Contractor: Woodward Drilling	Project Name: Tosco #7124	Method/Equipment: CA Split Spoon 580B OVM	Well Number: MW-3		
See "Soil Classification Chart" for USCS Soil Classifications		Boring Diam.(in.): 10	Surface Elev.(ft.): 38.03	Groundwater Depth (ft.): ☒ 17 First Water ☒ 16 Stabilized Water	Total Depth (ft.): 26.5	Drive wt.(lbs.): 140	Drop Dist.(in.): 30

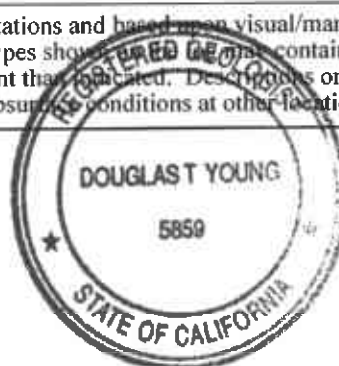
Well Construction	Depth, (ft.)	Sample Recovery	Blows/12"	Lithologic Description	PID (ppm)
Casing Elev : 37.72					
Christy Box Grout 4" Sch. 40 PVC Blank Bentonite Seal	0-5		12	Asphalt DARK BROWN (10 YR 3/3) SANDY SILT (ML) trace clay, fine grained sand, loose, damp (0, 20, 75, 5) Hand augered to 5 feet below ground surface Grades DARK GRAYISH BROWN (10 YR 4/2) increasing clay content, decreasing sand content, increasing stiffness (0, 5, 80, 10)	28
#3 Monterey Sand	5-15		23	VERY DARK BROWN (10 YR 2/2) SILTY CLAY (CL) trace fine to coarse grained sand, very stiff, damp (0, 5, 20, 70)	10.5
4" Sch. 40 0.020" Slotted PVC Screen	15-20		38	Grades BLACK (2.5 Y 2.5/1) increasing clay content, petroleum odor (0, 0, 10, 90)	2.5
End Cap #3 Monterey Sand	20-25		14	Grades DARK GRAY (5 Y 4/1) increasing silt content, wet, petroleum odor (0, 0, 40, 60)	208
	25-26.5		22	Grades OLIVE GRAY (5Y 5/2) increasing clay content (0, 0, 15, 85) Bottom of boring @ 26.5 feet below ground surface	470

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on this log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **6TO.03996.00**

Date **3/12/02**

MW'S GPJ
LOG OF BOREHOLE



Log of Well: **MW-3**

Approved by

Figure

(sheet 1 of 1)

Logged By: LF	Date Drilled: 3/1/02	Drilling Contractor: Woodward Drilling	Project Name: Tosco #7124	Method/Equipment: CA Split Spoon 580B OVM	Well Number: MW-4		
See "Soil Classification Chart" for USCS Soil Classifications		Boring Diam.(in.): 10	Surface Elev.(ft.): 38.77	Groundwater Depth (ft.): ▽ 21 First Water ▽ 18 Stabilized Water	Total Depth (ft.): 26.5	Drive wt.(lbs.): 140	Drop Dist.(in.): 30

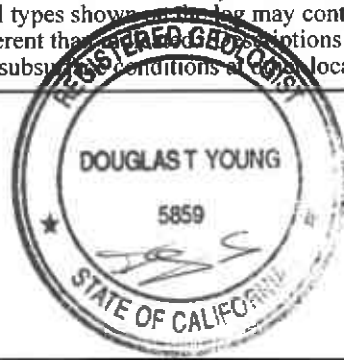
Well Construction	Depth, (ft.)	Sample Recovery	Blows/12"	Lithologic Description	PID (ppm)
Casing Elev.: 38.36					
Christy Box Grout 4" Sch. 40 PVC Blank Bentonite Seal	0 to 5		22	Asphalt Bricks VERY DARK GRAYISH BROWN (10 YR 3/2) CLAYEY SILT (ML) with fine grained sand (0, 15, 65, 20) Grades LIGHT OLIVE BROWN (2.5 Y 5/4) SANDY SILT (ML), trace clay, fine grained sand, loose, damp (0, 20, 75, 5) Hand augered to 5 feet below ground surface	0
#3 Monterey Sand	5 to 15		41	Grades GRAYISH BROWN (2.5 Y 5/2) CLAYEY SILT (ML) trace fine grained sand, very stiff, damp, orange veins, petroleum odor (0, 5, 55, 40)	2.5
4" Sch. 40 0.020" Slotted PVC Screen	15 to 20		30	OLIVE GRAY (5 Y 4/2) SILTY CLAY (CL) stiff, moist, orange mottling, petroleum odor (0, 0, 30, 70)	20
End Cap #3 Monterey Sand	20 to 25		12	Grades VERY DARK GRAY (5 Y 3/1) increasing clay content, wet, petroleum odor (0, 0, 25, 75)	17
	25 to 26.5		8	Grades with increasing silt, lenses of silt (0, 0, 30, 70) Bottom of boring @ 26.5 feet below ground surface	35

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than the descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No **6TO.03996.00**

Date **3/12/02**

MW'S.GPJ
LOG OF BOREHOLE



Log of Well: **MW-4**

Approved by

Figure

(Sheet 1 of 1)



MONITORING WELL
OBSERVATION SUMMARY SHEET

Client Facility #: Tosco(Unocal) SS#7124

G-R JOB #: 180299

LOCATION: 10151 East 14th Street

DATE: 4/8/02

CITY: Oakland, CA

TIME: _____

Well ID	Total Depth	Depth to Water	Product Thickness	TOB or TOC	Comments VOLUME PURGED
MW-1	25.40	14.27	∅	TOC	75
MW-2	25.46	15.86	↓	↓	60
MW-3	25.38	15.86	↓	↓	60
MW-4	25.44	16.59	↓	↓	60

Comments: A NEW 4" WELL PLUG NEEDED FOR MW-4.

Sampler: HAIG KEVORK Assistant: N/A

**WELL MONITORING/DEVELOPMENT
FIELD DATA SHEET**

Client/
Facility Tosco(Unocal) SS#7124
Address: 10151 East 14th Street
City: Oakland, CA

Job#: 180299
Date: 4/18/02
Sampler: HAIG KEVORK

Well ID MW-1

Well Condition: NEW

Well Diameter 4 in.

Hydrocarbon Thickness: Ø Ft. Amount Bailed (product/water): Ø (gal.)

Total Depth ~~(23.50)~~ 25.40 ft.

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

Depth to Water 14.27 ft.

11.13 x VF 0.66 = 7.3 x ¹⁰ (case volume) = Estimated Purge Volume: 113 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: STANL. STEEL BAILER 4"

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample

Starting Time: 1410
Sampling Time: 1540
Purging Flow Rate: VARIES gpm.
Did well de-water? *NO

Weather Conditions: SUNNY
Water Color: CLOUDY Odor: _____
Sediment Description: SILT
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>1429</u>	<u>10</u>	<u>7.85</u>	<u>499</u>	<u>19.5</u>			
<u>1437</u>	<u>20</u>	<u>7.59</u>	<u>543</u>	<u>18.8</u>			
<u>1444</u>	<u>30</u>	<u>7.28</u>	<u>466</u>	<u>19.3</u>			
<u>1500</u>	<u>45</u>	<u>7.15</u>	<u>451</u>	<u>19.1</u>			
<u>1518</u>	<u>60</u>	<u>7.13</u>	<u>448</u>	<u>19.4</u>			
<u>1532</u>	<u>75</u>	<u>7.10</u>	<u>442</u>	<u>19.3</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>5 VOA'S</u>	<u>Y</u>	<u>HCL</u>	<u>3 EGUOIA</u>	<u>G/BTEX/MTBE</u> <u>80XY158260</u>

COMMENTS: () TOTAL DEPTH PRIOR TO DEVELOPMENT,
* GOOD RECOVERY

**WELL MONITORING/DEVELOPMENT
FIELD DATA SHEET**

Client/
Facility Tosco(Unocal) SS#7124
Address: 10151 East 14th Street
City: Oakland, CA

Job#: 180299
Date: 4/8/02
Sampler: HAG KIEVORK

Well ID MW-2

Well Condition: NEW

Well Diameter 4 in.

Hydrocarbon Thickness: Ø Ft. Amount Bailed (product/water): Ø (gal.)

Total Depth (24.25) 25.46 ft.

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

Depth to Water 15.86 ft.

9.60 x VF 0.66 = 6 x 10 (case volume) = Estimated Purge Volume: 60 (gal.)

Purge Equipment: Disposable Bailer
Bailer
 Stack
Suction
Grundfos
Other: STAINLSTEEL BAILER

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

Starting Time: 1727

Weather Conditions: SUNNY

Sampling Time: 1850

Water Color: CLOUDY Odor: _____

Purging Flow Rate: VARIES gpm.

Sediment Description: SILT

Did well de-water? * NO

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

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1745	6	7.19	508	19.4			
1757	10	6.88	485	19.1			
1805	20	6.83	476	19.0			
1815	30	6.80	480	19.2			
1823	40	6.81	482	18.9			
1835	50	6.80	485	18.8			
1845	60	6.79	482	18.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	5 VOALS	Y	HCL	SEQUOIA	G/BTEX/MTBE 80XY58260

COMMENTS: () TOTAL DEPTH PRIOR TO DEVELOPMENT.
* GOOD RECOVERY

**WELL MONITORING/DEVELOPMENT
FIELD DATA SHEET**

Client/
Facility Tosco(Unocal) SS#7124
Address: 10151 East 14th Street
City: Oakland, CA

Job#: 180299
Date: 4/8/02
Sampler: HAI G KEVORK

Well ID MW-3 Well Condition: NEW

Well Diameter 4 in.
Total Depth (C) 225.38 ft.
Depth to Water 15.86 ft.

Hydrocarbon Thickness: Ø Ft. Amount Bailed (product/water): Ø (gal.)

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

9.52 x VF 0.66 6 x 10 (case volume) = Estimated Purge Volume: 60 (gal.)

Purge Equipment: Disposable Bailer Bailer Stack Suction Grundfos Other: STAINLESS STEEL BAILER 4"

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

Starting Time: 1856 Weather Conditions: SUNNY
Sampling Time: 2010 Water Color: CLOUDY Odor: _____
Purging Flow Rate: VARIES gpm. Sediment Description: SILT
Did well de-water? * NO If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1912	6	7.16	722	17.8			
1923	10	7.04	594	18.2			
1930	20	6.89	583	18.7			
1937	30	6.84	585	18.5			
1945	40	6.80	569	18.8			
1953	50	6.81	580	18.3			
2002	60	6.80	584	18.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	5 VOALS	Y	HCL	SEDLUOIA	G/BTEX/MTBIS 80XY'S 8260

COMMENTS: () TOTAL DEPTH PRIOR TO DEVELOPMENT.
* GOOD RECOVERY

**WELL MONITORING/DEVELOPMENT
FIELD DATA SHEET**

Client/
Facility Tosco(Unocal) SS#7124
Address: 10151 East 14th Street
City: Oakland, CA

Job#: 180299
Date: 4/8/02
Sampler: HAIG KEVORK

Well ID MW-4
Well Diameter 4 in.
Total Depth (22.19) 25.44 ft.
Depth to Water 16.59 ft.

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

8.85 x VF 0.66 = 5.8 x 2 (case volume) = Estimated Purge Volume: 58 (gal.)

Purge Equipment: Disposable Bailer
Bailer
 Stack
Suction
Grundfos
Other: STAINL STEEL BAILER 4"

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample

Starting Time: 1550 Weather Conditions: SUNNY
Sampling Time: 1720 Water Color: CLOUDY Odor: _____
Purging Flow Rate: VARIES gpm. Sediment Description: SILT
Did well de-water? * NO If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1605	6	7.42	662	19.6			
1618	15	7.27	568	18.5			
1625	25	7.10	527	19.1			
1642	40	6.92	531	19.3			
1650	50	6.90	525	18.8			
1712	60	6.86	533	18.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	5 VOA'S	Y	HCL	SEQUOIA	G/BTEX/MTBE 80XY'S 8260

COMMENTS: C) TOTAL DEPTH PRIOR TO DEVELOPMENT,
* GOOD RECOVERY,

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.

APPENDIX B

Certified Analytical Reports and Chain-of-Custody Documentation



**Sequoia
Analytical**

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

7 March, 2002

Jamin Valdez
Secor - Mountain View
2301 Leghorn St.
Mountain View, CA 94043

RE: Tosco #7124, Oakland, Ca
Sequoia Report: MLC0026

Enclosed are the results of analyses for samples received by the laboratory on 03/01/02 18:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley
Project Manager

CA ELAP Certificate #1210

Secor - Mountain View
2301 Leghorn St.
Mountain View CA, 94043

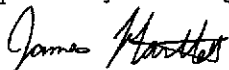
Project: Tosco #7124, Oakland, Ca
Project Number: Tosco 7124, Oakland, Ca
Project Manager: Daniel Vargas

Reported:
03/18/02 10:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3-6	MLC0082-01	Soil	02/28/02 12:08	03/01/02 18:20
MW-3-11.5	MLC0082-02	Soil	02/28/02 12:28	03/01/02 18:20
MW-3-16	MLC0082-03	Soil	02/28/02 12:25	03/01/02 18:20
MW-3-21	MLC0082-04	Soil	02/28/02 12:32	03/01/02 18:20
MW-3-26.5	MLC0082-05	Soil	02/28/02 12:38	03/01/02 18:20
MW-1-6.5	MLC0082-06	Soil	02/28/02 08:45	03/01/02 18:20
MW-1-11.5	MLC0082-07	Soil	02/28/02 08:49	03/01/02 18:20
MW-1-16.5	MLC0082-08	Soil	02/28/02 08:55	03/01/02 18:20
MW-1-21.5	MLC0082-09	Soil	02/28/02 09:04	03/01/02 18:20
MW-1-26.5	MLC0082-10	Soil	02/28/02 09:34	03/01/02 18:20

Sequoia Analytical - Morgan Hill



James Hartley, Project Manager

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



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 www.sequoialabs.com

Secor - Mountain View
 2301 Leghorn St.
 Mountain View CA, 94043

Project: Tosco #7124, Oakland, Ca
 Project Number: Tosco 7124, Oakland, Ca
 Project Manager: Daniel Vargas

Reported:
 03/18/02 10:09

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-6 (MLC0082-01) Soil Sampled: 02/28/02 12:08 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.4 %	60-140	"	"	"	"	"	
MW-3-16 (MLC0082-03) Soil Sampled: 02/28/02 12:25 Received: 03/01/02 18:20									
Ethanol	ND	20	mg/kg	4	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	1.2	0.10	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.10	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.10	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.10	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.10	"	"	"	"	"	"	
Ethylene dibromide	ND	0.10	"	"	"	"	"	"	
Benzene	ND	0.20	"	"	"	"	"	"	
Ethylbenzene	0.36	0.20	"	"	"	"	"	"	
Toluene	ND	0.20	"	"	"	"	"	"	
Total Xylenes	0.26	0.20	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	42	20	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.1 %	60-140	"	"	"	"	"	



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Secor - Mountain View
2301 Leghorn St.
Mountain View CA, 94043

Project: Tosco #7124, Oakland, Ca
Project Number: Tosco 7124, Oakland, Ca
Project Manager: Daniel Vargas

Reported:
03/18/02 10:09

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-26.5 (MLC0082-05) Soil Sampled: 02/28/02 12:38 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	0.23	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.9 %	60-140		"	"	"	"	
MW-1-6.5 (MLC0082-06) Soil Sampled: 02/28/02 08:45 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.1 %	60-140		"	"	"	"	

Sequoia Analytical - Morgan Hill

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Secor - Mountain View
 2301 Leghorn St.
 Mountain View CA, 94043

Project: Tosco #7124, Oakland, Ca
 Project Number: Tosco 7124, Oakland, Ca
 Project Manager: Daniel Vargas

Reported:
 03/18/02 10:09

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1-16.5 (MLC0082-08) Soil Sampled: 02/28/02 08:55 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.0 %	60-140		"	"	"	"	
MW-1-26.5 (MLC0082-10) Soil Sampled: 02/28/02 09:34 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94.2 %	60-140		"	"	"	"	

Sequoia Analytical - Morgan Hill

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Secor - Mountain View
 2301 Leghorn St.
 Mountain View CA, 94043

 Project: Tosco #7124, Oakland, Ca
 Project Number: Tosco 7124, Oakland, Ca
 Project Manager: Daniel Vargas

 Reported:
 03/18/02 10:09

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 2C12033 - EPA 5030B MeOH									
Blank (2C12033-BLK1)					Prepared & Analyzed: 03/12/02				
Ethanol	ND	5.0	mg/kg						
tert-Butyl alcohol	ND	0.50	"						
Methyl tert-butyl ether	ND	0.025	"						
Di-isopropyl ether	ND	0.025	"						Q-29
Ethyl tert-butyl ether	ND	0.025	"						
tert-Amyl methyl ether	ND	0.025	"						
1,2-Dichloroethane	ND	0.025	"						
Ethylene dibromide	ND	0.025	"						
Benzene	ND	0.050	"						
Ethylbenzene	ND	0.050	"						
Toluene	ND	0.050	"						
Total Xylenes	ND	0.050	"						
Gasoline Range Organics (C6-C10)	ND	5.0	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.00957		"	0.0100		95.7	60-140		
LCS (2C12033-BS1)					Prepared & Analyzed: 03/12/02				
Methyl tert-butyl ether	0.890	0.025	mg/kg	1.00		89.0	70-130		
Benzene	1.31	0.050	"	1.25		105	70-130		
Toluene	1.32	0.050	"	1.25		106	70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.00935		"	0.0100		93.5	60-140		
LCS (2C12033-BS2)					Prepared & Analyzed: 03/12/02				
Gasoline Range Organics (C6-C10)	16.2	5.0	mg/kg	12.5		130	60-140		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.00948		"	0.0100		94.8	60-140		
LCS Dup (2C12033-BSD1)					Prepared & Analyzed: 03/12/02				
Methyl tert-butyl ether	1.03	0.025	mg/kg	1.00		103	70-130	14.6	25
Benzene	1.22	0.050	"	1.25		97.6	70-130	7.11	25
Toluene	1.22	0.050	"	1.25		97.6	70-130	7.87	25
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.00962		"	0.0100		96.2	60-140		



Secor - Mountain View 2301 Leghorn St. Mountain View CA, 94043	Project: Tosco #7124, Oakland, Ca Project Number: Tosco 7124, Oakland, Ca Project Manager: Daniel Vargas	Reported: 03/18/02 10:09
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**Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 2C12033 - EPA 5030B MeOH									
LCS Dup (2C12033-BSD2)					Prepared & Analyzed: 03/12/02				
Gasoline Range Organics (C6-C10)	15.8	5.0	mg/kg	12.5	126	60-140	2.50	25	
Surrogate: 1,2-Dichloroethane-d4	0.00945		"	0.0100	94.5	60-140			



Secor - Mountain View
2301 Leghorn St.
Mountain View CA, 94043

Project: Tosco #7124, Oakland, Ca
Project Number: Tosco 7124, Oakland, Ca
Project Manager: Daniel Vargas

Reported:
03/18/02 10:09

Notes and Definitions

- Q-29 The percent recovery in the quality control analyte exceeded the upper control limit. Because there was no detectable amount of this compound in the associated sample, the result has been reported.
- 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

Nº 007842



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

Consultant Company: SECOR INC SECOR Int'l Inc		Tosco Engineer: Dave Dewitt	
Address: 2301 Leghorn St		Site #: 7124	
City: Mt View State: Ca Zip Code: 94043		Site Address: 10151 E. 14th St	
Telephone: 650 691 0131 Fax #:		City, State: Oakland, Ca	
Report To: Daniel Vargas	Sampler: L. Furuyama	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

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

Analyses Requested: **MLC0082**

Drinking Water
 Waste Water
 Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH/g/BTEX	TPH Diesel (8015)	TOG (418.1)	Oxygenates (6) B260	Oxygenates (6)+FDB 1,2-DCA (8260)	Other	Comments
1. MW-3-6'	2/20/02 12:08	Soil	1	secre	01	X			X			* ALL BY B260 *
2. MW-3-11.5'	12:28				02	hold						
3. MW-3-16'	12:25				03	X			X			
4. MW-3-21'	12:32				04	hold						
5. MW-3-26.5'	12:38				05	X			X			
6. MW-1-6.5'	8:45				06	X			X			
7. MW-1-11.5'	8:49				07	hold						
8. MW-1-16.5'	8:55				08	X			X			
9. MW-1-21.5'	9:04				09	hold						
10. MW-1-26.5'	9:34				10	X			X			

Relinquished By: <u>Lindsay Hy</u>	Date: <u>2/20/02</u>	Time: <u>17:15</u>	Received By: <u>WHS</u>	Date: <u>3-1-2</u>	Time: <u>15:20</u>
Relinquished By: <u>WHS</u>	Date: <u>3-2-1</u>	Time: <u>18:20</u>	Received By: <u>[Signature]</u>	Date: <u>3-1-02</u>	Time: <u>18:20</u>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment: Express Page 6 of 6

To be completed upon receipt of report:

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

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

Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Sequoia
White - Sequoia



**Sequoia
Analytical**

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18 March, 2002

Daniel Vargas
Secor - Mountain View
2301 Leghorn St.
Mountain View, CA 94043

RE: Tosco #7124, Oakland, Ca
Sequoia Report: MLC0074

Enclosed are the results of analyses for samples received by the laboratory on 03/01/02 18:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James Hartley
Project Manager

CA ELAP Certificate #1210



Secor - Mountain View
2301 Leghorn St.
Mountain View CA, 94043

Project: Tosco #7124, Oakland, Ca
Project Number: Tosco 7124, Oakland, Ca
Project Manager: Daniel Vargas

Reported:
03/18/02 10:17

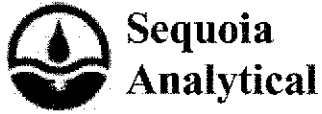
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2 - 6.5	MLC0074-01	Soil	03/01/02 07:36	03/01/02 18:20
MW-2 - 11	MLC0074-02	Soil	03/01/02 07:42	03/01/02 18:20
MW-2 - 16.5	MLC0074-03	Soil	03/01/02 07:48	03/01/02 18:20
MW-2 - 21.5	MLC0074-04	Soil	03/01/02 07:54	03/01/02 18:20
MW-2 - 26.5	MLC0074-05	Soil	03/01/02 08:01	03/01/02 18:20
MW-4 - 6.5	MLC0074-06	Soil	03/01/02 09:57	03/01/02 18:20
MW-4 - 11.5	MLC0074-07	Soil	03/01/02 10:02	03/01/02 18:20
MW-4 - 16.5	MLC0074-08	Soil	03/01/02 10:08	03/01/02 18:20
MW-4 - 21	MLC0074-09	Soil	03/01/02 10:15	03/01/02 18:20
MW-4 - 26.5	MLC0074-10	Soil	03/01/02 10:20	03/01/02 18:20

Sequoia Analytical - Morgan Hill

James Hartley, Project Manager

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Secor - Mountain View 2301 Leghorn St. Mountain View CA, 94043	Project: Tosco #7124, Oakland, Ca Project Number: Tosco 7124, Oakland, Ca Project Manager: Daniel Vargas	Reported: 03/18/02 10:17
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Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 - 6.5 (MLC0074-01) Soil Sampled: 03/01/02 07:36 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.8 %	60-140	"	"	"	"	"	
MW-2 - 16.5 (MLC0074-03) Soil Sampled: 03/01/02 07:48 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	0.085	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.8 %	60-140	"	"	"	"	"	



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Secor - Mountain View 2301 Leghorn St. Mountain View CA, 94043	Project: Tosco #7124, Oakland, Ca Project Number: Tosco 7124, Oakland, Ca Project Manager: Daniel Vargas	Reported: 03/18/02 10:17
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Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 - 26.5 (MLC0074-05) Soil Sampled: 03/01/02 08:01 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	0.16	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	16	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.4 %	60-140	"	"	"	"	"	
MW-4- 6.5 (MLC0074-06) Soil Sampled: 03/01/02 09:57 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	5.6	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94.9 %	60-140	"	"	"	"	"	

Sequoia Analytical - Morgan Hill

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Secor - Mountain View
2301 Leghorn St.
Mountain View CA, 94043

Project: Tosco #7124, Oakland, Ca
Project Number: Tosco 7124, Oakland, Ca
Project Manager: Daniel Vargas

Reported:
03/18/02 10:17

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4- 11.5 (MLC0074-07) Soil Sampled: 03/01/02 10:02 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		94.8 %	60-140		"	"	"	"	
MW-4- 26.5 (MLC0074-10) Soil Sampled: 03/01/02 10:20 Received: 03/01/02 18:20									
Ethanol	ND	5.0	mg/kg	1	2C12033	03/12/02	03/12/02	EPA 8260B	
tert-Butyl alcohol	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	0.028	0.025	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.025	"	"	"	"	"	"	Q-29
Ethyl tert-butyl ether	ND	0.025	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.025	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.025	"	"	"	"	"	"	
Ethylene dibromide	ND	0.025	"	"	"	"	"	"	
Benzene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Total Xylenes	ND	0.050	"	"	"	"	"	"	
Gasoline Range Organics (C6-C10)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		97.3 %	60-140		"	"	"	"	

Secor - Mountain View
 2301 Leghorn St.
 Mountain View CA, 94043

 Project: Tosco #7124, Oakland, Ca
 Project Number: Tosco 7124, Oakland, Ca
 Project Manager: Daniel Vargas

Reported:
 03/18/02 10:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 2C12033 - EPA 5030B MeOH									
Blank (2C12033-BLK1)					Prepared & Analyzed: 03/12/02				
Ethanol	ND	5.0	mg/kg						
tert-Butyl alcohol	ND	0.50	"						
Methyl tert-butyl ether	ND	0.025	"						
Di-isopropyl ether	ND	0.025	"						Q-29
Ethyl tert-butyl ether	ND	0.025	"						
tert-Amyl methyl ether	ND	0.025	"						
1,2-Dichloroethane	ND	0.025	"						
Ethylene dibromide	ND	0.025	"						
Benzene	ND	0.050	"						
Ethylbenzene	ND	0.050	"						
Toluene	ND	0.050	"						
Total Xylenes	ND	0.050	"						
Gasoline Range Organics (C6-C10)	ND	5.0	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.00957		"	0.0100		95.7	60-140		
LCS (2C12033-BS1)					Prepared & Analyzed: 03/12/02				
Methyl tert-butyl ether	0.890	0.025	mg/kg	1.00		89.0	70-130		
Benzene	1.31	0.050	"	1.25		105	70-130		
Toluene	1.32	0.050	"	1.25		106	70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.00935		"	0.0100		93.5	60-140		
LCS (2C12033-BS2)					Prepared & Analyzed: 03/12/02				
Gasoline Range Organics (C6-C10)	16.2	5.0	mg/kg	12.5		130	60-140		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.00948		"	0.0100		94.8	60-140		
LCS Dup (2C12033-BSD1)					Prepared & Analyzed: 03/12/02				
Methyl tert-butyl ether	1.03	0.025	mg/kg	1.00		103	70-130	14.6	25
Benzene	1.22	0.050	"	1.25		97.6	70-130	7.11	25
Toluene	1.22	0.050	"	1.25		97.6	70-130	7.87	25
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.00962		"	0.0100		96.2	60-140		



Secor - Mountain View
2301 Leghorn St.
Mountain View CA, 94043

Project: Tosco #7124, Oakland, Ca
Project Number: Tosco 7124, Oakland, Ca
Project Manager: Daniel Vargas

Reported:
03/18/02 10:17

**Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 2C12033 - EPA 5030B MeOH									
LCS Dup (2C12033-BSD2)				Prepared & Analyzed: 03/12/02					
Gasoline Range Organics (C6-C10)	15.8	5.0	mg/kg	12.5	126	60-140	2.50	25	
Surrogate: 1,2-Dichloroethane-d4	0.00945		"	0.0100	94.5	60-140			



Secor - Mountain View
2301 Leghorn St.
Mountain View CA, 94043

Project: Tosco #7124, Oakland, Ca
Project Number: Tosco 7124, Oakland, Ca
Project Manager: Daniel Vargas

Reported:
03/18/02 10:17

Notes and Definitions

- Q-29 The percent recovery in the quality control analyte exceeded the upper control limit. Because there was no detectable amount of this compound in the associated sample, the result has been reported.
- 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

TOSCO

Nº 007841

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

Consultant Company: SECOR Intl Inc		Tosco Engineer: David Dewitt	
Address: 2301 Leghorn St		Site #: 712A	
City: Mt View State: Ca Zip Code: 94043		Site Address: 10151 E. 14th	
Telephone: (505) 691-0131 Fax #: _____		City, State: Oakland, Ca MLC0074	
Report To: Daniel Vargas Sampler: Lindsay F.		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

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

- Analyses Requested
- Drinking Water
 - Waste Water
 - Other

Project Coding:

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH/TPH/TEX	TPH Diesel (8015)	TOG (418.1)	Oxygenates (6) 8260	Oxygenates (6) ED8 1,2 DCA (8260)	8 Fuel Oxy	Comments
1. MW-2-6.5'	3/1/02 7:30	soil	1	scarc	01	X			X			ALL
2. MW-2-11'	7:42	↓	↓	↓	02	hold						
3. MW-2-16.5'	7:48	↓	↓	↓	03	X			X			BY
4. MW-2-21.5'	7:54	↓	↓	↓	04	hold						
5. MW-2-26.5'	8:01	↓	↓	↓	05	X			X			8260
6. MW-4-6.5'	3/1/02 9:57	↓	↓	↓	06	X			X			
7. MW-4-11.5'	10:02	↓	↓	↓	07	X			X			
8. MW-4-16.5'	10:08	↓	↓	↓	08	hold						
9. MW-4-21'	10:15	↓	↓	↓	09	hold						
10. MW-4-26.5'	10:20	↓	↓	↓	10	X			X			

Relinquished By: <u>[Signature]</u>	Date: <u>3/1/02</u> Time: <u>15:15</u>	Received By: <u>[Signature]</u>	Date: <u>3-1-02</u> Time: <u>15:20</u>
Relinquished By: <u>WHA</u>	Date: <u>3-1-02</u> Time: <u>18:20</u>	Received By: <u>[Signature]</u>	Date: <u>3-1-02</u> Time: <u>18:20</u>
Relinquished By: _____	Date: _____ Time: _____	Received By: _____	Date: _____ Time: _____

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment: Sequoia Page 1 of 1

To be completed upon receipt of report:

- 1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
- 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Prepared by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Sequoia

White - Sequoia



**Sequoia
Analytical**

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

23 April, 2002

Deanna Harding
Gettler-Ryan - Dublin
6747 Sierra Ct, Suite J
Dublin, CA 94568

RECEIVED

APR 3 2002

GETTLER-RYAN INC
GENERAL CONTRACTOR

RE: Tosco/Phillips
Sequoia Work Order: P204186

Enclosed are the results of analyses for samples received by the laboratory on 04/09/02 10:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari

Angelee Cari
Client Services Representative

CA ELAP Certificate #2374



Gettler-Ryan - Dublin
6747 Sierra Ct, Suite J
Dublin CA, 94568

Project: Tosco/Phillips
Project Number: 7124/Oakland, Ca
Project Manager: Deanna Harding

Reported:
04/23/02 14:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	P204186-01	Water	04/08/02 00:00	04/09/02 10:30
MW-1	P204186-02	Water	04/08/02 15:40	04/09/02 10:30
MW-2	P204186-03	Water	04/08/02 18:50	04/09/02 10:30
MW-3	P204186-04	Water	04/08/02 20:10	04/09/02 10:30
MW-4	P204186-05	Water	04/08/02 17:20	04/09/02 10:30

Sequoia Analytical - Petaluma

Angelee Cari

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.

Angelee Cari, Client Services Representative

Gettler-Ryan - Dublin
 6747 Sierra Ct, Suite J
 Dublin CA, 94568

 Project: Tosco/Phillips
 Project Number: 7124/Oakland, Ca
 Project Manager: Deanna Harding

Reported:
 04/23/02 14:41

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (P204186-01) Water Sampled: 04/08/02 00:00 Received: 04/09/02 10:30									
Gasoline (C6-C12)	ND	50	ug/l	1	2040268	04/11/02	04/11/02	EPA 8015M/8020M	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		104 %	65-135		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	65-135		"	"	"	"	
MW-1 (P204186-02) Water Sampled: 04/08/02 15:40 Received: 04/09/02 10:30									
Gasoline (C6-C12)	ND	50	ug/l	1	2040268	04/11/02	04/11/02	EPA 8015M/8020M	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		101 %	65-135		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	65-135		"	"	"	"	
MW-2 (P204186-03) Water Sampled: 04/08/02 18:50 Received: 04/09/02 10:30									
Gasoline (C6-C12)	4400	250	ug/l	5	2040268	04/11/02	04/11/02	EPA 8015M/8020M	
Benzene	ND	2.5	"	"	"	"	"	"	
Toluene	ND	2.5	"	"	"	"	"	"	
Ethylbenzene	6.4	2.5	"	"	"	"	"	"	QR-04
Xylenes (total)	ND	2.5	"	"	"	"	"	"	
Methyl tert-butyl ether	380	12	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		100 %	65-135		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	65-135		"	"	"	"	

Gettler-Ryan - Dublin
 6747 Sierra Ct, Suite J
 Dublin CA, 94568

 Project: Tosco/Phillips
 Project Number: 7124/Oakland, Ca
 Project Manager: Deanna Harding

 Reported:
 04/23/02 14:41

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (P204186-04) Water Sampled: 04/08/02 20:10 Received: 04/09/02 10:30									
Gasoline (C6-C12)	8700	2500	ug/l	50	2040268	04/11/02	04/11/02	EPA 8015M/8020M	
Benzene	65	25	"	"	"	"	"	"	
Toluene	ND	25	"	"	"	"	"	"	
Ethylbenzene	400	25	"	"	"	"	"	"	
Xylenes (total)	ND	25	"	"	"	"	"	"	
Methyl tert-butyl ether	6500	120	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		<i>101 %</i>		<i>65-135</i>	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>100 %</i>		<i>65-135</i>	"	"	"	"	
MW-4 (P204186-05) Water Sampled: 04/08/02 17:20 Received: 04/09/02 10:30									
Gasoline (C6-C12)	13000	500	ug/l	10	2040268	04/11/02	04/11/02	EPA 8015M/8020M	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	28	5.0	"	"	"	"	"	"	QR-04
Xylenes (total)	ND	5.0	"	"	"	"	"	"	
Methyl tert-butyl ether	790	25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		<i>89 %</i>		<i>65-135</i>	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>116 %</i>		<i>65-135</i>	"	"	"	"	



Gettler-Ryan - Dublin
6747 Sierra Ct, Suite J
Dublin CA, 94568

Project: Tosco/Phillips
Project Number: 7124/Oakland, Ca
Project Manager: Deanna Harding

Reported:
04/23/02 14:41

**Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (P204186-02) Water Sampled: 04/08/02 15:40 Received: 04/09/02 10:30									
Tert-amyl methyl ether	ND	2.0	ug/l	1	2040478	04/19/02	04/19/02	EPA 8260B	
Tert-butyl alcohol	ND	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethanol	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		119 %	84-122		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		118 %	74-135		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		110 %	84-119		"	"	"	"	
MW-2 (P204186-03) Water Sampled: 04/08/02 18:50 Received: 04/09/02 10:30									
Tert-amyl methyl ether	ND	40	ug/l	20	2040478	04/19/02	04/19/02	EPA 8260B	
Tert-butyl alcohol	ND	2000	"	"	"	"	"	"	
Di-isopropyl ether	ND	40	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	40	"	"	"	"	"	"	
1,2-Dichloroethane	ND	40	"	"	"	"	"	"	
Ethanol	ND	10000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	40	"	"	"	"	"	"	
Methyl tert-butyl ether	490	40	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		117 %	84-122		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		116 %	74-135		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		112 %	84-119		"	"	"	"	



Gettler-Ryan - Dublin
6747 Sierra Ct, Suite J
Dublin CA, 94568

Project: Tosco/Phillips
Project Number: 7124/Oakland, Ca
Project Manager: Deanna Harding

Reported:
04/23/02 14:41

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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MW-3 (P204186-04) Water Sampled: 04/08/02 20:10 Received: 04/09/02 10:30

Tert-amyl methyl ether	ND	1000	ug/l	500	2040478	04/19/02	04/19/02	EPA 8260B	
Tert-butyl alcohol	ND	50000	"	"	"	"	"	"	
Di-isopropyl ether	ND	1000	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1000	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1000	"	"	"	"	"	"	
Ethanol	ND	250000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	1000	"	"	"	"	"	"	
Methyl tert-butyl ether	8300	1000	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

115 % 84-122

Surrogate: 1,2-Dichloroethane-d4

116 % 74-135

Surrogate: Toluene-d8

110 % 84-119

MW-4 (P204186-05) Water Sampled: 04/08/02 17:20 Received: 04/09/02 10:30

Tert-amyl methyl ether	ND	100	ug/l	50	2040478	04/19/02	04/19/02	EPA 8260B	
Tert-butyl alcohol	ND	5000	"	"	"	"	"	"	
Di-isopropyl ether	ND	100	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	100	"	"	"	"	"	"	
1,2-Dichloroethane	ND	100	"	"	"	"	"	"	
Ethanol	ND	25000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	980	100	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

114 % 84-122

Surrogate: 1,2-Dichloroethane-d4

118 % 74-135

Surrogate: Toluene-d8

115 % 84-119



Gettler-Ryan - Dublin
6747 Sierra Ct, Suite J
Dublin CA, 94568

Project: Tosco/Phillips
Project Number: 7124/Oakland, Ca
Project Manager: Deanna Harding

Reported:
04/23/02 14:41

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2040268 - EPA 5030, waters

Blank (2040268-BLK1)

Prepared & Analyzed: 04/11/02

Gasoline (C6-C12)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							

Surrogate: <i>a,a,a</i> -Trifluorotoluene	325		"	300		108	65-135			
Surrogate: 4-Bromofluorobenzene	311		"	300		104	65-135			

Blank (2040268-BLK2)

Prepared & Analyzed: 04/12/02

Gasoline (C6-C12)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							

Surrogate: <i>a,a,a</i> -Trifluorotoluene	326		"	300		109	65-135			
Surrogate: 4-Bromofluorobenzene	306		"	300		102	65-135			

LCS (2040268-BS1)

Prepared & Analyzed: 04/11/02

Gasoline (C6-C12)	2690	50	ug/l	2750		98	65-135			
Benzene	40.8	0.50	"	34.0		120	65-135			
Toluene	198	0.50	"	206		96	65-135			
Ethylbenzene	47.2	0.50	"	48.5		97	65-135			
Xylenes (total)	231	0.50	"	244		95	65-135			
Methyl tert-butyl ether	65.4	2.5	"	54.5		120	65-135			

Surrogate: <i>a,a,a</i> -Trifluorotoluene	354		"	300		118	65-135			
Surrogate: 4-Bromofluorobenzene	319		"	300		106	65-135			



Gettler-Ryan - Dublin
6747 Sierra Ct, Suite J
Dublin CA, 94568

Project: Tosco/Phillips
Project Number: 7124/Oakland, Ca
Project Manager: Deanna Harding

Reported:
04/23/02 14:41

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2040268 - EPA 5030, waters

LCS (2040268-BS2)

Prepared & Analyzed: 04/12/02

Gasoline (C6-C12)	2620	50	ug/l	2750		95	65-135			
Benzene	38.1	0.50	"	34.0		112	65-135			
Toluene	180	0.50	"	206		87	65-135			
Ethylbenzene	44.6	0.50	"	48.5		92	65-135			
Xylenes (total)	209	0.50	"	244		86	65-135			
Methyl tert-butyl ether	65.8	2.5	"	54.5		121	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	348		"	300		116	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	333		"	300		111	65-135			

Matrix Spike (2040268-MS1)

Source: P204186-02

Prepared & Analyzed: 04/11/02

Gasoline (C6-C12)	2750	50	ug/l	2750	ND	99	65-135			
Benzene	40.1	0.50	"	34.0	ND	118	65-135			
Toluene	197	0.50	"	206	ND	96	65-135			
Ethylbenzene	47.4	0.50	"	48.5	ND	98	65-135			
Xylenes (total)	229	0.50	"	244	ND	94	65-135			
Methyl tert-butyl ether	65.1	2.5	"	54.5	ND	119	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	344		"	300		115	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	321		"	300		107	65-135			

Matrix Spike Dup (2040268-MSD1)

Source: P204186-02

Prepared & Analyzed: 04/11/02

Gasoline (C6-C12)	2770	50	ug/l	2750	ND	99	65-135	0.7	20	
Benzene	39.3	0.50	"	34.0	ND	116	65-135	2	20	
Toluene	198	0.50	"	206	ND	96	65-135	0.5	20	
Ethylbenzene	46.7	0.50	"	48.5	ND	96	65-135	1	20	
Xylenes (total)	224	0.50	"	244	ND	92	65-135	2	20	
Methyl tert-butyl ether	64.0	2.5	"	54.5	ND	117	65-135	2	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	343		"	300		114	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	328		"	300		109	65-135			



Gettler-Ryan - Dublin
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Project: Tosco/Phillips
 Project Number: 7124/Oakland, Ca
 Project Manager: Deanna Harding

Reported:
 04/23/02 14:41

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2040478 - EPA 5030 waters

Blank (2040478-BLK1)

Prepared & Analyzed: 04/19/02

Tert-amyl methyl ether	ND	2.0	ug/l							
Tert-butyl alcohol	ND	100	"							
Di-isopropyl ether	ND	2.0	"							
1,2-Dibromoethane (EDB)	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Ethanol	ND	500	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	2.0	"							
<i>Surrogate: Dibromofluoromethane</i>	4.77		"	4.20		114	84-122			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.66		"	4.20		111	74-135			
<i>Surrogate: Toluene-d8</i>	4.60		"	4.20		110	84-119			

LCS (2040478-BS1)

Prepared & Analyzed: 04/19/02

Methyl tert-butyl ether	5.31	2.0	ug/l	5.00		106	79-118			
<i>Surrogate: Dibromofluoromethane</i>	5.08		"	4.20		121	84-122			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.76		"	4.20		113	74-135			
<i>Surrogate: Toluene-d8</i>	4.75		"	4.20		113	84-119			

Matrix Spike (2040478-MS1)

Source: P204186-03

Prepared & Analyzed: 04/19/02

Methyl tert-butyl ether	587	40	ug/l	100	490	97	79-118			
<i>Surrogate: Dibromofluoromethane</i>	5.06		"	4.20		120	84-122			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.90		"	4.20		117	74-135			
<i>Surrogate: Toluene-d8</i>	4.78		"	4.20		114	84-119			

Matrix Spike Dup (2040478-MSD1)

Source: P204186-03

Prepared & Analyzed: 04/19/02

Methyl tert-butyl ether	572	40	ug/l	100	490	82	79-118	3	20	
<i>Surrogate: Dibromofluoromethane</i>	5.01		"	4.20		119	84-122			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.88		"	4.20		116	74-135			
<i>Surrogate: Toluene-d8</i>	4.84		"	4.20		115	84-119			



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Reported:
04/23/02 14:41

Notes and Definitions

- QR-04 Primary and confirmation results varied by greater than 40% RPD. The results may still be useful for their intended purpose.
- 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

