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

F

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

March 13, 2007

Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Keith Marks
Suncor Holdings COP II LLC
11601 Wilshire Blvd. #700
Los Angeles, CA 90025

Asghar Kholdi
1319 Winding Stream Drive
Livermore, CA 94551-8935

Subject: Fuel Leak Case No. RO0000258 and Geotracker Global ID T0600101477, Unocal #6034, 4700 First Street, Livermore, CA – Request for Well Decommissioning

Dear Ms. Lathrop, Mr. Kholdi, and Mr. Marks:

Alameda County Environmental Health (ACEH) and California Regional Water Quality Control Board staff have reviewed the fuel leak case file and case closure summary for the above-referenced site and concur that no further action related to the underground storage tank fuel release is required at this time. Prior to issuance of a remedial action completion certificate, the monitoring wells at the site are to be properly destroyed, should the monitoring wells have no further use at the site. Please decommission the monitoring well and provide documentation of the well decommissioning to this office. A remedial action completion certificate will be issued following receipt of the documentation.

Well destruction permits may be obtained from the Alameda County Public Works Agency (http://www.acgov.org/pwa/wells/index.shtml). If you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Colleen Winey, QIC 80201
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani
Livermore-Pleasanton Fire Department
3560 Nevada Street
Pleasanton, CA 94566

Daniel Davis
Delta Environmental Consultants, Inc.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

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

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

March 7, 2007

Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Keith Marks
Suncor Holdings COP II LLC
11601 Wilshire Blvd. #700
Los Angeles, CA 90025

Asghar Kholdi
1319 Winding Stream Drive
Livermore, CA 94551-8935

Subject: Fuel Leak Case No. RO0000258, Unocal #6034, 4700 First Street, Livermore, CA – Review for Case Closure

Dear Ms. Lathrop, Mr. Kholdi, and Mr. Marks:

Alameda County Environmental Health (ACEH) is considering closure of the above referenced case. If case closure is approved, the fuel leak case will be closed with the requirement that the case needs to be re-evaluated if future land use changes from commercial to residential or other conservative land use. If you have any comments regarding closure of this case, please provide them within 30 days of the date of this letter.

If you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham
Hazardous Materials Specialist

cc: Colleen Winey, QIC 80201
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani
Livermore-Pleasanton Fire Department
3560 Nevada Street
Pleasanton, CA 94566

Daniel Davis
Delta Environmental Consultants, Inc.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

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

March 5, 2007

Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Subject: Fuel Leak Case No. RO0000258, Unocal #6034, 4700 First Street, Livermore, CA – Additional Responsible Parties

Dear Ms. Lathrop:

In a Notice of Responsibility dated April 27, 1992, Union Oil Company of California (currently ConocoPhillips) was notified that the above referenced site had been placed in the Local Oversight Program and that Union Oil Company of California was named as a Responsible Party for the fuel leak case. Asghar Kholdi and Suncor Holdings COP II LLC purchased the property and have been named additional Responsible Parties for the fuel leak case as defined under 23 C.C.R Sec. 2720. Please see Attachment A – Responsible Parties Data Sheet, which identifies all Responsible Parties and provides background on the unauthorized release and Responsible Party Identification.

If you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham, P.G.
Hazardous Materials Specialist

Attachment A – Responsible Parties Data Sheet

cc: Donna Drogos, ACEH
Jerry Wickham, ACEH
File

ALAMEDA COUNTY ENVIRONMENTAL HEALTH
LUFT LOCAL OVERSIGHT PROGRAM

ATTACHMENT A - RESPONSIBLE PARTIES DATA SHEET

March 02, 2007

Site Name & Address:
UNOCAL #6034
4700 1ST ST
LIVERMORE, CA 94550

Local ID:	**RO0000258**
Related ID:	**2465**
RWQCB ID:	**01-1602**
Global ID:	**T0600101477**

All Resposible Parties

RP has been named a Primary RP - SHELBY LATHROP
CONOCOPHILLIPS
76 BROADWAY | SACRAMENTO, CA 95818 | Phone (916) 558-7609

RP has been named a RP - ASGHAR KHOLDI
NA
1319 WINDING STREAM DRIVE | LIVERMORE, CA 94551-8935

RP has been named a RP - KEITH MARKS
SUNCOR HOLDINGS COP II LLC

Responsible Party Identification Background

Alameda County Environmental Health (ACEH) names a "Responsible Party," as defined under 23 C.C.R Sec. 2720. Section 2720 defines a responsible party 4 ways. An RP can be:

1. "Any person who owns or operates an underground storage tank used for the storage of any hazardous substance."
2. "In the case of any underground storage tank no longer in use, any person who owned or operated the underground storage tank immediately before the discontinuation of its use."
3. "Any owner of property where an unauthorized release of a hazardous substance from an underground storage tank has occurred."
4. "Any person who had or has control over an underground storage tank at the time of or following an unauthorized release of a hazardous substance."

ACEH has named the responsible parties for this site as detailed below.

Existence of Unauthorized Release

Two 12,000-gallon unleaded gasoline USTs and one 550-gallon waste oil UST were removed from the site on August 2, 1989. Fuel hydrocarbons were detected in soil samples collected from the tank pits. Four monitoring wells were installed at the site on October 25 and 26, 1989. Fuel hydrocarbons were detected in groundwater at concentrations up to 53,000 parts per billion for total petroleum hydrocarbons as gasoline.

Responsible Party Identification

Union Oil Company of California, which is a predecessor to ConocoPhillips, was the business owner, tank owner, and property owner at the time of and following the release. ConocoPhillips is a responsible party for the site because they owned and operated the underground storage tanks (Definition 1), formerly owned the property where an unauthorized release occurred (Definition 3), and had control of an underground storage tank at the time of an unauthorized release (Definition 4).

Suncor Holdings COP II LLC is a responsible party for the site because they are the former owner of a property where an unauthorized release occurred (Definition 3).

Asghar Kholdi is a responsible party for the site because he is the current owner of a property where an unauthorized release occurred (Definition 3).

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

7

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

October 18, 2006

Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Subject: Fuel Leak Case No. [redacted], Unocal #6034, 4700 First Street, Livermore, CA – Review for Case Closure

Dear Ms. Lathrop:

The fuel leak case file for the above-referenced site is under review for case closure by Alameda County Environmental Health (ACEH). If case closure is approved, the fuel leak case will be closed with the requirement that the case be reviewed in the future if land use changes. Please provide the certification requested below in the Landowner Notification Requirements that you have notified all responsible landowners of the request for case closure or that you are the sole landowner.

LANDOWNER NOTIFICATION REQUIREMENTS

Pursuant to California Health & Safety Code Section 25297.15, the active or primary responsible party for a fuel leak case must inform all current property owners of the site of cleanup actions or requests for closure. Furthermore, ACEH may not consider any cleanup proposals or requests for case closure without assurance that this notification requirement has been met. Additionally, the active or primary responsible party is required to forward to ACEH a complete mailing list of all record fee title holders to the site.

For you to meet these requirements when submitting cleanup proposals or requests for case closure, ACEH requires that you:

1. Notify all current record owners of fee title to the site of any cleanup proposals or requests for case closure;
2. Submit a letter to ACEH which certifies that the notification requirement in 25297.15(a) of the Health and Safety Code has been met;
3. Forward to ACEH a copy of your complete mailing list of all record fee title holders to the site; and
4. Update your mailing list of all record fee title holders, and repeat the process outlined above prior to submittal of any additional *Corrective Action Plan* or your *Request for Case Closure.*

Your written certification to ACEH (Item 2 above) must state, at a minimum, the following:

A. In accordance with Section 25297.15(a) of the Health & Safety Code, I, (name of primary responsible party), certify that I have notified all responsible landowners of the enclosed proposed action. (Check space for applicable proposed action(s)):
___ cleanup proposal (Corrective Action Plan)

___ request for case closure
___ local agency intention to make a determination that no further action is required
___ local agency intention to issue a closure letter

- OR -

B. In accordance with section 25297.15(a) of Chapter 6.7 of the Health & Safety Code, I, (name of primary responsible party), certify that I am the sole landowner for the above site.

(Note: Complete item A if there are multiple site landowners. If you are the sole site landowner, skip item A and complete item B.)

If you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Colleen Winey, QIC 80201
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani
Livermore-Pleasanton Fire Department
3560 Nevada Street
Pleasanton, CA 94566

Daniel Davis
Delta Environmental Consultants, Inc.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

RO258

Delta
Environmental
Consultants, Inc.

Solving environment-related business problems worldwide

www.deltaenv.com

3164 Gold Camp Drive • Suite 200
Rancho Cordova, California 95670 USA

916.638.2085 800.477.7411
Fax 916.638.8385

July 31, 2006

Mr. Jerry Wickham
Alameda County Health Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Site Assessment
COP Site No. 6034/RO0000258
4700 First Street
Livermore, California

Dear Mr. Wickham:

Delta Environmental Consultants, Inc. (Delta) requests that an extension be granted for the submittal of Soil and Groundwater Investigation Report at the above referenced site. Because of scheduling conflicts with the drilling contractor, the field work planned for the site was not completed until July 21, 2006. Therefore, Delta requests that an extension of the assessment report due date to September 15, 2006 be granted.

Thank you for your consideration. If you have questions, please call me at 916-503-1263.

Regards,
Delta Environmental Consultants, Inc.

Ben Wright
Staff Geologist

cc: Ms. Shelby Lathrop, ConocoPhillips (electronic copy)

Approved 8/2/06
JTW

R0258

Delta
Environmental
Consultants, Inc.

3164 Gold Camp Drive, #200
Rancho Cordova, CA 95670

Fax: (916) 638-8385

FACSIMILE TRANSMITTAL SHEET

TO: Jerry Wickham	FROM: Ben Wright
COMPANY: Alameda County Health Agency	DATE: 7/11/06
FAX NUMBER: 510-351-1367	TOTAL NO. OF PAGES INCLUDING COVER: 4
PHONE NUMBER: 510-567-6791	SENDER'S REFERENCE NUMBER: C10603404I
RE: Drilling Notification	YOUR REFERENCE NUMBER:

☐ URGENT ☒ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Please contact me with any questions

Thanks,

Ben

Xinogen

Delta
Environmental Consultants, Inc.

Solving environment-related business problems worldwide www.deltaenv.com

3164 Gold Camp Drive • Suite 200
Rancho Cordova, California 95670 USA

916.638.2085 800.477.7411
Fax 916.638.8385

July 11, 2006

Mr. Asghar
4700 First Street
Livermore, California 94551

Subject: Drilling Notification Letter, 76 Service Station No. 6034
4700 First Street, Livermore, California
Delta Project No. C106034041

Dear Mr. Asghar:

The purpose of this letter is to notify ConocoPhillips that Delta Environmental Consultants, Inc. (Delta) has scheduled environmental drilling work (soil borings) at the subject site. The drilling will begin on Thursday, July 20, 2006, at approximately 8:00 AM and should be completed by 5:00 PM on Friday, July 21, 2006.

The work will include the advancement of three (3) soil borings at the locations shown on Figure 1. The drilling locations may be modified slightly based on field conditions. An air-vacuum rig will first be on-site to clear the locations for utilities. Then, a cone penetrometer (CPT) rig will be used to drill and sample the soil and groundwater; a large support truck will also need to be on-site during drilling activities.

Underground Service Alert (USA) will be notified and will be marking utility locations. Additionally, a private utility locating service will be on-site on Thursday, July 20, 2006 to additionally mark possible utility locations.

Our field personnel and subcontractors will make every possible effort to minimize disruption of operations and any inconvenience at the facility. However, please inform the facility manager that his or her cooperation is necessary to ensure the work will be completed in an efficient and safe manner. The facility manager should also be informed that any soil cuttings and rinse water generated from the drilling activities will be stored in 55-gallon steel drums and will remain on-site up

to one month, pending consideration for proper disposal. Typically, the wastes are removed within a couple of weeks.

Delta will provide verbal notification to the facility manager of the scheduled activities at least 48 hours prior to the commencement of the work. Should you require further information about the scheduled work, please do not hesitate to contact me at (916) 503-1263.

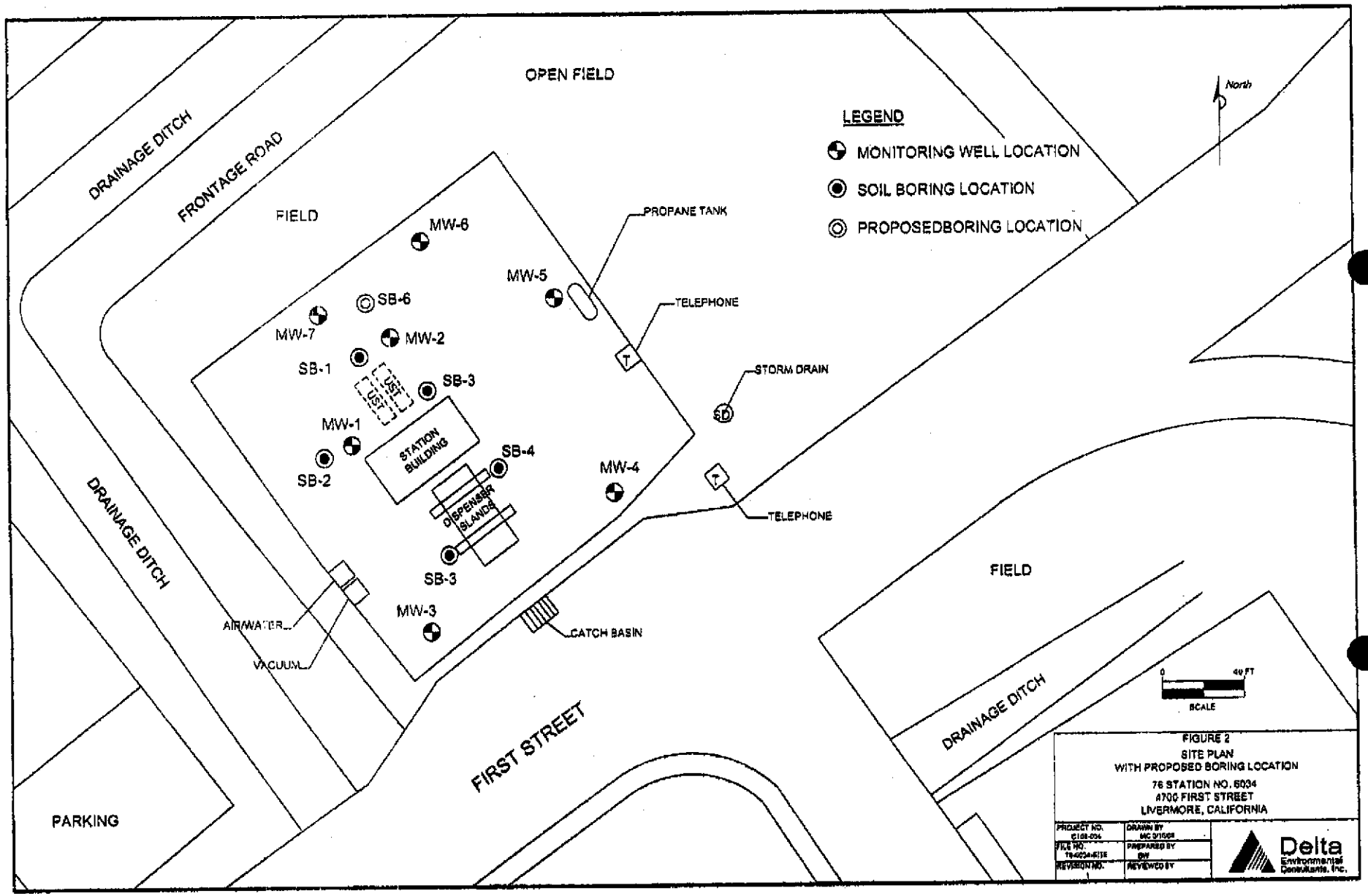
Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Ben Wright
Staff Geologist

Attachment: Figure 1 – Proposed Soil Boring Map

Cc: Shelby Lathrop, ConocoPhillips, Site Manager
Jerry Wickham, Alameda County Health Agency
Dave, Station Manager – Service Station 6034


OPEN FIELD
DRAINAGE DITCH
FRONTAGE ROAD
FIELD
LEGEND
MONITORING WELL LOCATION
SOIL BORING LOCATION
PROPOSEDBORING LOCATION
North
MW-6
MW-5
PROPANE TANK
SB-6
TELEPHONE
MW-7
MW-2
SB-1
SB-3
STORM DRAIN
MW-1
STATION BUILDING
SB-4
SB-2
MW-4
DISPENSER ISLANDS
TELEPHONE
SB-3
MW-3
AIR/WATER
VACUUM
CATCH BASIN
FIELD
DRAINAGE DITCH
DRAINAGE DITCH
FIRST STREET
PARKING
0
40 FT
SCALE
FIGURE 2
SITE PLAN
WITH PROPOSED BORING LOCATION
76 STATION NO. 6034
4700 FIRST STREET
LIVERMORE, CALIFORNIA
PROJECT NO. 6108-054
DRAWN BY MC 07/06/06
FILE NO. 76-6034-6S1E
PREPARED BY SW
REVISION NO.
REVIEWED BY
Delta
Environmental Consultants, Inc.

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

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

April 5, 2006

Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Subject: Fuel Leak Case No. [redacted] Unocal #6034, 4700 First Street, Livermore, CA – Work Plan Approval

Dear Ms. Lathrop:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site and the document entitled, "Work Plan – Soil Boring Assessment and Groundwater Monitoring Well Sampling," dated March 29, 2006, and "Quarterly Report, Fourth Quarter 2005," dated February 10, 2006. The Work Plan describes a scope of work to advance one cone penetrometer boring downgradient of well MW-2 in order to identify water-bearing zones for grab groundwater sampling. Subsequent borings will be advanced to collect depth-discrete groundwater samples from the water-bearing zones. The Work Plan also indicates that groundwater samples will be collected from existing monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7. ACEH concurs with the proposed scope of work provide that technical comments 1 and 2 below are addressed during the field investigation.

ACEH requests that you address the following technical comments, perform the proposed work, and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to jerry.wickham@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Depth of Cone Penetrometer Boring.** We request that the cone penetrometer boring to collect soil samples and identify potential water-bearing zones for grab groundwater sampling be advanced to a depth of approximately 50 feet below ground surface. Coarse-grained water-bearing zones are to be identified for depth-discrete grab groundwater sampling. As proposed in the Work Plan, the depth-discrete grab groundwater samples are to be collected from additional boreholes. Please present the results in the Soil and Groundwater Investigation Report requested below.

2. **Laboratory Analyses.** We concur with the proposed laboratory analyses for soil and groundwater samples but request that tertiary-butyl alcohol (TBA) be included in addition to the other fuel oxygenates as an analyte using EPA Method 8260B.

3. **Request for Information on Soil Borings S-1 through S-5.** In correspondence dated January 11, 2006, ACEH requested information on soil borings SB-1 through SB-5 shown on the Site Map (Figure 2) of the Sensitive Receptor Survey report. ACEH appreciates receiving an electronic upload of the report entitled, "Baseline Site Assessment Report,"

dated December 3, 2003, which presents analytical data and boring logs for soil borings S-1 through S-5.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **August 7, 2006** – Soil And Groundwater Investigation Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at jerry.wickham@acgov.org.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover

letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Matt Katen, QIC 80201
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani
Livermore-Pleasanton Fire Department
3560 Nevada Street
Pleasanton, CA 94566

Daniel Davis
Delta Environmental Consultants, Inc.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

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

January 11, 2006

Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Subject: Fuel Leak Case N[redacted]hocal #6034, 4700 First Street, Livermore, CA

Dear Ms. Lathrop:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site and the reports entitled, "Sensitive Receptor Survey," dated September 28, 2005 and "Quarterly Report, Second Quarter 2005," dated July 29, 2005. Groundwater monitoring is currently conducted at the site on a semi-annual basis using wells MW-2 and MW-4. Dissolved fuel hydrocarbons, including methyl tert-butyl ether (MTBE), continue to be detected in well MW-2, which is located adjacent to the northern corner of the tank pit. During the June 13, 2005 groundwater monitoring event, total petroleum hydrocarbons as gasoline (TPHg) were detected at a concentration of 3,300 micrograms per liter (µg/L) and MTBE was detected at a concentration of 2.5 µg/L in well MW-2. The extent of elevated concentrations of fuel hydrocarbons in groundwater appears to be limited to the area of well MW-2; however, no groundwater samples have been collected from the two downgradient wells at the site since 1996. In order to confirm that the extent of elevated concentrations fuel hydrocarbons in groundwater is limited to the area of the tank pit and well MW-2, we request that you submit a work plan **by March 29, 2006** to collect soil and groundwater samples from a boring downgradient of the tank pit and well MW-2.

ACEH requests that you address the following technical comments, perform the proposed work, and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to jerry.wickham@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Downgradient and Vertical Extent of Dissolved Fuel Hydrocarbons.** Based on groundwater monitoring data collected to date, the extent of elevated concentrations of dissolved fuel hydrocarbons in groundwater appears to be limited to the area of the tank pit and well MW-2. The concentrations of fuel hydrocarbons detected in groundwater from well MW-2 have been highly variable but generally have decreased over time. No groundwater samples have been collected since 1996 from the two downgradient monitoring wells at the site (MW-6 and MW-7) to confirm that the plume is shrinking. Well MW-6, has been described in sampling reports as obstructed with roots or dry since April 1996. In order to confirm that the plume of dissolved hydrocarbons is limited in extent both laterally and vertically, we request that you advance soil borings in a location directly downgradient from well MW-2. One soil boring or cone penetrometer boring should be logged continuously to a depth of approximately 50 feet below ground surface to collect soil samples and identify

potential water-bearing zones for grab groundwater sampling. A second soil boring should be advanced immediately adjacent to the first boring to collect discrete grab groundwater samples at the depth intervals selected using the log from the first continuously sampled soil boring or cone penetrometer boring. Please present plans to collect soil and groundwater samples from a location downgradient of well MW-2 in the Work Plan requested below.

2. **Soil Borings S-1 through S-5.** Soil borings SB-1 through SB-5 appear on the Site Map (Figure 2) of the Sensitive Receptor Survey report. We did not find data or boring logs for these borings in the case file. Please present available analytical data and boring logs for these borings in the Work Plan requested below.

3. **Monitoring Wells.** Monitoring wells MW-2 and MW-4 are currently the only wells sampled during semi-annual groundwater monitoring at the site. Please present plans in the Work Plan requested below to sample wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7 once, in conjunction with the soil and depth-discrete grab groundwater sampling requested in comment 1 above.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **March 29, 2006** – Soil And Groundwater Investigation Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was

required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at jerry.wickham@acgov.org.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Matt Katen, QIC 80201
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani
Livermore-Pleasanton Fire Department
3560 Nevada Street
Pleasanton, CA 94566

Daniel Davis
Delta Environmental Consultants, Inc.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

R0258

ATC ASSOCIATES INC.

6602 Owens Drive, Suite 100
Pleasanton, CA 94588
Tel: 925-460-5300
Fax: 925-463-2559

ATC has grown into one of the nation's largest environmental consulting, engineering, and construction services companies with an ENR rating of 37th among the top 200 environmental firms and 52nd among the top 500 design firms in the U.S. Our service areas include:

environmental

building sciences

infrastructure

geotechnical and material testing

training

DATE: 9/14/05

~~TO:~~ From: Jerry Witcon

COMPANY:

PHONE:

FAX: 510 337-9335

~~FROM:~~ To: Stephanie - ~~ATC~~ Associates

PHONE: (925)460-5300

FAX: (925)463-2559

PAGES (incl. cover): 2

SUBJECT: DWR - Release Form

Jerry - Please sign forms so we can get well records from DWR. Fax Back to me at the fax # listed above.

Thanks!

Alameda County
SEP 14 2005
Environmental Health

For more information, visit our website: **www.atc-enviro.com**

STATE OF CALIFORNIA - THE RESOU CES AGENCY ARNOLD SCHWARZENEGGER, Governor
DEPARTMENT OF WATER R ESOURCES
CENTRAL DISTRICT
3251 S Street
Sacramento, CA 95816
(916) 227-7832
(916) 227-7600(Fax)

NOR HERN DISTRICT
244(Main Street
Red luff, CA 96080
(530) 29-7300
(530) 29-7322 (Fax)

SAN JOAQUIN DISTRICT
3374 East Shields Avenue
Fresno, CA 93726
(559) 230-3300
(559) 230-3301 (Fax)

SOUTHERN DISTRICT
770 Fairmont Avenue
Glendale, CA 91203
(818) 543-4600
(818) 543-4804 (Fax)

Alameda County
Environmental Health
SEP 14 2005

WELL COMPL ETION REPORT RELEASE AGREEMENT--AGENCY
(Government nd Regulatory Agencies and their Authorized Agents)

Project/Contract No. 75118, 525 County

4700 First St. Liver more
Township, Range, and S ectic T3S, R2E, Sec 3 Radius

(Must include entire study area and map that shows the area of interest.) 1/2 mile radius

Under California Water Code ection 13752, the agency named below requests permission from Department of Water Resour es to inspect or copy, or for our authorized agent named below to inspect or copy, Well Comple on Reports filed pursuant to Section 13751 to (check one):

☐ Make a study, or,

☒ Perform an environm ntal cleanup study associated with an unauthorized release of a contaminant within a istance of 2 miles.

In accordance with Section 1 752, information obtained from these reports shall be kept confidential and shall not be isseminated, published, or made available for inspection by the public without written authorization om the owner(s) of the well(s). The information shall be used only for the purpose of conducting th study. Copies obtained shall be stamped **CONFIDENTIAL** and shall be kept in a restricted file ac essible only to agency staff or the authorized agent.

Jerry Wickham

ATC Associates	Alameda Co. Health Care Services
Authorized Agent	Government or Regulatory Agency
6602 Owens Dr, Ste.100	1131 Harbor Bay Parkway
Address	Address
Pleasanton, CA 94588	Alameda, CA 94502
City, State, and Zip Code	City, State, and Zip Code
Signature Stephanie Davi	Signature Jerry T Wickham
Title Staff Geologist	Title Hazardous Materials Specialist
Telephone 925 225-7830	Telephone (510) 567-6791
Fax 925 463-2559	Fax (510) 337-9335
Date 9/14/05	Date 09/14/2005
E-mail stephanie.davi@ atcassociates.com	E-mail jerrywickham@acgov.org

6 June 2001

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

7

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

July 18, 2005

Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Subject: Fuel Leak Case N[redacted] Unocal #6034, 4700 First Street, Livermore, CA

Dear Ms. Lathrop:

Alameda County Environmental Health (ACEH) staff has reviewed the case file and the work plan entitled, "Work Plan – Sensitive Receptor Survey," dated June 7, 2005 prepared for the above referenced site on behalf of ConocoPhillips by ATC Associates, Inc. The work plan proposes the completion of a well search and sensitive receptor survey of water bodies and sensitive facilities. ACEH concurs with the sensitive receptor survey as proposed in the work plan. Please present information from the sensitive receptor survey in the report requested below. The report should also include recommendations regarding the need for additional assessment at the site.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Jerry Wickham), according to the following schedule:

- **August 15, 2005** – Semiannual Monitoring Report for the Second Quarter 2005
- **October 17, 2005** – Sensitive Receptor Survey Report
- **February 15, 2006** – Semiannual Monitoring Report for the Fourth Quarter 2005

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham, P.G.
Hazardous Materials Specialist

cc: Shelby Lathrop, Shaw Environmental, 4005 Port Chicago Highway, Concord, CA 94520

David Evans, ATC Associates, Inc., 6602 Owens Drive, Suite 100, Pleasanton, CA 94588

Colleen Winey, QIC 80201
Zone 7 Water Agency, 100 North Canyons Parkway, Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street, Pleasanton, CA 94566

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

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

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

StID 2465

June 5, 2001

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

This office is in receipt of "Groundwater Monitoring & Sampling Report, First Semi-Annual Event of April 2, 2001" dated May 16, 2001, submitted by Deanna L. Harding of Gettler-Ryan Inc. regarding the above referenced property.

Per this report only the monitoring well MW-2 and MW-4 were sampled and analyzed. They both detected non-detect concentrations of the contaminants with the exception of MTBE, which was detected in low level in MW-4 well at 16ppb. You may make proposal to stop monitoring and or analysis of the wells, which have shown to contain non-detect levels of all contaminants consistently.

Additionally the above document included some information regarding the neighboring properties as well.

Per figure 1 within this report groundwater flow gradient is to the northwest. With the present groundwater flow gradient and the concentration of the constituents detected within MW-4 or MW-3 historically, there seems to be no contamination coming from off-site sources. However, MW-4 has had some revealed some contamination in the past.

If you have any questions, please call me at (510)-567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Deanna L. Harding, Project Coordinator, Gettler-Ryan Inc.,6747 Sierra Court, Suite J, Dublin, CA 94568
Files

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

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

StID 2465

August 16, 2000

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

I am in receipt of the "Semi-Annual 2000 Groundwater Monitoring & Sampling Report" dated June 13, 2000, submitted by Deanna L. Harding of Gettler-Ryan Inc. regarding the above referenced property.

According to this report, the concentrations of the contaminants in general has been on the decline including the oxygenates compounds with the MW-2 well, the most contaminated well, at 40.1ppb of MTBE. There were other minor contaminants as well. There have been some oscillations in the concentrations of TPH (G), Benzene, Ethylbenzene, Xylene, and MTBE compounds in the past. However, at the present time you may make proposal to stop monitoring and or analysis of some of the wells, which have revealed to contain non-detect levels of all contaminants consistently.

Groundwater flow gradient is to the northwest.

I will look forward for the next Groundwater Monitoring Report.

Should you have any questions, please call me at (510)-567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Deanna L. Harding, Project Coordinator, Gettler-Ryan Inc.,6747 Sierra Court, Suite J, Dublin, CA 94568
Files

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

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

STID 2465

February 13, 2000

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

This office is in receipt of the "Groundwater Monitoring & Sampling Report Second Semi-Annual 2000" dated December 15, 2000, submitted by Deanna L. Harding of Gettler-Ryan Inc. regarding the above referenced property.

Per this report, MW-1, MW-3, MW-5, MW-6, and MW-7 were not sampled. The concentrations of the contaminants in general has been on the decline including the oxygenates compounds with the MW-2 well, which has been the well with the most pollutant at 9.2 ppb of MTBE. Additionally there were other minor contaminants as well with minor oscillations in the concentrations of some of the constituents. However, as indicated previously, you may make proposal to stop monitoring and or analysis of some of the wells, which have revealed to contain non-detect levels of all contaminants consistently.

Per figure 1 of this report groundwater flow gradient is to the northwest.

If you have any questions, please call me at (510)-567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Deanna L. Harding, Project Coordinator, Gettler-Ryan Inc.,6747 Sierra Court, Suite J, Dublin, CA 94568
Files

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

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9432

StID 2465

January 13, 2000

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

This office is in receipt of the "Groundwater Monitoring & Sampling Report Semi-Annual 1999" dated December 2, 1999, submitted by Deanna L. Harding of Gettler-Ryan Inc. regarding the above referenced property.

Per this report, the MW-2 well is still the well with highest concentrations of contaminants with 2,200ppb TPH(G), 480ppb of Xylene, and 52ppb of MTBE. As indicated previously, there have been some oscillations in the concentrations of TPH(G), Benzene, Ethylbenzene, Xylene, and MTBE compounds.

I will look forward for the next Groundwater Monitoring Report.

If you have any questions, please do not hesitate to call me at (510)-567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Deanna L. Harding, Project Coordinator, Gettler-Ryan Inc.,6747 Sierra Court, Suite J, Dublin, CA 94568
Files

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

StID 2465

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9432

November 15, 1999

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

I have received and reviewed the analytical laboratory result regarding "other oxygenated contaminants" such as those of TAME, DIPE, ETBE, TBA, EDB, and EDC from Mr. Douglas J. Lee of Gettler-Ryan Inc. Mr. Lee's letter was in response to my inquiry in the letter dated September 28th, 1999 by this office.

Thank you for the submittal of the letter and the laboratory results. Per this report, all oxygenated compounds were found at "ND", non-detect level, except presence of low concentrations of MTBE in MW-2 and MW-4 wells.

I understand that the second semi-annual monitoring and sampling event was performed on October 12th, 1999, and that the results of this event will be forwarded to this office.

I will look forward for this report.

Should you have any questions, please call me at (510)-567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Douglas J. Lee, Project Coordinator, Gettler-Ryan Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568
Files

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 2465

June 23, 1999

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

I have received and reviewed the "semi-annual 1999 Groundwater Monitoring & Sampling Report" dated June 3, 1999, submitted by Deanna L. Harding of Gettler-Ryan Inc. regarding the above referenced property. Thank you for the submission of this report. As you are aware, the MW-2 well is the well with highest concentrations of contaminants. However, there have been numerous oscillations in the concentrations of the contaminants in the MW-2 well. This variation of concentrations has been taking place in regard to TPH(G), Benzene, Ethylbenzene, Xylene, and MTBE.

The test for presence of other oxygenated contaminants such as those of TAME, DIPE, ETBE, TBA, EDB, and EDC revealed non-detect, ND levels for all of these constituents.

As indicated previously, I need to know how fast per year the ground water is moving in this region to confirm that MTBE plume is localized around MW2 only. **Please calculate and submit the ground water speed on this site.** This requirement can be accomplished during the next Quarterly Groundwater Monitoring Report.

I will look forward for the next Groundwater Monitoring Report, which should include Groundwater speed on the above referenced site.

Should you have any questions, please call me at (510)-567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Deanna L. Harding, Project Coordinator, Gettler-Ryan Inc.,6747 Sierra Court, Suite J, Dublin, CA 94568
Files

GETTLER-RYAN INC.

ST10246S
Resp. Ltr
11/18/99

November 10, 1999

Mr. Amir K. Gholami
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **Tosco 76 Branded Facility No. 6034, 4700 First Street, Livermore, California**

Mr. Gholami:

At the request of Tosco Marketing Company (Tosco), Gettler-Ryan Inc. (GR) has prepared this letter in response to your September 28, 1999, correspondence regarding the subject site. During the April 14, 1999 monitoring and sampling event at the site, groundwater samples collected from monitoring wells MW-2 and MW-4 were analyzed for fuel oxygenate compounds, 1,2-DCA, and EDB by EPA Method 8260. Except for very low concentrations of MTBE, all constituents analyzed were not detected. The analytical results are summarized in the enclosed Table 4.

The second semi-annual monitoring and sampling event was conducted on October 12, 1999. A report summarizing the results of the event is currently being prepared and will be submitted to your agency following review by Tosco.

If you have any questions, please do not hesitate to call me at (925) 551-7555.

Sincerely,
Gettler-Ryan Inc.

Douglas J. Lee
Project Manager
R.G. No. 6882

Enclosure: Table 4 - Groundwater Analytical Results - Oxygenate Compounds

cc: Mr. David B. De Witt, Tosco Marketing Company

140096.01

Table 4

Groundwater Analytical Results - Oxygenate Compounds

TOSCO (Unocal) Service Station #6034

4700 First Street

Livermore, California

Well ID	Date	Ethanol *(ppb)*	TBA *(ppb)*	MTBE *(ppb)*	DIPE *(ppb)*	ETBE *(ppb)*	TAME *(ppb)*	1,2-DCA *(ppb)*	EDB *(ppb)*
MW-2	04/14/99	ND	ND	57	ND	ND	ND	ND/ND[1]	ND/ND[1]
MW-4	04/14/99	ND	ND	16	ND	ND	ND	ND/ND[1]	ND/ND[1]

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-Dibromethane
ppb = Parts per billion
ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

[1] Halogenated Volatile Organics by EPA Method 8010.

TOSCO
Marketing
Company

2000 Crow Canyon Place
Suite 400
San Ramon, CA 94583
925.277.2305
fax: 925.277.2361

**Environmental
Compliance
Department**

May 26, 1999

Mr. Amir Gholami
Alameda County – Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Groundwater sampling
76 Products Service Station #6034 **(SiID 2465)**
4700 First Street
Livermore, CA

Dear Mr. Gholami:

As we discussed on the telephone this morning, I have checked with our records regarding the timing of monitoring events at the site. Attached is a copy of a letter from Ms. Eva Chu of the Alameda Co. – EHS that approves the reduced sampling interval at the site.

I have also talked with Gettler-Ryan who conduct the monitoring and sampling at the site. According to their records, samples were collected on April 14, 1999 and analyzed for the oxygenate compounds as you requested. The results should be available in the near future.

Should you have any other questions, feel free to call me at 925-277-2384.

Sincerely,

David B. De Witt
Environmental Project Manager

99 MAY 27 PM 4:35
ENVIRONMENTAL PROTECTION

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 2465

May 17, 1999

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

As you are aware, I sent you a letter dated May 12th, 1999 requesting several items to be addressed by June 12th, 1999. In the letter, I requested that you calculate the speed of ground water as well as **testing for the presence of other oxygenated contaminants such as those of TAME, DIPE, ETBE, TBA, EDB, and EDC at least once to ensure absence of the indicated constituents.** Per our discussion, the first requirement was already met and submitted.

The second requirement can be accomplished during the next Quarterly Groundwater Monitoring Report, which is due presently.

Per our discussion please respond within 30 days from the receipt of this letter or by June 12, 1999.

If you need an extension for the submittal of the above or you have any other questions, please call me at (510)-567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Deanna L. Harding, Project Coordinator, Gettler-Ryan Inc.,6747 Sierra Court, Suite J, Dublin, CA 94568
Files

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 2465

May 12, 1999

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

As you are aware, I sent you a letter dated 1/6/99 requesting several items to be addressed within 30 days of the receipt of the letter or by 2/6/99. To this date this office has not received the requested information. As indicated previously, I need to know how fast per year the ground water is moving in this region to confirm that MTBE plume is localized around MW2 only. This is necessary since MTBE level of 3700 ppb was found in MW2 well alone, according to the last report. **Please calculate and submit the ground water speed on this site.**

Additionally, per Cal/EPA and Regional Water Quality Control Board (RWQB), **you need to test for the presence of other oxygenated contaminants such as those of TAME, DIPE, ETBE, TBA, EDB, and EDC at least once to ensure absence of the indicated constituents.**

The above requirements can be accomplished during the next Quarterly Groundwater Monitoring Report, which is due presently.

Please respond within 30 days from the receipt of this letter or by June 12, 1999.

If you have any questions, call me at (510)-567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Deanna L. Harding, Project Coordinator, Gettler-Ryan Inc.,6747 Sierra Court, Suite J, Dublin, CA 94568
Files

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

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

StID 2465

March 8, 1999

David DeWitt
Tosco Marketing Company
2000 Crow Canyon Place Suite 400
San Ramon, CA 94583

RE: Tosco (UNOCAL) 4700 First Street, Livermore, CA

Dear Mr. DeWitt:

I have received and reviewed the letter and groundwater velocity calculation dated March 4, 1999 by Gettler-Ryan Inc. I understand that some of the wells are being monitored and sampled semi-annually per this office correspondence dated December 19, 1998.

The groundwater velocity if 139.7 ft/yr. for graded gravel with sand should have reached MW-7 downgradient well by now. However, the velocity of 0.0014 ft/yr. for silt obviously is obviously too slow to have reached MW-7 well for the same duration. I will be looking forward to receive the groundwater samples for the next sampling event which will be analyzed by EPA method 8260 to confirm the absence of fuel oxygenates other than MTBE.

If you have any questions, I can be reached at (510) 567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Douglas J. Lee, Project Manager, Gettler-Ryan Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568
Files

StID 2465

December 8, 1998

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

RE: Tosco (unocal) 4700 First Street, Livermore, CA

Dear Ms. Harding:

This office has assigned me to review the above referenced site. It has come to my attention that MTBE level of 9600 ppb was found in MW2 only. It seems that the MTBE should have reached to downgradient monitoring wells of MW7 or MW6 by now since the work started in 1991. However, MTBE has not migrated into downgradient wells. I need to know how fast per year the ground water is moving in this region to confirm that MTBE plume is localized around MW2 only. **Please calculate and submit the ground water speed on this site as soon as possible**. This information can help proceed further with this case.

If you have any questions, I can be reached at (510) 567-6876.

Sincerely,

Amir K. Gholami, REHS
Hazardous Materials Specialist

C: Tina Berry, Tosco Marketing Company, 2000 Crow Canyon Place, Suite 400, San Ramon, CA 94583
files

2465gwspeed

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

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

StID 2465

December 19, 1996

Ms. Tina Berry
Unocal
P.O. Box 5155
San Ramon, CA 94583

RE: Reduced Sampling at Unocal SS #6034, 4700 1st Street, Livermore, CA

Dear Ms. Berry:

Thank you for the submittal of mpds' November 1996 Quarterly Data Report for the above referenced site.

The sampling freqency of groundwater monitoring wells MW-2 and MW-4 may be reduced to a semi-annual basis. The wells should be sampled in April and October of subsequent years.

Also, you may discontinue groundwater sampling of the remaining wells, MW-1, MW-3, MW-5, MW-6, and MW-7.

If you have any questions, I can be reached 510/ 567-6762.

eva chu
Hazardous Materials Specialist

FILE # 6034 SS ✓ BP ____
RPT ____ QM ____ TRANSMITTAL ____
1 ____ 2 ____ 3 ✓ 4 ____ 5 ____ 6 ____

RECEIVED
DEC 23 1996

unocal2.6

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

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

StID 2465

December 19, 1996

Ms. Tina Berry
Unocal
P.O. Box 5155
San Ramon, CA 94583

RE: Reduced Sampling at Unocal SS #6034, 4700 1st Street, Livermore, CA

Dear Ms. Berry:

Thank you for the submittal of mpds' November 1996 Quarterly Data Report for the above referenced site.

The sampling freqency of groundwater monitoring wells MW-2 and MW-4 may be reduced to a semi-annual basis. The wells should be sampled in April and October of subsequent years.

Also, you may discontinue groundwater sampling of the remaining wells, MW-1, MW-3, MW-5, MW-6, and MW-7.

If you have any questions, I can be reached 510/ 567-6762.

eva chu
Hazardous Materials Specialist

unocal2.6

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

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

StID 2465

December 1, 1995

Ms. Tina Berry
UNOCAL
P.O. Box 5155
San Ramon, CA 94583

RE: Reduce Sampling Frequency at Unocal SS #6034, 4700 1st St, Livermore

Dear Ms. Berry:

I have completed review of mpds' November 1995 Quarterly Data Report for the above referenced site. There is sufficient groundwater data at this time where sampling frequency may be reduced as follows:

1. sample quarterly well MW-2;
2. sample semi-annually well MW-4; and
3. sample annually wells MW-3, MW-5, MW-6, and MW-7.

Groundwater should be analyzed for TPH-G and BTEX. MTBE should be quantified. Additionally, dissolved oxygen should be measured so the effectiveness of ORC can be evaluated.

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

eva chu
Hazardous Materials Specialist

cc: files

unocal2.5

Unocal Corporation
Diversified Businesses
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583
Telephone (510) 867-0760
Facsimile (510) 277-2309

0,2

UNOCAL 76

August 8, 1995

Northern Region
Corporate Environmental
Remediation and Technology

Ms. Eva Chu
Alameda County Health Care
Services Agency
1131 Harbor Bay Pkwy, #250
Alameda, California 94502-6577

UNOCAL Station No. 6034
4700 First Street
Livermore, California

Dear Ms. Eva Chu:

I am pleased to inform you that UNOCAL has initiated a program to enhance bioremediation of dissolved-phase hydrocarbons in site well MW-2, as previously addressed in my letter to you dated January 10, 1995 and in a subsequent letter from our consultant, KEI, dated April 13, 1995. This was done to address your concerns regarding the persistent dissolved hydrocarbons present in site well MW-2.

An oxygen releasing compound (ORC) consisting of magnesium peroxide was installed in Well MW-2 on August 2, 1995. The ORC product was contained within 1-1/2 inch diameter "socks" strung together and inserted into the well casing, extending from approximately 14 to 20 feet below grade (i.e., from the water table to approximately six feet below the water table). Prior to ORC inclusion into the well (and during the last sampling event in July), water samples were collected and tested for dissolved oxygen, pH, and various ions to obtain a baseline characterization of the groundwater. Additional testing of these parameters will follow during subsequent sampling events. I have enclosed information from Regenesis Bioremediation Products, manufacturers of the ORC product, for your information and files.

Please note that UNOCAL submitted a Non-Attainment Area Management Plan for the referenced site on April 6, 1995. We currently await your comments on this document.

No need for NAA - We are looking at closure

Please call me at 510-277-2321 should you have any questions or concerns regarding this letter. I look forward to hearing from you shortly.

Sincerely,

Tina Berry

Tina Berry
Environmental Geologist

cc: File (6034)
Ron Bock, UNOCAL
Tom Berkins, KEI

REGENESIS
Bioremediation Products

27130A Pasco Espada, Suite 1407
San Juan Capistrano,CA 92675
Phone: (714) 443-3136
Fax: (714) 443-3140

The Company and Its Products

Introduction

REGENESIS was incorporated in the Spring of 1994 to continue the development and commercialization of Oxygen Release Compound, ORC®. ORC is a patented formulation of a very fine, insoluble solid peroxygen which has been formulated to release oxygen at a controlled rate when hydrated. Since oxygen is frequently the limiting factor in bioremediation, the product has been demonstrated to increase the remediation of hydrocarbon contamination in soil and groundwater. The company is now in the commercialization stage, working with clients to meet their specific project needs.

The Company

The roots of the company go back several years before its incorporation in California. The inventors originally began working on a similar product used to facilitate the growth of plants in oxygen poor soils. That product, OXYGEN PLUS®, is now sold to the horticultural market.

Formulations of ORC, more appropriate to bioremediation applications, were first tested in the laboratory over three years ago. After several successful laboratory results and small scale field tests, the company commissioned Arthur D. Little to complete a market study. This September 1993 study indicated a significant commercial opportunity. Concurrent with the study and encouraged by its results, REGENESIS decided to conduct several full scale field demonstrations. One of the most significant was published in a Ground Water Monitoring and Remediation article (Winter 1994) which describes the results of an application of ORC by the University of Waterloo at the widely studied Borden Aquifer.

The Founder and Chairman of the Board of REGENESIS is Mr. Gavin S. Herbert, who also founded Allergan Pharmaceuticals--a Fortune 300 company with almost $1 billion is sales. The President and CEO of the company is Mr. John B. Griffiths, who came to the company after 15 years in the oil equipment industry. Mr. Griffiths was Vice President and Group Manager of FMCs $350 million petroleum equipment business and later became President of Hydril. The co-inventor of the product, Dr. Stephen Koenigsberg is the company's Vice President of Research. The Scientific Advisory Board is headed by Dr. Herb Ward, Chairman Emeritus of the Department of Environmental Science and Engineering at Rice University. He and the other four members are renown scientists in the environmental remediation industry. REGENESIS' Board of Directors is composed of recognized leaders from industry and government.

ORC Features and Benefits

The core technology involves a patented formulation which when hydrated releases oxygen slowly, from a period of a few months to in excess of one year. Regenesis is working almost exclusively with magnesium peroxide although the patent covers the use of several other peroxygen materials as a basis for formulating ORC. ORC is

environmentally safe to use. The time-release technology is not based on a coating process which could introduce regulatory concerns regarding the introduction of such materials to aquifers. ORC releases oxygen when it is contacted with water, however, the material is stable at up to 3% moisture which facilitates storage (long shelf life) and handling. Moderate pH levels are maintained when ORC is used. The particle size of ORC is extremely small (-325 mesh or about 44 microns and below) which facilitates oxygen dispersion. Although it is designed to be removed upon depletion, if left in place, ORC would ultimately be converted to ordinary magnesium hydroxide (Milk of Magnesia) which is also insoluble.

As a result of these features, ORC can provide a passive, low cost, long term remediation in many circumstances. In groundwater, the hydraulics of a contaminated plume will not be disturbed and pollutants will not be volatized. Also, the rate control features of ORC make it a "redox control" agent which can be important where specific microbial systems yield the desired bioremediation activity in a restricted range of redox potentials.

Technology

When ORC comes in contact with moisture, oxygen is slowly released. The reaction proceeds according to the following equation:

$$MgO_2 + H_2O \rightarrow \tfrac{1}{2}O_2\uparrow + Mg(OH)_2$$

In groundwater application, the ORC powder is contained in a matrix, such as cement briquettes or sand, and then lowered into the groundwater in an inert container. When the oxygen has been dissipated, this container and spent ORC is removed from the groundwater. The by-products of the reaction are oxygen and magnesium hydroxide. The oxygen is consumed and the insoluble magnesium hydroxide is removed.

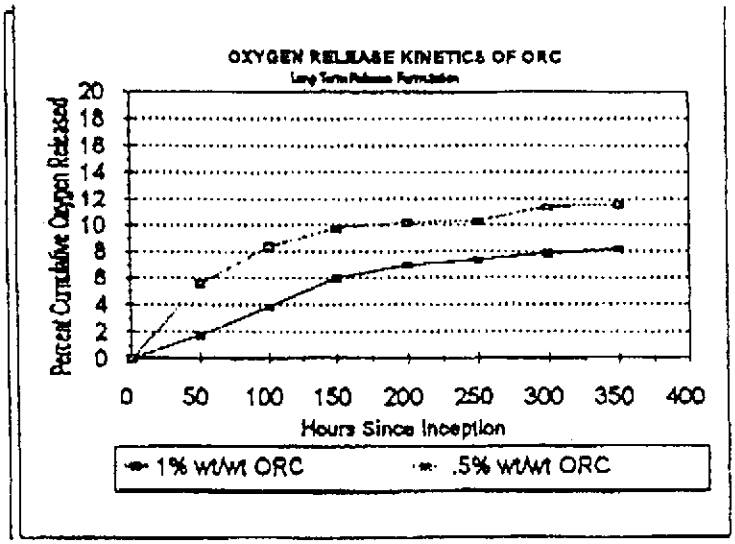
Magnesium peroxide has several uses outside of bioremediation. In agriculture, magnesium peroxide is used to provide oxygen to treat anaerobic soils that limit plant growth. Fifty states have registered Oxygen Plus® Plant Food, a magnesium peroxide based product, for use. Magnesium peroxide is listed in the Merck Index as a digestive antiacid making it even safe to ingest.

The manufacture of ORC uses hydrogen peroxide in an exothermic reaction that is essentially irreversible. Thus, magnesium peroxide does not degrade to hydrogen peroxide as is often assumed. Consequently, it does not have a significant ability to chemically oxidize compounds, or emit powerful free-radical mechanisms as is the case with hydrogen peroxide and peroxide hydrates, such as sodium percarbonate.

Applications

Figure 1 presents typical release patterns for two concentration of ORC in saturated sod. In general terms, the product can be described as releasing up to 10% of the available oxygen in about the first 200 hours followed by a release of each additional 10% every thousand hours. This translates into a longevity of about one year under static conditions.

Figure 1



In field applications, longevity can be reduced by oxygen demand factors. Other conditions, such as temperature and pH play a role; acidic conditions promote a faster oxygen release and basic conditions slow it down.

During the past three years, studies have been conducted at several recognized private laboratories and universities which proved that ORC could release oxygen slowly and that remediation of hydrocarbons could be causally linked to this property through enhanced microbial activity. Subsequent field applications in contaminated soil demonstrated that ORC was effective in promoting bioremediation under "real world" conditions. Having established the value of ORC in soil bioremediation, its applicability to groundwater remediation became a focal point of activity.

ORC can be configured to form an **oxygen barrier** across a contaminated plume. A row of wells or a trench containing ORC can release oxygen slowly and cut off the plume by fostering bioremediation in the oxygenated zone. Oxygen barriers are a passive, in-situ treatment that can represent significant capital and maintenance cost advantages over alternative means of remediation. A properly placed and maintained oxygen barrier offers the assurance that the plume remains "cut-off," and does not reappear as it can with other methods.

The first field evaluations of oxygen barriers were made by the University of Waterloo and North Carolina State University (NCSU). The first limited commercial test application was recently completed by a major consulting firm in Alaska. At Waterloo, the contamination was created by measured addition to the groundwater at a widely studied site (Canadian Forces Base Borden). The Waterloo experiment used two of the BTEX components, benzene and toluene, whereas in the NCSU and Alaska projects the entire BTEX fraction was involved, since an actual fuel spill was the contaminant source.

The Waterloo experiment has been completed and the results published as previously mentioned. The preliminary results of the NCSU experiment were presented at The Second International Symposium for In Situ and On Site Bioreclamation (1993 Battelle

Conference). The full experiment ran for 233 days and the final results are being prepared for publication. Of great significance was the fact that remediation occurred even though concentrations of BTEX entering the barrier had increased several fold during the course of the experiment. Nevertheless, upon passing through, all of the compounds were remediated to federal standards except for benzene which was reduced 98%, dropping from 1870 ppb to 34 ppb. In some states this would be acceptable for closure. The Alaska study looked at the dispersion of oxygen in the field, with special reference to a predictive model. The field test oxygen measurements exceeded the predicted dispersion results by a factor of two to three times. The actual results were significant enough for the company to propose a full scale barrier and purchase the product for installation.

In all of these studies the effectiveness of ORC was clearly demonstrated. The validity of the basic concept was proven. Oxygen can be delivered to the subsurface in a passive, low cost time release manner, which can be effective in the remediation of moderate levels of dissolved phase hydrocarbons, traversing the barrier with typical groundwater flow velocities.

ORC is appropriate to be considered whenever aerobic bioremediation could be the technology of choice. The oxygen barrier concept can be used to contain a spreading groundwater plume as described. Another use of ORC is the in-situ treatment of "hot spots" to bring down contamination quickly to more acceptable levels. Or, ORC can be used as a "polishing agent" to continue remediation after a more expensive pump and treat system is turned off. Finally, ORC has been successfully demonstrated for odor control and in biopiles; particularly in remote or inclement areas that limit the viability of other treatment methods and/or where the passive release of oxygen in-situ offers safety or operational advantages.

MONITORING
PURGING
DISPOSING
SAMPLING

MPDS SERVICES, INCORPORATED

May 30, 1995

Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94501

RE: Unocal Service Station #6034
4700 First Street
Livermore, California 94550

Per the request of the Unocal Corporation Project Manager, Ms. Tina R. Berry, enclosed please find our report (MPDS-UN6034-06) dated May 11, 1995, for the above referenced site.

Should you have any questions regarding the reporting of data, please feel free to call our office at (510) 602-5120. Any other questions may be directed to the Project Manager at (510) 277-2321.

Sincerely,

MPDS Services, Inc.

Brenda Pepito

/bp

Enclosure

cc: Ms. Tina R. Berry

2401 Stanwell Drive, Suite 300, Concord, CA 94520
TEL: (510) 602-5120 FAX: (510) 689-1918

KAPREALIAN ENGINEERING
INCORPORATED

TRANSMITTAL PAGE

DATE: April 13, 1995

TO: Eva Chu
Alameda County Health Care Services Agency

FROM: TOM BERKINS

Number of pages (including cover): 2

SUBJECT: Unocal Service Station #6034
4700 First St., Livermore

Per Tina Berry's request, attached is a letter regarding the use of magnesium peroxide (bioremediation) in monitoring well MW2 at the subject site. An original copy of this letter will be mailed to you. If you have any questions, please give me a call at (510) 602-5112.

Tom Berkins

****

If any problems occur in receiving, please call the number listed below

2401 Stanwell Drive, Suite 400
Concord, CA 94520
Tel. 510/602-5100 Fax: 510/687-0602

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510.602.5100 Fax: 510.687.0602

KAPREALIAN ENGINEERING
INCORPORATED

April 13, 1995

Alameda County Health Care
Service Agency
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

Attention: Ms. Eva Chu

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Dear Ms. Chu:

This letter is a follow-up to the recent Non-Attainment Area (NAA) Management Plan dated April 6, 1995 (prepared by Pacific Environment Group, Inc.) that was submitted by Unocal Corporation for the referenced site. In response to your concerns regarding the levels of petroleum hydrocarbons detected in monitoring well MW2, Kaprealian Engineering, Inc. (KEI) has conducted a review of remedial options.

Since the petroleum hydrocarbons detected at the Unocal site appear to be limited to the vicinity of well MW2, enhanced bioremediation was selected as a feasible means of ground water remediation. This option will also minimize the potential to cause contamination to migrate onto the Unocal site. The bioremediation program will consist of the addition of an oxygen-releasing compound (magnesium peroxide) to monitoring well MW2.

Unocal is currently negotiating with the manufacturer (Regenesis) of the oxygen-releasing compound to provide the necessary supplies needed to implement the bioremediation program at the Unocal site. Unocal anticipates that the oxygen-releasing compound will be installed no later than May 15, 1995.

If you have any questions, please feel free to contact me at (510) 602-5112.

Sincerely,

Kaprealian Engineering, Inc.

Thomas J. Berkins

Thomas J. Berkins
Project Manager

cc: Tina Berry, Unocal Corporation

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510.602.5100 Fax: 510.687.0602

Unocal Corporation
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583
Telephone (510) 867-0760
Facsimile (510) 277-2309

1/13

UNOCAL 76

January 10, 1995

North Region
Corporate Environmental Remediation & Technology

Mr. Eva Chu
Alameda County Health Care
Services Agency
UST Local Oversight Program
1131 Harbor Bay Parkway, Room #250
Alameda, California 94502-6577

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Dear Ms. Chu:

This letter responds to our telephone conversation of December 21, 1994 regarding the subject site. Please be advised that Unocal intends to prepare and submit a Non-Attainment Area (NAA) package for this site. We anticipate that the NAA report will be submitted to you by March 31, 1995.

In response to your concerns regarding hydrocarbon concentrations in onsite well MW2, Unocal is currently considering available options to address this issue. Those options include, but are not limited to, the use of hydrogen peroxide injection, solar sparging, and bioremediaion. A work plan addressing the procedures and implementation for hydrocarbon reduction in well MW2 will be sumitted to your office by April 15, 1995.

If you have any questions concerning this letter, please do not hesitate to contact me at 510-277-2321.

Very truly yours,

Tina Berry

Tina Berry
Environmental Geologist
Unocal Corporation

cc: Tom Berkins, KEI
Mike Hurd, PEG
File

MONITORING
PURGING
DISPOSING
SAMPLING
MPDS SERVICES, INCORPORATED

EC

November 21, 1994

Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94501

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Per the request of the Unocal Corporation Project Manager, Ms. Tina R. Berry, enclosed please find our report (MPDS-UN6034-04) dated November 14, 1994 for the above referenced site.

Should you have any questions regarding the reporting of data, please feel free to call our office at (510) 602-5120. Any other questions may be directed to the Project Manager at (510) 277-2321.

Sincerely,

MPDS Services, Inc.

Jarrel F. Crider

Jarrel F. Crider

/jfc

Enclosure

cc: Ms. Tina R. Berry

MW-6 must be made accessible for sampling on a quarterly basis

$10^{0.5} - 10^{.15} = 0.2$

2401 Stanwell Drive, Suite 400, Concord, CA 94520
TEL: (510) 602-5120 FAX: (510) 689-1918

12/16/94 03

Unocal Corporation
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583
Telephone (510) 867-0760
Facsimile (510) 277-2309

Is site ready for NFA?

HAZMAT

94 NOV 17 PM 2:52

UNOCAL 76

November 15, 1994

North Region
Corporate Environmental Remediation & Technology

Ms. Eva Chu
Alameda County Health Care
Services Agency
UST Local Oversight Program
1131 Harbor Bay Parkway, Room #250
Alameda, CA 94502-6577

Request for Corrective Action Plan
Unocal Service Station #6034
4700 First Street
Livermore, California

Dear Ms. Chu:

This letter is written in response to your letter dated September 30, 1994, that requested Unocal Corporation to "develop a Corrective Action Plan (CAP) for further investigation" of the referenced site, and "to identify and evaluate all feasible alternatives for cleanup of soil and ground water."

Based on the analytical results of all of the samples collected to date, it is Unocal's opinion that the extent of petroleum hydrocarbons detected in soil and ground water at the referenced site has been adequately defined; therefore, a CAP for "further investigation" does not appear to be warranted. Upon removal and replacement of the underground fuel storage tanks, waste oil tank, and product piping in August of 1989, the analytical results of all of the soil samples collected showed low (less than 10 ppm of TPH as gasoline) to non-detectable concentrations of petroleum hydrocarbons, except for one sample (A3) collected beneath the northern corner of the fuel tank pit, which showed 390 ppm of TPH as gasoline. However, this area was subsequently overexcavated to the ground water depth (approximately 17.5 feet below grade) in order to remove the contaminated soil. A total of seven monitoring wells have been installed at the Unocal site to date. Based on 18 consecutive quarters of monitoring and sampling of the monitoring wells, the ground water flow direction has been consistently to the northwest, and the downgradient monitoring wells (MW6 and MW7) have consistently shown no detectable concentrations of petroleum hydrocarbons. Thus, the extent of petroleum hydrocarbons detected in ground water does not extend off of the Unocal site, and appears to be limited to the vicinity of well MW2.

Subsequent to discussions from the November 8, 1994 meeting with you and Kevin Graves of the RWQCB, it is our opinion that this site is a good candidate for consideration in the

Regional Water Quality Control Board's (RWQCB) non-attainment area (NAA) program. This site appears to meet all of the "Category I" criteria established by the RWQCB in order to be considered for the NAA program. In particular, the extent of petroleum hydrocarbons detected in ground water appears to be limited on-site to the vicinity of well MW2, source removal (soil excavation to the ground water depth) has been conducted, and dissolved phase cleanup does not appear appropriate due to limited water impacts or human health risks. Was there any attempt to remediate dissolved phase? Need there be in the future?

Is it also not cost effective?

In summary, it is the opinion of Unocal and our consultant, Kaprealian Engineering, Inc. (KEI), that a CAP for this site is not necessary at this time, and Unocal formally requests that this site be considered for inclusion in the NAA program. We would appreciate the opportunity to discuss this site with you, and will be contacting you in the near future to arrange a meeting.

If you have any questions or comments regarding this letter, please do not hesitate to contact me at (510) 277-2321, or Tom Berkins of KEI at (510) 602-5100.

Sincerely,

Tina Berry

Tina Berry
Unocal Corporation
Environmental Geologist

cc: Thomas J. Berkins, KEI
File

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

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

StID 2465

September 30, 1994

Ms. Tina Berry
UNOCAL Corp
P.O. Box 5155
San Ramon, CA 94583

RE: CAP for Unocal Service Station #6034, 4700 1st Street, Livermore 94550

Dear Ms. Berry:

Upon review the case file for the above referenced site, it appears groundwater contamination persists in the vicinty of well MW-2. At this time, pursuant to Section 2721 et seq. of Article 11, Title 23, California Code of Regulations, you are hereby requested to develop a Corrective Action Plan (CAP) for further investigation of this site, and to identify and evaluate all feasible alternatives for cleanup of soil and groundwater caused by the unauthorized release of petroleum products.

The referenced CAP is due in this office within 45 days of the date of this letter, or by **Noverber 18, 1994. Please be advised that this is a formal request for technical reports pursuant to Title 23, CCR, Section 2722(c). Any extensions of the stated deadlines, or modifications of the required tasks, must be confirmed in writing by this agency.**

Should you have any questions about the content of this letter, please contact me at (510) 567-6762.

eva chu
Hazardous Materials Specialist

cc: files

unocal14

MONITORING
PURGING
DISPOSING
SAMPLING
MPDS SERVICES, INCORPORATED

6/13/94

ALCO
HAZMAT

94 MAY 27 PM 2:28

May 26, 1994

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, California 94621

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Per the request of the Unocal Corporation Project Manager, Ms. Tina R. Berry, enclosed please find our report (MPDS-UN6034-02) dated May 19, 1994, for the above referenced site.

Should you have any questions regarding the reporting of data, please feel free to call our office at (510) 602-5120. Any other questions may be directed to the Project Manager at **(510) 277-2321.**

Sincerely,

MPDS Services, Inc.

for: Brenda Negrete
Deanna L. Harding
Technical Assistant

/dlh

Enclosure

cc: Ms. **Tina R. Berry**

Ask Tina Berry if Unocal interested in air sparge/pump + treat from MW-2, to see if it will lower concentrations of TPH.
Was there adequate source removal?

Unocal is contemplating
① Does it qualify for NAZ, if so

2401 Stanwell Drive, Suite 400, Concord, CA 94520
TEL: (510) 602-5120 FAX: (510) 689-1918

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

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

StIDs 3169 and 2465

January 5, 1993

Ron Bock
UNOCAL
P.O.Box 5155
San Ramon, CA 94583

Subject: Response to Letter of December 30, 1992, Summarizing Meeting of November 18, 1992

Dear Mr. Bock:

I have reviewed your letter of December 30, 1992 and have the following comments to clarify additional work which should be considered for the UNOCAL stations in Livermore and in Dublin.

UNOCAL Service Station No. 6034, Livermore

1. The groundwater flow has not been consistently to the northwest. Gradient fluctuates from west to north. Monitoring well MW7 is located northwest of the UST pit, and at times is cross-gradient from the pit. A monitoring well should be installed 20' from the pit in the westerly direction. This well may more accurately define the groundwater contaminant plume.

2. This office is requiring Chevron to take corrective action for the remediation of on- and off-site contamination due to the release of petroleum hydrocarbons from their site.

UNOCAL Service Station No. 5366, Dublin

1. Annual sampling of monitoring wells MW2, MW3, and MW4 should be performed when groundwater elevation is at its seasonal high, February or March. This should continue until further notice. UNOCAL is not to discontinue sampling of these wells without prior approval from the RWQCB or this office.

2. It is agreed that the extent of contamination in the vicinity of MW1 has not been completely defined. If drilling is not practical due to safety and accessibility reasons, efforts should be made to prevent potential offsite migration of contaminated groundwater. This could involve soil vapor extraction or other feasible alternatives.

Should you have any questions or comments, I can be reached at (510) 271-4530.

Sincerely,

Eva Chu
Hazardous Materials Specialist

cc: Rich Hiett, RWQCB
Edgar Howell/files

unocald2
unocal13

KAPREALIAN ENGINEERING
INCORPORATED

January 11, 1993

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Gentlemen:

Per the request of Mr. Ed Ralston of Unocal Corporation, enclosed please find our report dated November 11, 1992, for the above referenced site.

If you should have any questions, please feel free to call our office at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey

jad\82

Enclosure

cc: Ed Ralston, Unocal Corporation

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510.602.5100 Fax: 510.687.0602

REB27.92

Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, California 94583
Telephone (510) 867-0760
Facsimile (510) 277-2309

UNOCAL 76

December 30, 1992

Northern Region
Corporate Environmental
Remediation & Technology

Ms. Eva Chu
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, Ca 94621

SUMMARIZATION OF MEETING ON
NOVEMBER 18, 1992

Unocal Service Station No. 6034
~~4700 First Street~~
Livermore, California

Unocal Service Station No. 5366
7375 Amador Valley Boulevard
Dublin, California

Dear Ms. Chu:

This letter has been prepared in order to summarize the items discussed and agreed to in our November 18, 1992 meeting pertaining to the two referenced sites. However, before proceeding with the summary, I would like to again thank you for taking the time to sit down and discuss the work that has been performed at the two sites. I have found that these face-to-face meetings are usually successful in resolving concerns over the direction of an environmental investigation, and I encourage them whenever possible.

As outlined in our meeting, it has been and still is our intention to immediately address and assess contamination that is encountered at any of our facilities. Unocal typically performs source removal work (i.e., tank and product piping removal, excavation of contaminated soil, purging of the tank pit groundwater, etc.) where feasible, in order to eliminate the source of contamination at a given site. Following the source removal work, a soil and groundwater investigation is typically implemented. The purpose of the investigation is to define the extent of contamination where feasible and to determine if there are any potential receptor areas that contamination from our site may impact. Once the investigation is completed, an evaluation is

performed to determine if monitoring, remediation, or other work is warranted at the site. As discussed in our meeting, this is the general methodology that has been followed at both the Livermore and Dublin sites.

Environmental Investigative/Remedial Tasks Performed at Service Station No. 6034, Livermore, California 4700 First St. - Livermore

As part of Unocal's routine tank replacement program to upgrade our facilities with "state-of-the-art" double-wall underground tanks and piping, the former underground tanks and piping were removed and replaced in August of 1989. Upon removal, six soil samples were collected from beneath the former fuel tanks, one soil sample was collected from beneath the former waste oil tank, and seven soil samples were collected within the pipe trenches. Analysis of the soil samples all showed low to non-detectable levels of hydrocarbon contamination, except for the sample collected beneath the northern corner of the fuel tank pit, which showed 390 ppm of TPH as gasoline. However, this area was subsequently overexcavated to the groundwater depth (approximately 17.5 feet below grade) to remove the source of contamination.

Based on RWQCB guidelines, a soil and groundwater investigation was then initiated at the site. To date, a total of seven monitoring wells have been installed at the site. The groundwater flow direction has consistently been to the northwest. Based upon the analytical results of the soil and groundwater samples collected to date, the following can be concluded:

1. The extent of soil and groundwater contamination in the downgradient direction of the Unocal site has been defined. The contamination does not extend off the Unocal parcel.

2. Dissolved hydrocarbons have been present in the groundwater samples collected from the well adjacent to the fuel tank pit.

3. Upgradient monitoring wells MW4 and MW5 have consistently shown detectable concentrations of petroleum hydrocarbons.

As discussed, an ongoing environmental investigation/remediation effort is being conducted at the upgradient Chevron site due to a past product release. A groundwater remediation system was previously installed by Chevron and operated for an undetermined period of time. This system has apparently been shut down and is no longer in operation. Chevron has installed 19 monitoring wells at and in the vicinity of their site, with several of the wells still showing elevated levels of dissolved petroleum hydrocarbons.

The consultants for Unocal and Chevron are currently performing a joint quarterly monitoring and sampling program of the wells at the respective sites. Based on the data collected to date, the Chevron site is upgradient of the Unocal site and it appears that contamination from the Chevron release may have migrated off-site and impacted our upgradient wells MW4 and MW5.

Unocal is planning to continue the joint groundwater monitoring and sampling program. However, Unocal is concerned about the groundwater contamination present in our upgradient

wells that appears to have migrated from the Chevron site. If the contaminant concentrations in our upgradient wells increase, or if evidence occurs that this contamination is migrating further on our site, Unocal will request that your office require Chevron to take corrective action.

In summary, based on the information presented above, including the fact that contaminant source removal work has been performed at the Unocal site during the tank replacement project, and that any residual contamination from the Unocal site is isolated to the vicinity of the fuel tank pit and has not migrated off-site, it is our opinion that no further contamination delineation nor active remediation work is warranted for the Unocal site at this time. However, if remediation is deemed to be warranted at the Unocal site in the future, Unocal shall only be responsible for the contamination that is the result of Unocal operations.

Environmental Investigation/Remedial Tasks Performed at Service Station 5366, Dublin
7375 Amador Valley Blvd

The underground storage tanks and piping at this site were removed and replaced with double-wall underground tanks and piping in late 1987/early 1988. Contaminated soil was encountered at the site in the vicinity of the waste oil and fuel tanks during their removal. Contaminated soil was overexcavated in the vicinity of the waste oil tank, and the analytical results of the final soil samples collected from the base of the excavation indicated that the majority of the contaminated soil had been removed. Contaminated soil was also encountered in the vicinity of the former fuel tank pit. To effectively eliminate the source of contamination, the fuel tank pit was overexcavated to a depth of about 13 feet below grade (i.e., about 2.5 feet below the groundwater depth at that time) and approximately 9,000 gallons of groundwater were purged from the tank pit.

The sidewall soil samples collected from the fuel tank pit excavation showed TPH as gasoline and TPH as diesel concentrations ranging from non-detectable to 83 ppm, except for one sidewall sample that showed 1,700 ppm of TPH as gasoline. Unfortunately, the sidewall that showed the 1,700 ppm of TPH as gasoline was located adjacent to the southerly pump island and canopy footing. Therefore, overexcavation of this sidewall was not feasible due to concerns about the structural stability of the pump island and canopy.

In accordance with RWQCB guidelines, a contamination assessment was initiated in 1988 to determine if soil and groundwater had been impacted. The assessment included the installation of four monitoring wells. Each of the wells was placed on a monthly monitoring and quarterly sampling program beginning in April 1988. The extent of this monitoring and sampling program was reduced in May 1990 to include only sampling of MW1 since groundwater samples collected from MW2, MW3 and MW4 indicated non-detectable concentrations of TPH as gasoline and benzene for the three preceding consecutive quarters.

Beginning on May 22, 1992 annual sampling of upgradient well MW2 was implemented. The groundwater sample collected from this well on this date also showed non-detectable

concentrations of TPH as gasoline and benzene.

As discussed in our meeting, the nearby BP and former Shell service station locations also have environmental investigations in progress. Elevated levels of dissolved hydrocarbon contamination and free product have been detected in the monitoring wells at these two sites. Unocal is currently participating in a joint quarterly groundwater monitoring program to determine the regional groundwater flow direction in the vicinity of these sites.

According to information provided by you in our meeting, the ARCO site on the northeast corner of Village Parkway and Amador Valley Boulevard is also currently undergoing an environmental investigation. The data generated during this investigation will be useful in completely defining the extent of soil and groundwater contamination in the vicinity of our site. Therefore, I have instructed our consultant for this project to perform a file review at your office for the ARCO site.

As we discussed, two items that were requested in your September 29, 1992 letter are as follows:

1. Sample existing monitoring wells MW2, MW3 and MW4 on a semi-annual basis.

2. Install additional monitoring wells and/or exploratory borings to the east of the Unocal site in order to completely define the extent of contamination at and in the vicinity of the Unocal site.

Unocal's response to these items is as follows:

1. Wells MW2, MW3 and MW4 were sampled quarterly from April 29, 1988 to May 18, 1990 (a period of nine quarters). The analytical results of the groundwater samples collected from MW2 showed non-detectable concentrations of TPH as gasoline and benzene for eight of the nine quarters (TPH as gasoline and benzene were detected at concentrations of 170 ppb and 2.7 ppb, respectively, on the initial sampling date). Based on these consistently non-detectable concentrations, the sampling of this well was discontinued in May of 1990. However, because this well is in the upgradient direction of the well (MW1) at the site that has consistently shown dissolved hydrocarbon constituents (but no free product), annual sampling of MW2 was re-implemented in May of this year. The analytical results of the groundwater sample collected from MW2 on May 22, 1992, once again showed non-detectable concentrations of TPH as gasoline and benzene.

   The analytical results of the groundwater samples collected from well MW3 showed non-detectable concentrations of TPH as gasoline, TPH as diesel, and benzene during eight of the nine quarters. The April 28, 1989, sample showed 880 ppb of TPH as gasoline, 72 ppb of TPH as diesel, and 9.6 ppb of benezene. However, due to questions about the validity of these sample results, an additional sample was collected from this well on May 22, 1989. The analytical results of this sample again showed non-detectable concentrations of TPH as

gasoline and benzene. TOG was non-detectable in MW3 during three of the five times that it was analyzed for. However, the detectable levels (2.5 ppm and 1.6 ppm) were just slightly above the detection limit (1.0 ppm) which indicates that no widespread concentrations of TOG are present in the groundwater at the site. Based on these predominantly non-detectable concentrations, the sampling of this well was discontinued in May of 1990.

The analytical results of the groundwater samples collected from MW4 showed non-detectable concentrations of TPH as gasoline during all nine sampling events, and non-detectable concentrations of benezene during seven of the nine sampling events. However, the detectable levels of benzene (0.30 ppb and 0.67 ppb) were either at or just above the detection limit (0.30 ppb), which once again indicates that no significant groundwater contamination is present in the vicinity of MW4. Therefore, once again based on these predominantly non-detectable concentrations, the sampling on this well was discontinued in May of 1990.

Based on the preceding analytical results, it is our opinion that no further sampling of wells MW2, MW3 and MW4 is warranted. However, in the spirit of compromise, Unocal agrees to sample wells MW2, MW3 and MW4 on an annual basis for one year (two separate sampling dates). All samples will be analyzed for TPH as gasoline and BTX&E constituents. In addition, the samples from MW3 will be analyzed for TPH as diesel and TOG. If these analytical results are non-detectable, Unocal will once again discontinue the sampling of these wells.

2. Based on the analytical results of the samples collected to date, well MW1 has consistently shown dissolved concentrations of hydrocarbon constituents. Since this well is downgradient of the area near the southerly pump island that could not be excavated during the fuel tank removal and replacement project, and since residual levels of soil contamination (340 ppb of TPH as gasoline) were encountered during the installation of this well, it was anticipated that dissolved hydrocarbon constituents would be consistently detected in this well. However, since the concentrations of contaminants found in the well have consistently remained at the same order of magnitude, it appears that these levels are due to the residual soil contamination in the vicinity of the wells.

   Obviously, the extent of contamination in the vicinity of MW1 has not been completely defined. However, the reason that no additional off-site investigative work has been performed is because no suitable locations for additional monitoring wells are available. MW1 is already adjacent to Village Parkway. Both Amador Valley Boulevard and Village Parkway are wide, heavily traveled roads that for safety and accessibility reasons are not suitable for drilling. All four corners of this intersection currently contain or have contained service stations. Unocal, BP, and Shell are already conducting joint monitoring to determine regional groundwater flow direction and contaminant levels. The nearest site east of the Unocal site suitable for drilling is the ARCO site. This is the reason that Unocal has instructed our consultant to perform a file review for the ARCO site. It is anticipated that

the soil and groundwater data from the ARCO site can be used to determine the approximate limits of contamination for the Unocal site.

In summary, extensive contaminant source removal was performed at the Unocal site during the replacement of the underground tanks and lines. Residual soil contamination in the vicinity of the southerly pump islands could not be excavated during the source removal work, and it appears that the dissolved groundwater contamination in MW1 is related to this residual soil contamination. No other significant groundwater contamination has been found at the site. MW1 will continue to be sampled on a quarterly basis, and the remaining three wells will be sampled on an annual basis. Unocal will also continue to participate in the joint monitoring program with BP and Shell (and hopefully ARCO); but because of the isolated nature of the contamination at our site, we do not feel that any active remedial measures at this site are warranted at this time. Not confirmed

Should you have any questions, please feel free to contact me at (510) 277-2303.

Sincerely,

Ronald E. Bock

Ronald E. Bock
Manager Remediation Projects

EC/bsb
c: E. C. Ralston
P. C. Stern
T. R. Ross, KEI

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

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

StID 2465

October 3, 1992

Tim Ross
UNOCAL
P.O.Box 5155
San Ramon, CA 94583

Subject: Corrective Action Plan for Unocal Service Station #6034, 4700 First Street, Livermore CA 94550

Dear Mr. Ross:

This office has reviewed the file for the above referenced site. When 3 USTs were removed in August 1989, soil samples exhibited up to 390 ppm TPH-G. The UST pit was over-excavated until ground water was encountered. The water sample showed 47,000 ppb TPH-G and 260 ppb benzene. Clearly, an unauthorized release of petroleum hydrocarbons has occurred at this site, impacting soil and ground water.

In October 1989 four monitoring wells were installed. Quarterly sampling began in January 1990. To delineate the ground water contamination plume, three additional wells were installed (2 downgradient and 1 cross gradient).

The subsurface investigation performed to date appears to have delineated the extent of soil contamination at the site. Further, based to a large extent on historical gradient information, it appears that ground water contamination has not migrated off-site in the downgradient direction. However, there appears to be a possible contributory source from off-site affecting water quality in upgradient well MW-4 and possibly MW-5.

At this time, pursuant to Section 2721 et seq. of Article 11, Title 23, California Code of Regulations, you are hereby requested to develop a Corrective Action Plan (CAP) for further investigation to identify and evaluate all feasible alternatives for cleanup of groundwater contamination caused by the unauthorized release of petroleum products at this site.

The reference CAP is due in this office **within 45 days of the date of this letter.** Once the proposal is approved, field work should commence within 60 days. A report must be submitted within 45 days after the completion of this phase of work at the site. All reports and proposals must be submitted under seal of a California Registered Geologist, Certified Engineering Geologist, or Registered Civil Engineer.

Please be advised that this is a formal request for technical reports pursuant to California Water Code Section 13267(b). Any extensions of the stated deadlines, or modifications of the required tasks, must be confirmed in writing by either this agency or the RWQCB. Copies of all proposals and reports must also be sent to Mr. Eddy So of the RWQCB.

Should you have any questions about the content of this letter, please contact me at (510) 271-4530.

Sincerely,

Eva Chu
Hazardous Materials Specialist

cc: Eddy So, RWQCB
Mark Thomson, Alameda County District Attorney's Office
Danielle Stefani, Livermore Fire Department
[redacted]/files

unocal12

KAPREALIAN ENGINEERING
INCORPORATED

August 20, 1992

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Gentlemen:

Per the request of Mr. Bob Boust of Unocal Corporation, enclosed please find our reports dated May 4, 1992, and August 12, 1992, for the above referenced site.

If you should have any questions, please feel free to call our office at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey

jad\82

Enclosure

cc: Bob Boust, Unocal Corporation

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510.602.5100 Fax: 510.687.0602

DATE: month 4 date | ,1992

TO : **Local Oversight Program**

FROM: Don Hwang

SUBJ: **Transfer of Elligible Oversight Case**

Site name: Unocal

Address: 4700 1st St City L Zip 94550

Closure plan attached? (Y) N DepRef remaining $_____

DepRef Project # 80 STID #(if any) 2465

Number of Tanks: 3 removed? (Y) N Date of removal 8/2/89

Leak Report filed? Y (N) Date of Discovery 8/2/89

Samples received? (Y) N Contamination: (Soil) (Groundwater) TPH-G 2900 ppm TPH-G 47 ppm benzene 2.60 ppb

Petroleum (Y) N Types: Avgas Jet leaded (unleaded) Diesel
fuel oil (waste oil) kerosene solvents

Monitoring wells on site 7 Monitoring schedule? (Y) N

LUFT category 1 2 3 * H S C A R W G O

Briefly describe the following: for MW4-TPH-G 990 ppm, B 9.8 ppm, T-10 ppm, X-4.7, E-7.1

Preliminary Assessment 12/18/89-4 MW's-soils for MW2-790 ppm TPH-G, ~~for MW4~~ for MW-4: 56 ppm TPH-G; water MW2-TPH-G 53000 ppm, B 540 ppm, T-560, X-22,000, E-130.

Remedial Action _____

Post Remedial Action Monitoring _____

Enforcement Action _____

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

November 25, 1991

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

RE: Unocal Service Station #6034
4700 First St.
Livermore, California

Reg'd ref + LM

Gentlemen:

Per the request of Mr. Ron Bock of Unocal Corporation, enclosed please find our report dated November 25, 1991, for the above referenced site.

If you have any questions, please call our office at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey

jad\82

Enclosure

cc: Ron Bock, Unocal Corporation

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

June 12, 1991

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Gentlemen:

Per the request of Mr. Ron Bock of Unocal Corporation, enclosed please find our report dated May 10, 1991, for the above referenced site.

Should you have any questions, please feel free to call our office at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey

jad\82

Enclosure

cc: Ron Bock, Unocal Corporation

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

90 OCT 31 PM 12: 18

October 30, 1990

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Mr. Lowell Miller

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Dear Mr. Miller:

Per the request of Mr. Ron Bock Unocal Corporation, enclosed please find our report dated October 23, 1990, for the above referenced site.

Should you have any questions, please feel free to call our office at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey

jad\82

Enclosure

cc: Ron Bock, Unocal Corporation

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

90 OCT 10 AM 11:39

October 5, 1990

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Mr. Lowell Miller

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Dear Mr. Miller:

Per the request of Mr. Ron Bock of Unocal Corporation, enclosed please find our report dated July 24, 1990, for the above referenced site.

Should you have any questions, please feel free to call our office at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey

jad\82

Enclosure

cc: Ron Bock, Unocal Corporation

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

December 26, 1989

Alameda County Health Agency
80 Swan Way, Rm. 200
Oakland, CA 94621

Attention: Mr. Lowell Miller

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

Dear Mr. Miller:

Per the request of Mr. Ron Bock of Unocal Corporation, enclosed please find our report and proposal, both dated December 18, 1989, for the above referenced site.

Should you have any questions, please feel free to call our office at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey

Judy A. Dewey

Enclosure

cc: Ron Bock, Unocal Corporation

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(707) 746-6915 (707) 746-6916
FAX: (707) 746-5581

KEI-P89-0801.P2
December 18, 1989

PROPOSAL TO
UNOCAL CORPORATION
for the
Unocal Service Station #6034
4700 First Street
Livermore, California

GROUND WATER MONITORING, SAMPLING AND ANALYSIS

INTRODUCTION

Preliminary investigation of the ground water conducted in October, 1989 at the referenced site showed the presence of detectable levels of benzene in wells MW2, MW3 and MW4. Per our recommendations described in KEI's report KEI-P89-0801.R4 dated December 18, 1989, Kaprealian Engineering, Inc. (KEI) proposes the following work plan.

PROPOSED TASK

1. Monitor all existing wells (MW1 through MW4) on-site on a monthly basis. Record the elevation of the water table and any abnormal conditions noted during inspection, including presence of product and sheen.

2. Purge and sample ground water from all monitoring wells on a quarterly basis, and analyze for total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 in conjunction with modified 8015, benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA method 8020 on a quarterly basis. In addition, ground water from MW1 (adjacent to the waste oil tank), will be analyzed for TPH as diesel using EPA method 3510 in conjunction with modified 8015, total oil and grease using EPA method 418.1 with clean up, and EPA 8010 constituents. Prior to sampling, water table elevation will be recorded as well as the presence of any free product.

3. Prepare quarterly technical reports summarizing the field activity water sampling and analyses with discussion and recommendations.

The purging of ground water and sampling should continue for 12 months. This proposed monitoring and sampling program should be re-evaluated after 12 months.

Unocal Refining & Marketing Division
Unocal Corporation
2175 North California Blvd., Suite 650
Walnut Creek, California 94596
Telephone (415) 945-7676

867-0760

UNOCAL 76

August 29, 1989

Northern California Division

Mr. Lowell Miller
Alameda County Health Agency
80 Swan Way, Room 200
Oakland, California 94621

Unocal Service Station No. 6034
4700 First Street
Livermore, California

Dear Mr. Miller:

Unocal recognizes that additional work may be necessary at the referenced site, and has every intention of doing whatever work is necessary to fulfill all regulatory requirements.

The contamination found beneath the site should not interfere with the new double wall steel tank's monitoring system.

Sould you have any questions regarding this matter, please do not hesitate to call me at (415) 945-7676.

Very truly yours,

Ronald E Bock

R. E. BOCK
ENVIRONMENTAL ENGINEER

REB/sgm

cc: R. L. Folda
Kaprealian Engineering

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☐ NO

REPORT DATE: 08 / 28 / 89 (M / D / Y)

CASE #:

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFTY CODE.

SIGNED _____ DATE _____

REPORTED BY

NAME OF INDIVIDUAL FILING REPORT: Christina Lecce

PHONE: (707) 746-6915

SIGNATURE: Christina Lecce

REPRESENTING ☒ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER _____

COMPANY OR AGENCY NAME: Kaprealian Engineering, Inc.

ADDRESS: 638½ First Street (STREET) | Benicia (CITY) | CA (STATE) | 94510 (ZIP)

RESPONSIBLE PARTY

NAME: Unocal Corporation ☐ UNKNOWN

CONTACT PERSON: Tim Ross

PHONE: (415) 945-7676

ADDRESS: 2175 N. California Blvd., #650 (STREET) | Walnut Creek (CITY) | CA (STATE) | 94596 (ZIP)

SITE LOCATION

FACILITY NAME (IF APPLICABLE): Unocal Service Station #6034

OPERATOR: Ken Peacock

PHONE: (415) 443-8866

ADDRESS: 4700 First Street (STREET) | Livermore (CITY) | Alameda (COUNTY) | 94550 (ZIP)

CROSS STREET: Interstate 580

TYPE OF AREA ☒ COMMERCIAL ☐ INDUSTRIAL ☐ RURAL ☐ RESIDENTIAL ☐ OTHER _____

TYPE OF BUSINESS ☒ RETAIL FUEL STATION ☐ FARM ☐ OTHER _____

IMPLEMENTING AGENCIES

LOCAL AGENCY / AGENCY NAME: Alameda County Health Agency

CONTACT PERSON: Lowell Miller

PHONE: (415) 271-4320

REGIONAL BOARD: San Francisco Bay Region

PHONE: (415) 464-1255

SUBSTANCES INVOLVED

(1) NAME: gasoline — QUANTITY LOST (GALLONS): _____ ☒ UNKNOWN

(2) waste oil — _____ ☒ UNKNOWN

DISCOVERY/ABATEMENT

DATE DISCOVERED: 08 / 02 / 89 (M / D / Y)

HOW DISCOVERED: ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITIONS ☐ TANK TEST ☒ TANK REMOVAL ☐ OTHER _____

DATE DISCHARGE BEGAN: ☒ UNKNOWN

HAS DISCHARGE BEEN STOPPED? ☒ YES ☐ NO IF YES, DATE: 08 / 02 / 89

METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY)
☒ REMOVE CONTENTS ☒ REPLACE TANK ☐ CLOSE TANK ☐ REPAIR TANK ☐ REPAIR PIPING ☐ CHANGE PROCEDURE ☐ OTHER _____

SOURCE/CAUSE

SOURCE OF DISCHARGE: ☐ TANK LEAK ☒ UNKNOWN ☐ PIPING LEAK ☐ OTHER

TANKS ONLY/CAPACITY: 2@12K &1-550 GAL. AGE _____ YRS ☒ UNKNOWN

MATERIAL: ☐ FIBERGLASS ☒ STEEL ☐ OTHER _____

CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILURE ☐ CORROSION ☒ UNKNOWN ☐ SPILL ☐ OTHER _____

CASE TYPE

CHECK ONE ONLY
☒ UNDETERMINED ☐ SOIL ONLY ☐ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS

CHECK ONE ONLY
☒ SITE INVESTIGATION IN PROGRESS (DEFINING EXTENT OF PROBLEM) ☐ CLEANUP IN PROGRESS ☐ SIGNED OFF (CLEANUP COMPLETED OR UNNECESSARY) ☐ NO ACTION TAKEN ☐ POST CLEANUP MONITORING IN PROGRESS ☐ NO FUNDS AVAILABLE TO PROCEED ☐ EVALUATING CLEANUP ALTERNATIVES

REMEDIAL ACTION

CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
☐ CAP SITE (CD) ☒ EXCAVATE & DISPOSE (ED) ☐ REMOVE FREE PRODUCT (FP) ☐ ENHANCED BIO DEGRADATION (IT)
☐ CONTAINMENT BARRIER (CB) ☐ EXCAVATE & TREAT (ET) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ REPLACE SUPPLY (RS)
☐ TREATMENT AT HOOKUP (HU) ☐ NO ACTION REQUIRED (NA) ☒ OTHER (OT) install groundwater monitoring wells

COMMENTS

HSC 05 (4/87)

INSTRUCTIONS

EMERGENCY
Immediate chemical, personnel response (personnel and equipment) were provided at any time. If not, a discharge/material incident report should be filed with the State Office of Emergency Services (OES) at 2800 Meadowview Road, Sacramento, CA 95832. Copies of the OES report form may be obtained at your local underground storage tank permitting agency. Indicate whether OES action has been taken as of the date of this report.

LOCAL AGENCY ONLY
A health department notification pursuant to Health and Safety Code section 25180.7 a designated government employee should sign and date the form in this block. A signature does not mean that the risk has been determined to pose a significant amount of human health or safety, only that notification procedures have been followed if required.

REPORTER #
Enter your name, telephone number, and address. Indicate which party you represent and provide company or agency name.

RESPONSIBLE PARTY
[illegible] name, and address of the party [illegible] party would normally be the tank

SITE LOCATION
Enter information regarding the tank facility and surrounding area. At a minimum, you must provide the facility name and full address.

IMPLEMENTING AGENCIES
Enter names of the local agency and Regional Water Quality Control Board involved.

SUBSTANCES INVOLVED
Enter the name and quantity lost of the hazardous substance involved. Room is provided for information on two substances if appropriate. If more than two substances leaked, list the two of most concern for cleanup.

DISCOVERY/ABATEMENT
Provide information regarding the discovery and abatement of the leak.

SOURCE/CAUSE
Indicate source(s) of leak. Provide details on tank age; capacity and material if known. Check box(es) indicating cause of leak.

CASE TYPE
Indicate the case type category for this leak. Check one box only. Case type is based on the most sensitive resource affected. For example, if both soil and ground water have been affected, case type will be "Ground Water". Indicate "Drinking Water" only if one or more municipal or domestic water wells have actually been affected. A "Ground Water" designation does not imply that the affected water cannot be, or is not, used for drinking water, but only that water wells have not yet been affected. It is understood that case type may change upon further investigation.

CURRENT STATUS
Indicate the category which best describes the current status of the case. Check one box only. The response should be relative to the case type. For example, if case type is "Ground Water", then "Current Status" should relate to the status of the ground water investigation or cleanup, as opposed to that of soil.

IMPORTANT: THE INFORMATION PROVIDED ON THIS FORM IS INTENDED FOR GENERAL STATISTICAL PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS REPRESENTING THE OFFICIAL POSITION OF ANY GOVERNMENTAL AGENCY

REMEDIAL ACTION
Indicate which actions have been used to cleanup or remediate the leak. Descriptions of options follow:

Cap Site - install horizontal impermeable layer to reduce rainfall infiltration.
Containment Barrier - install vertical dike to block horizontal movement of contaminants.
Excavate and Dispose - remove contaminated soil and dispose in approved site.
Excavate and Treat - remove contaminated soil and treat (includes spreading or land farming).
Remove Free Product - remove floating product from water table.
Pump and Treat Groundwater - generally employed to remove dissolved contaminants.
Enhanced Biodegradation - use of any available technology to promote bacterial decomposition of contaminants.
Replace Supply - provide alternative water supply to affected parties.
Treatment at Hookup - install water treatment devices at each dwelling or other place of use.
No Action Required - incident is minor, requiring no remedial action.

COMMENTS - Use this space to elaborate on any aspects of the incident.
SIGNATURE - Sign the form in the space provided.
DISTRIBUTION

If the form is completed by the tank owner or his agent, retain the last copy and forward the remaining copies in tact to your local tank permitting agency for distribution.
1. Original - Local Tank Permitting Agency
2. State Water Resources Control Board, Division of Water Quality, Underground Tank Program, P. O. Box 100, Sacramento, CA 95801
3. Regional Water Quality Control Board
4. County Board of Supervisors or designee to receive Proposition 65 notifications.
5. Owner/responsible party.

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO — HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☐ NO

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFTY CODE.
SIGNED _____ DATE _____

REPORT DATE: 08/28/89 — CASE #:

REPORTED BY
NAME OF INDIVIDUAL FILING REPORT: Christina Lecce — PHONE: (707) 746-69155 — SIGNATURE: Christina Lecce
REPRESENTING ☒ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER _____ — COMPANY OR AGENCY NAME: Kaprealian Engineering, Inc.
ADDRESS: 638½ First Street (STREET) — Benicia (CITY) — CA (STATE) — 94510 (ZIP)

RESPONSIBLE PARTY
NAME: Unocal Corporation ☐ UNKNOWN — CONTACT PERSON: Tim Ross — PHONE: (415) 945-7676
ADDRESS: 2175 N. California Blvd., #650 (STREET) — Walnut Creek (CITY) — CA (STATE) — 94596 (ZIP)

SITE LOCATION
FACILITY NAME (IF APPLICABLE): Unocal Service Station #6034 — OPERATOR: Ken Peacock — PHONE: (415) 443-8866
ADDRESS: 4700 First Street (STREET) — Livermore (CITY) — Alameda (COUNTY) — 94550 (ZIP)
CROSS STREET: Interstate 580
TYPE OF AREA ☒ COMMERCIAL ☐ INDUSTRIAL ☐ RURAL ☐ RESIDENTIAL ☐ OTHER _____
TYPE OF BUSINESS ☒ RETAIL FUEL STATION ☐ FARM ☐ OTHER _____

IMPLEMENTING AGENCIES
LOCAL AGENCY / AGENCY NAME: Alameda County Health Agency — CONTACT PERSON: Lowell Miller — PHONE: (415) 271-4320
REGIONAL BOARD: San Francisco Bay Region — PHONE: (415) 464-1255

SUBSTANCES INVOLVED
(1) NAME: gasoline — QUANTITY LOST (GALLONS): _____ ☒ UNKNOWN
(2) waste oil — _____ ☒ UNKNOWN

DISCOVERY/ABATEMENT
DATE DISCOVERED: 08/28/89 — HOW DISCOVERED: ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITIONS ☐ TANK TEST ☒ TANK REMOVAL ☐ OTHER _____
DATE DISCHARGE BEGAN: ☒ UNKNOWN
HAS DISCHARGE BEEN STOPPED? ☒ YES ☐ NO IF YES, DATE: 08/28/89
METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY): ☒ REMOVE CONTENTS ☒ REPLACE TANK ☐ CLOSE TANK ☐ REPAIR TANK ☐ REPAIR PIPING ☐ CHANGE PROCEDURE ☐ OTHER _____

SOURCE/CAUSE
SOURCE OF DISCHARGE: ☐ TANK LEAK ☒ UNKNOWN ☐ PIPING LEAK ☐ OTHER
TANKS ONLY/CAPACITY: 2@12K &1-550 GAL. — AGE _____ YRS ☒ UNKNOWN
MATERIAL: ☐ FIBERGLASS ☒ STEEL ☐ OTHER _____
CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILURE ☐ CORROSION ☒ UNKNOWN ☐ SPILL ☐ OTHER _____

CASE TYPE
CHECK ONE ONLY
☒ UNDETERMINED ☐ SOIL ONLY ☐ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS
CHECK ONE ONLY
☒ SITE INVESTIGATION IN PROGRESS (DEFINING EXTENT OF PROBLEM) ☐ CLEANUP IN PROGRESS ☐ SIGNED OFF (CLEANUP COMPLETED OR UNNECESSARY) ☐ NO ACTION TAKEN ☐ POST CLEANUP MONITORING IN PROGRESS ☐ NO FUNDS AVAILABLE TO PROCEED ☐ EVALUATING CLEANUP ALTERNATIVES

REMEDIAL ACTION
CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
☐ CAP SITE (CD) ☒ EXCAVATE & DISPOSE (ED) ☐ REMOVE FREE PRODUCT (FP) ☐ ENHANCED BIO DEGRADATION (IT)
☐ CONTAINMENT BARRIER (CB) ☐ EXCAVATE & TREAT (ET) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ REPLACE SUPPLY (RS)
☐ TREATMENT AT HOOKUP (HU) ☐ NO ACTION REQUIRED (NA) ☒ OTHER (OT) install groundwater monitoring wells

COMMENTS

HSC 05 (4/87)

INSTRUCTIONS

EMERGENCY
Indicate whether emergency response personnel and equipment were involved at any time. If so, a Hazardous Material Incident Report should be filed with the State Office of Emergency Services (OES) at 2800 Meadowview Road, Sacramento, CA 95832. Copies of the OES report form may be obtained at your local underground storage tank permitting agency. Indicate whether the OES report has been filed as of the date of this report.

LOCAL AGENCY ONLY
To assist duplicate notification pursuant to Health and Safety Code Section 25180.7, a designated government employee should sign and date the form in this block. A signature here does not mean that the leak has been determined to pose a significant threat to human health or safety, only that notification procedures have been followed if required.

REPORTED BY
Enter your name, telephone number, and address. Indicate which party you represent and provide company or agency name.

RESPONSIBLE PARTY
Enter name, telephone number, and address of the party responsible for the release. The responsible party would normally be the tank owner.

SITE LOCATION
Enter information regarding the tank facility and surrounding area. At a minimum, you must provide the facility name and full address.

IMPLEMENTING AGENCIES
Enter names of the local agency and Regional Water Quality Control Board involved.

SUBSTANCES INVOLVED
Enter the name and quantity lost of the hazardous substance involved. Room is provided for information on two substances if appropriate. If more than two substances leaked, list the two of most concern for cleanup.

DISCOVERY/ABATEMENT
Provide information regarding the discovery and abatement of the leak.

SOURCE/CAUSE
Indicate source(s) of leak. Provide details on tank age; capacity and material if known. Check box(es) indicating cause of leak.

CASE TYPE
Indicate the case type category for this leak. Check one box only. Case type is based on the most sensitive resource affected. For example, if both soil and ground water have been affected, case type will be "Ground Water". Indicate "Drinking Water" only if one or more municipal or domestic water wells have actually been affected. A "Ground Water" designation does not imply that the affected water cannot be, or is not, used for drinking water, but only that water wells have not yet been affected. It is understood that case type may change upon further investigation.

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- Pump and Treat Groundwater - generally employed to remove dissolved contaminants.
- Enhanced Biodegradation - use of any available technology to promote bacterial decomposition of contaminants.
- Replace Supply - provide alternative water supply to affected parties.
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3. Regional Water Quality Control Board
4. County Board of Supervisors or designee to receive Proposition 65 notifications.
5. Owner/responsible party.

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94566 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

(1) LOCATION OF PROJECT Unocal Service Station
4700 First Street
Livermore, CA

(2) CLIENT
Name Unocal Corporation
Address 2175 N. Ca., #650 Phone 415/945-7676
City Walnut Creek Zip 94596

(3) APPLICANT
Name Christina Lecce
Kaprealian Engineering, Inc.
Address P. O. Box 127 Phone 707/746-6915
City Benicia Zip 94510

(4) DESCRIPTION OF PROJECT
Water Well Construction X Geotechnical Investigation
Cathodic Protection ___ General ___
Well Destruction ___ Contamination ___

(5) PROPOSED WATER WELL USE
Domestic ___ Industrial ___ Irrigation ___
Municipal ___ Monitoring X Other ___

(6) PROPOSED CONSTRUCTION
Drilling Method:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 484288

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 35 ft.
Surface Seal Depth 10 ft. Number 4

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

(7) ESTIMATED STARTING DATE 9/22/89
ESTIMATED COMPLETION DATE 9/22/89

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

APPLICANT'S SIGNATURE Christina Lecce Date 8/28/89

FOR OFFICE USE

PERMIT NUMBER ___
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 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 WELLS, INCLUDING PIEZOMETERS
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, irrigation, and monitoring wells unless a lesser depth is specially approved.

C. 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.

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

E. WELL DESTRUCTION. See attached.

Approved ___ Date ___

21989

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

Hazardous Materials Inspection Form

II,III

Site ID # ____ Site Name UNOCAL Today's Date 8/2/89

Site Address 4700 First St

City ________ Zip 94____ Phone ________

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Business Plans, Acute Hazardous Materials
____ III. Underground Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments:

Tank pull ; 2 12,000 gal tanks
1 50 + 550 gal waste oil tank

no evidence of contamination
tanks in good shape ; soil
appeared clean

time 4.5 hrs

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2. Bus. Plan Stds.	25503(b)
___	3. RR Cars > 30 days	25503.7
___	4. Inventory Information	25504(a)
___	5. Inventory Complete	2730
___	6. Emergency Response	25504(b)
___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MAT'LS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	___
___	14. Offsite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(f)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

___	1. Permit Application	25284 (H&S)
___	2. Pipeline Leak Detection	25292 (H&S)
___	3. Records Maintenance	2712
___	4. Release Report	2651
___	5. Closure Plans	2670

Monitoring for Existing Tanks

___ 6. Method
1) Monthly Test
2) Daily Vadose
Semi-annual gndwater
One time soils
3) Daily Vadose
One time soils
Annual tank test
4) Monthly Gndwater
One time soils
5) Daily inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon.
6) Daily inventory
Annual tank testing
Cont pipe leak det
7) Weekly Tank Gauge
Annual tank tstng
8) Annual Tank Testing
Daily inventory
9) Other ________

___	7. Precis Tank Test Date: ______	2643
___	8. Inventory Rec.	2644
___	9. Soil Testing.	2646
___	10. Ground Water.	2647

New Tanks

___	11. Monitor Plan	2632
___	12. Access. Secure	2634
___	13. Plans Submit Date: ______	2711
___	14. As Built Date: ______	2635

Rev 6/88

II, III

Contact: Dick Brady
Title: Kurnegian Eng.
Signature: [signature]

Inspector: L Mull
Signature: L Mull

Rcvd-
7/26/89

FILE

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621
PHONE NO. 415/271-4320

56

JULY 11, 1989

UNDERGROUND TANK CLOSURE/MODIFICATION PLANS

1. Business Name SPRINGTOWN UNION 76 S.S.# 6034

   Business Owner KEN PEACOCK

2. Site Address 4700 FIRST STREET

   City LIVERMORE Zip 94550 Phone (415) 443-8866

3. Mailing Address (SAME AS ABOVE)

   City _____ Zip _____ Phone _____

4. Land Owner UNOCAL OIL CO.

   Address 2175 N. CALIFORNIA BLVD. #650 City, State WALNUT CREEK, CA. Zip 94596

5. EPA I.D. No. CAD 982 057 812

6. Contractor PARADISO CONSTRUCTION

   Address 9220 G STREET

   City OAKLAND Phone (415) 562-5511

   License Type A, B, C8, C10, C61/D40 ID# _____

7. Consultant R.H. LEE AND ASSOC (AGENT FOR UNOCAL)

   Address 1337 HOWE AVE. #211

   City SACRAMENTO Phone 646-4003

8. Contact Person for Investigation

Name JOE COMSTOCK Title CONSTRUCTION ENG.-UNOCAL

Phone (916) 446-4981

9. Total No. of Tanks at facility 3

10. Have permit applications for all tanks been submitted to this office? Yes [✓] No [ ]

11. State Registered Hazardous Waste Transporters/Facilities

a) Product/Waste Tranporter

Name H & H SHIPPING EPA I.D. No. CAD004771168

Address 220 CHINA BASIN RD.

City SAN FRAN. State CA. Zip 94107

b) Rinsate Transporter

Name H & H SHIPPING EPA I.D. No. _____

Address _____

City _____ State _____ Zip _____

c) Tank Transporter

Name H & H SHIPPING EPA I.D. No. _____

Address _____

City _____ State _____ Zip _____

d) Tank Disposal Site

Name LEVIN METALS EPA I.D. No. _____

Address 600 S. 4TH STREET

City RICHMOND State CA Zip _____

e) Contaminated Soil Transporter (FOR CLASS I)

Name DILLER TRUCKING INC. EPA I.D. No. CAD981692809

Address ROUTE 1 BOX 73

City BYRON State CA Zip 94514

12. Sample Collector

Name _____

Company KAPREALIAN ENGINEERING INC.

Address 638 1/2 FIRST ST.

City BENICIA State CA. Zip 94510 Phone (707) 746-6915

13. Sampling Information for each tank or area

Tank or Area		Material sampled	Location & Depth
Capacity	Historic Contents (past 5 years)		
10,000 GA.	UNLEADED GASOLINE		
10,000GA.	UNLEADED GASOLINE		
550GA.	WASTE OIL		

14. Have tanks or pipes leaked in the past? Yes [ ] No [ ]

If yes, describe. UNKNOWN

15. NFPA methods used for rendering tank inert? Yes [✓] No [ ]

If yes, describe. 50 LBS. DRY ICE PER 1000 GALS. OF TANK CAPACITY

An explosion proof combustible gas meter shall be used to verify tank inertness.

16. Laboratories

Name SEQUOIA ANALYTICAL

Address 680 CHESAPEAKE DR.

City REDWOOD CITY State CA. Zip 94063

State Certification No. 145

17. Chemical Methods to be used for Analyzing Samples

Contaminant Sought	EPA, DHS, or Other Sample Preparation Method Number	EPA, DHS, or Other Analysis Number
GASOLINE TPH-E BTX +E		GCFID 5030 8020 OR 8240
WASTE OIL TPH-D TPH-E BTX +E CHLORINATED HC's TOE SEMI-VOC'S		GCFID 3550 GCFID 5030 8020 OR 8240 8010 OR 8240 503 D+E 8270

18. Submit Site Safety Plan

19. Workman's Compensation: Yes [✓] No [ ]

Copy of Certificate enclosed? Yes [✓] No [ ]

Name of Insurer R.C. FISHER + CO.

20. Plot Plan submitted? Yes [✓] No [ ]

21. Deposit enclosed? Yes [✓] No [ ]

22. Please forward to this office the following information within 60 days after receipt of sample results.

a) Chain of Custody Sheets

b) Original Signed Laboratory Reports

c) TSD to Generator copies of wastes shipped and received

d) Attachment A summarizing laboratory results

I declare that to the best of my knowledge and belief the statements and information provided above are correct and true. I understand that information in addition to that provided above may be needed in order to obtain an approval from the Department of Environmental Health and that no work is to begin on this project until this plan is approved.

I understand that any changes in design, materials or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Saftey and Health Administration) requirements concerning personnel and safety.

I will notify the Department of Environmental Health at least two (2) working days (48 hours) after approval of this closure plan in advance to schedule any required inspections. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Signature of Contractor

Name (please type) Paradiso Construction Co

Signature Christine Watson

Date 7/11/89

Signature of Site Owner or Operator

Name (please type) LORI R. AUSTIN - AGENT FOR UNOCAL ROBERT H. LEE & ASSOC.

Signature Lori R. Austin

Date 7-11-89

ATTACHMENT A

SAMPLING RESULTS

Tank or Area	Contaminant	Location & Depth	Results (specify units)

acord CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY): 07/12/89

PRODUCER

R.C. FISCHER & COMPANY
INSURANCE—SURETY BONDS
1220 Oakland Blvd., Suite #300 • P.O. Box 8101
Walnut Creek, California 94596-8101
Phone (415) 932-7823

If calling from Oakland - Phone (415) 839-3015

INSURED

Paradiso Construction Co.
9220 "G" Street
Oakland CA 94603

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER **A** —
COMPANY LETTER **B**
COMPANY LETTER **C**
COMPANY LETTER **D** REPUBLIC INDEMNITY COMPANY
COMPANY LETTER **E**

COVERAGES

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SUCH POLICIES.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIABILITY LIMITS IN THOUSANDS	EACH OCCURRENCE	AGGREGATE
	GENERAL LIABILITY						
	COMPREHENSIVE FORM				BODILY INJURY	$	$
	PREMISES/OPERATIONS				PROPERTY DAMAGE	$	$
	UNDERGROUND EXPLOSION & COLLAPSE HAZARD				BI & PD COMBINED	$	$
	PRODUCTS/COMPLETED OPERATIONS						
	CONTRACTUAL						
	INDEPENDENT CONTRACTORS						
	BROAD FORM PROPERTY DAMAGE				PERSONAL INJURY		$
	PERSONAL INJURY						
	AUTOMOBILE LIABILITY				BODILY INJURY (PER PERSON)	$	
	ANY AUTO				BODILY INJURY (PER ACCIDENT)	$	
	ALL OWNED AUTOS (PRIV. PASS.)				PROPERTY DAMAGE	$	
	ALL OWNED AUTOS (OTHER THAN PRIV. PASS)				BI & PD COMBINED	$	
	HIRED AUTOS						
	NON-OWNED AUTOS						
	GARAGE LIABILITY						
	EXCESS LIABILITY				BI & PD COMBINED	$	$
	UMBRELLA FORM						
	OTHER THAN UMBRELLA FORM						
D	**WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY**	PC994559	4/01/89	4/01/90	STATUTORY		
					$1000 (EACH ACCIDENT)		
					$1000 (DISEASE-POLICY LIMIT)		
					$1000 (DISEASE-EACH EMPLOYEE)		
	OTHER						

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

JOB: ALL CALIFORNIA OPERATIONS

Unocal SS #6034
4700 First Street
Livermore, CA

CERTIFICATE HOLDER

Alameda County Enviromental Health
80 Swan Way, Room 200
Oakland, CA 94621

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE Cathy Lorraine

10-2