

RC450



ENVIRONMENTAL RESOLUTIONS, INC.

TRANSMITTAL

TO: Ms. Eva Chu
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

DATE: July 12, 2001
PROJECT NUMBER: 224803T6
SUBJECT: Former Tosco 76 Service
Station 0843, 1629 Webster Street
Alameda, California

FROM: Paul Blank
TITLE: Assistant Project Manager

WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	July 11, 2001	Supplemental Evaluation of Soil and Groundwater

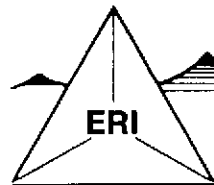
THESE ARE TRANSMITTED as checked below:

- For review and comment Approved as submitted Resubmit __ copies for approval
- As requested Approved as noted Submit __ copies for distribution
- For approval Return for corrections Return __ corrected prints
- For your files For distribution to regulatory agencies

REMARKS: At the request of Tosco Marketing Company (Tosco), Environmental Resolutions, Inc. (ERI) is submitting a copy of the above-referenced document. Please call with any questions or comments.

Paul D. Blank, Assistant Project Manager

cc: Mr. Dave DeWitt, Tosco Marketing Company
Ms. Jolanta Uchman, California Regional Water Quality Control Board - San Francisco Bay Region
ERI Project File 224803T6



ENVIRONMENTAL RESOLUTIONS, INC.

July 11, 2001
ERI 224803.R03

Mr. Dave DeWitt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Subject: Supplemental Evaluation of Soil and Groundwater, Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California.

Mr. DeWitt:

At the request of Tosco Marketing Company (Tosco), Environmental Resolutions, Inc. (ERI) performed a supplemental environmental investigation at the subject site. The purpose of the work was to evaluate whether underground utility trenches in the vicinity of the site may provide preferential pathways for groundwater flow and off-site migration of dissolved petroleum hydrocarbons. ERI performed the work in general accordance with ERI's *Underground Utility Survey and Work Plan for Supplemental Evaluation of Soil and Groundwater* (Work Plan) dated April 2, 2001. The Alameda County Health Care Services Agency (the County) approved the Work Plan in a letter dated April 10, 2001. A copy of the County's letter is provided in Attachment A.

Specifically, the work included:

- Obtaining a drilling permit from the Alameda County Public Works Agency (Public Works) to advance five off-site exploratory soil borings;
- Obtaining a right-of-way permit from the City of Alameda Public Works Department (the City) to advance soil borings in the City right of way;
- Obtaining an encroachment permit from the State of California Department of Transportation (CalTrans) to advance soil borings in the CalTrans right-of-way;
- Coordinating the work to coincide with quarterly groundwater monitoring and sampling of existing groundwater monitoring wells;
- Advancing off-site soil borings GP1 through GP5;
- Collecting soil samples from the borings for laboratory analysis and to evaluate soil stratigraphy;
- Collecting groundwater samples from the borings for laboratory analysis;
- Abandoning the soil borings;
- Submitting the samples for analysis of petroleum hydrocarbons and related constituents;
- Interpreting field and laboratory data to evaluate soil and groundwater conditions; and,
- Preparing this report documenting the procedures and results of the evaluation.

BACKGROUND

The site is located on the southwestern corner of Webster Street and Pacific Avenue in Alameda, California, as shown on the Site Vicinity Map (Plate 1). The locations of former underground storage

tanks (USTs), former dispenser islands, existing groundwater monitoring wells, and other selected site features are shown on the Generalized Site Plan (Plate 2). Properties in the vicinity of the site are occupied by residential and commercial developments.

Previous environmental work performed at the site has included:

- Removal of two 10,000-gallon gasoline USTs, one 550-gallon used-oil UST, product lines, and dispensers; and installation of a conductor casing within the former UST cavity backfill (ERI, September 15, 1998);
- Installation of four on-site groundwater monitoring wells (MW1 through MW4) (ERI, April 28, 1999);
- Installation of two off-site groundwater monitoring wells (MW5 and MW6) (ERI, March 7, 2000); and,
- Quarterly groundwater monitoring and sampling.

Laboratory analysis results of soil samples collected during the environmental work indicate residual hydrocarbons are delineated beneath the site. Analyses of groundwater samples collected during quarterly groundwater monitoring and sampling continue to detect dissolved hydrocarbons beneath and in the vicinity of the site. The cumulative results of groundwater monitoring and sampling are provided in Attachment F.

FIELD WORK

Scope of Work

The purpose of the work was to evaluate whether underground utility trenches in the vicinity of the site may provide preferential pathways for groundwater flow and off-site migration of dissolved petroleum hydrocarbons. ERI obtained a drilling permit from Public Works, a right-of-way permit from the City, and an encroachment permit from CalTrans prior to beginning field work. Copies of the permits are provided in Attachment B. ERI performed the field work in general accordance with the Work Plan, a site-specific Health and Safety Plan which was kept on site during field operations, and ERI's field protocol (Attachment C). ERI's Work Plan proposed the advancement of seven exploratory soil borings (GP1 through GP7). However, CalTrans would not issue an encroachment permit to advance borings GP6 and GP7 in the traffic lanes of Webster Street. Therefore, ERI proceeded with the work proposed in the Work Plan excluding the advancement of GP6 and GP7. ERI notified Tosco and the County of the changes to the scope of work prior to proceeding with the work.

Soil Borings

On May 23, 2001, ERI observed Gregg Drilling & Testing, Inc., (Gregg) of Martinez, California, advance five 2-inch diameter direct-push soil borings (GP1 through GP5). The boring locations are shown on Plate 2. Soil borings GP1 through GP5 were advanced to approximately 12 feet below ground surface (bgs). The soil borings were continuously cored, and select sections of the cores in the 4 to 5-foot depth range and 10-foot depth range were packaged for submittal to the laboratory. Groundwater samples were collected from borings GP1 through GP5 at depths ranging from 6 to 10 feet bgs using a Hydropunch® (or similar) tool. The work was coordinated to occur concurrently with

quarterly groundwater monitoring and sampling of existing groundwater monitoring wells by Gettler-Ryan, Inc. (GRI), Tosco's groundwater monitoring and sampling contractor.

ERI's geologist identified the soil samples collected from the borings using visual and manual methods, and classified the samples using the Unified Soil Classification System (Attachment D). Descriptions of the materials encountered are presented in the Boring Logs (Attachment D).

Analytical Methods

Soil samples collected from borings GP1 through GP5 were submitted under Chain-of-Custody protocol to Sequoia Analytical Laboratories, Inc. (Sequoia) in Walnut Creek, California. Select soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) using the methods listed in Table 1. The laboratory analysis reports and Chain-of-Custody records are provided in Attachment E.

Groundwater samples collected from borings GP1 through GP5 were submitted under Chain-of-Custody protocol to Sequoia. The groundwater samples were analyzed for TPHg, BTEX, and MTBE using the laboratory methods listed in Table 2. The laboratory analysis reports and Chain-of-Custody records are provided in Attachment E.

RESULTS OF INVESTIGATION

Site Geology

Sediments encountered in borings GP1 through GP5 consisted primarily of medium-grained sand with traces of silt. Groundwater was encountered at approximately 4 to 5 feet bgs in the borings.

Soil Conditions

Results of laboratory analyses of soil samples collected from borings GP1 through GP5 are summarized in Table 2.

Groundwater Conditions

Results of laboratory analyses of groundwater samples collected from borings GP1 through GP5 are summarized in Table 2. Groundwater monitoring and sampling data from wells MW1 through MW6 are provided in Attachment F. Isoconcentration maps showing the distribution of dissolved TPHg and MTBE in groundwater are provided on Plates 3 and 4, respectively. The isoconcentration maps were generated from laboratory analysis results of groundwater samples collected from borings GP1 through GP5 and groundwater samples collected from wells MW1 through MW6 on May 23, 2001.

WASTE DISPOSAL

Less than 1 cubic foot of asphalt, road base, and soil were generated during drilling activities at the site. It is ERI's understanding that the property owner disposed of the asphalt and road base as

construction debris. The full amount of the soil component of the stockpile was sent to the laboratory in sample sleeves.

CONCLUSIONS

Based on the data collected during the underground utility survey (ERI, April 2, 2001), the trench backfill for the buried sanitary sewer, storm sewer and water lines may constitute potential pathways for groundwater flow. However, based on the data collected during this investigation, it does not appear that sufficient evidence exists to suggest that underground utility lines are providing preferential pathways for the off-site migration of dissolved petroleum hydrocarbons.

LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental practice in California at the time this investigation was performed. This investigation was conducted solely for the purpose of evaluating environmental conditions of the soil and groundwater with respect to petroleum hydrocarbons and gasoline-related constituents.

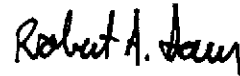
ERI recommends that signed copies of this report be forwarded to:

Ms. Eva Chu
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Ms. Jolanta Uchman
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Please call Mr. Paul D. Blank, ERI's project manager for this site, at (415) 382-5988 with questions regarding this report.

Sincerely,
Environmental Resolutions, Inc.



Robert A. Saur
Staff Geologist



John B. Bobbitt
R.G. 4313



Attachments: References

Table 1: Results of Laboratory Analyses of Soil Samples
Table 2: Results of Laboratory Analyses of Groundwater Samples

Plate 1: Site Vicinity Map
Plate 2: Generalized Site Plan
Plate 3: TPHg Concentrations in Groundwater - May 23, 2001
Plate 4: MTBE Concentrations in Groundwater - May 23, 2001

Attachment A: County Letter Dated April 10, 2001
Attachment B: Permits
Attachment C: Field Protocol
Attachment D: Unified Soil Classification System, Symbol Key, and Boring Logs
Attachment E: Laboratory Analysis Reports and Chain-of-Custody Records
Attachment F: Cumulative Groundwater Monitoring and Sampling Data
(GRI, July 2, 2001)

REFERENCES:

Environmental Resolutions, Inc. September 15, 1998. Underground Storage Tank, Associated Piping, and Dispenser Removal at Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224832.R01

Environmental Resolutions, Inc. April 28, 1999. Evaluation of Soil and Groundwater at Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803.R01

Environmental Resolutions, Inc. March 7, 2000. Supplemental Evaluation of Groundwater, Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803.R02

Environmental Resolutions, Inc. April 2, 2001. Underground Utility Survey and Work Plan for Supplemental Evaluation of Soil and Groundwater, Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803.W03

Gettler-Ryan, Inc. (GRI). July 5, 2001. Second Quarter Event of May 23, 2001 - Groundwater Monitoring & Sampling Report, Former Tosco 76 Service Station #0843, 1629 Webster Street, Alameda, California. G-R Job #180203

United States Geological Survey (USGS). 1980. 7.5-Minute Topographic Quadrangle Map, Oakland West, California.

**TABLE 1
RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES**

Former Tosco 76 Service Station 0843
1629 Webster Street
Alameda, California
(Page 1 of 1)

Sample Designation	Depth (feet bgs)	Date Sampled	TPHg	B	T	E	X	MTBE	Lead
			<ppm..... >						
Soil Boring Samples									
S-4-GP1	4	05/23/01	ND	ND	ND	ND	ND	ND/ND*	NA
S-5-GP2	5	05/23/01	ND	ND	ND	ND	ND	ND/ND*	NA
S-10-GP2	10	05/23/01	ND	ND	ND	ND	ND	ND/ND*	NA
S-5-GP3	5	05/23/01	ND	ND	ND	ND	0.011	ND/ND*	NA
S-5-GP4	5	05/23/01	ND	ND	ND	ND	ND	ND/ND*	NA
S-4-GP5	4	05/23/01	ND	ND	ND	ND	ND	ND/ND*	NA
S-10-GP5	10	05/23/01	ND	ND	ND	ND	ND	0.18/ND*	NA
Soil Stockpile Sample									
S-SP1-(1-4)	NA	05/23/01	1.2	0.0065	ND	0.013	0.079	ND	1.1

Notes:

- S-4-GP1 = Soil sample-depth-boring number.
- S-SP1-(1-4) = Composited stockpiled soil sample-stockpile number-sample sleeve numbers.
- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015M.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
- MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8020.
- Lead = Total lead analyzed using EPA Method 6010A.
- bgs = Below ground surface.
- ppm = Parts per million.
- ND = Not detected at or above the laboratory reporting limit.
- NA = Not applicable/Not Analyzed.
- * = MTBE confirmed using EPA Method 8260A.

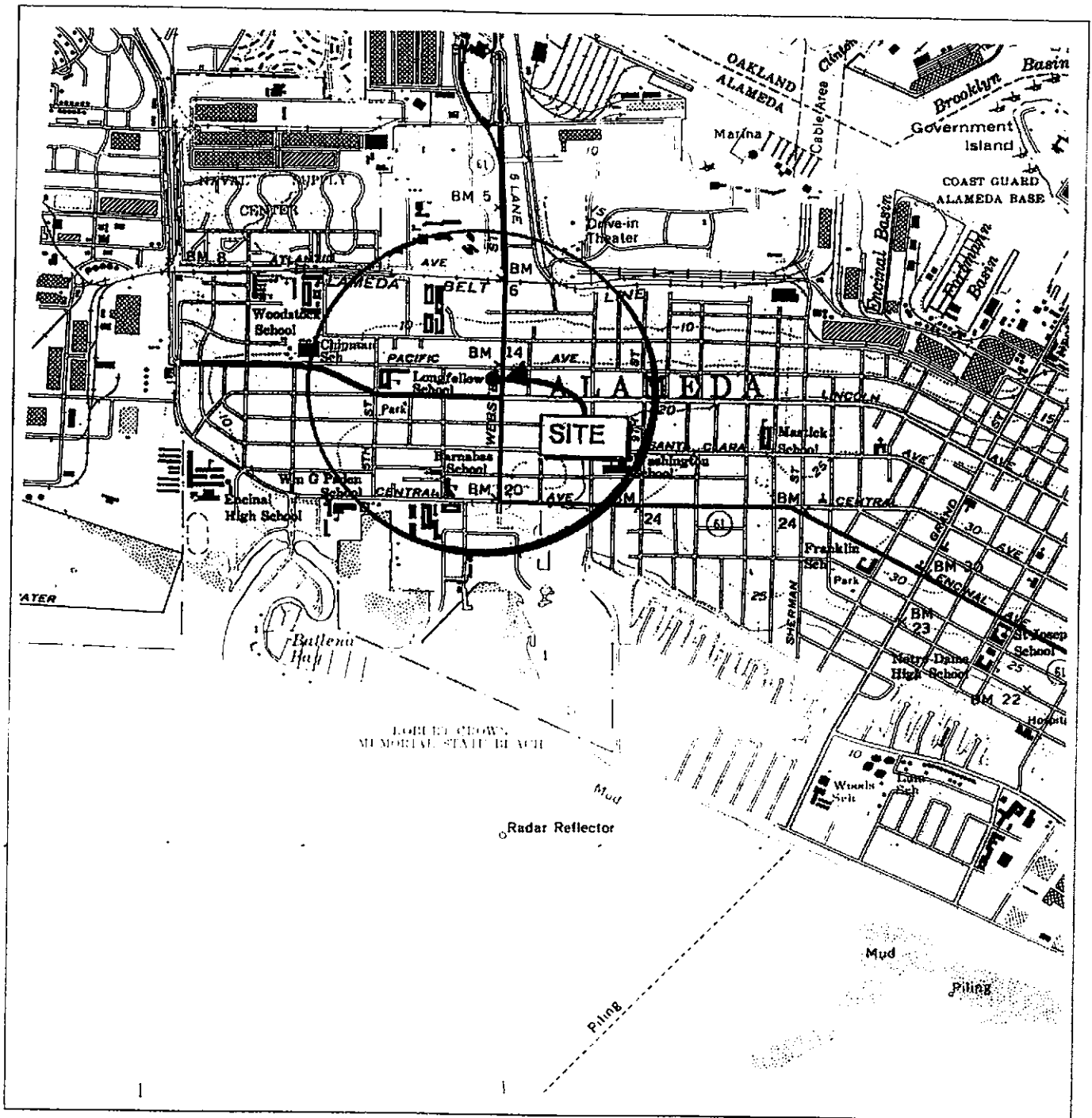
TABLE 2
RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES

Former Tosco 76 Service Station 0843
 1629 Webster Street
 Alameda, California
 (Page 1 of 1)

Sample Designation	Depth (feet bgs)	Date Sampled	TPHg <.....ppb.....>	B	T	E	X	MTBE
W-10-GP1	10	05/23/01	ND	ND	ND	ND	ND	3.7/3.7*
W-10-GP2	10	05/23/01	ND	1.1	0.67	ND	ND	ND/ND*
W-9-GP3	9	05/23/01	ND	1.2	ND	0.55	3.9	ND/2.1*
W-6-GP4	6	05/23/01	ND	0.70	ND	ND	0.011	96/72*
W-10-GP5	10	05/23/01	2,100	39	16	ND	17	2,200/2,000*

Notes:

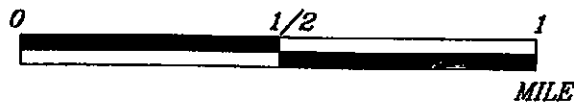
- W-10-GP1 = Groundwater sample-depth-boring number.
- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015M.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
- MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8020.
- bgs = Below ground surface.
- ppb = Parts per billion.
- ND = Not detected at or above the laboratory reporting limit.
- * = MTBE confirmed using EPA Method 8260A.



FN 22480001



APPROXIMATE SCALE



Source: U.S.G.S. 7.5 minute topographic quadrangle map Oakland West, California (Photorevised 1980)



PROJECT ERI 2248

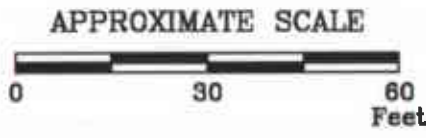
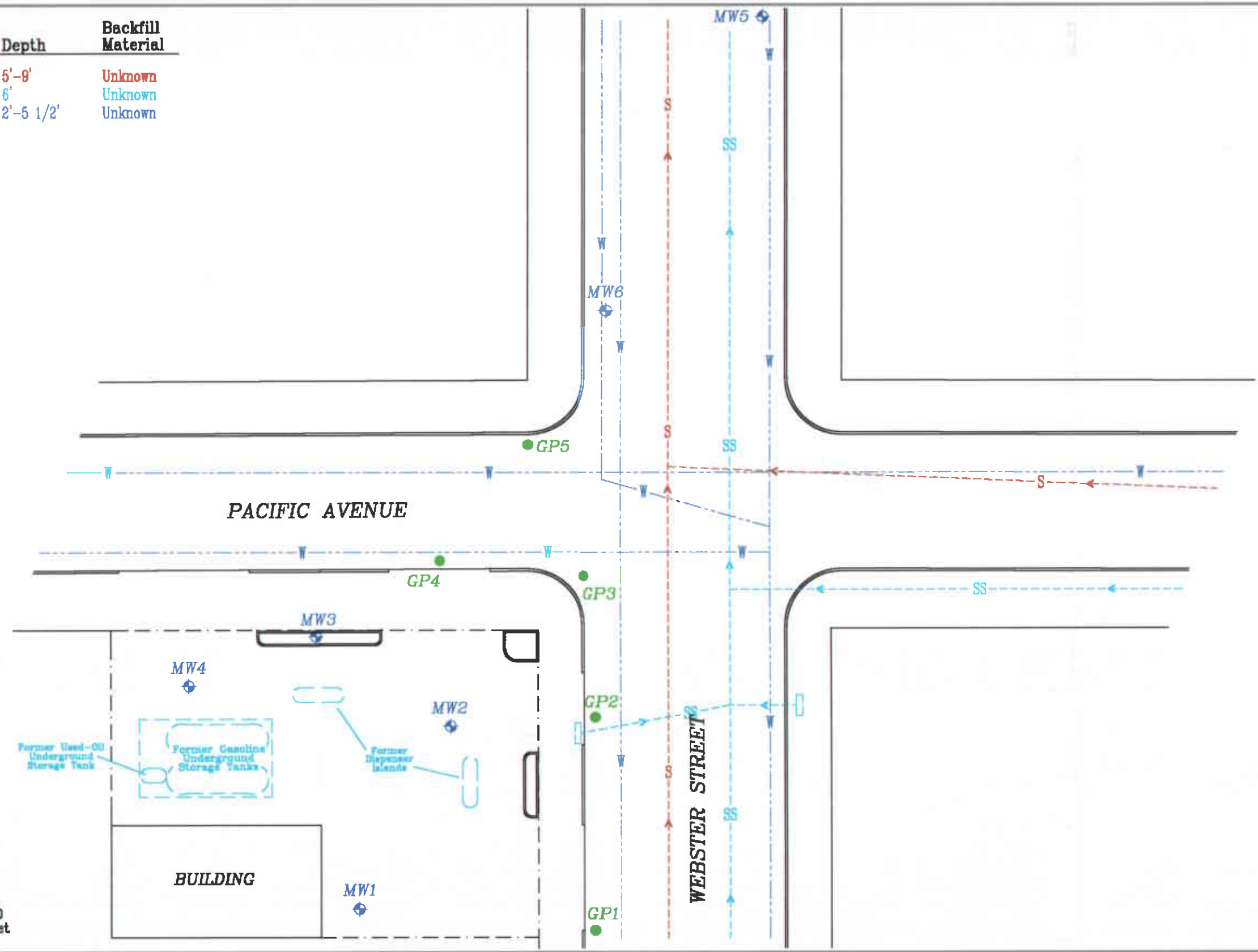
SITE VICINITY MAP

FORMER TOSCO 76 SERVICE STATION 0843
1629 Webster Street
Alameda, California

PLATE

1

Symbol	Utility	Depth	Backfill Material
---S---	Sanitary Sewer	5'-9'	Unknown
---SS---	Storm Sewer	6'	Unknown
---W---	Water	2'-5 1/2'	Unknown



Source: Modified from a map provided by Morrow Surveying

FN: 2248003A



GENERALIZED SITE PLAN

Former Tosco 76 Service Station 0843
1629 Webster Street
Alameda, California

EXPLANATION

- MW6 Groundwater Monitoring Well
- GP5 Direct-Push Soil Boring

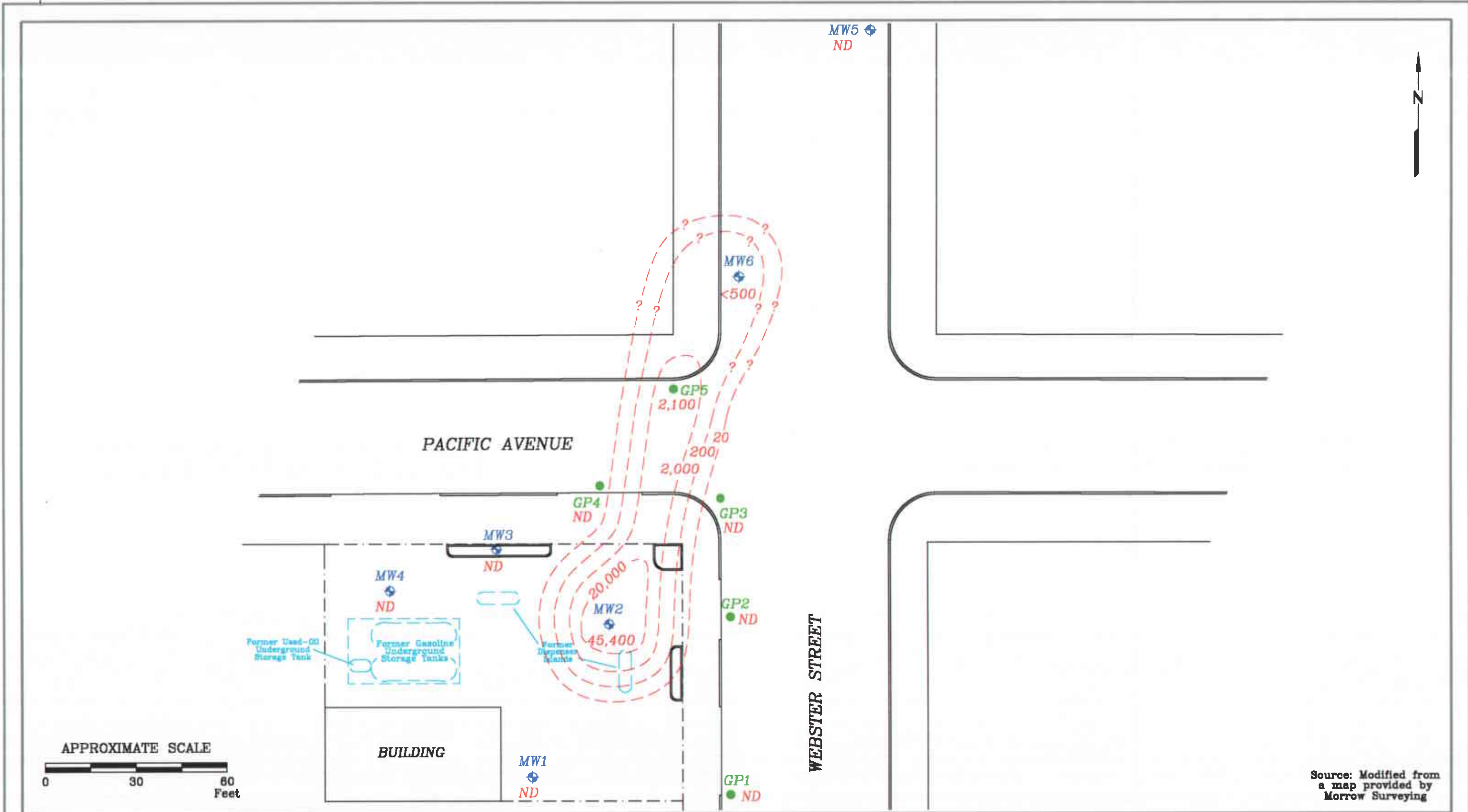
PROJECT NO.

2248

PLATE

2

July 8, 2001



Source: Modified from a map provided by Morrow Surveying

FN: 2248003A



**TPHg CONCENTRATIONS IN GROUNDWATER
May 23, 2001**

Former Tosco 76 Service Station 0843
1629 Webster Street
Alameda, California

EXPLANATION

- MW6 Groundwater Monitoring Well
- GP5 Direct-Push Soil Boring
- Isoconcentration Contour Line

Concentrations in Parts Per Billion (ppb)
ND = <50 ppb

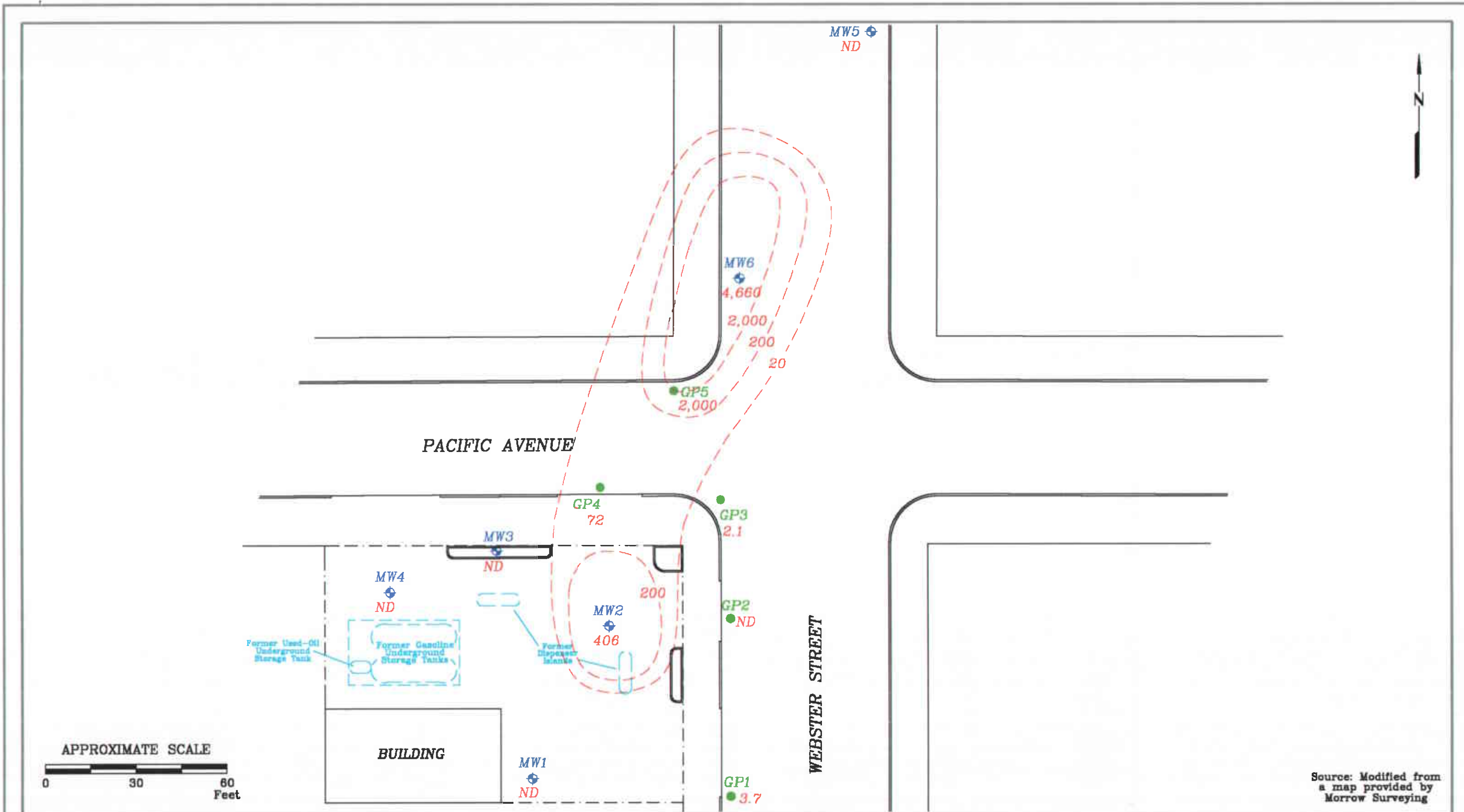
PROJECT NO.

2248

PLATE

3

July 8, 2001



FN: 2248003A



MTBE CONCENTRATIONS IN GROUNDWATER
May 23, 2001

Former Tosco 76 Service Station 0843
1629 Webster Street
Alameda, California

EXPLANATION

- MW6 Groundwater Monitoring Well
- GP5 Direct-Push Soil Boring
- - - Isoconcentration Contour Line

Concentrations in Parts Per Billion (ppb)
ND = <2 ppb

PROJECT NO.

2248

PLATE

4

July 8, 2001

ATTACHMENT A

COUNTY LETTER DATED APRIL 10, 2001

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



224803T6
APR 16 2001

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

RO-0000450

April 10, 2001

Mr. David DeWitt
Tosco Marketing
2000 Crow Canyon Pl, Suite 400
San Ramon, CA 94583

**RE: Workplan Approval for Former Tosco 76 Service Station 0843 at
1629 Webster Street, Alameda, CA**

Dear Mr. DeWitt:

I have completed review of Environmental Resolutions, Inc's (ERI) April 2001 *Underground Utility Survey and Work Plan for Supplemental Evaluation of Soil and Groundwater* report prepared for the above referenced site. Upon completion of an underground utility survey, ERI proposed to advance seven off-site borings utilizing direct-push technology to delineate the extent of the contaminant plume and to determine if the utility trenches act as preferential pathway for contaminant migration. ERI's workplan proposal is acceptable. If groundwater is analyzed for MTBE using Method 8260, please have the laboratory quantify for other oxygenates, too.

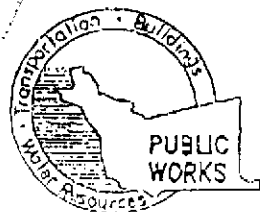
Since the borings are proposed on Webster Street, I anticipate that field work will not commence until encroachment permits are obtain, and that may take a long time. Please provide up to 72 hours advance notice of field work. If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

✓ c: Paul Blank, ERI, 73 Digital Drive, Suite 100, Novato, CA 94949-5791

ATTACHMENT B

PERMITS



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

399 ELMHURST ST. HAYWARD CA. 94544-1395

PHONE (510) 670-5554 MARLON MAGALLANES/FRANK CODD (510) 670-5783

FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT At the corner of Pacific Ave & Webster Street in the vicinity of 1629 Webster St. (see attached map) Alameda City.

PERMIT NUMBER W01-238
WELL NUMBER _____
APN _____

PERMIT CONDITIONS Circled Permit Requirements Apply

CLIENT Tesco Marketing Company
Address 2000 Crow Canyon Pl Ste 400 Phone 925-227-2384
City San Ramon, CA Zip 94583

A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

APPLICANT Environmental Resolutions, Inc.
Name Allen Rob Saur Fax 415-382-1856
Address 73 Digital Dr. Ste 100 Phone 415-582-3541
City Moraga, CA Zip 94549

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Corrosive Protection	<input type="checkbox"/>	General	<input checked="" type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input type="checkbox"/>

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other _____	<input type="checkbox"/>

D. GEOTECHNICAL

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	Direct Push	

E. CATHODIC

Fill hole anode zone with concrete placed by tremie

DRILLER'S NAME Gregg Drilling & Testing, INC

F. WELL DESTRUCTION

See attached requirements for destruction of shallow wells. Send a map of work site. A different permit application is required for wells deeper than 45 feet.

DRILLER'S LICENSE NO C-57 485165

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

WELL PROJECTS

Drill Hole Diameter _____ in.	Maximum _____
Casing Diameter _____ in.	Depth _____ ft.
Surface Seal Depth _____ ft.	Owner's Well Number _____

GEOTECHNICAL PROJECTS

Number of Borings <u>7 (6PI-6P7)</u>	Maximum _____
Hole Diameter _____ in.	Depth <u>± 10 ft.</u>

ESTIMATED STARTING DATE 5/23/01
ESTIMATED COMPLETION DATE 5/23/01

APPROVED [Signature] DATE 4-20-01

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Rob Saur ERI DATE 4/19/01

PLEASE PRINT NAME Rob Saur Rev. 6-3-00

950 West Mall Square, #110
Alameda Point
Alameda, CA 94501

CITY OF ALAMEDA

(510) 749-5840

Public Works Department

Fax (510) 749-5867

Printed: 05-23-2001

Right-of-Way Permit

Permit #

EX01-0036

Applicant

ENVIRONMENTAL RESOLUTIONS
KOKA SAM & MICHELLE J
73 DIGITAL DR STE #100
NOVATO, CA
94949
415-382-9105

Contractor Information

Owner Information

802 PACIFIC AVE
ALAMEDA CA
94501

Project Information

RTOFWAY - Right-of-Way Permit - **APPROVED**
Sub-Type:

Applied: 04/26/2001
Finaled:

Issued: 05/22/2001
Expires: 05/22/2002
Valuation: **\$167.00**

Job Address: 1629 WEBSTER ST
074 043000101

Parcel Number:

Suite / Unit:

Work Description: DRILLING OF 7 SOIL BORINGS TO COLLECT GROUND WATER SAMPLES

Total Fees: \$167.00
Total Payments: \$167.00
BALANCE DUE \$0.00

Payments Made: 05/23/2001 08:07 AM
Total Payment: **\$90.00**

RECEIPT

Receipt #: R01-002473

Payee: ENVIRONMENTAL RESOLUTIONS

Current Payment Made to the Following Items:

Account Code	Description	Amount
4225-37160 (6319)	Engin.-Plan Check Fees	75.00
99409-37900 (1464)	Records Mgmt./Microfiche	15.00

Payments Made for this Receipt:

Type	Method	Description	Amount
Payment	Credit C	CREDIT	90.00

Account Summary for Fees and Payments:

Item#	Description	Account Code	Tot Fee	Paid	Prev. Pmts	Cur. Pmts
250	Permit Filing Fees	4520-37450 (1050)	36.00	36.00	36.00	.00
620	Records Mgmt./Microfiche	99409-37900 (1464)	15.00	15.00	.00	15.00
831	Engin.-Plan Check Fees	4225-37160 (6319)	75.00	75.00	.00	75.00
833	Eng.-Right of Way Permit	4225-37190 (6321)	41.00	41.00	41.00	.00

**** See application for additional requirements ****

INSPECTIONS

510-749-5840

NOTE: All construction within the public right of way must have barricades with flashers for night time protection.

This is to certify that the above work has been completed to my satisfaction and approval.

Date

Inspector

ENCROACHMENT PERMIT

TR-0120

Permit No. 0401-6SV-1164	
Dist/Co/Rte/PM 04-Ala-260-0.35/0.38	
Date May 16, 2001	
Fee Paid \$160.00	Deposit \$160.00
Performance Bond Amount (1)	Payment Bond Amount (2)
Bond Company	
Bond Number (1)	Bond Number (2)

In compliance with (Check one):

- Your application of April 27, 2001
- Utility Notice No. _____ of _____
- Agreement No. _____ of _____
- R/W Contract No. _____ of _____

TO: ENVIRONMENTAL RESOLUTIONS, INC.
73 Digital Drive, Suite 100
Novato, CA 94949

Attn: Rob Sour
 Phone: (415) 382-9105 _____, PERMITTEE

and subject to the following, **PERMISSION IS HEREBY GRANTED** to:

Perform soil borings and take soil samples on State Highway 04-Ala-260, Post Mile 0.35/0.38, at 1629 Webster Street, in the City of Alameda.

Two days before work is started under this permit, notice shall be given to, and approval of construction details, operations, public safety, and traffic control shall be obtained from State Representative N. Freitag, 600 Lewelling Blvd., San Leandro, 94579, 510-614-5951, weekdays, between 8:00 AM and 4:30 PM.

Immediately following completion of the work permitted herein, the permittee shall fill out and mail the Notice of completion attached to this permit.

All personnel shall wear hard hats and orange vests, shirts, or jackets as appropriate during construction.

The following attachments are also included as part of this permit (Check applicable):

- Yes No General Provisions
- Yes No Utility Maintenance Provisions
- Yes No Special Provisions
- Yes No A Cal-OSHA permit required prior to beginning work:

In addition to fee, the permittee will be billed actual costs for:

- Yes No Review
- Yes No Inspection
- Yes ----- Field Work

(If any Caltrans effort expended)

Yes No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before December 31, 2001

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.

No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

APPROVED:

HARRY Y. YAHATA, District Director

BY:


S. S. NOZZARI, District Permit Engineer

ATTACHMENT C
FIELD PROTOCOL

FIELD PROTOCOL

Site Safety Plan

Field work is performed by ERI personnel in accordance with a site safety plan (SSP) developed for the site. The SSP describes the basic safety requirements for the subsurface investigation and the drilling of soil borings at the work site. The SSP is applicable to personnel and subcontractors of ERI. Personnel at the site are informed of the contents of the SSP before work begins. A copy of the SSP is kept at the work site and is available for reference by appropriate parties during the work. The ERI geologist acts as the Site Safety Officer.

Soil Borings and Soil Sampling

Prior to drilling of borings, ERI acquires the necessary permits from the appropriate agency(ies). ERI contacts Underground Service Alert (USA) before drilling to help locate public utility lines at the site. ERI observes the driller clear boring locations to a depth of approximately 4 feet before drilling to reduce the risk of damaging underground structures.

Soil borings are drilled with a B-57 (or similar) drill rig equipped with hollow-stem augers. Auger flights and sampling equipment are steam-cleaned before use to minimize the possibility of crosshole contamination. The rinsate is containerized and stored on site. ERI coordinates the appropriate disposal or recycling of the rinsate with Tosco.

Drilling is performed under the observation of a field geologist, and the earth materials in the borings are identified using visual and manual methods, and classified as drilling progresses using the Unified Soil Classification System. Soil borings are advanced until groundwater is encountered, until refusal, or until the maximum extent of the drill rig is reached.

During drilling, soil samples are collected at 5-foot intervals, obvious changes in lithology, and just above the groundwater surface. Samples are collected with a California-modified, split-spoon sampler equipped with laboratory-cleaned brass sleeves. Samples are collected by advancing the auger to a point just above the sampling depth and driving the sampler into the soil. The sampler is driven 18 inches with a standard 140-pound hammer repeatedly dropped 30 inches. The number of blows required to drive the sampler each successive 6-inch interval is counted and recorded to give an indication of soil consistency.

Soil samples are monitored with a photoionization device (PID), which measures hydrocarbon concentrations in the ambient air or headspace above the soil sample. Field instruments such as the PID are useful for indicating relative levels of hydrocarbon vapors, but do not detect concentrations of hydrocarbons with the same precision as laboratory analyses. Soil samples selected for possible chemical analysis are sealed promptly with Teflon® tape and plastic caps. The samples are labeled and placed in iced storage for transport to the laboratory. Chain of Custody records are initiated by the geologist in the field, updated throughout handling of the samples, and sent with the samples to the laboratory. Copies of these records are included in the final report.

Cuttings generated during drilling are placed on plastic sheeting, covered, and left at the site. ERI coordinates the appropriate disposal or recycling of the cuttings with Tosco.

Hydropunch® Groundwater Sampling

ERI observes the driller push the Hydropunch® (or similar temporary discrete groundwater sampling well point) approximately 2 to 3 feet below the groundwater surface using a GeoProbe® (or similar direct-push rig). The point is then opened exposing a well screen to the formation. ERI collects a discrete groundwater sample for laboratory analysis using a stainless steel bailer cleaned with a laboratory-grade detergent and deionized water. Groundwater is transferred slowly from the bailer to laboratory-cleaned, 1-liter amber bottles and 40-milliliter glass volatile organic analysis vials (VOAs) for analyses by the laboratory. The VOAs contain hydrochloric acid as a preservative. The sampler checks to see if headspace is present. If headspace is present, the sampler collects more samples until none is present. Chain of Custody records are initiated in the field by the sampler, updated throughout handling of the samples, and sent along with the samples to the laboratory. Copies of these records are included in our final report.

Quality Assurance/Quality Control

The sampling and analysis procedures employed by ERI for groundwater sampling follow regulatory guidance documents for quality assurance/quality control (QA/QC). Quality control is maintained by site-specific field protocols and quality control checks performed by the laboratory. Laboratory and field handling of samples may be monitored by including QC samples for analysis. QC samples may include any combination of the following. The number and types of QC samples are selected and analyzed on a project-specific basis.

Trip Blanks – Trip blanks are prepared with organic-free water by the laboratory, and accompany sampling equipment to the project site. They are not opened. Trip blanks travel with the groundwater samples (collected from the project site) to the laboratory and verify that concentrations of analyzed chemical constituents are not being introduced into the samples during transportation.

Bailer Blanks – Bailer blanks are prepared at the project site immediately prior to sample collection using a new disposable bailer or a cleaned stainless steel bailer, and organic-free water. Bailer blanks accompany the groundwater samples (collected from the project site) to the laboratory and verify that concentrations of analyzed chemical constituents are not being introduced into the samples by the sampling equipment and/or methods used in the field.

ATTACHMENT D

**UNIFIED SOIL CLASSIFICATION SYSTEM, SYMBOL KEY,
AND BORING LOGS**

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS	LTR	DESCRIPTION	MAJOR DIVISIONS	LTR	DESCRIPTION	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravels or gravel sand mixtures, little or no fines	SILTS AND CLAYS LL<50	ML	Inorganic silts and very fine-grained sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		GP	Poorly-graded gravels or gravel sand mixture, little or no fines		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		GM	Silty gravels, gravel-sand-clay mixtures		OL	Organic silts and organic silt-clays of low plasticity
		GC	Clayey gravels, gravel-sand-clay mixtures		MH	Inorganic silts, micaceous or diatomaceous fine-grained sandy or silty soils, elastic silts
	SAND AND SANDY SOILS	SW	Well-graded sands or gravelly sands, little or no fines	SILTS AND CLAYS LL>50	CH	Inorganic clays of high plasticity, fat clays
		SP	Poorly-graded sands or gravelly sands, little or no fines		OH	Organic clays of medium to high plasticity
		SM	Silty sands, sand-silt mixtures		HIGHLY ORGANIC SOILS	Pt
		SC	Clayey sands, sand-clay mixtures			

WELL DESIGN

<p> DEPTH THROUGH WHICH SAMPLER IS DRIVEN</p> <p> RELATIVELY UNDISTURBED SAMPLE</p> <p> MISSED SAMPLE</p> <p> GROUNDWATER LEVEL OBSERVED FROM FIRST WET SOIL SAMPLE IN BORING</p> <p> STATIC GROUNDWATER LEVEL</p> <p>OVM ORGANIC VAPOR METER READING IN PARTS PER MILLION</p> <p>PID PHOTO-IONIZATION DETECTOR READING IN PARTS PER MILLION</p>	<p> SAND PACK</p> <p> BENTONITE ANNULAR SEAL</p> <p> NEAT CEMENT ANNULAR SEAL</p> <p> BLANK PVC</p> <p> MACHINE-SLOTTED PVC</p> <p>S-10 SAMPLE LOCATION</p> <p>NR NOT RECORDED</p> <p>NA NOT ANALYZED</p>
--	--

BLOW/FT. REPRESENTS THE NUMBER OF BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH THE LAST 12 INCHES OF AN 18-INCH OR 24-INCH PENETRATION.

DASHED LINES SEPARATING UNITS ON THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS AT THE BORING LOCATION AT THE TIME OF DRILLING ONLY.



UNIFIED SOIL CLASSIFICATION SYSTEM AND LOG OF BORINGS SYMBOL KEY

FORMER TOSCO 76 SERVICE STATION 0843
1629 Webster Street
Alameda, California

ATTACHMENT

D

PROJECT 2248



Project No.: 224803 Boring: GPI Plate: 1 OF 1

Site: Former Tosco 76 Service Station 0843 Date: 5/23/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct-Push Geologist: John B. Bobbitt

Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature: *[Handwritten Signature]*

Location: Western side of Webster Street on southern property line Registration: R.G. 4313
 Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PID/OTM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						5-inches of asphalt	
5	0	▽			SP	Sand, medium-grained, brown, well sorted, trace of silt, wet at 4 feet	
10							
15						Total depth at 12 feet bgs. Boring grouted to ground surface.	
20							
25							
30							
35							
40							

Casing Diameter: N/A Slot Size: N/A Sand Size: N/A Grout: Portland I, II



Project No.: 224803 Boring: GP2 Plate: 1 OF 1

Site: Former Tosco 76 Service Station 0843 Date: 5/23/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct-Push Geologist: John B. Bobbitt

Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature: *[Handwritten Signature]*

Location: Approximately 60 feet north of GP1 Registration: R.G. 4313

Logged by: Rob Saur

DEPTH (ft.)	BLOW COUNTS	PID/OPM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6-inches of asphalt	
0					SP		
5						Sand medium-grained, brown, well sorted, trace of silt, wet at 5 feet	
6 to 8						6 to 8 feet slightly stained blue-green	
						Same, brown	
10							
12						Total depth at 12 feet bgs.	
						Boring grouted to ground surface.	
15							
20							
25							
30							
35							
40							

Casing Diameter: N/A Slot Size: N/A Sand Size: N/A Grout: Portland I/II



Project No.: 224803 Boring: GP3 Plate: 1 OF 1

Site: Former Tosco 76 Service Station 0843 Date: 5/23/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct-Push Geologist: John B. Bobbitt

Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature: *[Handwritten Signature]*

Location: Adjacent to curb on Southwest corner of Registration: R.G. 4313

Webster Street and Pacific Avenue Logged by: Rob Saur

DEPTH (ft)	BLOW COUNTS	PIU/OVM (ppm)	SAMPLES	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6-inches of asphalt	
					SP		
-5		0 ▽				Sand, medium-grained, brown, well sorted, trace of silt, wet at 5 feet At 6 feet blue-green color	
-10						Unable to get soil from sampler	
-15						Total Depth 12 feet Boring grouted to ground surface.	
-20							
-25							
-30							
-35							
-40							

Casing Diameter: N/A Slot Size: N/A Sand Size: N/A, Grout: Portland I/II



Project No.: 224803 Boring: GP4 Plate: 1 OF 1

Site: Former Tosco 78 Service Station 0B43 Date: 5/23/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct-Push Geologist: John H. Robbitt

Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature: *[Handwritten Signature]*

Location: Adjacent to th curb on southern side of Registration: R.G. 4313

Pacific Avenue Logged by: Rob Saur

DEPTH (ft.)	BLOW COUNTS	PID/OTM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6 inch asphalt	
				SP			
5		0 ∇				Sand, medium-grained, well-sorted, trace of silt, wet at 5 feet, at 6 feet green color	
						Same, at 8 feet brown color	
10	124					Same	
						Total depth at 12 feet bgs. Boring grouted to ground surface.	
15							
20							
25							
30							
35							
40							

Casing Diameter: N/A Slot Size: N/A Sand Size: N/A Grout: Portland I/II



Project No.: 224803 Boring: GP5 Plate: 1 OF 1

Site: Former Tosco 76 Service Station 0843 Date: 5/23/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct-Push Geologist: John B. Bobbitt

Drill Rig: Maryl 25 Key Bore Hole Diameter: 2" Signature: [Handwritten Signature]

Location: Adjacent to curb on northern side of Registration: R.G. 4313

Pacific Avenue Logged by: Rob Saur

DEPTH (ft.)	BLOW COUNTS	PID/OPM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6-inches of asphalt	
				SP			
-5		0 ∇				Sand, medium-grained, brown, well-sorted, trace of silt, wet at 5 feet	
						Bluish-green at 6 feet, strong odor	
-10	106						
						Total depth at 12 feet bgs.	
						Boring grouted to ground surface.	
-15							
-20							
-25							
-30							
-35							
-40							

Casing Diameter: N/A Slot Size: N/A, Sand Size: N/A, Grout: Portland I/II

ATTACHMENT E

**LABORATORY ANALYSIS REPORTS AND
CHAIN-OF-CUSTODY RECORDS**

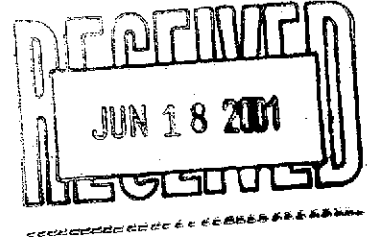


Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

13 June, 2001

Paul Blank
Environmental Resolutions
73 Digital Drive, Suite 100
Novato, CA 94949



RE: Tosco
Sequoia Report: W105576

Enclosed are the results of analyses for samples received by the laboratory on 25-May-01 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Charlie Westwater
Project Manager

CA ELAP Certificate #1271





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-5-GP4	W105576-01	Soil	23-May-01 08:50	25-May-01 17:00
W-6-GP4	W105576-02	Water	23-May-01 09:00	25-May-01 17:00
S-4-GP5	W105576-03	Soil	23-May-01 10:00	25-May-01 17:00
S-10-GP5	W105576-04	Soil	23-May-01 10:30	25-May-01 17:00
S-5-GP3	W105576-05	Soil	23-May-01 11:00	25-May-01 17:00
W-10-GP5	W105576-06	Water	23-May-01 10:30	25-May-01 17:00
W-9-GP3	W105576-07	Water	23-May-01 12:00	25-May-01 17:00
S-5-GP2	W105576-08	Soil	23-May-01 12:30	25-May-01 17:00
S-10-GP2	W105576-09	Soil	23-May-01 12:50	25-May-01 17:00
W-10-GP2	W105576-10	Water	23-May-01 13:00	25-May-01 17:00
S-4-GP1	W105576-11	Soil	23-May-01 13:30	25-May-01 17:00
W-10-GP1	W105576-12	Water	23-May-01 14:00	25-May-01 17:00
S-SP1-(1-4)	W105576-13	Soil	23-May-01 14:30	25-May-01 17:00

Sequoia Analytical - Walnut Creek

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.

Charlie Westwater, Project Manager





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-5-GP4 (W105576-01) Soil Sampled: 23-May-01 08:50 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	20	1E31017	01-Jun-01	01-Jun-01	EPA 8015/8020	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		89.0 %	40-140		"	"	"	"	
W-6-GP4 (W105576-02) Water Sampled: 23-May-01 09:00 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	1F04003	04-Jun-01	04-Jun-01	EPA 8015M/8020	
Benzene	0.70	0.50	"	"	"	"	"	"	CC-3
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	96	2.5	"	"	"	"	"	"	CC-3
<i>Surrogate: a,a,a-Trifluorotoluene</i>		99.7 %	70-130		"	"	"	"	
S-4-GP5 (W105576-03) Soil Sampled: 23-May-01 10:00 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	20	1E31017	01-Jun-01	01-Jun-01	EPA 8015/8020	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	40-140		"	"	"	"	





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-10-GP5 (W105576-04) Soil Sampled: 23-May-01 10:30 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	20	1E31017	01-Jun-01	01-Jun-01	EPA 8015/8020	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	0.18	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		109 %	40-140	"	"	"	"	"	
S-5-GP3 (W105576-05) Soil Sampled: 23-May-01 11:00 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	20	1E31017	01-Jun-01	01-Jun-01	EPA 8015/8020	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.011	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		115 %	40-140	"	"	"	"	"	
W-10-GP5 (W105576-06) Water Sampled: 23-May-01 10:30 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	2100	500	ug/l	10	1F04003	04-Jun-01	04-Jun-01	EPA 8015M/8020	P-01
Benzene	39	5.0	"	"	"	"	"	"	CC-3
Toluene	16	5.0	"	"	"	"	"	"	CC-3
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Xylenes (total)	17	5.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %	70-130	"	"	"	"	"	





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
W-10-GP5 (W105576-06RE1) Water Sampled: 23-May-01 10:30 Received: 25-May-01 17:00									
Methyl tert-butyl ether	2200	250	ug/l	100	1F04003	04-Jun-01	06-Jun-01	EPA 8015M/8020	CC-3
<i>Surrogate: a,a,a-Trifluorotoluene</i>		109 %	70-130						
W-9-GP3 (W105576-07) Water Sampled: 23-May-01 12:00 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	1F04003	04-Jun-01	04-Jun-01	EPA 8015M/8020	
Benzene	1.2	0.50	"	"	"	"	"	"	CC-3
Toluene	ND	0.50	"	"	"	"	"	"	CC-3
Ethylbenzene	0.55	0.50	"	"	"	"	"	"	CC-3
Xylenes (total)	3.9	0.50	"	"	"	"	"	"	CC-3
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		117 %	70-130						
S-5-GP2 (W105576-08) Soil Sampled: 23-May-01 12:30 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	20	1E31017	01-Jun-01	01-Jun-01	EPA 8015/8020	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		102 %	40-140						
S-10-GP2 (W105576-09) Soil Sampled: 23-May-01 12:50 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	20	1E31017	01-Jun-01	01-Jun-01	EPA 8015/8020	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %	40-140						





Environmental Resolutions 73 Digital Drive, Suite 100 Novato CA, 94949	Project: Tosco Project Number: Tosco # 0843 Project Manager: Paul Blank	Reported: 13-Jun-01 19:08
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Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
W-10-GP2 (W105576-10) Water Sampled: 23-May-01 13:00 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	1F04003	04-Jun-01	04-Jun-01	EPA 8015M/8020	
Benzene	1.1	0.50	"	"	"	"	"	"	CC-3
Toluene	0.67	0.50	"	"	"	"	"	"	CC-3,CF-01
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	CC-3
Surrogate: <i>a,a,a</i> -Trifluorotoluene		113 %		70-130	"	"	"	"	
S-4-GP1 (W105576-11) Soil Sampled: 23-May-01 13:30 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	20	1E31017	01-Jun-01	01-Jun-01	EPA 8015/8020	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	CC-3
Surrogate: <i>a,a,a</i> -Trifluorotoluene		101 %		40-140	"	"	"	"	
W-10-GP1 (W105576-12) Water Sampled: 23-May-01 14:00 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	1F04003	04-Jun-01	04-Jun-01	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	3.7	2.5	"	"	"	"	"	"	CC-3
Surrogate: <i>a,a,a</i> -Trifluorotoluene		115 %		70-130	"	"	"	"	





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-SP1-(1-4) (W105576-13) Soil Sampled: 23-May-01 14:30 Received: 25-May-01 17:00									
Purgeable Hydrocarbons	1.2	1.0	mg/kg	20	1E31017	01-Jun-01	05-Jun-01	EPA 8015/8020	P-01
Benzene	0.0065	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.013	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.079	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	CC-3
<i>Surrogate: a,a,a-Trifluorotoluene</i>		101 %	40-140	"	"	"	"	"	





Environmental Resolutions 73 Digital Drive, Suite 100 Novato CA, 94949	Project: Tosco Project Number: Tosco # 0843 Project Manager: Paul Blank	Reported: 13-Jun-01 19:08
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**MTBE by EPA Method 8260A
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-5-GP4 (W105576-01) Soil Sampled: 23-May-01 08:50 Received: 25-May-01 17:00									
Methyl tert-butyl ether	ND	0.20	mg/kg	100	1F05001	06-Jun-01	06-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		94.0 %	50-150		"	"	"	"	
W-6-GP4 (W105576-02) Water Sampled: 23-May-01 09:00 Received: 25-May-01 17:00									
Methyl tert-butyl ether	72	2.0	ug/l	1	1F04001	04-Jun-01	04-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		89.2 %	50-150		"	"	"	"	
S-4-GP5 (W105576-03) Soil Sampled: 23-May-01 10:00 Received: 25-May-01 17:00									
Methyl tert-butyl ether	ND	0.20	mg/kg	100	1F05001	06-Jun-01	06-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		92.0 %	50-150		"	"	"	"	
S-10-GP5 (W105576-04) Soil Sampled: 23-May-01 10:30 Received: 25-May-01 17:00									
Methyl tert-butyl ether	ND	0.20	mg/kg	100	1F05001	06-Jun-01	06-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		86.0 %	50-150		"	"	"	"	
S-5-GP3 (W105576-05) Soil Sampled: 23-May-01 11:00 Received: 25-May-01 17:00									
Methyl tert-butyl ether	ND	0.20	mg/kg	100	1F05001	06-Jun-01	06-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		88.0 %	50-150		"	"	"	"	
W-10-GP5 (W105576-06) Water Sampled: 23-May-01 10:30 Received: 25-May-01 17:00									
Methyl tert-butyl ether	2000	10	ug/l	5	1F04001	04-Jun-01	04-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		91.2 %	50-150		"	"	"	"	
W-9-GP3 (W105576-07) Water Sampled: 23-May-01 12:00 Received: 25-May-01 17:00									
Methyl tert-butyl ether	2.1	2.0	ug/l	1	1F04001	04-Jun-01	04-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		84.0 %	50-150		"	"	"	"	





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

MTBE by EPA Method 8260A
Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-5-GP2 (W105576-08) Soil Sampled: 23-May-01 12:30 Received: 25-May-01 17:00									
Methyl tert-butyl ether	ND	0.20	mg/kg	100	1F05001	06-Jun-01	07-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		90.4 %	50-150		"	"	"	"	
S-10-GP2 (W105576-09) Soil Sampled: 23-May-01 12:50 Received: 25-May-01 17:00									
Methyl tert-butyl ether	ND	0.20	mg/kg	100	1F05001	06-Jun-01	07-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		96.8 %	50-150		"	"	"	"	
W-10-GP2 (W105576-10) Water Sampled: 23-May-01 13:00 Received: 25-May-01 17:00									
Methyl tert-butyl ether	ND	2.0	ug/l	1	1F04001	04-Jun-01	04-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		84.6 %	50-150		"	"	"	"	
S-4-GP1 (W105576-11) Soil Sampled: 23-May-01 13:30 Received: 25-May-01 17:00									
Methyl tert-butyl ether	ND	0.20	mg/kg	100	1F05001	06-Jun-01	07-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		82.0 %	50-150		"	"	"	"	
W-10-GP1 (W105576-12) Water Sampled: 23-May-01 14:00 Received: 25-May-01 17:00									
Methyl tert-butyl ether	3.7	2.0	ug/l	1	1F04001	04-Jun-01	04-Jun-01	EPA 8260B	
Surrogate: Dibromofluoromethane		85.0 %	50-150		"	"	"	"	





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

**Total Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-SP1-(1-4) (W105576-13) Soil Sampled: 23-May-01 14:30 Received: 25-May-01 17:00									
Lead	1.1	1.0	mg/kg	1	1E29024	29-May-01	30-May-01	EPA 6010A	





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Notes
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Batch 1E31017 - EPA 5030B MeOH

Blank (1E31017-BLK1)

Prepared & Analyzed: 31-May-01

Purgeable Hydrocarbons	ND	1.0	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.050	"							
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.660		"	0.600		110	40-140			

LCS (1E31017-BS1)

Prepared & Analyzed: 31-May-01

Benzene	0.728	0.0050	mg/kg	0.800		91.0	50-150			
Toluene	0.762	0.0050	"	0.800		95.2	50-150			
Ethylbenzene	0.806	0.0050	"	0.800		101	50-150			
Xylenes (total)	2.38	0.0050	"	2.40		99.2	50-150			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.660		"	0.600		110	40-140			

Matrix Spike (1E31017-MS1)

Source: W105576-01

Prepared & Analyzed: 01-Jun-01

Benzene	0.822	0.0050	mg/kg	0.800	ND	103	50-150			
Toluene	0.868	0.0050	"	0.800	ND	108	50-150			
Ethylbenzene	0.916	0.0050	"	0.800	ND	114	50-150			
Xylenes (total)	2.72	0.0050	"	2.40	ND	113	50-150			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.614		"	0.600		102	40-140			

Matrix Spike Dup (1E31017-MSD1)

Source: W105576-01

Prepared & Analyzed: 01-Jun-01

Benzene	0.818	0.0050	mg/kg	0.800	ND	102	50-150	0.488	20	
Toluene	0.870	0.0050	"	0.800	ND	109	50-150	0.230	20	
Ethylbenzene	0.918	0.0050	"	0.800	ND	115	50-150	0.218	20	
Xylenes (total)	2.75	0.0050	"	2.40	ND	115	50-150	1.10	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.606		"	0.600		101	40-140			





Environmental Resolutions 73 Digital Drive, Suite 100 Novato CA, 94949	Project: Tosco Project Number: Tosco # 0843 Project Manager: Paul Blank	Reported: 13-Jun-01 19:08
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Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1F04003 - EPA 5030B P/T

Blank (1F04003-BLK1)

Prepared & Analyzed: 04-Jun-01

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	30.8		"	30.0		103	70-130			

Blank (1F04003-BLK2)

Prepared & Analyzed: 05-Jun-01

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	28.3		"	30.0		94.3	70-130			

Blank (1F04003-BLK3)

Prepared & Analyzed: 07-Jun-01

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	28.4		"	30.0		94.7	70-130			

LCS (1F04003-BS1)

Prepared & Analyzed: 04-Jun-01

Benzene	22.4	0.50	ug/l	20.0		112	70-130			
Toluene	21.4	0.50	"	20.0		107	70-130			
Ethylbenzene	22.2	0.50	"	20.0		111	70-130			
Xylenes (total)	63.2	0.50	"	60.0		105	70-130			
Surrogate: a,a,a-Trifluorotoluene	30.3		"	30.0		101	70-130			





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control
Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1F04003 - EPA 5030B P/T

LCS (1F04003-BS2)

Prepared & Analyzed: 05-Jun-01

Benzene	19.9	0.50	ug/l	20.0		99.5	70-130			
Toluene	20.0	0.50	"	20.0		100	70-130			
Ethylbenzene	20.1	0.50	"	20.0		100	70-130			
Xylenes (total)	56.8	0.50	"	60.0		94.7	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	28.1		"	30.0		93.7	70-130			

LCS (1F04003-BS3)

Prepared & Analyzed: 07-Jun-01

Benzene	21.1	0.50	ug/l	20.0		106	70-130			
Toluene	20.6	0.50	"	20.0		103	70-130			
Ethylbenzene	20.7	0.50	"	20.0		104	70-130			
Xylenes (total)	59.5	0.50	"	60.0		99.2	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	26.8		"	30.0		89.3	70-130			

Matrix Spike (1F04003-MS1)

Source: W106011-15

Prepared & Analyzed: 05-Jun-01

Benzene	19.3	0.50	ug/l	20.0	ND	96.5	70-130			
Toluene	18.8	0.50	"	20.0	ND	94.0	70-130			
Ethylbenzene	19.1	0.50	"	20.0	ND	95.5	70-130			
Xylenes (total)	54.1	0.50	"	60.0	ND	90.2	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	29.8		"	30.0		99.3	70-130			

Matrix Spike Dup (1F04003-MSD1)

Source: W106011-15

Prepared & Analyzed: 05-Jun-01

Benzene	18.3	0.50	ug/l	20.0	ND	91.5	70-130	5.32	20	
Toluene	17.8	0.50	"	20.0	ND	89.0	70-130	5.46	20	
Ethylbenzene	18.2	0.50	"	20.0	ND	91.0	70-130	4.83	20	
Xylenes (total)	51.3	0.50	"	60.0	ND	85.5	70-130	5.31	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	29.3		"	30.0		97.7	70-130			





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

**MTBE by EPA Method 8260A - Quality Control
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1F04001 - EPA 5030B (P/T)										
Blank (1F04001-BLK1) Prepared & Analyzed: 31-May-01										
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	44.9		"	50.0		89.8	50-150			
Blank (1F04001-BLK2) Prepared & Analyzed: 04-Jun-01										
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	48.0		"	50.0		96.0	50-150			
Blank (1F04001-BLK3) Prepared & Analyzed: 07-Jun-01										
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	44.8		"	50.0		89.6	50-150			
LCS (1F04001-BS1) Prepared & Analyzed: 31-May-01										
Methyl tert-butyl ether	46.3	2.0	ug/l	50.0		92.6	70-130			
Surrogate: Dibromofluoromethane	45.3		"	50.0		90.6	50-150			
LCS (1F04001-BS2) Prepared & Analyzed: 04-Jun-01										
Methyl tert-butyl ether	41.5	2.0	ug/l	50.0		83.0	70-130			
Surrogate: Dibromofluoromethane	47.0		"	50.0		94.0	50-150			
LCS (1F04001-BS3) Prepared & Analyzed: 07-Jun-01										
Methyl tert-butyl ether	42.4	2.0	ug/l	50.0		84.8	70-130			
Surrogate: Dibromofluoromethane	44.9		"	50.0		89.8	50-150			
LCS Dup (1F04001-BSD1) Prepared & Analyzed: 31-May-01										
Methyl tert-butyl ether	56.7	2.0	ug/l	50.0		113	70-130	20.2	25	
Surrogate: Dibromofluoromethane	46.1		"	50.0		92.2	50-150			
Matrix Spike (1F04001-MS1) Source: W105576-10 Prepared & Analyzed: 07-Jun-01										
Methyl tert-butyl ether	43.2	2.0	ug/l	50.0	ND	86.4	60-150			
Surrogate: Dibromofluoromethane	44.1		"	50.0		88.2	50-150			





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

**MTBE by EPA Method 8260A - Quality Control
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1F04001 - EPA 5030B (P/T)

Matrix Spike Dup (1F04001-MSD1)		Source: W105576-10			Prepared & Analyzed: 07-Jun-01					
Methyl tert-butyl ether	53.0	2.0	ug/l	50.0	ND	106	60-150	20.4	25	
Surrogate: Dibromofluoromethane	44.0		"	50.0		88.0	50-150			

Batch 1F05001 - EPA 5030B (MeOH)

Blank (1F05001-BLK2)		Prepared & Analyzed: 06-Jun-01								
Methyl tert-butyl ether	ND	0.20	mg/kg							
Surrogate: Dibromofluoromethane	2.10		"	2.50		84.0	50-150			

Blank (1F05001-BLK3)		Prepared & Analyzed: 07-Jun-01								
Methyl tert-butyl ether	ND	0.20	mg/kg							
Surrogate: Dibromofluoromethane	2.25		"	2.50		90.0	50-150			

LCS (1F05001-BS2)		Prepared & Analyzed: 06-Jun-01								
Methyl tert-butyl ether	1.77	0.20	mg/kg	2.50		70.8	70-130			
Surrogate: Dibromofluoromethane	2.15		"	2.50		86.0	50-150			

LCS (1F05001-BS3)		Prepared & Analyzed: 07-Jun-01								
Methyl tert-butyl ether	2.12	0.20	mg/kg	2.50		84.8	70-130			
Surrogate: Dibromofluoromethane	2.25		"	2.50		90.0	50-150			





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

**Total Metals by EPA 6000/7000 Series Methods - Quality Control
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E29024 - EPA 3050B										
Blank (1E29024-BLK1)										
Prepared: 29-May-01 Analyzed: 30-May-01										
Lead	ND	1.0	mg/kg							
LCS (1E29024-BS1)										
Prepared: 29-May-01 Analyzed: 30-May-01										
Lead	47.2	1.0	mg/kg	50.0		94.4	80-120			
LCS Dup (1E29024-BSD1)										
Prepared: 29-May-01 Analyzed: 30-May-01										
Lead	47.2	1.0	mg/kg	50.0		94.4	80-120	0.00	20	
Matrix Spike (1E29024-MS1)										
Source: W105573-02 Prepared: 29-May-01 Analyzed: 30-May-01										
Lead	49.8	1.0	mg/kg	50.0	12	75.6	80-120			Q-01
Matrix Spike Dup (1E29024-MSD1)										
Source: W105573-02 Prepared: 29-May-01 Analyzed: 30-May-01										
Lead	53.6	1.0	mg/kg	50.0	12	83.2	80-120	7.35	20	





Environmental Resolutions
73 Digital Drive, Suite 100
Novato CA, 94949

Project: Tosco
Project Number: Tosco # 0843
Project Manager: Paul Blank

Reported:
13-Jun-01 19:08

Notes and Definitions

- CC-3 Continuing Calibration indicates that the quantitative result for this analyte includes a greater than 15% degree of uncertainty. The value as reported is within method acceptance.
- CF-01 Results between the primary and confirmation column varied by greater than 40% RPD.
- P-01 Chromatogram Pattern: Gasoline C6-C12
- Q-01 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- 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 002885

TOSCO

600 Jarvis Drive Morgan Hill, CA 95037 • (408) 770-9000 • FAX (408) 782-0500
 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
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 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 FAX (650) 232-9612

d

Consultant Company: ERF		Project Name: 224803TG	
Address: 73 Digital Dr. Ste 100		TOSCO Engineer (required) Dave DeWitt	
City: Novato	State: CA	Zip Code: 94949	W105576
Telephone: 415-382-9105		FAX #: 415-382-1856	Site #, City, State: 0843, Alameda, CA
Report To: Paul Blank	Sampler: Rob	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
 Drinking Water
 Waste Water
 Other

CODE: Misc. Detect. Eval. Remed. Demol. Closure

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested							Comments
						TPH (EPA 8015 Mod. Gas)	BTEX (EPA 8020)	MTBE (EPA 8020)	TPH (EPA 8015 Mod. Diesel)	Volatile Organics (EPA 8260)	MTBE Confirmation (EPA 8260)		
1. S-5-GP4	5/24/01 850	Soil	1	Sleeve	-01 A	X	X	X	X	X	X		
2. W-6-GP4	900	Water	6	Voas	-02A-F	X	X	X	X	X	X		
3. S-4-GP5	1000	Soil	1	Sleeve	-03 A	X	X	X	X	X	X		
4. S-10-GP5	1030	↓	1	↓	-04 A	X	X	X	X	X	X		
5. S-5-GP3	1100	↓	1	↓	-05 A	X	X	X	X	X	X		
6. W-10-GP5	1030	Water	6	Voas	-06 A-F	X	X	X	X	X	X		
7. W-9-GP3	1200	↓	6	Voas	-07 A-F	X	X	X	X	X	X		
8. S-5-GP2	1230	Soil	1	Sleeve	-08 A	X	X	X	X	X	X		
9. S-10-GP2	1250	Soil	1	Sleeve	-09 A	X	X	X	X	X	X		
10. W-10-GP2	1300	Water	6	Voas	-10 A-F	X	X	X	X	X	X		

Relinquished By: Rob Jan	Date: 5/24/01	Time: 900	Received By: Mike Goin	Date: 5/24/01	Time: 1245
Relinquished By: Mike Goin	Date: 5/25	Time: 0800	Received By: Mike Goin	Date: 5/25/01	Time: 1700
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received in Good Condition? Yes No
 Samples on Ice? Yes No
 Method of Shipment _____
 Page ___ of ___

To be completed upon receipt of report:
 1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____
 Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Sequoia

White - Sequoia

002880

TOSCO

605 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

20

Consultant Company: ERI		Project Name: 227803T6	
Address: 73 Digital Drive Ste 100		TOSCO Engineer (required) Dave DeWitt	
City: Novato	State: CA	Zip Code: 94949	
Telephone: 415-382-9105		FAX #: 415-382-1856	
Report To: Paul Blank		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	
Sampler: Rob		Site #, City, State: 0843, Alameda, CA	

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

CODE: Misc. Detect. Eval. Remed. Demol. Closure

Drinking Water Waste Water Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested							Comments	
						TPH (EPA 8015 Mod. Gas)	BTEX (EPA 8020)	MTBE (EPA 8020)	TPH (EPA 8015 Mod. Diesel)	Volatile Organics (EPA 8260)	MTBE Confirmation (EPA 8260)	Total Lead		Zn
1. S-4-GPI	5/25/01 1330	Soil	1	Sleeve	-11A	X	X	X						
2. W-10-GPI	↓ 1700	Water	6	Vials	-12A-F	X	X	X						
3. S-5PI-(1-4)	↓ 1430	Soil	4	Sleeve	-13A-D	X	X	X						Composite
4.														
5.														
6.														
7.														
8.														
9.														
10.														

Relinquished By: Rob Jam	Date: 5/24/01	Time: 900	Received By: David	Date: 5/24/01	Time: 1245
Relinquished By: David	Date: 5/25/01	Time: 0800	Received By: Mike Goin	Date: 5/25/01	Time: 1700
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Were Samples Received in Good Condition? Yes No
 Samples on Ice? Yes No
 Method of Shipment _____
 Page ___ of ___

To be completed upon receipt of report:

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

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

Approved by: _____ Signature: _____ Company: _____ Date: _____

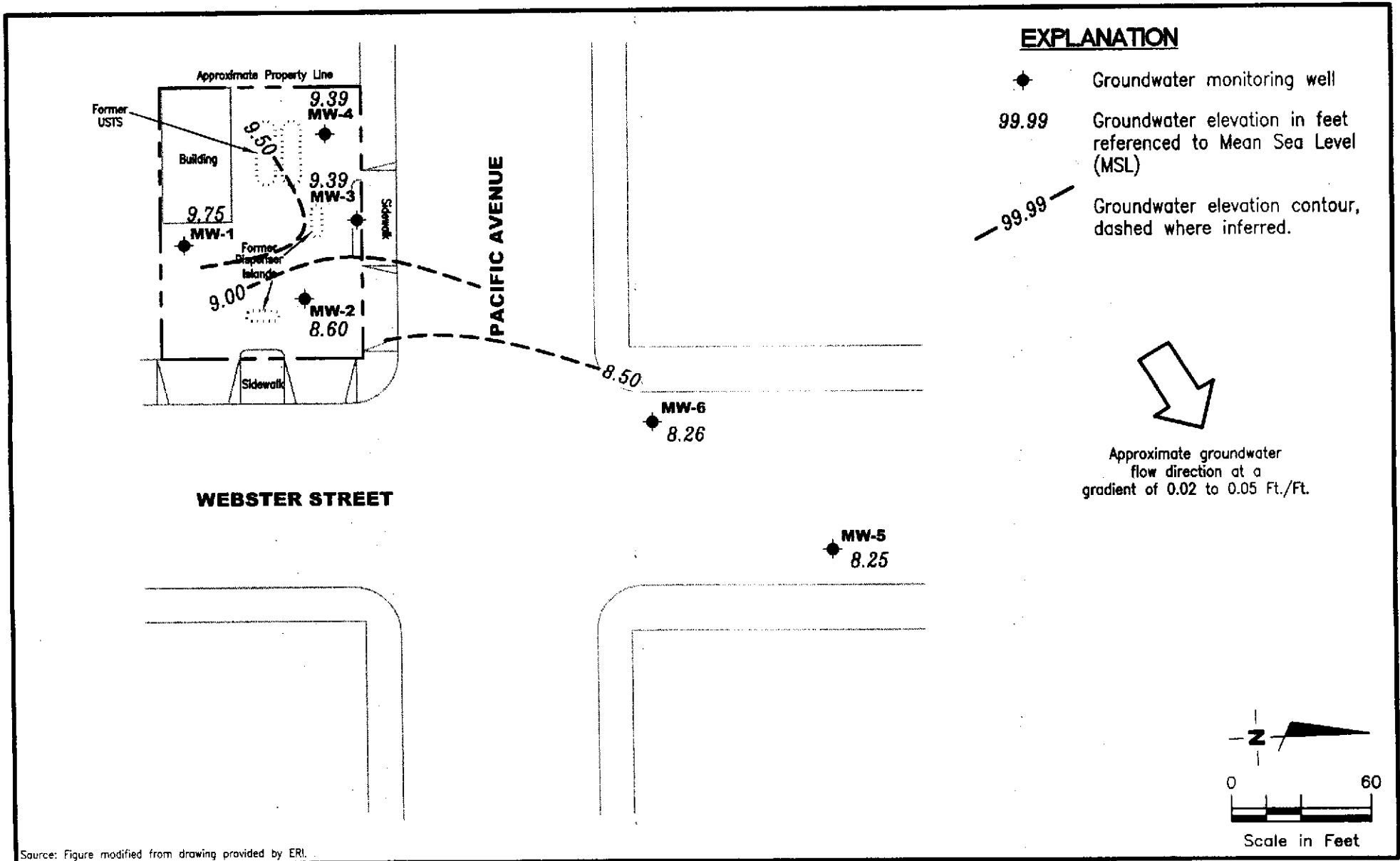
Pink - Client

Yellow - Sequoia

White - Sequoia

ATTACHMENT F

**CUMULATIVE GROUNDWATER MONITORING AND SAMPLING
DATA (GRI, JULY 5, 2001)**



GETTLER - RYAN INC.
 8747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
 Former Tosco 76 Service Station #0843
 1629 Webster Street
 Alameda, California

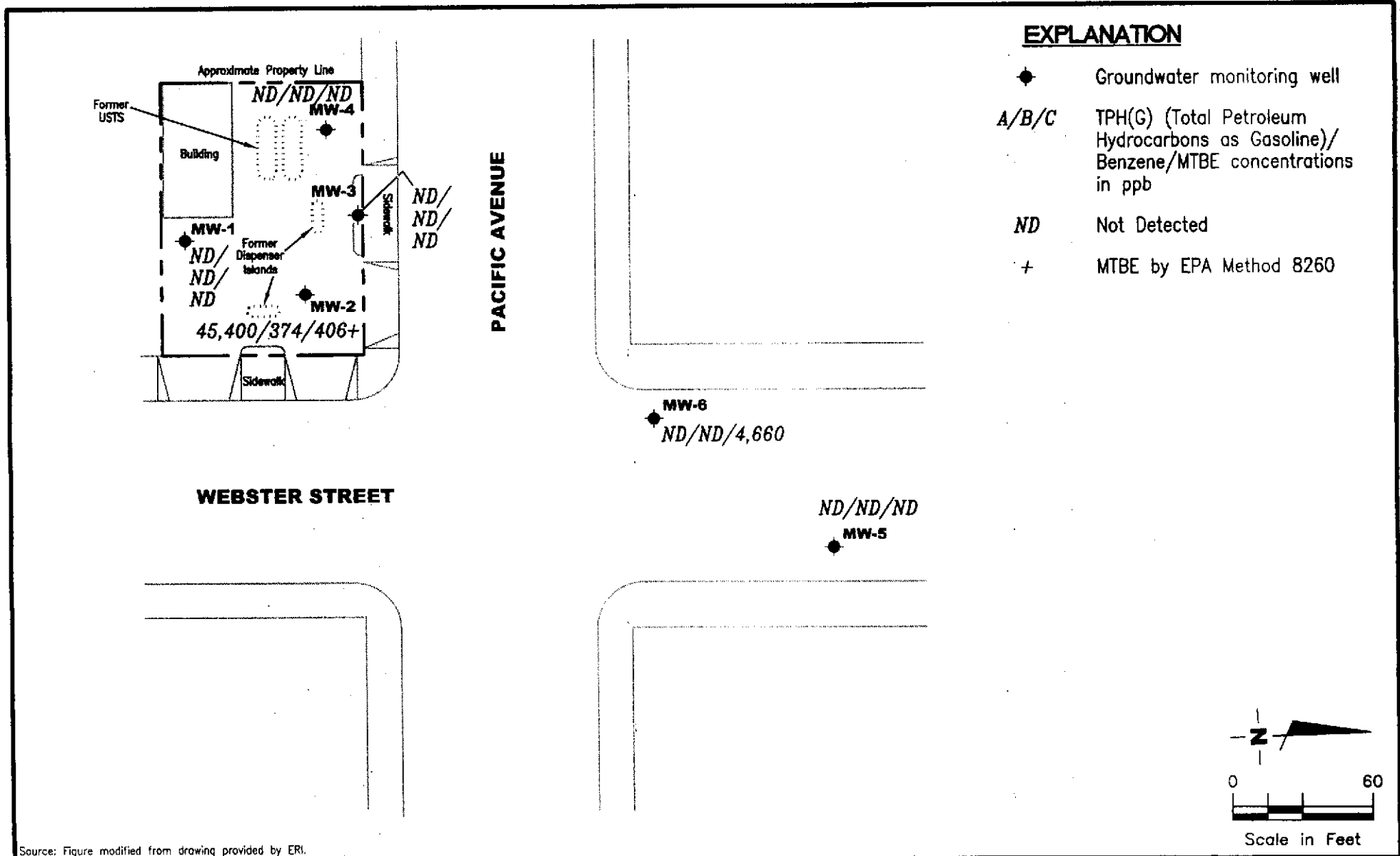
FIGURE
1

PROJECT NUMBER
 180203

REVIEWED BY

DATE
 May 23, 2001

REVISED DATE



Source: Figure modified from drawing provided by ERI.

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

CONCENTRATION MAP
 Former Tosco 76 Service Station #0843
 1629 Webster Street
 Alameda, California

FIGURE
2

PROJECT NUMBER
 180203

REVIEWED BY

DATE
 May 23, 2001

REVISED DATE

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco 76 Service Station #0843
1629 Webster Street
Alameda, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1 16.18	03/05/99 ¹	--	--	86.6 ³	ND	2.04	ND	4.06	23.9 ²
	06/03/99	6.24	9.94	ND	ND	ND	ND	ND	ND/ND ²
	09/02/99	7.19	8.99	ND	ND	ND	ND	ND	ND/ND ²
	12/14/99	8.07	8.11	ND	ND	ND	ND	ND	ND
	03/14/00	5.47	10.71	ND	ND	ND	ND	ND	ND
	05/31/00	6.22	9.96	ND	ND	ND	ND	ND	ND
	08/29/00	6.82	9.36	ND	ND	ND	ND	ND	ND
	12/01/00	7.54	8.64	ND	ND	ND	ND	ND	ND
	03/17/01	5.73	10.45	ND	ND	ND	ND	ND	ND
	05/23/01	6.43	9.75	9.75	ND	ND	ND	ND	ND
MW-2 15.57	03/05/99 ¹	--	--	34,400	2,070	7,710	2,340	8,240	8,460 ²
	06/03/99	5.96	9.61	51,200 ⁴	1,820	7,570	2,510	7,320	6,460/8,800 ²
	09/02/99	6.85	8.72	17,000 ⁵	1,000	3,100	1,400	3,700	4,000/3,720 ²
	12/14/99	7.65	7.92	83,000 ⁵	3,000	22,000	4,500	17,000	9,100/11,000 ²
	03/14/00	5.26	10.31	31,000 ⁵	1,600	4,600	2,300	7,300	5,700/8,700 ²
	05/31/00	5.60	9.97	9,970 ⁵	598	1,030	487	2,060	2,500/1,670 ²
	08/29/00	6.35	9.22	7,900 ⁵	390	1,500	280	1,900	1,800/1,300 ²
	12/01/00	7.06	8.51	87,500 ⁵	1,860	17,400	5,590	19,400	6,220/3,790 ²
	03/17/01	5.98	9.59	4,310 ⁵	371	59.0	280	682	321/433 ²
	05/23/01	6.97	8.60	45,400⁵	374	4,490	2,790	10,900	ND/406²
MW-3 15.11	03/05/99 ¹	--	--	135 ³	ND	ND	ND	4.84	2.46 ²
	06/03/99	5.57	9.54	ND	ND	ND	ND	ND	5.23/12.7 ²
	09/02/99	6.50	8.61	ND	ND	ND	ND	ND	13/11.0 ²
	12/14/99	7.28	7.83	ND	ND	ND	ND	ND	ND
	03/14/00	4.87	10.24	ND	ND	ND	ND	ND	7.2/6.3 ²
	05/31/00	5.58	9.53	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco 76 Service Station #0843
1629 Webster Street
Alameda, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3 (cont)	08/29/00	6.06	9.05	ND	ND	ND	ND	ND	ND
	12/01/00	6.76	8.35	ND	ND	ND	ND	ND	ND
	03/17/01	5.09	10.02	ND	ND	ND	ND	ND	ND
	05/23/01	5.72	9.39	ND	ND	ND	ND	ND	ND
MW-4 15.17	03/05/99 ¹	--	--	ND	ND	ND	ND	2.44	25.2 ²
	06/03/99	5.45	9.72	ND	ND	ND	ND	ND	ND/3.96 ²
	09/02/99	6.48	8.69	ND	ND	ND	ND	ND	23/27.0 ²
	12/14/99	7.27	7.90	ND	ND	ND	ND	ND	200/270 ²
	03/14/00	4.67	10.50	ND	ND	ND	ND	ND	46/49 ²
	05/31/00	5.48	9.69	ND	ND	ND	ND	ND	ND
	08/29/00	6.10	9.07	ND	ND	ND	ND	ND	6.1/3.2 ²
	12/01/00	6.79	8.38	ND	ND	ND	ND	ND	152/101 ²
	03/17/01	5.01	10.16	ND	ND	ND	ND	ND	ND
	05/23/01	5.78	9.39	ND	ND	ND	ND	ND	ND
MW-5 13.34	12/14/99	6.45	6.89	ND	ND	ND	ND	ND	3.5/3.8 ²
	03/14/00	4.46	8.88	ND	ND	ND	ND	ND	ND
	05/31/00	5.18	8.16	ND	ND	ND	ND	ND	ND
	08/29/00	5.46	7.88	ND	ND	ND	ND	ND	ND
	12/01/00	5.95	7.39	ND	ND	ND	ND	ND	ND
	03/17/01	5.36	7.98	ND	ND	ND	ND	ND	ND
	05/23/01	5.09	8.25	ND	ND	ND	ND	ND	ND
MW-6 14.08	12/14/99	6.64	7.44	ND	ND	ND	ND	ND	11,000/18,000 ²
	03/14/00	4.72	9.36	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	19,000/21,000 ^{2,6}
	05/31/00	5.28	8.80	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	13,200
	08/29/00	5.39	8.69	ND	ND	ND	ND	ND	270/400 ²

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco 76 Service Station #0843
1629 Webster Street
Alameda, California

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	GWE (msl)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6 (cont)	12/01/00	6.11	7.97	ND	ND	ND	ND	ND	6,330/3,640 ²
	03/17/01	6.02	8.06	18,700 ⁵	2,950	989	1,040	3,000	10,200/11,500 ²
	05/23/01	5.82	8.26	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	4,660 ⁸
Trip Blank	03/05/99 ¹	--	--	ND	ND	ND	ND	ND	ND ²
TB-LB	06/03/99	--	--	ND	ND	ND	ND	ND	ND
	09/02/99	--	--	ND	ND	ND	ND	ND	ND
	12/14/99	--	--	ND	ND	ND	ND	ND	ND
	03/14/00	--	--	ND	ND	ND	ND	ND	ND
	05/31/00	--	--	ND	ND	ND	ND	ND	ND
	08/29/00	--	--	ND	ND	ND	ND	ND	ND
	12/01/00	--	--	ND	ND	ND	ND	ND	ND
	03/17/01	--	--	ND	ND	ND	ND	ND	ND
05/23/01	--	--	ND	ND	ND	ND	ND	ND	

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco 76 Service Station #0843
1629 Webster Street
Alameda, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to June 3, 1999, were compiled from reports prepared by ERI, Inc.

TOC = Top of Casing	B = Benzene	(ppb) = Parts per billion
(ft.) = Feet	T = Toluene	ND = Not Detected
DTW = Depth to Water	E = Ethylbenzene	-- = Not Measured/Not Analyzed
GWE = Groundwater Elevation	X = Xylenes	
(msl) = Mean sea level	MTBE = Methyl tertiary butyl ether	
TPH-G = Total Petroleum Hydrocarbons as Gasoline		

* TOC elevations are based on USC&GS Benchmark WEB PAC - 1947 - R 1951; (Elevation = 14.054 feet).

¹ B,T,E,X by EPA Method 8260.

² MTBE by EPA Method 8260.

³ Laboratory report indicates weathered gasoline C6-C12.

⁴ Laboratory report indicates chromatogram pattern C6-C12.

⁵ Laboratory report indicates gasoline C6-C12.

⁶ Laboratory report indicates sample was analyzed 03/28/00 but required reanalysis at a dilution. The dilution was analyzed outside of the EPA recommended holding time.

⁷ Detection limit raised. Refer to analytical reports.

⁸ Laboratory did not perform analysis for MTBE by EPA Method 8260 as requested on the Chain of Custody for 8020 MTBE hits.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Former Tosco 76 Service Station #0843
1629 Webster Street
Alameda, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-1	09/02/99	ND	ND	ND	ND	ND	ND	--	--
MW-2	09/02/99	ND ¹	ND ¹	3,720	ND ¹	ND ¹	ND ¹	--	--
	12/14/99	ND ¹	ND ¹	11,000	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	03/14/00	ND ¹	1,300	8,700	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	05/31/00	ND ¹	ND ¹	1,670	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	08/29/00	ND	250	1,300	ND	ND	ND	ND	ND
	12/01/00	ND ¹	ND ¹	3,790	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	03/17/01	ND ¹	ND ¹	433	14.8	ND ¹	ND ¹	ND ¹	ND ¹
	05/23/01	ND ¹	ND ¹	406	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
MW-3	09/02/99	ND	ND	11.0	ND	ND	ND	--	--
	03/14/00	--	--	6.3	--	--	--	--	--
MW-4	09/02/99	ND	ND	27.0	ND	ND	ND	--	--
	12/14/99	--	--	270	--	--	--	--	--
	03/14/00	--	--	49	--	--	--	--	--
	08/29/00	--	--	3.2	--	--	--	--	--
MW-5	12/14/99	--	--	3.8	--	--	--	--	--
MW-6	12/14/99	--	--	18,000	--	--	--	--	--
	03/14/00	--	--	21,000 ²	--	--	--	--	--
	08/29/00	--	--	400	--	--	--	--	--
	03/17/01	ND ¹	ND ¹	11,500	ND ¹	ND ¹	ND ¹	219	ND ¹
	05/23/01 ³	--	--	--	--	--	--	--	--

Table 2
Groundwater Analytical Results - Oxygenate Compounds
Former Tosco 76 Service Station #0843
1629 Webster Street
Alameda, 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
-- = Not Analyzed
ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

- ¹ Detection limit raised. Refer to analytical reports.
- ² Laboratory report indicates sample was analyzed 03/28/00 but required reanalysis at a dilution. The dilution was analyzed outside of the EPA recommended holding time.
- ³ Laboratory did not perform analysis for oxygenates as requested on the Chain of Custody, on all 8020 MTBE hits.