Soil Gas Survey Results

UNOCAL Service Station 7124
10151 E 14th St
Oakland, California

(31279)

Prepared for

Tosco Marketing Company

October 29, 1997

Prepared by

Pacific Environmental Group, Inc.
2025 Gateway Place, Suite 440
San Jose, California 95110

Project 311-163.1A

PACIFIC ENVIRONMENTAL GROUP, INC.

SOIL GAS SURVEY RESULTS
FOR
UNOCAL SERVICE STATION 7124
OAKLAND, CALIFORNIA

INTRODUCTION

This report presents the results of a soil gas survey completed at UNOCAL Service Station 7124. The soil gas survey was performed by Pacific Environmental Group, Inc. (PACIFIC) on September 12, 1997. The work was performed in accordance with a scope of work prepared by Tosco Marketing Company (Tosco), dated August 25, 1997.

The purpose of the soil gas survey is to provide baseline data regarding the occurrence of petroleum hydrocarbon vapors in soil near potential source areas at the site referenced above. This report presents a discussion of field data collection methods and analytical procedures, and the survey results. The following information is attached to this report; a Field Data Sheet, a Site Plan, a Soil Gas Sampling Analysis Report, and chain-of-custody documentation for the soil gas samples.

FIELD AND LABORATORY PROCEDURES

The scope of work included the following procedures: (1) perform a presurvey site visit to mark soil gas probe locations for utility clearance, (2) collect organic vapor measurements from beneath product dispensers and within manways for the underground storage tank (UST) turbines, (3) collect soil vapor samples from near USTs, product islands, and product lines, and (4) submit soil gas samples to Sequoia Analytical Laboratories for chemical analyses. These procedures are described below in further detail.

Prefield Preparation

Prior to initiating the soil gas survey, PACIFIC personnel performed a site visit to mark proposed probe locations, check accessibility, and to notify the UNOCAL station manager of the proposed survey schedule. Probe locations were selected based on PACIFIC's understanding of underground facilities as shown on the attached Site Plan which was provided by Tosco. In some cases probe locations were adjusted in the field to avoid overhead or under-

ground obstructions that were not noted on the site plan. Underground Service Alert was notified to clear each probe location for underground utilities.

Field Data Collection

The level of volatile organic vapors were measured from beneath product dispensers and within turbine manways using a HNU PI-101 photo-ionization detector (PID). A PACIFIC field technician opened each product dispenser and turbine manway and collected a PID measurement from soil immediately below each dispenser or turbine at a height of approximately 1/2-inch above the exposed soil. If native soil was not exposed, then this observation was recorded on the Field Data Sheet and PID measurements were not collected.

PID measurements and field observations are recorded on the attached Field Data Sheet. The location of each PID reading is shown on the attached site plan.

Soil Gas Survey

On September 12, 1997, a PACIFIC staff technician directed the installation of 5 soil gas probes in the vicinity of USTs, product islands, and product lines at the site referenced above. The approximate location and designation of each soil gas probe is shown on the attached Site Plan. Sample collection depths are noted on the attached Field Data Sheet.

Two samples were collected from the area of the UST complex at depths ranging from 3 feet to 15 feet.

Three soil gas samples were collected adjacent to the product dispenser islands at depths of approximately 3 feet. Soil gas samples were not collected along the product lines because either line locations could not be field verified, or less than 20 linear feet of product exists between the UST complex and product island.

The soil gas survey consisted of driving a 1/2-inch diameter hollow steel probe into unsaturated soils at each sampling location. The end of the driven probe was fitted with a small screened interval with protective cover. The probes were driven into the soil with pneumatic equipment. Upon reaching the desired depth the outer protective casing was retracted to allow the screened interval to be exposed to the soils. Soil gas samples were drawn from the probe by means of a vacuum pump through a probe head fitting and a silastic tubing sample line. The soil gas probe was purged of vapors for approximately 3 minutes prior to sample collection. A soil gas sample was then collected into a clean 1-liter Tedlar bag. Each Tedlar bag was labeled with the appropriate sample designation, date of sample, and UNOCAL station number and stored in a cool dark box. The samples were submitted to Sequoia Analytical Laboratories within 24 hours of sample collection.

Upon completion of the sampling procedures the probes were removed and the probe holes were backfilled to the surface with a neat cement seal.

Laboratory Procedures

Soil gas samples were submitted under appropriate chain-of-custody documentation to Sequoia Analytical Laboratories, a Tosco-approved state-certified analytical laboratory. The samples were analyzed for total purgeable petroleum hydrocarbons calculated as gasoline in accordance with EPA Method 8015 (modified), and benzene, toluene, ethylbenzene, xylenes, and methyl-tert butyl ether (MtBE) in accordance with EPA Method 8020. Additionally, if MtBE was detected, the soil gas sample indicating the highest MtBE concentration by EPA Method 8020, was analyzed in accordance with EPA Method 8260, to confirm the presence of MtBE.

FINDINGS

The soil gas survey findings are presented on the attached Field Data Sheet and Soil Gas Sample Analysis Report.

CLOSING

This report and all field activities described within were performed by the staff of PACIFIC under the professional supervision of the project geologist whose signature appears hereon.

Should you have any questions concerning the contents of this report, please call.

Sincerely,

Pacific Environmental Group, Inc.

Joseph Muzzio
Project Geologist
CEG 1672

Attachments: Field Data Sheet
Soil Gas Sample Analysis Report
Chain-of-Custody Documentation
Site Plan

Tosco Marketing Company
Field Data Sheet

Baseline Augmentation
Unocal Service Station Sites

Facility No.: #7124
Location: 102 NO & E 19TH
Date Sampled: 9.2.97

Sampler: Paul Nemhard
Time On Site: 9:30
Weather: Cloudy

UST Samples (Sample Designation: T-1, T-2,....)/**Former UST Samples** (Sample Designation: (FT-1, FT-2,...)

Sample ID	PID Reading (ppm)	Air Sample Collected (Yes/No)	Sample Depth (feet)	Comments (NPO, FPO, MPO, SPO)
T-1	60	Yes	3'	FAINT ODOR ON PROBE
T-2	—	Yes	8'	—

Dispenser Island Samples (Sample Designation: D-1, D-2,....)

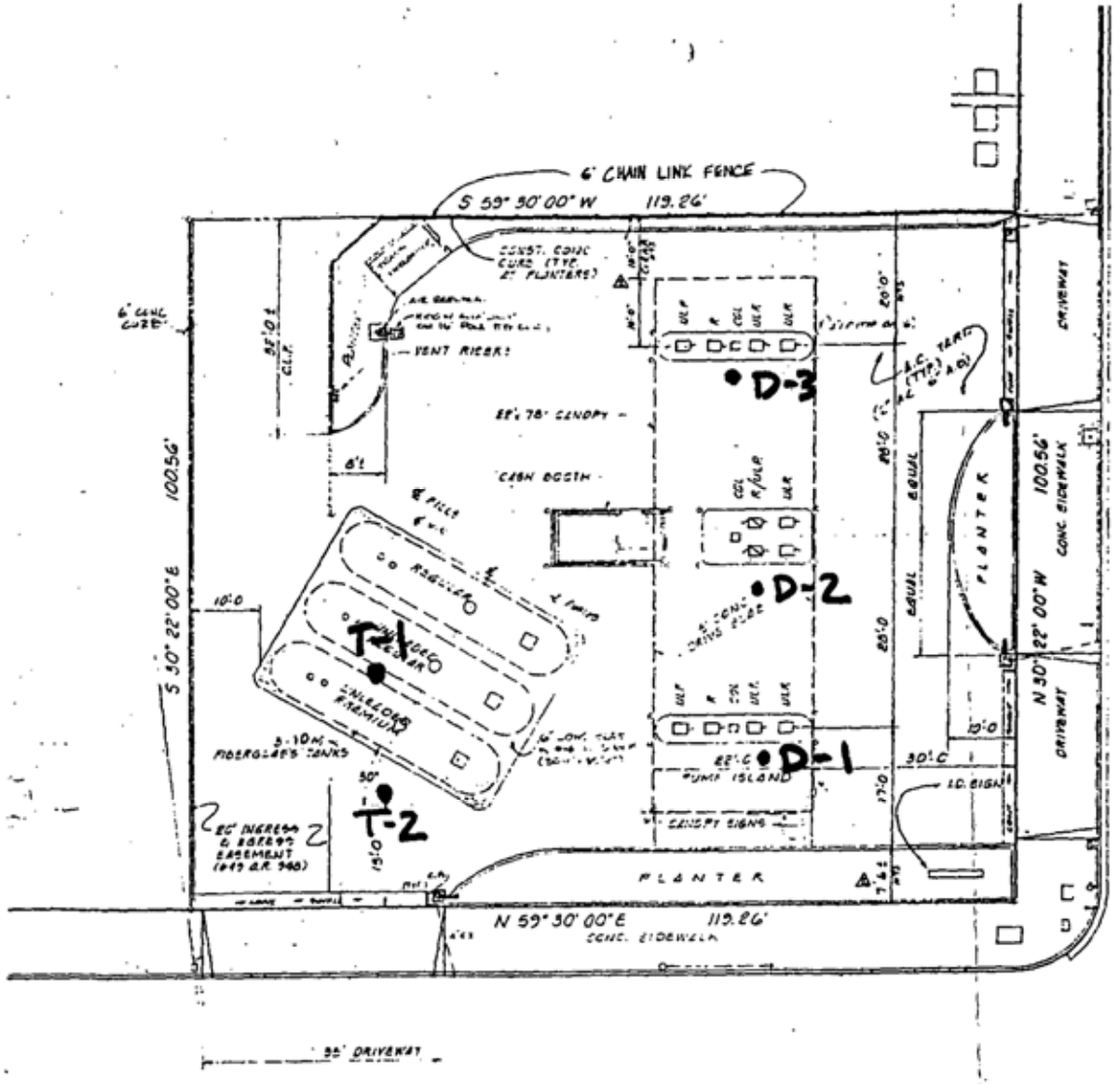
Sample ID	PID Reading (ppm)	Air Sample Collected (Yes/No)	Sample Depth (feet)	Comments (NPO, FPO, MPO, SPO)
D-1	—	Yes	3'	—
D-2	—	Yes	3'	—
D-3	—	Yes	3'	—

Product Lines (Sample Designation: P-1, P-2,....)

Sample ID	PID Reading (ppm)	Air Sample Collected (Yes/No)	Sample Depth (feet)	Comments (NPO, FPO, MPO, SPO)
		NONE		

Product Dispensers (Sample Designation: PD-1, PD-2,....) /**UST Turbines** (Sample Desiganation TU-1, TU-2

Sample ID	PID Reading (ppm)	Air Sample Collected (Yes/No)	Exposed Soil (Yes/No)	Comments (NPO, FPO, MPO, SPO)
TU-1	17	NO	Yes	FAINT ODOR
TU-2	31	NO	Yes	↓
TU3	40	NO	Yes	↓
PD-1	2	NO	Yes	NO ODOR
PD2	0	No	Yes	↓
PD3	6	NO	Yes	↓



SS#71

PROPERTY OWNED BY U
BOUNDED THUS:

GRAPHIC

GENERAL AR
SERVICE STATI
EAST 14TH STREET

UNOCAL 76

☐ 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
☐ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
☐ 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
☐ 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200.
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: PACIFIC ENVIRONMENTAL	Project Name: 102ND & E 14TH
Address: 2025 GATEWAY PL #440	UNOCAL Project Manager: TINA BERRY / BASELINE AUGMENTATION
City: SAN JOSE State: CA Zip Code: 95110	AFE #: #7124
Telephone: 408 441 7500 FAX #: 408 441 7539	Site #, City, State: #7124 OAKLAND CA
Report To: JEE MUZIO Sampler: PAUL WEINHARDT	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

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	Laboratory Sample #	8010/8020	MTBE Distinction	Comments
1. T-1	9.12.97	AIR	1	BAG	7090947	X	X	CONFIRM
2. T-2	"	"	"	"	7090948	"	"	HIGHEST MTBE
3. D-1	"	"	"	"	7090949	"	"	BY 8260
4. D-2	"	"	"	"	7090950	"	"	
5. D-3	"	"	"	"	7090951	"	"	
6.								
7.								
8.								
9.								
10.								

Pink - Client

Yellow - Laboratory

White - Laboratory

Relinquished By: Paul Weinhardt	Date: 9.12.97	Time: 1335	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: 9/12/97	Time: 1530

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: _____