ERI

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: March 7, 2000
PROJECT NUMBER: 224803T5
SUBJECT: Former Tosco 76 Service Station 0843
1629 Webster Street, Alameda, California

Now need to determine if conduits along Webster is acting as pref. pathway.

FROM: Dylan R. Crouse
TITLE: Staff Geologist

WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	March 7, 2000	Supplemental Evaluation of Groundwater

THESE ARE TRANSMITTED as checked below:

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

REMARKS: At the request of Tosco Marketing Company, (Tosco)., ERI is forwarding 1 copy of this report. Please call with any questions or comments.

Dylan R. Crouse, Staff Geologist

cc: Mr. Dave DeWitt, Tosco Marketing Company
1 copy to ERI project file 224803T5

ENVIRONMENTAL RESOLUTIONS, INC.

March 7, 2000
ERI 224803.R02

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

Subject: Supplemental Evaluation of 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) installed two off-site groundwater monitoring wells (MW5 and MW6) at the subject site. The purpose of the work was to evaluate the lateral extent of dissolved petroleum hydrocarbons and related constituents in the downgradient (northeast) direction of groundwater flow from the site. ERI performed the work in general accordance with ERI's *Work Plan for Supplemental Evaluation of Groundwater* (Work Plan) dated September 8, 1999, in response to a letter from the Alameda County Health Services Agency (the County) dated July 30, 1999 (Attachment A). In response to the Work Plan, the County contacted ERI and requested that the proposed location of off-site well MW5 be relocated approximately 150 feet northeast of the site (ERI, October 7, 1999). In response to the request by the County, and upon authorization from Tosco, ERI proposed that well MW5 remain at approximately the same location as proposed in the Work Plan and that a second off-site groundwater monitoring well (MW6) be installed within approximately 150 feet northeast (downgradient) of the site. The County approved the Work Plan, including the locations of the off-site wells MW5 and MW6 in a letter dated October 18, 1999 (Attachment A).

The work described in this report includes:

- Obtaining an encroachment permit from the California Department of Transportation (Caltrans) and a right-of-way permit from the City of Alameda Public Works Department (the City) to drill in the Caltrans and City right-of-way;
- Obtaining a permit from the Alameda County Public Works Agency (County Public Works) to drill two soil borings (MW5 and MW6) and install groundwater monitoring wells MW5 and MW6;
- Drilling off-site soil borings MW5 and MW6 to approximately 20 feet below ground surface (bgs);
- Collecting soil samples from the borings to evaluate soil stratigraphy;
- Constructing groundwater monitoring wells MW5 and MW6 in borings MW5 and MW6, respectively;

- Coordinating groundwater monitoring, developing, and sampling of wells MW5 and MW6 with Gettler-Ryan Inc. (GRI) and Tosco to coincide with quarterly monitoring and sampling of previously-existing on-site wells MW1 through MW4; 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), 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, single-walled steel, gasoline USTs, one 550-gallon, single-walled steel, used-oil UST, product lines, and dispensers; and installation of a conductor casing within the former UST cavity backfill (ERI, September 1998).

- Installation of four on-site groundwater monitoring wells MW1 through MW4 (ERI, April 1999).

Laboratory analysis results of soil samples collected during the environmental work indicate residual hydrocarbons are delineated beneath the site. Laboratory results of groundwater samples collected at the site indicate dissolved hydrocarbons are present in groundwater beneath the site. Groundwater flow direction is typically towards the northeast at a gradient of 0.004 to 0.006.

FIELD WORK

Scope of Work

ERI obtained an encroachment permit from Caltrans, and a right-of-way permit from the City, and obtained a permit to drill the borings and install groundwater monitoring wells from the County Public Works prior to beginning field work. Copies of the permits are provided in Attachment B. ERI performed the field work in general accordance with ERI's Work Plan, dated September 8, 1999, ERI's field protocol (Attachment C), and a site-specific Health and Safety Plan, which was kept on site during field operations.

Soil Borings

On December 8, 1999, ERI observed Woodward Drilling, Inc., (Woodward) of Rio Vista, California, drill two off-site soil borings (MW5 and MW6). Drilling was performed under the guidance of an ERI geologist who collected soil samples from the borings during drilling. Soil samples were collected at approximately 5-foot intervals and above first-encountered groundwater at approximately 5.5 to 20.5 feet bgs.

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). Soil borings MW5 and MW6 were drilled to approximately 21.5 feet bgs.

Monitoring Well Construction, Surveying, Development, and Sampling.

On December 8, 1999, ERI observed Woodward construct groundwater monitoring wells MW5 and MW6, in borings MW5 and MW6, respectively. Well locations are shown on Plate 2. Details of the well construction are shown on the Boring Logs (Attachment D).

On December 10, 1999, Morrow Surveying, Inc., of Sacramento, California, a California-state licensed land surveyor, surveyed the location of wells MW5 and MW6 to a permanent datum and casing elevation relative to mean sea level. ERI coordinated development and sampling of well MW5 and MW6 with Tosco and GRI. On December 14, 1999, GRI developed groundwater monitoring wells MW5 and MW6 and sampled wells MW1 through MW6.

Analytical Methods - Soil Samples

Soil samples collected from off-site borings MW5 and MW6 were not submitted to the laboratory because residual hydrocarbons are delineated on site. ERI collected and submitted a composite soil sample from the drill cutting stockpile under Chain of Custody record to Sequoia Analytical Laboratories Inc. (Sequoia) of Walnut Creek for laboratory analysis of total purgeable petroleum hydrocarbons as gasoline (TPPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and total lead using the methods listed in Table 1. The laboratory analysis results are provided in Attachment E.

RESULTS OF INVESTIGATION

Site Geology

Sediments encountered in borings MW5 and MW6 consist primarily of clay with some sand underlain by poorly graded, fine-grained sand. Groundwater was encountered initially at approximately 9.8 feet bgs in the borings.

Groundwater Conditions

Analytical laboratory results of groundwater samples collected from the previously existing and newlyinstalled groundwater monitoring wells, MW1 through MW6, are included in GRI's Quarterly Monitoring and Sampling Report dated January 4, 1999, as provided in Attachment F. Groundwater flow direction using the existing wells and the newly installed wells (MW5 and MW6) is towards the northwest with a calculated gradient of 0.004.

SOIL STOCKPILE DISPOSAL

Approximately 1.25 tons of soil were generated during drilling activities at the site. The results of laboratory analyses are summarized in Table 1. Copies of laboratory analysis reports are provided in Attachment E.

At Tosco's request, Manley and Sons Trucking, Inc. of Sacramento, California, transported and disposed of the stockpiled soil at Forward Landfill in Manteca, California. The soil disposal documentation is provided in Attachment G.

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. Glenn L. Matteucci, ERI's project manager for this site, at (415) 382-5994 with questions regarding this report.

Sincerely,
Environmental Resolutions, Inc.

Dylan R. Crouse
Staff Geologist

Mark S. Dockum
R.G. 4412
C.E.G. 1675

Attachments: References

Table 1: Analytical Laboratory Results of Soil Samples

Plate 1: Site Vicinity Map
Plate 2: Generalized Site Plan

Attachment A: Alameda County Health Care Services Agency Letters (Dated, July 30, and October 18, 1999)
Attachment B: Copies of 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: Gettler-Ryan Inc. *Fourth Quarter 1999, Groundwater Monitoring and Sampling Report,* dated January 4, 2000
Attachment G: Soil Disposal Documentation

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. October 7, 1999. Proposed Well Locations for Work Plan for Supplemental Evaluation of Groundwater, Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803EC.L03

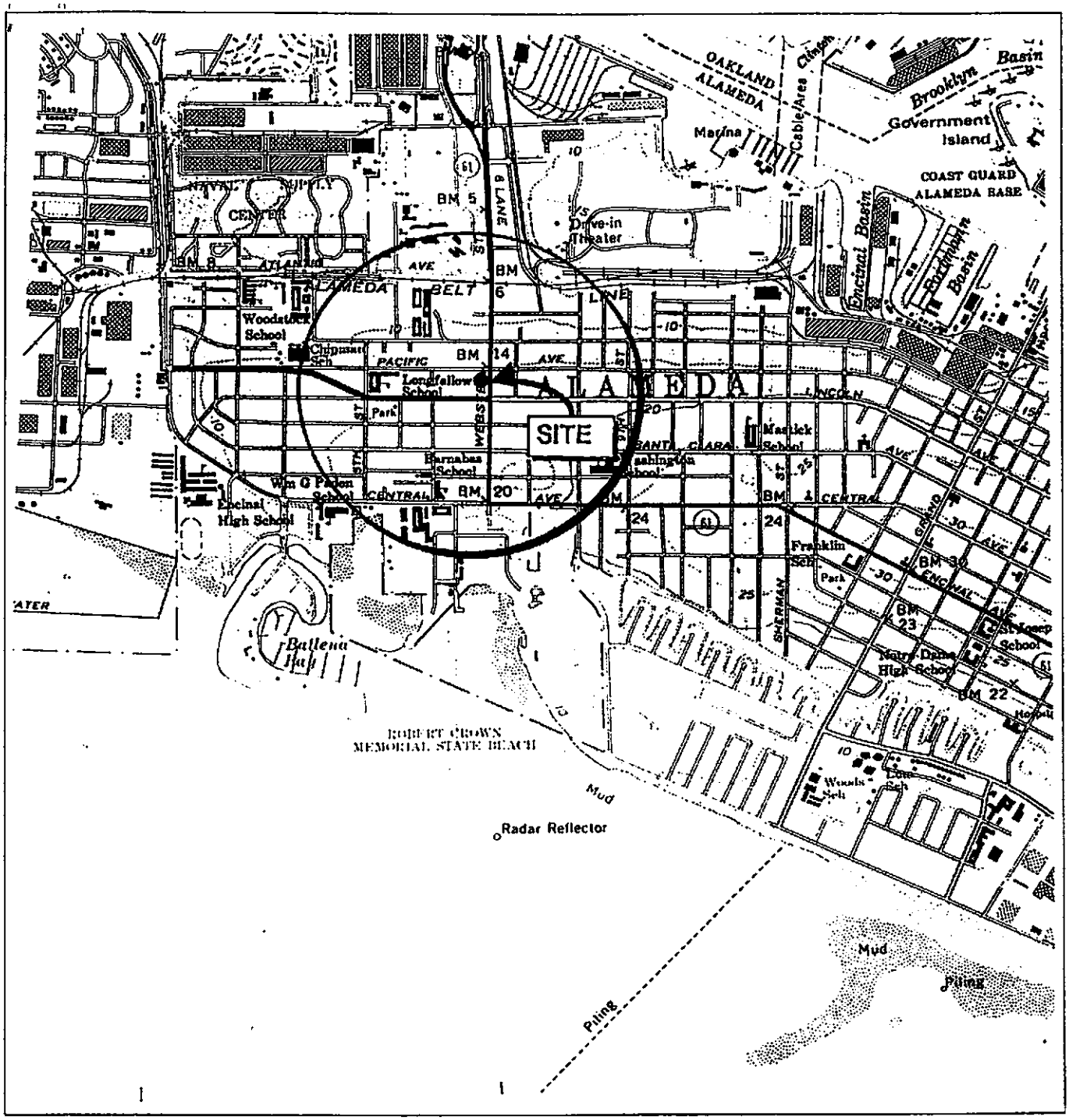
United States Geological Survey. 1980. 7.5-Minute Topographic Quadrangle Map, Oakland West, California.

TABLE 1
ANALYTICAL LABORATORY RESULTS of SOIL SAMPLES
Former Tosco 76 Service Station 0843
1629 Webster Street
Alameda, California

Sample Number	Plate Call-out	Date Sampled	TPPHg	MTBE	B	T	E	X	Lead
			<.....ppm.....>						
Soil-Stockpile									
SP1 (1-4)	----	12/8/99	ND	1.6	ND	ND	ND	0.0064	18

Notes:

ppm	=	Parts per million.
SP1 (1-4)	=	Stock Pile 1, 1 through 4 composite samples.
TPPHg	=	Total purgeable petroleum hydrocarbons as gasoline analyzed using EPA Method 8015/8020 modified.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8015/8020 modified.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8015/8020 modified.
Lead	=	Lead analyzed using EPA method 6010 A.
ND	=	Not detected at or above laboratory reporting limit.
Plate Call-out	=	Location of Sample on Plate 2.
---	=	Not applicable.



FN 22480001

N

APPROXIMATE SCALE

0 1/2 1

MILE

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

ERI ENVIRONMENTAL RESOLUTIONS, INC.

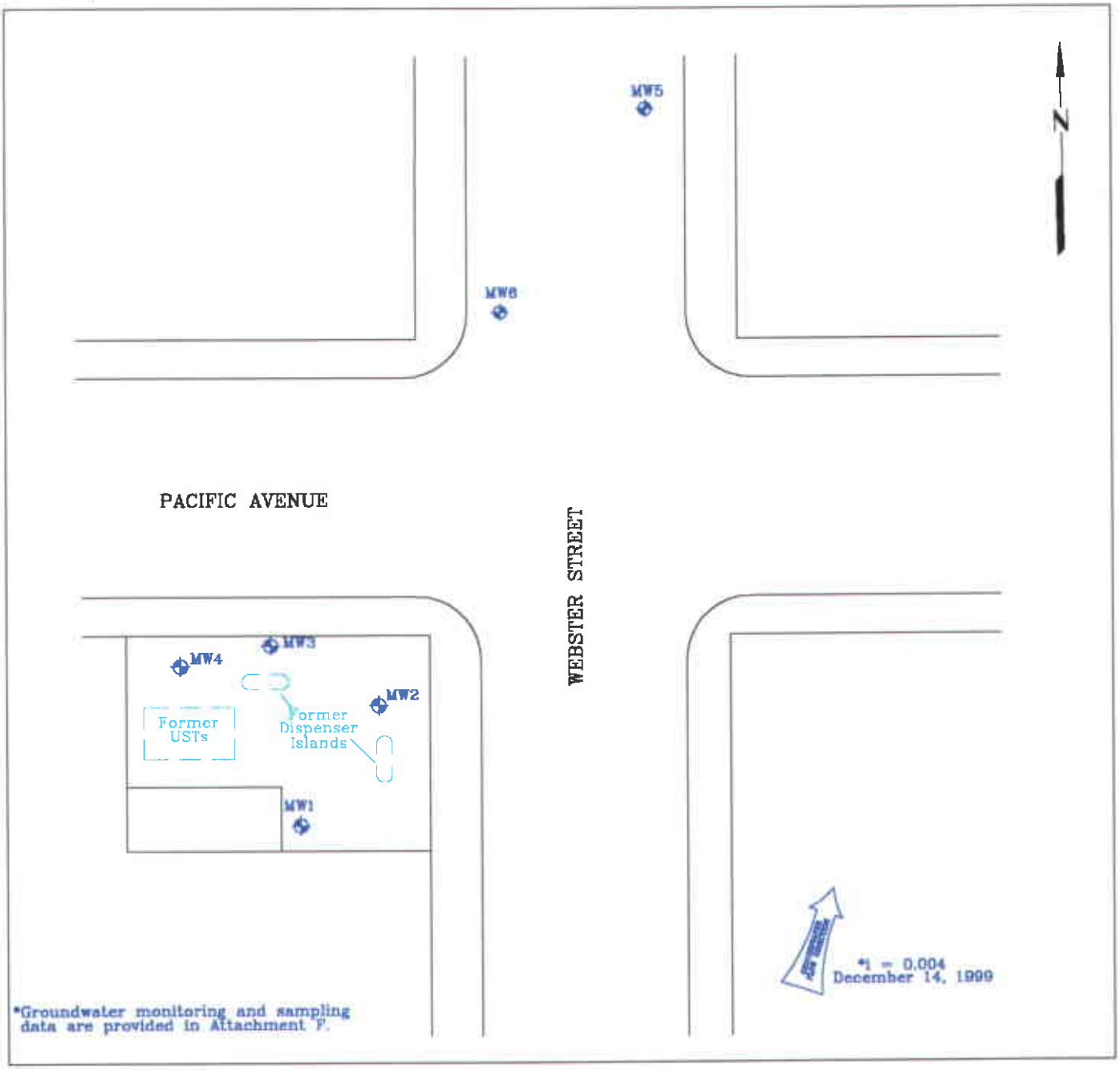
PROJECT ERI 2248

SITE VICINITY MAP

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

PLATE

1



FN 22480003

EXPLANATION

MW6 ◆ Groundwater Monitoring Well

i = Interpreted Groundwater Gradient From the recent Gettler-Ryan Inc. groundwater monitoring and sampling report.

SOURCE: Modified from a map provided by North American Title Company

APPROXIMATE SCALE

0 60 120 FEET

ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

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

PROJECT NO. 2248

PLATE 2

December 9, 1999

ATTACHMENT A

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY LETTERS
(Dated July 30 and October 18, 1999)

224803 T4

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

StID 2067

July 30, 1999

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

RE: Additional Well for 1629 Webster Street, Alameda, CA

Dear Mr. DeWitt:

I have completed review of Gettler-Ryan Inc.'s July 1999 *Second Quarter 1999 Groundwater Monitoring & Sampling Report* prepared for the above referenced site. After two quarterly sampling events, hydrocarbon carbon constituents remain elevated in Well MW-2. Groundwater appears to flow in the northeasterly direction.

At this time, in order to delineate the extent of the contaminant plume, an additional groundwater monitoring well is required northeast of Well MW-2. A workplan for the delineation of the plume is due within 60 days of the date of this letter, **or by October 4, 1999.**

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

RECEIVED
AUG 06 1999
ENV. COMPLIANCE

tosco#0843-3

Post-it™ brand fax transmittal memo 7671 | # of pages ▸

To Glenn M	From Dave D.
Co.	Co.
Dept.	Phone #
Fax #	Fax #

StID 2067

October 18, 1999

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

RE: Workplan Approval for 1629 Webster Street, Alameda, CA

Dear Mr. DeWitt:

I have completed review of ERI's September and October 1999 reports entitled *Work Plan for Supplemental Evaluation of Groundwater* and *Proposed Well Locations for Work Plan for Supplemental Evaluation of Groundwater* prepared for the above referenced site. Two additional groundwater monitoring wells are proposed along the Webster Street right of way. I discussed the relocation of the nearer well to the northwest corner of Webster Street with Mr. Glenn Matteucci. Pending the access agreement with CalTrans, this well may have to be relocated along Park Street.

The workplan to install two wells to delineate the extent of the contaminant plume is acceptable. Field work should commence within 60 days of the date of this letter, or **by December 20, 1999.** Please notify this office at least 72 hours prior to the start of field activities.

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

email: Glenn Matteucci (gmatteucci@eri-us.com)

bp-tosco#0843-4

ATTACHMENT B

COPIES OF PERMITS

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT

TR-0120

d24KUS14

RECEIVED NOV 30 1999

Permit No.	0499-6SV3062
Dist/Co/Rte/PM	04-Ala-260 0.38/0.39
Date	November 19, 1999

Fee Paid	Deposit
$210.00	$140.00
Performance Bond Amount (1)	Payment Bond Amount (2)
$4000.00	
Bond Company	
Safeco Insurance Company of America	
Bond Number (1)	Bond Number (2)
6025666	

In compliance with (*Check one*):

☒ Your application of October 18, 1999

☐ Utility Notice No. ____ of ____

☐ Agreement No. ____ of ____

☐ R/W Contract No. ____ of ____

TO: Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, CA 94583

Attn: Dylan Crouse
Phone (415) 382-4325 , **PERMITTEE**

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

Install two groundwater monitoring wells on Webster Street on State Highway 04-Ala-260, Post Mile 0.38/0.39, in the City of Oakland.

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, CA 94579, 510-614-5951, weekdays, between 8:00 AM and 4:30 PM.

All personnel working within the State right of way shall wear hard hats and orange vets, shirt or jackets as appropriate during construction.

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

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

Yes	No	
☒ Yes	☐ No	General Provisions
☐ Yes	☒ No	Utility Maintenance Provisions
☐ Yes	☒ No	Special Previsions
☐ 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	
☐ 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, 2004

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: [signature]

G. J. BATTAGLINI, District Permit Engineer

Name: Tosco Marketing Company
Permit #: 0499-6SV3062
Date: November 19, 1999

Shoulder closure is authorized only between 9:00 A.M. and 3:00 P.M., Monday through Friday, holidays excluded. This permit does not authorized lane closures

Shoulder closures will be as shown on the attached copy of Standard Plan Sheet T-10.

No excavation shall be left open overnight without written permission from the Caltrans representative or unless otherwise specified herein.

The site of the work shall be enclosed by suitable barricades, signs and lights, as approved by State's representative, to warn and protect traffic effectively.

Excavations made within the limits of the highway shall be backfilled before leaving the work for the night unless otherwise authorized by State's representative. After backfilling the trench, temporary surfacing shall be placed if required by State's representative.

Any damage to existing facilities, landscaping or irrigation within the State's Right of Way shall be replaced in kind by the permittee at permittee's expense.

All painted markings shall be made with water soluble paint.

Certain details of work authorized hereby are shown on permittee's plans submitted with the request for permit.

This permit does not authorize tree trimming or tree removal.

Monitoring wells shall not be installed in the travelling lanes. Their location shall be approved by State Representative before starting the work

Upon request by Caltrans, Permittee shall provide a copy of the collected data at no charge to Caltrans.

Drainage of treated or untreated effluent into the State drainage system is not permitted.

Bentonite material on the median shall be removed after well abandonment.

Upon completion of observation and testing, the well shall be abandoned in compliance with the requirements of the Department of Water Resources publication "Water Well Standards - State of California " Bulletin 74-81, latest edition.

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

CITY OF ALAMEDA

Public Works Department

(510) 749-5840
Fax (510) 749-5867

Printed: ***12-06-1999***

Encroachment Permit

Permit #
EN99-074

Applicant
ENVIRONMENMETAL RESOLUTIONS
73 DIGITAL DRIVE SUITE 100
NOVATO, CA

415-382-9105

Contractor Information

Owner Information
DOGGIE DINER INC
OGDEN CORP/TX DEPT
2 PENN PLZ
NEW YORK NY
10121

Project Information
ENCROACH - Encroachment Permit - ***APPROVED***
Sub-Type:

Applied: **10/29/1999**
Finaled:

Issued: **12/6/1999**
Expires: **12/5/2000**
Valuation: **$0.00**

Job Address: **1700 WEBSTER ST**
Suite / Unit:
Work Description: **EXCAVATE/ENCROACH-2 MONITORING WELLS**

Parcel Number: **073 041701201**

Total Fees:	$52.00
Total Payments:	$52.00
BALANCE DUE	**$0.00**

Payments Made: 12/6/1999 10:54 AM
Total Payment: **$52.00**

RECEIPT

Receipt #: R99006498
Payee: ENVIRONMENTAL RESOLUTIONS

Current Payment Made to the Following Items:

Account Code	Description	Amount
224-37330 (8763)	Parking Meter Revenue	9.00
4520-33410 (1011)	Encroachment Fees	8.00
4520-37450 (1050)	Permit Filing Fees	20.00
99409-37900 (1464)	Microfiche / Scanning	15.00

Payments Made for this Receipt:

Type	Method	Description	Amount
Payment	Credit C	CREDIT	52.00

Account Summary for Fees and Payments:

Item#	Description	Account Code	Tot Fee	Paid	Prev. Pmts	Cur. Pmts
240	Encroachment Fees	4520-33410 (1011)	8.00	8.00	.00	8.00
250	Permit Filing Fees	4520-37450 (1050)	20.00	20.00	.00	20.00
620	Microfiche / Scanning	99409-37900 (1464)	15.00	15.00	.00	15.00
1150	Parking Meter Revenue	224-37330 (8763)	9.00	9.00	.00	9.00

INSPECTIONS **510-749-5840**
Call for an inspection when work is complete.

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

Date

Inspector

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

CITY OF ALAMEDA

Public Works Department

(510) 749-5840

Fax (510) 749-5867

Printed: ***12-06-1999***

Right-of-Way Permit

Permit #
EX99-0073

Applicant
ENVIRONMENMETAL RESOLUTIONS
73 DIGITAL DRIVE SUITE 100
NOVATO, CA

415-382-9105

Contractor Information

Owner Information
DOGGIE DINER INC
OGDEN CORP/TX DEPT
2 PENN PLZ
NEW YORK NY
10121

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

Applied: **10/29/1999**
Finaled:

Issued: **12/6/1999**
Expires: **12/5/2000**
Valuation: **$0.00**

Job Address: **1700 WEBSTER ST**
Suite / Unit:
Work Description: **EXCAVATE/ENCROACH-2 MONITORING WELLS**

Parcel Number: **073 041701201**

Total Fees:	$35.00
Total Payments:	$35.00
BALANCE DUE	**$0.00**

Payments Made: 12/6/1999 10:56 AM

RECEIPT

Receipt #: R99006499

Total Payment: **$35.00**

Payee: ENVIRONMENTAL RESOLUTIONS

Current Payment Made to the Following Items:

Account Code	Description	Amount
4520-37450 (1050)	Permit Filing Fees	20.00
99409-37900 (1464)	Microfiche / Scanning	15.00

Payments Made for this Receipt:

Type	Method	Description	Amount
Payment	Credit C	CREDIT	35.00

Account Summary for Fees and Payments:

Item#	Description	Account Code	Tot Fee	Paid	Prev. Pmts	Cur. Pmts
250	Permit Filing Fees	4520-37450 (1050)	20.00	20.00	.00	20.00
620	Microfiche / Scanning	99409-37900 (1464)	15.00	15.00	.00	15.00

**** 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

224803T4

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-6575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Former Tosco 76 SS# 0843
1629 Webster St.
Alameda, California

California Coordinates Source ___ ft. Accuracy ± ___ ft.
CCN ___ ft. CCE ___ ft.
APN ___

CLIENT
Name Tosco Marketing Company. Attn: Dave DeWitt
Address 2000 Crow Canyon Phone 925-277-2384
City San Ramon CA Zip 94583

APPLICANT
Name Environmental Resolutions, Inc
Dylan Crouse @ Fax 415 382-1856
Address Digital Dr 74 Suite 6 Phone 415 382-9105
City Novato Zip 94925

TYPE OF PROJECT
Well Construction
- Cathodic Protection ☐
- Water Supply ☐
- Monitoring ☒

Geotechnical Investigation
- General ☐
- Contamination ☐
- Well Destruction ☐

PROPOSED WATER SUPPLY WELL USE
- New Domestic ☐
- Municipal ☐
- Industrial ☐
- Replacement Domestic ☐
- Irrigation ☐
- Other ___ ☐

DRILLING METHOD:
- Mud Rotary ☐
- Cable ☐
- Air Rotary ☐
- Other ☐
- Auger ☒

DRILLER'S LICENSE NO. 710079

WELL PROJECTS
Drill Hole Diameter 8 in.
Casing Diameter 2 in.
Surface Seal Depth 4 ft.
Maximum Depth 20 ft.
Number 2

GEOTECHNICAL PROJECTS
Number of Borings ___
Hole Diameter ___ in.
Maximum Depth ___ ft.

ESTIMATED STARTING DATE 12-8-99
ESTIMATED COMPLETION DATE 12-8-99

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

APPLICANT'S SIGNATURE Dylan Crouse DATE ___

FOR OFFICE USE

PERMIT NUMBER 99WR691
WELL NUMBER ___
APN ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

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 work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

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.

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.

D. GEOTECHNICAL
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED Frank L. Codd DATE 12-7-99

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 Sampling

Prior to drilling of borings and construction of wells, ERI acquires necessary permits from the appropriate agency(ies). ERI also contacts Underground Service Alert (USA) and a private utility locator before drilling to help locate public utility lines at the site. ERI observes the driller hand-probe and hand-auger boring locations to a depth of approximately 5 feet bgs and a diameter greater than the soil boring diameter before drilling to reduce the risk of damaging underground structures.

Soil borings are drilled with a B-57 (or similar) drill rig equipped with 8-inch diameter, 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 will coordinate with Tosco for appropriate recycling or disposal of the rinsate.

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 drilled to approximately 10 feet below the uppermost zone of saturation or 5 feet into any competent clay layer (aquitard) encountered beneath the water-bearing zone. If an aquitard is encountered, the boring is terminated and backfilled with bentonite before installing a groundwater monitoring well.

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 detector (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 analyses 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 in our report. Cuttings generated during drilling are placed on

plastic sheeting and covered and left at the site. ERI coordinates with Tosco for the soil to either be treated on site or removed to an appropriate recycling or disposal facility.

Monitoring Well Construction

Monitoring wells are constructed in borings using thread-jointed, 2-inch inner diameter, Schedule 40 polyvinyl chloride (PVC) casing. No chemical cements, glues, or solvents are used in well construction. The screened portion of each well consists of factory-perforated casing with 0.010-inch wide slots. If unconfined aquifer conditions exist, the well screen is installed from the total depth of each well to approximately 10 feet above the uppermost water-bearing unit. If confined conditions exist, the uppermost water-bearing unit is screened exclusively. Unperforated casing is installed from the top of each screen to the ground surface. The annular space in the well is packed with number 2/12 sand to approximately 1 to 2 feet above the slotted interval. A bentonite plug is added above the sand pack to prevent cement from entering the well pack. The remaining annulus is backfilled to grade with a slurry of Portland cement.

The monitoring wells are protected with a traffic-rated steel utility box equipped with a galvanized sheet steel skirt. The box has a watertight seal to protect against surface-water infiltration. The design of this box discourages vandalism and reduces the possibility of accidental disturbance of the well.

ATTACHMENT D

UNIFIED SOIL CLASSIFICATION SYSTEM, SYMBOL KEY, AND BORING LOGS

UNIFIED SOIL CLASSIFICATION SYSTEM

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

DEPTH THROUGH WHICH SAMPLER IS DRIVEN

RELATIVELY UNDISTURBED SAMPLE

MISSED SAMPLE

GROUNDWATER LEVEL OBSERVED FROM FIRST WET SOIL SAMPLE IN BORING

STATIC GROUNDWATER LEVEL

OVM — ORGANIC VAPOR METER READING IN PARTS PER MILLION

PID — PHOTO-IONIZATION DETECTOR READING IN PARTS PER MILLION

WELL DESIGN

SAND PACK

BENTONITE ANNULAR SEAL

NEAT CEMENT ANNULAR SEAL

BLANK PVC

MACHINE-SLOTTED PVC

S-10 — SAMPLE LOCATION

NR — NOT RECORDED

NA — NOT ANALYZED

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.

ENVIRONMENTAL RESOLUTIONS, INC.

PROJECT 2248

UNIFIED SOIL CLASSIFICATION SYSTEM AND LOG OF BORINGS SYMBOL KEY

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

ATTACHMENT D

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: MW5 Plate: APPENDIX
Site: Former Tosco 76 Service Station 0843 Date: 12/8/99
Drill Contractor: Woodward Drilling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: 6.3 Feet from Curb 215 North and 95 Feet East of Northeast Site Boundary Registration: R.G. 4412
Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						1' asphalt Fill, sand	
5	9	0			CL	*Sand with some clay, olive gray, moist, slight plasticity, (25% clay, 75% sand), very fine-grained	
10	26	0			SM	Sand with some silt, yellowish orange, (25% silt, 75% sand), very fine-grained, wet, red staining	
15	36	0				same as above	
20	50	0				same as above	
						Total depth at 21.5 feet. First encountered groundwater at 10 feet. Static groundwater at 6.9 feet.	

*Soil description modified following field work.
Original field log available upon request from ERI.

Casing Diameter: 2" Slot Size: 010 , Sand Size: 2/12 , Grout: Portland I,II

FN: 22480006

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2248 Boring: MW6 Plate: APPENDIX
Site: Former Tosco 76 Service Station 0843 Date: 12/8/99
Drill Contractor: Woodward Drilling
Sample Method: Split Spoon Geologist: MARK S. DOCKUM
Drill Rig: B57 Bore Hole Diameter: 8" Signature
Location: 6.5 Feet from Curb 130 Feet North and 18 Feet East of Northeast Site Boundary Registration: R.G. 4412
Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6" asphalt, 6" concrete Fill, sand with some gravel	
5	8					no recovery Sand with some silt, yellowish orange, (25% silt, 75% sand), very fine-grained, wet	
10	21	5			SM	same as above	
15	19	28				same as above	
20	80	3				same as above	
						Total depth at 21.5 feet. First encountered groundwater at 9.8 feet.	

Casing Diameter: 2' Slot Size: 0.010 , Sand Size: 2/12 , Grout: Portland I,II

FN: 22488006

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

23 December, 1999

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

RE: Tosco

Enclosed are the results of analyses for samples received by the laboratory on 10-Dec-99 13:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Dimple Sharma
Project Manager

Sequoia Analytical

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

Environmental Resolutions	Project: Tosco	
73 Digital Drive, Suite 100	Project Number: Tosco # 0843	**Reported:**
Novato CA, 94949	Project Manager: Glenn Matteucci	23-Dec-99 11:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP1 (1-4)	W912244-01	Soil	08-Dec-99 14:30	10-Dec-99 13:40

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.

Dimple Sharma, Project Manager

Sequoia Analytical

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

Environmental Resolutions	Project: Tosco	
73 Digital Drive, Suite 100	Project Number: Tosco # 0843	**Reported:**
Novato CA, 94949	Project Manager: Glenn Matteucci	23-Dec-99 11:37

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
SP1 (1-4) (W912244-01) Soil	**Sampled: 08-Dec-99 14:30**	**Received: 10-Dec-99 13:40**							
Purgeable Hydrocarbons	ND	1.0	mg/kg	20	9L17002	17-Dec-99	17-Dec-99	EPA	
Benzene	ND	0.0050	"	"	"	"	"	8015/8020	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.0064**	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**1.6**	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*107 %*	*40-140*		"	"	"	"	

Dimple Sharma, Project Manager

Sequoia Analytical

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

Environmental Resolutions	Project: Tosco	
73 Digital Drive, Suite 100	Project Number: Tosco # 0843	**Reported:**
Novato CA, 94949	Project Manager: Glenn Matteucci	23-Dec-99 11:37

Total Metals by EPA 6000/7000 Series Methods

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP1 (1-4) (W912244-01) Soil Sampled: 08-Dec-99 14:30 Received: 10-Dec-99 13:40									
Lead	**18**	1.0	mg/kg	1	9L14029	14-Dec-99	16-Dec-99	EPA 6010A	

Dimple Sharma, Project Manager

Sequoia Analytical

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

Environmental Resolutions	Project: Tosco	
73 Digital Drive, Suite 100	Project Number: Tosco # 0843	**Reported:**
Novato CA, 94949	Project Manager: Glenn Matteucci	23-Dec-99 11:37

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
Batch 9L17002: Prepared 17-Dec-99 Using EPA 5030B [MeOH]										
Blank (9L17002-BLK1)										
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: a,a,a-Trifluorotoluene	*0.776*		"	*0.600*		*129*	*40-140*			
LCS (9L17002-BS1)										
Benzene	0.842	0.0050	mg/kg	0.800		105	50-150			
Toluene	0.836	0.0050	"	0.800		105	50-150			
Ethylbenzene	0.844	0.0050	"	0.800		105	50-150			
Xylenes (total)	2.53	0.0050	"	2.40		105	50-150			
Surrogate: a,a,a-Trifluorotoluene	*0.646*		"	*0.600*		*108*	*40-140*			
Matrix Spike (9L17002-MS1)					**Source: W912331-05RE1**					
Benzene	0.876	0.0050	mg/kg	0.800	ND	109	50-150			
Toluene	0.878	0.0050	"	0.800	ND	110	50-150			
Ethylbenzene	0.882	0.0050	"	0.800	ND	110	50-150			
Xylenes (total)	2.70	0.0050	"	2.40	ND	112	50-150			
Surrogate: a,a,a-Trifluorotoluene	*0.596*		"	*0.600*		*99.3*	*40-140*			
Matrix Spike Dup (9L17002-MSD1)					**Source: W912331-05RE1**					
Benzene	0.884	0.0050	mg/kg	0.800	ND	110	50-150	0.909	20	
Toluene	0.880	0.0050	"	0.800	ND	110	50-150	0.228	20	
Ethylbenzene	0.878	0.0050	"	0.800	ND	110	50-150	0.455	20	
Xylenes (total)	2.68	0.0050	"	2.40	ND	112	50-150	0.743	20	
Surrogate: a,a,a-Trifluorotoluene	*0.562*		"	*0.600*		*93.7*	*40-140*			

Dimple Sharma, Project Manager

Sequoia Analytical

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

Environmental Resolutions	Project: Tosco	
73 Digital Drive, Suite 100	Project Number: Tosco # 0843	**Reported:**
Novato CA, 94949	Project Manager: Glenn Matteucci	23-Dec-99 11:37

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 9L14029: Prepared 14-Dec-99 Using EPA 3050B										
Blank (9L14029-BLK1)										
Lead	ND	1.0	mg/kg							
LCS (9L14029-BS1)										
Lead	45.1	1.0	mg/kg	50.0		90.2	80-120			
LCS Dup (9L14029-BSD1)										
Lead	44.6	1.0	mg/kg	50.0		89.2	80-120	1.11	20	
Matrix Spike (9L14029-MS1)					**Source: W912278-01**					
Lead	88.0	1.0	mg/kg	50.0	31	114	80-120			
Matrix Spike Dup (9L14029-MSD1)					**Source: W912278-01**					
Lead	84.5	1.0	mg/kg	50.0	31	107	80-120	4.06	20	

Dimple Sharma, Project Manager

Sequoia Analytical

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

Environmental Resolutions	Project: Tosco	
73 Digital Drive, Suite 100	Project Number: Tosco # 0843	**Reported:**
Novato CA, 94949	Project Manager: Glenn Matteucci	23-Dec-99 11:37

Notes and Definitions

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

Dimple Sharma, Project Manager

N. 000625

TOSCO

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: ERI	Project Name: Former Tosco 76 SS 0893
Address: 73 Digital Drive, suite 100	TOSCO Engineer (required) 2480315
City: Novato State: CA Zip Code: 94949	DAVE DeWitt
Telephone: 415-382-9105 FAX #: 382-1856	Site #, City, State: 0843 W9/2744
Report To: G. Matteucci Sampler: D. Crouse	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

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

☐ Drinking Water ☐ Waste Water ☒ Other

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

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH (EPA 8015 Mod. Gas)	BTEX (EPA 8020)	MTBE (EPA 8020)	TPH (EPA 8015 Mod. Diesel)	Volatile Organics (EPA 8260)	MTBE Confirmation (EPA 8260)	Lead 6010		Comments
1. S-MW5-MW6	12/8/99 11:20	Soil	1	Brass Sleeve										hold
2. S-15.5-MW6	11:25		1											hold
3. S-20.5-MW6	11:33		1											hold
4. S-6-MW5	11:20		1											hold
5. S-10.5-MW5	1330		1											hold
6. S-15.5-MW5	1335		1											hold
7. S-20.5-MW5	1340		1											hold
8. SP1-(1-4)			4		01A-D	X	X	X				X		Composite
9.														
10.														

Pink - Client
Yellow - Sequoia
White - Sequoia

Relinquished By: Refrigerate 12/8/99	Date: 12/8/99	Time:	Received By: PET	Date: 12/10/99	Time: 13:40
Relinquished By: Carl Hansman	Date: 12/10/99	Time: 14:30	Received By:	Date: 12-10	Time: 1445
Relinquished By:	Date: 12/10	Time:	Received By: (this)	Date: 12/10	Time: 16:00

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: Glenn Matteucci Signature: _____ Company: ERI Date: 12/16

12/23/99 12:29 :05/05 NO:787

ATTACHMENT F

GETTLER-RYAN INC. *FOURTH QUARTER 1999, GROUNDWATER MONITORING AND SAMPLING REPORT* (dated, January 4, 1999)

GETTLER-RYAN INC.

January 4, 2000
G-R Job #180203

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

RE: 1999 Groundwater Monitoring & Sampling Report
Former Tosco 76 Service Station #0843
1629 Webster Street
Alameda, California

Dear Mr. De Witt:

This report documents well development and the groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On December 14, 1999, field personnel developed two wells (MW-5 and MW-6) and monitored and sampled six wells (MW-1 through MW-6) and at the above referenced site.

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

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

Sincerely,

Deanna L. Harding

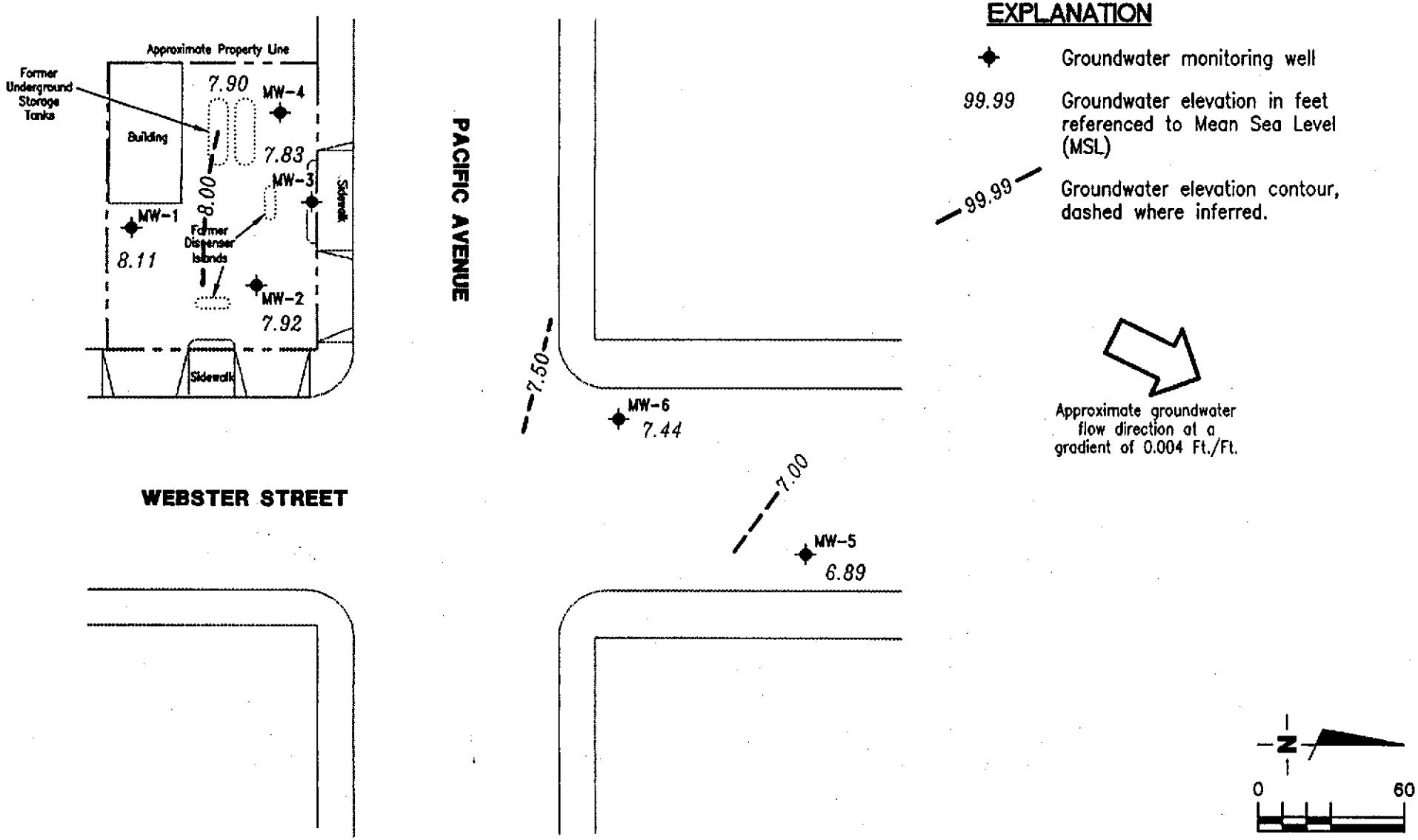
Deanna L. Harding
Project Coordinator

Douglas J. Lee
Senior Geologist, R.G. No. 6882

REGISTERED GEOLOGIST
DOUGLAS J. LEE
No. 6882
STATE OF CALIFORNIA

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

0843.qml



Base Map: ERI, Generalized Site Plan, dated 12/09/99

Gettler - Ryan Inc.

6747 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

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180203		December 14, 1999	

Table 1

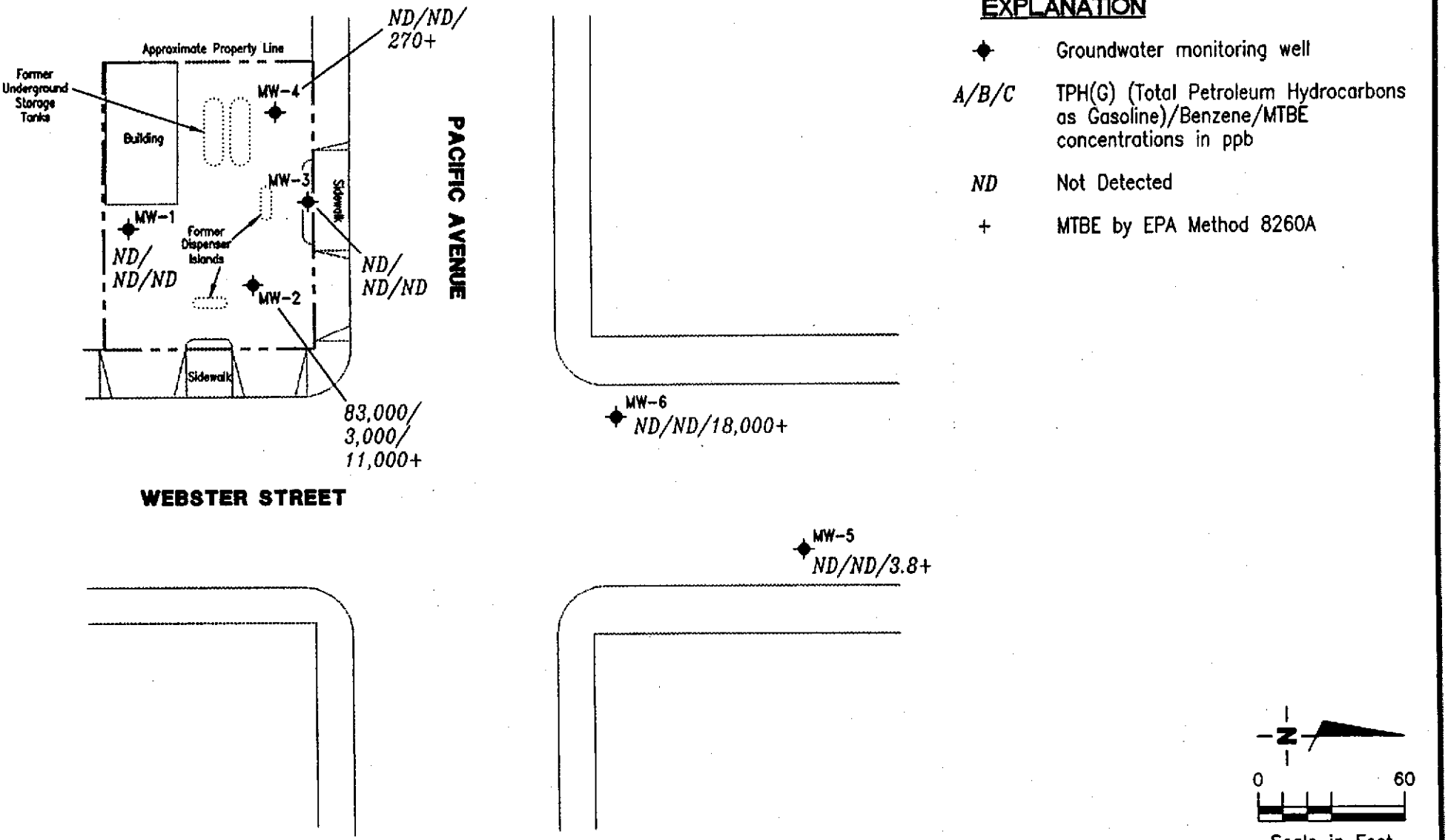
Groundwater Monitoring Data and Analytical Results

Former Tosco 76 Service Station #0843

1629 Webster Street

Alameda, California

Well ID/ TOC*	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]
16.18	**12/14/99**	**8.07**	**8.11**	**ND**	**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]
15.57	**12/14/99**	**7.65**	**7.92**	**83,000[5]**	**3,000**	**22,000**	**4,500**	**17,000**	**9,100/11,000[2]**
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]
15.11	**12/14/99**	**7.28**	**7.83**	**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]
15.17	**12/14/99**	**7.27**	**7.90**	**ND**	**ND**	**ND**	**ND**	**ND**	**200/270[2]**
MW-5									
13.34	**12/14/99**	**6.45**	**6.89**	**ND**	**ND**	**ND**	**ND**	**ND**	**3.5/3.8[2]**
MW-6									
14.08	**12/14/99**	**6.64**	**7.44**	**ND**	**ND**	**ND**	**ND**	**ND**	**11,000/18,000[2]**



Base Map: ERI, Generalized Site Plan, dated 12/09/99

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

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

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180203		December 14, 1999	

Table 1

Groundwater Monitoring Data and Analytical Results

Former Tosco 76 Service Station #0843

1629 Webster Street

Alameda, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
Trip Blank									
TB-LB	03/05/99[1]	--	--	ND	ND	ND	ND	ND	ND[2]
	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**

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 elevation
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
TPH(G) = Total Petroleum Hydrocarbons as Gasoline

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether

ppb = Parts per billion
ND = Not Detected
-- = Not Measured/Not Analyzed

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

[1] Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8260A.

[2] MTBE by EPA Method 8260A.

[3] Laboratory report indicates weathered gasoline C6-C12.

[4] Laboratory report indicates chromatogram pattern C6-C12.

[5] Laboratory report indicates gasoline C6-C12.

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]**
MW-3	09/02/99	ND	ND	11.0	ND	ND	ND	--	--
MW-4	09/02/99	ND	ND	27.0	ND	ND	ND	--	--
	12/14/99	**--**	**--**	**270**	**--**	**--**	**--**	**--**	**--**
MW-5	**12/14/99**	**--**	**--**	**3.8**	**--**	**--**	**--**	**--**	**--**
MW-6	**12/14/99**	**--**	**--**	**18,000**	**--**	**--**	**--**	**--**	**--**

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 = Ethylene dibromide
ppb = Parts per billion
ND = Not Detected
-- = Not Analyzed

[1] Detection limit raised. Refer to analytical reports.

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

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

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility: Former Tosco #0843 — Job#: 180203

Address: 1629 Webster St. — Date: 12/14/99

City: Alameda, CA — Sampler: HAIG KEVORK

Well ID: MW- 1 — Well Condition: OK

Well Diameter: 2 in. — Hydrocarbon Thickness: Ø (feet) — Amount Bailed (product/water): Ø (Gallons)

Total Depth: 20.50 ft.

Depth to Water: 8.07 ft.

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

12.43 X VF 0.17 = 2.1 X 3 (case volume) = Estimated Purge Volume: 6.3 (gal.)

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

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

Starting Time: 12:50 — Weather Conditions: SUNNY

Sampling Time: 13:05 — Water Color: _____ Odor: _____

Purging Flow Rate: 1-1.25 gpm. — Sediment Description: _____

Did well de-water? _____ — If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F C°	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:52	2	8.10	367	19.2			
	4	8.02	352	18.8			
12:57	6	7.95	344	18.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 1	2 VOA	Y	HCl	SEQUOIA	TPHGas/Btex/Mtbe

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility: Former Tosco #0843 — Job#: 180203

Address: 1629 Webster St. — Date: 12/14/99

City: Alameda, CA — Sampler: HAIG KEVORK

Well ID: MW-2 — Well Condition: OK

Well Diameter: 2 in. — Hydrocarbon Thickness: Ø (feet) — Amount Bailed (product/water): Ø (Gallons)

Total Depth: 20.50 ft.

Depth to Water: 7.65 ft.

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

12.85 x VF 0.17 = 2.1 X 3 (case volume) = Estimated Purge Volume: 6.5 (gal.)

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

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

Starting Time: 14:30 — Weather Conditions: SUNNY

Sampling Time: 14:45 — Water Color: _____ — Odor: _____

Purging Flow Rate: 1-1.25 gpm. — Sediment Description: _____

Did well de-water? NO — If yes; Time: _____ — Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F C°	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
14:32	2	7.35	552	18.7			
	4	7.27	545	19.2			
14:38	6	7.23	540	19.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	4 VOA	Y	HCl	SEQUOIA	TPHGas/Btex/Mtbe
					6OXYS/1,2 DCA
					EDB BY 8260

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility Former Tosco #0843 Job#: 180203

Address: 1629 Webster St. Date: 12/14/99

City: Alameda, CA Sampler: HAIG KEVORK

Well ID MW-3 Well Condition: OK

Well Diameter 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)

Total Depth 20.50 ft.

Depth to Water 7.28 ft.

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

13.22 x VF 0.17 = 2.2 X 3 (case volume) = Estimated Purge Volume: 6.6 (gal.)

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

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

Starting Time: 13:23 Weather Conditions: SUNNY

Sampling Time: 13:40 Water Color: _____ Odor: _____

Purging Flow Rate: 1-1.25 gpm. Sediment Description: _____

Did well de-water? NO If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F / °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
13:25	2.5	7.82	382	18.7			
	5	7.45	374	18.6			
13:31	6.5	7.70	369	18.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	2 VOA	Y	HCl	SEQUOIA	TPHGas/Btex/Mtbe

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility: Former Tosco #0843 Job#: 180203

Address: 1629 Webster St. Date: 12/14/99

City: Alameda, CA Sampler: HAIG KEVORK

Well ID: MW- 4 Well Condition: OK

Well Diameter: 2 in. Hydrocarbon Thickness: Ø (feet) Amount Bailed (product/water): Ø (Gallons)

Total Depth: 20.50 ft.

Depth to Water: 7.27 ft.

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

13.23 x VF 0.17 = 2.2 X 3 (case volume) = Estimated Purge Volume: 6.6 (gal.)

Purge Equipment: Bailer — Disposable Bailer; (Stack); Suction; Grundfos; Other: _____

Sampling Equipment: (Disposable Bailer); Bailer; Pressure Bailer; Grab Sample; Other: _____

Starting Time: 13:55 Weather Conditions: SUNNY

Sampling Time: 14:10 Water Color: _____ Odor: _____

Purging Flow Rate: 1~1.25 gpm. Sediment Description: _____

Did well de-water? NO If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F C°	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
13:57	2.5	7.48	895	19.7			
	5	7.39	901	19.4			
14:03	6.5	7.35	904	19.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 4	2 VOA	Y	HCl	SEQUOIA	TPHGas/Btex/Mtbe

COMMENTS: _____

WELL MONITORING/DEVELOPMENT
FIELD DATA SHEET

Client/
Facility Former Tosco #0843 Job#: 180203

Address: 1629 Webster St. Date: 12/14/99

City: Alameda, CA Sampler: HAIG KEVORK

Well ID MW- 5 Well Condition: NEW

Well Diameter 2 in. Hydrocarbon Thickness: Ø Ft. Amount Bailed (product/water): Ø (gal.)

Total Depth 20.22 ft.

Depth to Water 6.45 ft.

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

13.77 x VF 0.17 = 2.3 X 10 (case volume) = Estimated Purge Volume: 23 (gal.)

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

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

Starting Time: 15:00 Weather Conditions: SUNNY

Sampling Time: 15:45 Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? NO If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
15:05	2.5	8.10	972	18.9			
	5	7.88	1030	19.6			
	8	7.76	1040	19.2			
	12	7.70	1010	19.8			
	16	7.67	990	19.5			
	20	7.62	980	19.6			
15:37	23	7.60	960	19.5			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 5	2 VOA	Y	HCl	Sequoia	TPHGas/Btex/Mtbe

COMMENTS: _____

WELL MONITORING/DEVELOPMENT
FIELD DATA SHEET

Client/
Facility Former Tosco #0843 Job#: 180203

Address: 1629 Webster St. Date: 12/14/99

City: Alameda, CA Sampler: HAIG KEVORK

Well ID MW-6 Well Condition: NEW

Well Diameter 2 in. Hydrocarbon Thickness: Ø Ft. Amount Bailed (product/water): Ø (gal.)

Total Depth 20.15 ft.

Depth to Water 6.64 ft.

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

13.51 X VF 0.17 = 2.29 X 10 (case volume) = Estimated Purge Volume: 23 (gal.)

Purge Equipment: Disposable Bailer; [x] Bailer; [x] Stack; Suction; Grundfos; Other:

Sampling Equipment: [x] Disposable Bailer; Bailer; Pressure Bailer; Grab Sample; Other:

Starting Time: 16:00 Weather Conditions: SUNNY

Sampling Time: 16:40 Water Color: Odor:

Purging Flow Rate: gpm. Sediment Description:

Did well de-water? NO If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
16:04	2.5	7.89	1040	18.2			
	5	7.80	980	17.8			
	8	7.62	960	17.6			
	12	7.58	940	17.5			
	16	7.54	940	17.3			
	20	7.49	930	17.6			
16:32	23	7.46	920	17.5			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	2 VOA	Y	HCl	Sequoia	TPHGas/Btex/Mtbe

COMMENTS:

TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number: TOSCO (Former 76) SS #0843
Facility Address: 1629 Webster Street, ALAMEDA CA
Consultant Project Number: 180023.85
Consultant Name: Gettler-Ryan Inc. (G-R Inc.)
Address: 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name): Deanna L. Harding
(Phone): 925-551-7555 (Fax Number): 925-551-7888

Contact (Name): Mr. [redacted]
(Phone): (916) 774-2910
Laboratory Name: Sequoia Analytical
Laboratory Release Number: W912-320
Samples Collected by (Name): HAIG KEVORK
Collection Date: 12/14/1999
Signature: [signature]

DO NOT BILL TB-LB ANALYSIS

Analyses To Be Performed

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	TPH Gas + BTEX w/MTBE (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	6 Oxy's Compounds + 1,2 DCA/EDB by 8260	Remarks
TB-LB	01A	1	W	G		HCl	YES	✓									Run mtbe
MW-1	02 A-B	2	W	G	13:05	↓	↓	✓									by 8260
MW-2	03 A-D	4	W	G	14:45	↓	↓	✓								✓	on ANY
MW-3	04 A-B	2	W	G	13:40	↓	↓	✓									8020 mtbe
MW-4	05	2	W	G	14:10	↓	↓	✓									hit.
MW-5	06	2	W	G	15:45	↓	↓	✓									Thank you.
MW-6	07	2	W	G	16:40	↓	↓	✓									Oh

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	G-R Inc.	12/15/99 0800	Jean Weber	G-R INC.	12/15/99 0800
Jean Weber	G-R INC.	12/15/99 0900	[signature]	Seq. An.	12/15/99 12:20
[signature]	Seq. An.	12/15/99 12:50	Received For Laboratory By (Signature): [signature]		12/15 12:50

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted (circled)

Sequoia Analytical

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

29 December, 1999

Deanna L. Harding
Gettler Ryan, Inc. - Dublin
6747 Sierra Court Suite J
Dublin, CA 94568

RE: Tosco

Enclosed are the results of analyses for samples received by the laboratory on 15-Dec-99 12:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alan B. Kemp
Laboratory Director

Sequoia Analytical

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

Gettler Ryan, Inc. - Dublin	Project: Tosco	
5747 Sierra Court Suite J	Project Number: Tosco # 0843	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	29-Dec-99 09:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W912320-01	Water	14-Dec-99 00:00	15-Dec-99 12:50
MW-1	W912320-02	Water	14-Dec-99 13:05	15-Dec-99 12:50
MW-2	W912320-03	Water	14-Dec-99 14:45	15-Dec-99 12:50
MW-3	W912320-04	Water	14-Dec-99 13:40	15-Dec-99 12:50
MW-4	W912320-05	Water	14-Dec-99 14:10	15-Dec-99 12:50
MW-5	W912320-06	Water	14-Dec-99 15:45	15-Dec-99 12:50
MW-6	W912320-07	Water	14-Dec-99 16:40	15-Dec-99 12:50

Alan B. Kemp, Laboratory Director

Sequoia Analytical

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

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 0843	Reported:
Dublin CA, 94568	Project Manager: Deanna L. Harding	29-Dec-99 09:20

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
TB-LB (W912320-01) Water Sampled: 14-Dec-99 00:00 Received: 15-Dec-99 12:50									
Purgeable Hydrocarbons	ND	50	ug/l	1	9L21005	21-Dec-99	21-Dec-99	EPA 8015M/8020	
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		*110 %*	*70-130*		"	"	"	"	
MW-1 (W912320-02) Water Sampled: 14-Dec-99 13:05 Received: 15-Dec-99 12:50									
Purgeable Hydrocarbons	ND	50	ug/l	1	9L21005	21-Dec-99	21-Dec-99	EPA 8015M/8020	
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		*113 %*	*70-130*		"	"	"	"	
MW-2 (W912320-03) Water Sampled: 14-Dec-99 14:45 Received: 15-Dec-99 12:50									**P-01**
Purgeable Hydrocarbons	**83000**	10000	ug/l	200	9L21005	21-Dec-99	21-Dec-99	EPA 8015M/8020	
Benzene	**3000**	100	"	"	"	"	"	"	
Toluene	**22000**	100	"	"	"	"	"	"	
Ethylbenzene	**4500**	100	"	"	"	"	"	"	
Xylenes (total)	**17000**	100	"	"	"	"	"	"	
Methyl tert-butyl ether	**9100**	500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*70-130*		"	"	"	"	

Alan B. Kemp, Laboratory Director

Sequoia Analytical

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

Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 0843	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	29-Dec-99 09:20

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
TW-3 (W912320-04) Water Sampled: 14-Dec-99 13:40 Received: 15-Dec-99 12:50									
Purgeable Hydrocarbons	ND	50	ug/l	1	9L21005	21-Dec-99	21-Dec-99	EPA 8015M/8020	
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		*110 %*		*70-130*	"	"	"	"	
MW-4 (W912320-05) Water Sampled: 14-Dec-99 14:10 Received: 15-Dec-99 12:50									
Purgeable Hydrocarbons	ND	50	ug/l	1	9L21005	21-Dec-99	21-Dec-99	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	200	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*113 %*		*70-130*	"	"	"	"	
MW-5 (W912320-06) Water Sampled: 14-Dec-99 15:45 Received: 15-Dec-99 12:50									
Purgeable Hydrocarbons	ND	50	ug/l	1	9L21005	21-Dec-99	21-Dec-99	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	3.5	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*110 %*		*70-130*	"	"	"	"	

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Sequoia Analytical

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Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 0843	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	29-Dec-99 09:20

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
MW-6 (W912320-07) Water Sampled: 14-Dec-99 16:40 Received: 15-Dec-99 12:50									
Purgeable Hydrocarbons	ND	50	ug/l	1	9L21005	21-Dec-99	21-Dec-99	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*70-130*		"	"	"	"	
MW-6 (W912320-07RE1) Water Sampled: 14-Dec-99 16:40 Received: 15-Dec-99 12:50									
Methyl tert-butyl ether	**11000**	250	ug/l	100	9L21005	21-Dec-99	22-Dec-99	EPA 8015M/8020	
Surrogate: a,a,a-Trifluorotoluene		*107 %*	*70-130*		"	"	"		

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ettler Ryan, Inc. - Dublin	Project: Tosco	
47 Sierra Court Suite J	Project Number: Tosco # 0843	**Reported:**
ublin CA, 94568	Project Manager: Deanna L. Harding	29-Dec-99 09:20

MTBE Confirmation by EPA Method 8260A

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
V-4 (W912320-05) Water Sampled: 14-Dec-99 14:10 Received: 15-Dec-99 12:50									
thyl tert-butyl ether	**270**	10	ug/l	5	9L22012	22-Dec-99	23-Dec-99	EPA 8260A	
rogate: Dibromofluoromethane		*106 %*		*50-150*	"	"	"	"	
rogate: 1,2-Dichloroethane-d4		*94.0 %*		*50-150*	"	"	"	"	
V-5 (W912320-06) Water Sampled: 14-Dec-99 15:45 Received: 15-Dec-99 12:50									
thyl tert-butyl ether	**3.8**	2.0	ug/l	1	9L22012	22-Dec-99	23-Dec-99	EPA 8260A	
rogate: Dibromofluoromethane		*108 %*		*50-150*	"	"	"	"	
rogate: 1,2-Dichloroethane-d4		*96.0 %*		*50-150*	"	"	"	"	
V-6 (W912320-07) Water Sampled: 14-Dec-99 16:40 Received: 15-Dec-99 12:50									
thyl tert-butyl ether	**18000**	200	ug/l	100	9L22012	22-Dec-99	23-Dec-99	EPA 8260A	
rogate: Dibromofluoromethane		*110 %*		*50-150*	"	"	"	"	
rogate: 1,2-Dichloroethane-d4		*100 %*		*50-150*	"	"	"	"	

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Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 0843	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	29-Dec-99 09:20

Volatile Organic Compounds by EPA Method 8260A

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (W912320-03) Water Sampled: 14-Dec-99 14:45 Received: 15-Dec-99 12:50									
Ethanol	ND	2500	ug/l	5	9L17011	16-Dec-99	16-Dec-99	EPA 8260A	
tert-Butyl alcohol	ND	500	"	"	"	"	"	"	
Methyl tert-butyl ether	**11000**	100	"	50	"	"	"	"	
Di-isopropyl ether	ND	10	"	5	"	"	"	"	
Ethyl tert-butyl ether	ND	10	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	10	"	"	"	"	"	"	
Ethylene dibromide	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*50-150*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98.0 %*	*50-150*		"	"	"	"	

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Gettler Ryan, Inc. - Dublin	Project: Tosco	
5747 Sierra Court Suite J	Project Number: Tosco # 0843	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	29-Dec-99 09:20

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
Batch 9L21005: Prepared 21-Dec-99 Using EPA 5030B [P/T]										
Blank (9L21005-BLK1)										
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: α,α,α-Trifluorotoluene	*35.7*		"	*30.0*		*119*	*70-130*			
LCS (9L21005-BS1)										
Benzene	21.8	0.50	ug/l	20.0		109	70-130			
Toluene	22.3	0.50	"	20.0		111	70-130			
Ethylbenzene	23.0	0.50	"	20.0		115	70-130			
Xylenes (total)	69.5	0.50	"	60.0		116	70-130			
Surrogate: α,α,α-Trifluorotoluene	*30.9*		"	*30.0*		*103*	*70-130*			
Matrix Spike (9L21005-MS1)					**Source: W912389-06**					
Benzene	20.1	0.50	ug/l	20.0	ND	101	70-130			
Toluene	20.8	0.50	"	20.0	ND	104	70-130			
Ethylbenzene	21.3	0.50	"	20.0	ND	106	70-130			
Xylenes (total)	64.2	0.50	"	60.0	ND	107	70-130			
Surrogate: α,α,α-Trifluorotoluene	*30.5*		"	*30.0*		*102*	*70-130*			
Matrix Spike Dup (9L21005-MSD1)					**Source: W912389-06**					
Benzene	20.9	0.50	ug/l	20.0	ND	104	70-130	3.90	20	
Toluene	21.6	0.50	"	20.0	ND	108	70-130	3.77	20	
Ethylbenzene	21.9	0.50	"	20.0	ND	109	70-130	2.78	20	
Xylenes (total)	66.7	0.50	"	60.0	ND	111	70-130	3.82	20	
Surrogate: α,α,α-Trifluorotoluene	*31.3*		"	*30.0*		*104*	*70-130*			

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Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568	Project: Tosco Project Number: Tosco # 0843 Project Manager: Deanna L. Harding	**Reported:** 29-Dec-99 09:20

MTBE Confirmation 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 9L22012: Prepared 22-Dec-99 Using EPA 5030B [P/T]										
Blank (9L22012-BLK2)										
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*57.0*		"	*50.0*		*114*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*53.0*		"	*50.0*		*106*	*50-150*			
LCS (9L22012-BS2)										
Methyl tert-butyl ether	65.4	2.0	ug/l	50.0		131	70-130			Q-01
Surrogate: Dibromofluoromethane	*57.0*		"	*50.0*		*114*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*55.0*		"	*50.0*		*110*	*50-150*			
Matrix Spike (9L22012-MS1)					Source: W912394-02					
Methyl tert-butyl ether	68.4	2.0	ug/l	50.0	ND	137	60-150			
Surrogate: Dibromofluoromethane	*54.0*		"	*50.0*		*108*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*49.0*		"	*50.0*		*98.0*	*50-150*			
Matrix Spike Dup (9L22012-MSD1)					Source: W912394-02					
Methyl tert-butyl ether	61.4	2.0	ug/l	50.0	ND	123	60-150	10.8	25	
Surrogate: Dibromofluoromethane	*52.0*		"	*50.0*		*104*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*45.0*		"	*50.0*		*90.0*	*50-150*			

Alan B. Kemp, Laboratory Director

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Gettler Ryan, Inc. - Dublin 5747 Sierra Court Suite J Dublin CA, 94568	Project: Tosco Project Number: Tosco # 0843 Project Manager: Deanna L. Harding	**Reported:** 29-Dec-99 09:20

Volatile Organic Compounds 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 9L17011: Prepared 16-Dec-99 Using EPA 5030B [P/T]										
Blank (9L17011-BLK1)										
Ethanol	ND	500	ug/l							
tert-Butyl alcohol	ND	100	"							
Methyl tert-butyl ether	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
tert-Amyl methyl ether	ND	2.0	"							
Surrogate: Dibromofluoromethane	*51.0*		"	*50.0*		*102*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*51.0*		"	*50.0*		*102*	*50-150*			
LCS (9L17011-BS1)										
Methyl tert-butyl ether	59.9	2.0	ug/l	50.0		120	70-130			
Surrogate: Dibromofluoromethane	*51.0*		"	*50.0*		*102*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*51.0*		"	*50.0*		*102*	*50-150*			
Matrix Spike (9L17011-MS1)					Source: W912187-01					
Methyl tert-butyl ether	57.4	2.0	ug/l	50.0	ND	115	60-150			
Surrogate: Dibromofluoromethane	*48.0*		"	*50.0*		*96.0*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*48.0*		"	*50.0*		*96.0*	*50-150*			
Matrix Spike Dup (9L17011-MSD1)					Source: W912187-01					
Methyl tert-butyl ether	46.7	2.0	ug/l	50.0	ND	93.4	60-150	20.6	25	
Surrogate: Dibromofluoromethane	*49.0*		"	*50.0*		*98.0*	*50-150*			
Surrogate: 1,2-Dichloroethane-d4	*45.0*		"	*50.0*		*90.0*	*50-150*			

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Gettler Ryan, Inc. - Dublin	Project: Tosco	
6747 Sierra Court Suite J	Project Number: Tosco # 0843	**Reported:**
Dublin CA, 94568	Project Manager: Deanna L. Harding	29-Dec-99 09:20

Notes and Definitions

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

Alan B. Kemp, Laboratory Director

ATTACHMENT G

SOIL DISPOSAL DOCUMENTATION

80

DISPOSAL CONFIRMATION

Consultant:	E.R.I.
Contact:	DYLAN CROUSE
Phone/Fax:	(415) 382-4325 FAX (415) 382-1856
Client:	TOSCO - DAVE DEWITT
Station #/Wic #:	STATION # 0843
Site Address:	1629 WEBSTER STREET
City/State:	ALAMEDA, CA
Estimated YD/Ton:	3 YARDS
Actual YD/Ton:	1.25 TONS
Disposal Facility:	FORWARD LANDFILL
Disposal Date:	JANUARY 15, 2000
Contact:	BRAD BONNER
Phone #:	(800) 204-4242
Hauler:	MANLEY & SONS TRUCKING, INC.
Contact:	TIM A. MANLEY
Phone #:	(916) 381-6864
Fax #:	(916) 381-1573

Date & Time Faxed

9833