SCWT 01-23-06

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

January 20, 2006

Shelby Lathrop (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818

Dear Ms. Lathrop:

Subject: Fuel Leak Case No. RO0000229, Unocal Service Station No. 5325, 3220 Lakeshore Avenue, Oakland, CA

Alameda County Environmental Health (ACEH) staff has reviewed "Ozone Sparge Pilot Test Work Plan" dated November 17, 2005, prepared by TRC. We request that you perform the proposed work and send us the technical reports requested below.

OTHER COMMENTS

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).

TECHNICAL REPORT REQUEST

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

- January 31, 2006 - 4th Quarter 2005 Groundwater Monitoring Report
- March 17, 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.

If you have any questions, I may be reached at (510) 567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist
Local Oversight Program

C: Keith Woodburne, TRC, 1590 Solano Way, Suite A, Concord, CA 94520
Donna Drogos
File

10-2-01

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

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October 1, 2001
StID 1059/ RO0000229

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

Re: Tosco Service Station #5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. DeWitt:

Upon review of the Second Quarter 2001 Monitoring Report for the referenced site, I have the following observations:

- MTBE concentrations remain elevated in wells U-1 and U-2
- No information regarding recent past quarter or future proposed actions at the site is provided
- No information regarding the advancement of the proposed off-site boring nor the extraction of groundwater from monitoring or back-fill wells is given

Please provide a summary of actions, both past and future proposed actions, along with your monitoring reports. Please give a summary of the amounts of groundwater and estimated mass of TPHg and MTBE removed from the site. Please continue groundwater extraction from monitoring and tank back-fill wells on a regular basis until TPH concentrations remain consistently below 8000 ppb, the RWQCB interim Criterion for Continuous Concentration.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
H. Kevork, Gettler-Ryan Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568
01-3220LakeshoreAve

SCWT 6-30-2000

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

R0229

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June 30, 2000
StID # 1059

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

Re: Site Conceptual Model for Tosco Service Station, 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. DeWitt:

Our office has received and reviewed the June 19, 2000 Site Conceptual Model (SCM) for the above referenced site as prepared by Gettler-Ryan Inc. (GR). Based upon this evaluation, it was determined that this site is a Class D priority as defined in the SWRCB Final Draft of Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates. This is because the site is not in an area that is most vulnerable to contamination and has concentrations of MTBE in groundwater over 5 ppb. In addition, using ecological protection levels from the Water Board, no eco-risk is likely to the nearest surface water body, Lake Merritt.

Though this site is considered a Class D, sites with high concentration of MTBE should have those concentrations and mass reduced before the plume can spread as stated in the SWRCB's final draft. To address this concern, the SCM proposes to perform purging of the tank pit every two weeks of an estimated 5000 gallon volume of impacted water. This is proposed for a period of three months for a total removal volume of 30,000 gallons. In addition, to further characterize the extent of the petroleum plume, GR proposes to advance a boring near former boring U-D and sample soil and groundwater for both chemical and geo-technical analysis. These items were discussed in our February 1, 2000 meeting and were verbally agreed upon at that time.

Our office approves this work proposal, however, please perform the additional items:

- Please include the removal of groundwater from wells U-1 and U-2 during the groundwater extraction event since it is uncertain whether pumping from the tank pit will influence these known impacted areas.
- Please include information regarding the groundwater removal in your groundwater monitoring reports. Please include such items as an estimate of the mass of each analyte removed, total mass removed, etc.
- Please continue groundwater removal until the concentrations in on-site wells equilibrates to low levels of MTBE.

Please initiate this work as soon as possible. You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. J. Douglas, Gettler-Ryan, 1364 North McDowell Blvd. Suite B2, Petaluma CA 94954-1116

SCMap3220Lakeshore

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

FEB 1 5 2000

CC's

RO229

ENVIRONMENTAL HEALTH SERVICES
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(510) 337-9432

February 16, 2000

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

Re: Tosco/76 Service Stations #5325, 3220 Lakeshore Ave., Oakland CA 94610 and # 3135, 845 66th Ave., Oakland CA 94621

Dear Mr. DeWitt:

This letter serves to summarize items discussed during our recent 2/1/00 meeting at the County office regarding the above referenced sites. These sites were primarily concerned about their MTBE concentration in groundwater and understanding its fate and remediation requirements relative to the Site Conceptual Model.

In regards to 3220 Lakeshore Ave., items mentioned in my November 12, 1999 letter were discussed. The efficacy of the mobile treatment system used in April 1999 was questioned. You stated that you could provide an estimate of the amount of residual petroleum at the site and also estimate the amount of petroleum removed in the groundwater extracted during this treatment. We also discussed whether the extent of MTBE contamination had been determined, particularly in the down-gradient direction. You stated that you believed a boring, U-D, had already been taken in this area and that you would provide me any soil or groundwater data. Lastly, the need for active remediation was discussed. You proposed to initiate three month, biweekly purging from the tank cavity well with an estimated removal of 5000 gallons per each vacuuming event. We would evaluate the effectiveness of this action through the groundwater monitoring events.

In regards to 845 66th Ave., we discussed the January 31, 2000 Gettler-Ryan response to my December 22, 1999 letter at the meeting. The historic groundwater gradient was indicated to vary from northeast, southeast, west-southwest and north-northwest. This information was used to show that an off-site source of MTBE was not apparent and that further site characterization is necessary in the southerly direction. You agreed to submit a work plan for the installation of an off-site well. You provided a map showing the location of two well fields. The Fitchburg Well Field was identified as being approximately 1200 feet southeast of the site. We then discussed the significance of this. Although existing conditions are not technically with those items stated in the SWRCB guidelines, I conferred with Mr. Chuck Headlee of the RWQCB for his opinion. He stated that the existence of potential conduits to the deep aquifer constitutes a risk, therefore, the extent (lateral and vertical) of MTBE contamination in the direction of the former well field must be determined. Please account for this need in your monitoring well work plan.

Please respond to these observations in writing within 30 days or no later than March 17, 2000. Should my observations meet with your concurrence, please include a schedule for your future actions.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. D. Vossler, Gettler-Ryan Inc., 6747 Sierra Ct., Suite J, Dublin, CA 94568
Mr. S. Carter, Gettler-Ryan, 3164 Gold Camp Drive, Suite 240, Rancho Cordova, CA 95670

MTBE-Toscosites

ALAMEDA COUNTY
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DAVID J. KEARS, Agency Director

R0229

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(510) 337-9335 (FAX)

August 31, 1999
StID # 1059

Mr. David De Witt
Tosco Marketing Co.
2000 Crow Canyon Rd., Suite 400
San Ramon, CA 94583

Re: Tosco (Unocal) Station # 5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. De Witt:

Our office has received and reviewed the Second Quarter 1999 groundwater monitoring and sampling report for the above site prepared by Gettler-Ryan. Our office has the following observations and comments:

- This is the first monitoring event after the dual-phase extraction test at this site in April 1999. Groundwater concentrations have decreased slightly,however, they remain high. Please submit a report on the vapor extraction test and your opinion as to whether this remediation approach would be recommended for additional future treatment of this site.
- It appears that the oxidation-reduction potential (ORP) readings were done in the laboratory. Please have these measurements performed in the field.
- It appears that dissolved oxygen was not run on wells U-1 and U-2, why was this?
- Please have your consultant provide an interpretation and recommendation section. This should include an evaluation of the historical bio-remediation parameters and the concentration trends observed in groundwater.

Please comment on these observations in writing **within 30 days or by October 1, 1999.**

You may contact me at (510) 567-6765 if you have any comments or questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. B. Sieminski, Gettler-Ryan, 6747 Sierra Ct., Suite J, Dublin, CA 94568

Comments3220

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

RO# 229

ENVIRONMENTAL HEALTH SERVICES
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September 3, 1998
StID # 1059

Ms. Tina Berry
Tosco Marketing Co.
2000 Crow Canyon Place, Suite 200
San Ramon, CA 94583

Re: Unocal Service Station # 5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Ms. Berry:

Our office has received and reviewed the August 13, 1998 Second Quarter 1998 Monitoring and Sampling Report for the above site prepared by Gettler-Ryan. My initial reaction to this report is the noticeable absence of any interpretation and recommendation section in this report as requested in my May 8, 1998 letter. Please be aware, in accordance to Title 23, Division 3, Chapter 16, Section 2652d your quarterly report should include, among others, the following items:

- A description of the corrective and remedial actions the past quarter and the plans of action for the next.
- The method(s) of cleanup implemented to date, proposed cleanup actions, and a time schedule for implementing the proposed actions and
- An interpretation of results.

Please comment on the following observations of our office regarding this site:

- What conclusion was made regarding the potential of off-site utilities acting as preferential pathways for groundwater movement ? If the utilities do not act as a preferential pathway, how will the extent of the groundwater contamination plume be determined?
- Please confirm the presence of MTBE in monitoring wells U-2, U-5 and U-6 using EPA Method 8240 or 8260 as recommended by the Water Board.
- What is your explanation as to how it can be that monitoring well U-1 reported 52,000 ppb total petroleum hydrocarbons as gasoline and ND for MTBE ?
- Please check with your sampler to verify the reported oxidation-reduction values. The attached data sheets appear to report 100 times the values presented in Table 2 of this report. If the Table 2 values are correct, it appears that conditions are not conducive for natural attenuation.
- Please have the well samples analyzed for iron +2 (ferrous ion). The relative concentration of iron+2 can indicate the tendency for anaerobic biodegradation to occur. I believe total iron was analyzed in this monitoring event.
- The continual presence of free product or sheen in U-1 and U-2 is a concern. Please describe what can be done to reduce this source.

Please provide your written comment to these items **within 30 days or by October 5, 1998.**

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. Greg Gurss, Gettler-Ryan, 3164 Gold Camp Drive, Rancho Cordova, CA 95670
2-3220Lake

ALAMEDA COUNTY
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September 3, 1998
StID # 1059

Ms. Tina Berry
Tosco Marketing Co.
2000 Crow Canyon Place, Suite 200
San Ramon, CA 94583

Re: Unocal Service Station # 5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Ms. Berry:

Our office has received and reviewed the August 13, 1998 Second Quarter 1998 Monitoring and Sampling Report for the above site prepared by Gettler-Ryan. My initial reaction to this report is the noticeable absence of any interpretation and recommendation section in this report as requested in my May 8, 1998 letter. Please be aware, in accordance to Title 23, Division 3, Chapter 16, Section 2652d your quarterly report should include, among others, the following items:

- A description of the corrective and remedial actions the past quarter and the plans of action for the next.
- The method(s) of cleanup implemented to date, proposed cleanup actions, and a time schedule for implementing the proposed actions and
- An interpretation of results.

Please comment on the following observations of our office regarding this site:

- What conclusion was made regarding the potential of off-site utilities acting as preferential pathways for groundwater movement ? If the utilities do not act as a preferential pathway, how will the extent of the groundwater contamination plume be determined?
- Please confirm the presence of MTBE in monitoring wells U-2, U-5 and U-6 using EPA Method 8240 or 8260 as recommended by the Water Board.
- What is your explanation as to how it can be that monitoring well U-1 reported 52,000 ppb total petroleum hydrocarbons as gasoline and ND for MTBE ?
- Please check with your sampler to verify the reported oxidation-reduction values. The attached data sheets appear to report 100 times the values presented in Table 2 of this report. If the Table 2 values are correct, it appears that conditions are not conducive for natural attenuation.
- Please have the well samples analyzed for iron +2 (ferrous ion). The relative concentration of iron+2 can indicate the tendency for anaerobic biodegradation to occur. I believe total iron was analyzed in this monitoring event.
- The continual presence of free product or sheen in U-1 and U-2 is a concern. Please describe what can be done to reduce this source.

Please provide your written comment to these items **within 30 days or by October 5, 1998.**

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. Greg Gurss, Gettler-Ryan, 3164 Gold Camp Drive, Rancho Cordova, CA 95670
2-3220Lake

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

R0229

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(510) 567-6700
(510) 337-9335 (FAX)

May 12, 1998

ATTN: Ron Sorenson

Robert H Lee & Assoc
650 Howe Ave #504
Sacramento CA 95825

RE: Project # 89B - Type MOD
at 3220 Lakeshore Ave in Oakland 94610

Dear Property Owner/Designee:

Our records indicate the deposit/refund account for the above project has fallen below the minimum deposit amount. To replenish the account, please submit an additional deposit of $423.40, payable to Alameda County, Environmental Health Services, within two weeks of receipt of this letter.

It is expected that the amount requested will allow the project to be completed with a zero balance. Otherwise, more money will be requested or any unused monies will be refunded to you or your designee.

The deposit refund mechanism is authorized in Section 6.92.040L of the Alameda County Ordinance Code. Work on this project will be debited at the Ordinance specified rate, currently $94 per hour.

Please be sure to write the following identifying information on your check:
- project #
- type of project and
- site address (see RE: line above).

If you have any questions, please contact Amir Gholami at (510) 567-6876.

Sincerely,

Tom Peacock, Manager
Environmental Protection

c: files

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

RO#229

May 8, 1998
StID # 1059

ENVIRONMENTAL HEALTH SERVICES
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Ms. Tina Berry
Tosco Marketing Co.
2000 Crow Canyon Place, Suite 200
San Ramon, Ca 94583

Re: Unocal Service Station # 5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Ms. Berry:

After reviewing the recent February 20, 1998 Fourth Quarter 1997 Groundwater Monitoring and Sampling Report for the above site, it occurred to me that I was not aware of the any recent remediation which may have taken place at this site. This may be a result of a lost technical report, however, I would like to suggest that your quarterly monitoring reports consist of a brief historical summary of subsurface investigations and remedial actions. Your reports should also make any recommendations for future action.

Our office's most recent data of this type is the report of the advancement of 2 borings and the installation of an observation well within the underground tank pit in June of 1997. During this time, approximately 13,000 gallons of water was purged from the tank pit. This observation well was to be used to observe the presence of free product, to allow for additional purging or the addition of oxygen or other supplements to enhance natural biodegradation.

The continued presence of free product requires some additional remedial measures besides that of a skimmer within these wells. It appears that the tank pit and the north dispenser island are the likely sources of free product. Please consider using the tank pit for either active or enhanced bio remediation. The oxygen levels, though adequate for bioremediation, could be increased with oxygen supplements. Please contact me at (510) 567-6765 on your suggestions to eliminate free product from this site. You are reminded that your human health risk assessment should be on hold until the free product is eliminated.

Sincerely,

Barney M. Chan, Hazardous Materials Specialist

C: B. Chan, files
Mr. Greg Gurss, Gettler-Ryan, 3164 Gold Camp Drive, Rancho Cordova, CA 95670

3220Lake

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

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November 17, 1997
StID # 1059

Ms. Tina Berry
Tosco Marketing Co.
Environmental Compliance Dept.
2000 Crow Canyon Place, Suite 400
San Ramon, CA 94583

Re: Unocal Service Station # 5325, 3220 Lakeshore Ave., Oakland 94610

Dear Ms. Berry:

Our office has received and reviewed the October 24, 1997 Quarterly Monitoring report for the above referenced site. This monitoring was the second event after the June 1997 boring and observation well installations and groundwater purging from the observation well.

I have the following observations after reviewing the recent report:

* The groundwater gradient tends to flow towards the underground tank pit. This favors the use of the observation well for either adding supplements or extracting water.
* Wells U-1 and U-2 still have the presence of a sheen and would benefit from additional groundwater removal or possibly oxygen addition.
* The impacted well, (U-5), tested for dissolved oxygen and redox potential exhibited low values while those wells not impacted with petroleum contamination, (U-3 and U-4), had acceptable DO concentration.
* Monitoring well U-6, interestingly, has again detected elevated MTBE concentrations without detecting any TPHg and BTEX.

As you are aware, prior to performing an ASTM Human Health Risk Assessment, all free product must be removed. Please inform our office of what steps will be done to do this and if the addition of supplements to enhance natural bioremediation is recommended.

Please contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

c: B. Chan, files
3320L

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

RO#229

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June 2, 1997
StID # 1059

Mr. David De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, CA 94583

Re: Unocal Service Station #5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. De Witt:

Our office has received and reviewed GeoStrategies' May 5, 1997 **Work Plan for Limited Subsurface Investigation.** The work plan addresses items previously discussed during our March 26, 1997 meeting and include the comments in my April 7, 1997 letter. The work plan calls for the following:

1. Advancement of one offsite boring to delineate soil and groundwater contamination to the northwest of the existing tank complex and dispenser island;

2. The installation of a recovery well within the tank complex;

3. The advancement of one onsite boring for testing of physical parameters to use in a Tier 2 RBCA; and the addition of intrinsic bio parameters for the existing wells.

This work plan is accepted with the following conditions;

* Please consider the removal of contaminated water along with free product from the proposed recovery well

* Please consider the introduction of oxygen releasing compounds into the tank pit

* Please continue to run the intrinsic bio parameters along with the petroleum contaminants in future monitoring events and in all wells. Future monitoring reports can then compare trends in these parameters over time as well as an anticipated decrease in contaminant concentration.

Please contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

c: B. Chan, files
Mr. D. Vossler, GeoStrategies, 6747 Sierra Court, Suite G, Dublin, CA 94568
Ms. T. Berry, Tosco Marketing Co.

wpap3220

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

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April 7, 1997
StID # 1059

Mr. David De Witt
Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, CA 94583

Re: Unocal Service Station #5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. De Witt:

Our office has received GeoStrategies' March 31, 1997 letter summarizing our March 26, 1997 meeting regarding the above referenced site. This letter provides written approval for your 45 day extension for submisssion of a work plan. Your work plan is thus due by **May 21, 1997.**

I have the following comments regarding the contents of the letter:

1. In regards to the hydrocarbon concentration used in the initial RBCA on February 6, 1997, one preferred method for determing groundwater contamination is using the average concentration for the past year of the most contaminated well. For soil contamination concentration, the highest residual concentration is conservatively used.

2. Cursory review of the maps of the utility trenches and conduits and historic groundwater elevations supports your belief that the conduits are not serving as a preferential pathway for contaminant migration.

3. Soil delineation should be performed to determine accurate contaminant concentration for the viable exposure pathways.

4. In regards to site specific indicator parameter for intrinsic bioremediation, please add Fe (iron) +3 to your listed parameters.

5. Separate phase hydrocarbon must be remediated and the use of ORC was mentioned as one passive method to do this.

Please contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

c: B. Chan, files
Mr. D. Vossler, GeoStrategies, 6747 Sierra Court, Suite G, Dublin, CA 94568

wpext3220

ALAMEDA COUNTY
HEALTH CARE SERVICES
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March 7, 1997
StID # 1059

Mr. David De Witt
Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, CA 94583

Re: Unocal Service Station #5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. De Witt:

Our office has received your 2/25/97 fax providing site specific data proposed for use in a Tier 2 RBCA. I have also discussed this site with Ms. Madhulla Logan of our office. Please explain how the average hydrocarbon concentrations in soil and groundwater were calculated in items number 4 & 5 of this letter.

It is premature to perform your risk assessment since the extent of the groundwater contamination has not been determined. When determined, you can then identify the complete exposure pathways and determine risk based upon site specific data. Offsite exposure to commercial workers and/or to a surface water body (Lake Merritt) are the most likely scenarios. Onsite soil and groundwater contamination is mainly downgradient to the onsite buildings.

Therefore, prior to performing a RBCA, please provide a workplan to determine the extent of offsite contamination. Because migration is likely through groundwater transport, grab groundwater samples should be taken along potential utility conduits and across Lakeshore Ave. where the commercial buildings are located.

Please submit your workplan **within 30 days or by April 8, 1997.** You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

c: B. Chan, files
Mr. G. Gurss, GeoStrategies, 3164 Gold Camp Dr., Suite 240, Rancho Cordova, CA 95670

wpre3220

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

R0229

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January 2, 1997
StID # 1059

Mr. David De Witt
Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, CA 94583

Re: Unocal Service Station #5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. De Witt:

This letter provides written confirmation for the extension from December 19, 1996 to January 31, 1997 in responding to the questions posed in my November 18, 1996 letter.

As mentioned in this letter, you may modify the current monitoring schedule to omit chemical analysis for monitoring wells U-3 and U-4. Please continue, however, to take groundwater elevation readings for gradient contouring purposes. Please also remember to analyze the well containing the highest prior MTBE concentration by Method 8240 or 8260.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

c: B. Chan, files
Mr. G. Gurss, GeoStrategies, 3164 Gold Camp Dr., Suite 240, Rancho Cordova, CA 95670
Mr. J. Greger, MPDS Services Inc., 2401 Stanwell Dr., Suite 400, Concord CA 94520
ext3220

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

RO# 229

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1131 Harbor Bay Parkway, Suite 250
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FAX (510) 337-9335

November 18, 1996
StID # 1059

Mr. David De Witt
Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, CA 94583

Re: Unocal Service Station #5325, 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. De Witt:

Our office has received and reviewed the July 24, 1996 MPDS groundwater monitoring report for the above site. I also was present along with yourself during the November 15, 1996 waste oil tank and underground piping removal. During this removal, it appeared that the dispenser areas on the northern portion of this site had been impacted by a gasoline release. The other samples, beneath the waste oil tank and along the rest of the fuel line did not appear impacted. Additional overexcavation was planned within the dispenser area down to five (5) feet bgs along with resampling. Please send a copy of the analytical results for the samples from the tank and piping removal as soon as possible. It is possible that the observed soil contamination in the area of the dispensers is the source of the elevated petroleum contamination being found in monitoring well U-2.

In regards to the overall site investigation, I spoke with Mr. Haig Tejirian about this. A number of items were discussed which I would like brought to your attention:

1. Based on the elevated levels of petroleum contaminants in groundwater, please investigate the underground utilities as a potential preferential pathway for contamination migration. Please identify how the extent of the petroleum hydrocarbon plume will be determined.

2. Should some type of remediation be done to prevent offsite migration of contamination or to attenuate the elevated levels being detected in wells U-1, U-2 and U-5 ?

3. Based on historical monitoring data, it seem appropriate to either decrease or halt groundwater monitoring in wells U-3 and U-4.

4. Please run the monitoring well with the highest reported MTBE result via Method 8240 or 8260 as recommended to the LOP managers by SWRCB UST Section manager.

Please respond to the above items in writing **within 30 days or by December 19, 1996.**

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

c: B. Chan, files
Mr. J. Greger, MPDS Services Inc., 2401 Stanwell Dr., Suite 400, Concord CA 94520
ssi3220

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

R0229

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

May 17, 1994
StID # 1059

Mr. David DeWitt
Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, CA 94583

Re: Approval for March 22, 1994 Work Plan for Installation of Additional Monitoring Wells at 3220 Lakeshore Ave., Oakland 94610

Dear Mr. DeWitt,

This letter recounts our discussion after my recent site visit with you and Mr. Cliff Garratt of GeoStrategies at the above site. Recall, we discussed the locations of the proposed additional wells. You pointed out the locations of utilities which would make the installation of offsite wells difficult.

It was decided that the original well locations are acceptable, and may proceed, however, the well locations will not give any evidence whether offsite contamination exists from the former Shell Station on Rand Ave.

You may contact me at (510) 271-4530 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

cc: C. Garratt, Geostrategies Inc,, 6747 Sierra Ct., Suite G, Dublin, CA 94568
E. Howell, files

2wp3220

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

R0229

April 4, 1994
StID # 1059

Mr. David DeWitt
Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, CA 94583

Re: Comment on March 22, 1994 Work Plan for the Installation of Additional Monitoring Wells at 3220 Lakeshore Ave., Oakland CA 94610

Dear Mr. DeWitt:

Our office has received and reviewed the above referenced work plan as provided by your consultant, GeoStrategies. We have also spoken with Mr. Robert Mallory, geologist from GeoStrategies, regarding the proposed location of the additional wells. Though the proposed three wells may help to further explain the site specific gradient, they will not determine if the former Shell station on the corner of Lakeshore and Rand Ave. is a potential up-gradient source. An earlier letter, dated April 1, 1993, from Mr. Tim Howard referred to this former Shell site. In my conversation with Mr. Mallory, I stated that an off-site monitoring well between the former Shell site and the Unocal site would be required. I also left a copy of the tank closure report detailing the removal of Shell's three underground tanks for GeoStrategie's review.

Please comment on this observation. If you concur, please send a revised site map indicating your new well location. Our office should be notified **48 working hours** prior to any field work so I may arrange to be onsite if possible.

You may contact me at (510 271-4530 if you have any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

cc: C. Garratt, GeoStrategies Inc., 6747 Sierra Ct., Suite G, Dublin, CA 94568
E. Howell, files
wp3220

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

R0229

RAFAT A. SHAHID, Assistant Agency Director

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

May 13, 1993
STID # 1059

Mr. Syed Rizvi
Unocal, Environmental Compliance
911 Wilshire Blvd., Floor 11
Los Angeles, CA 90017

Re: FIVE YEAR UNDERGROUND STORAGE TANK PERMIT AT,
UNOCAL #5325, ~~3200~~ 3220 LAKESHORE AVE. OAKLAND 94610

Dear Mr. Rizvi:

Enclosed is your five year permit to operate two underground fuel tanks and one waste oil tank at the above referenced facility. These tanks are double-walled with fiberglass coating. Their associated piping is also double-walled, with fiberglass secondary piping.

To operate under a valid permit , you are required to comply with the conditions in Title 23 of the California Code of Regulations (CCR). Based on these requirements, both tanks and piping are monitored by an electronic alarm system.

You may consult the revised Title 23, CCR for additional requirements. To obtain a copy of the regulations, you may contact the State Water Resources Control Board at (916) 657-0917.

Please, do not hesitate to contact me with any questions at (510) 271-4320, Monday through Thursday.

Sincerely,

Kevin Tinsley
Hazardous Materials Specialist

c, Edgar Howell, Chief - files (kt)
Brian Oliva, Hazardous Materials Specialist
Nelson Wong, Unocal Dealer

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

R0229

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

January 8, 1993
StID # 1059

Mr. Tim Howard
Union Oil Co. of California
P. O. Box 5155
San Ramon, CA 94583

Re: **Request for Further Subsurface Investigation at Unocal #5325, 3220 Lakeshore Ave., Oakland CA 94610**

Dear Mr. Howard:

Our office has completed its review of the fourth quarter 1992 monitoring report for the above site. As has been the case previously, TPHg and BTEX concentrations remains moderate for gasoline and at concentrations exceeding the MCL for benzene in monitoring wells U-1 and U-2. Non-detectable concentrations of TPHg and BTEX remain in U-3. Our office's concern is that it appears that the extent of the groundwater contamination has not been determined. The groundwater gradient has varied from south to southwest and thus U-3 cannot detect the full extent of potential downgradient contamination. At one time, Unocal was seeking access to install an upgradient well on Lakeshore Ave. What is the status in obtaining this permit? In an effort to meet site closure requirements, our office now requests a workplan for the determination of the full extent of groundwater contamination. Please provide such a workplan to our office **within 45 days** of receipt of this letter.

You may contact me at (510) 271-4530 should you have any questions regarding this letter.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

cc: G. Jensen, Alameda County District Attorney Office
R. Hiett, RWQCB
D. Vossler, GeoStrategies Inc., 2140 West Winton Ave., Hayward, CA 94545
E. Howell, files

1-3220WP

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

R0229

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

July 16,1990

Mr. Ron Bock
Unocal Corporation
3220 Lakeshore Ave.
Oakland, CA 94610

Subject: Unauthorized Release from Underground Tank Removals,
3220 Lakeshore Ave
Oakland, CA 94610

Dear Mr. Bock:

Alameda County Environmental Health, Hazardous Materials Division, has been informed of subsurface soil results from borings done by Gettler-Ryan Inc. on your behalf at the above address. Three borings were taken, U-A,U-B and U-C , surrounding the location of the underground tanks , see Soil Boring Report Unocal Service Station # 5325, Report No. 7814-1. Significant hydrocarbon contamination was found at all three locations as identified as total petroleum hydrocarbons as gasoline. In addition, benzene,toluene, ethyl benzene and xylenes (BTEX) were found at high levels. Because of the degree of contamination found, this facility is considered to have experienced a confirmed release of petroleum hydrocarbons that has impacted subsurface soil and potentially groundwater. The extent of this contamination must be assessed and remediated. Alameda County has been working with Mr. John Werfal of Gettler-Ryan in order to verify overexcavation to "clean" levels before the installation of three new underground tanks. This is a request for further work plans which may define the impact to groundwater and characterize the extent of any groundwater contamination.

Our office will be the lead agency overseeing both the soil and groundwater remediation of this site. The Regional Water Quality Control Board (RWQCB) is currently unable to oversee the large number of contamination cases within Alameda County and has delegated the handling of this case to our Division. We will be in contact with the RWQCB in order to provide you with guidance concerning the RWQCB's remediation requirements. However, please be aware that you are responsible for diligent actions to protect waters of the State.

To complete contaminant assessment and begin any possible remediation, we require that you submit a work plan which, at a minimum, addresses the items listed below and presents a timetable for their completion. Please submit this workplan within 30 days of the date of this letter.

I. Introduction

A. Statement of scope of work
B. Site map showing location of existing and past underground storage tanks and associated piping
C. Site History
- provide historical site use and ownership information. Include a description of types and locations of hazardous materials used on site.

II. Site Description

A. Vicinity description including hydrogeologic setting
B. Initial soil contamination and excavation results
- provide sampling procedures used
- indicate depth to ground water
- describe soil strata encountered
- provide soil sampling results, chain of custody forms, identity of sampler
- describe methods for storing and disposal of all soils

III. Plan for determining extent of soil contamination on site

A. Describe approach to determine extent of lateral and vertical contamination
- identify subcontractors, if any
- identify methods or techniques used for analysis
- provide sampling map showing all lines of excavation and sampling points
- if a step out procedure is used, define action level for determination of "clean" isopleth
- provide chain of custody forms, lab analysis results, all receipts and manifests, & identity of sampler

B. Describe method and criteria for screening clean versus contaminated soil. If onsite soil aeration/bioremediation is to be utilized, then provide a complete description of method that includes:

- volume and rate of aeration/turning
- method of containment and cover
- wet weather contingency plans
- permits obtained

C. Describe security measures

Plan for determining ground water contamination

- Construction and placement of wells should adhere to the requirements of the "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks". Provide a description of placement and rationale for the location of monitoring wells including a map to scale.

- The placement and number of wells must be able to determine the extent and magnitude of the free product and dissolved product plumes.

A. Drilling method for construction of monitoring wells

- expected depth and diameter of monitoring wells
- date of expected drilling
- casing type, diameter, screen interval, and pack and slot sizing techniques
- depth and type of seal
- development method and criteria for adequacy of development
- plans for cuttings and development water

B. Ground water sampling plan

- method for free product measurement, observation of sheen
- well purging procedures
- sample collection procedures
- chain of custody procedures
- procedures for determining ground water gradient

C. Sampling schedule

- measure free product weekly for first month following well installation
- measure free product and dissolved constituents monthly for first three months.
- after first three months monitor quarterly.
- monitoring must occur a minimum of one year.

V. Provide a site safety plan

Development of a Remediation Plan.

A. The Remediation Plan is to include a time schedule for remediation, and, at minimum, must address the following issues:

- removal of all free product. Manual bailing is not acceptable as a recovery system. Actual amount of free product removed must be monitored and tabulated.

- remediation of contaminated soils and dissolved constituents must follow RWQCB's resolution No. 68-16.

- soils containing 1,000+ ppm of hydrocarbons must be remediated. Soils containing between 100 and 1,000 ppm must be remediated unless sufficient evidence is provided which indicates no adverse effects on groundwater will occur. Clean up of soils to 100 ppm is strongly recommended.

- design of remedial action system should be based on a review of hydrogeologic and water quality data and on an evaluation of mitigation alternatives. The determination of probable capture zone(s) of extraction system(s) should be based on aquifer characteristics as determined by aquifer test data

VII Reporting

A. Technical reports should be submitted with a cover letter from Unocal Corporation or their authorized representative.

B. Monthly reports must be submitted for the next three months with the first report due 90 days from the above letter date.

C. Quarterly reports must be submitted with the first report due 90 days after the final monthly report. These reports should describe the status of the investigation and cleanup.

D. All reports and proposals must be signed by a California-Certified Engineering Geologist, California Registered Geologist or a California-Registered Civil Engineer (see page 2, 2 June 1988 RWQCB document). A statement of qualifications should be included in

all reports. Initial tank removal and soil sampling does not require such expertise; however, borehole and monitoring well installation and logging, and impact assessments do require such a professional.

All proposals, reports and analytical results pertaining to this investigation and remediation must be sent to our office and RWQCB. You should be aware that this Division is working in conjunction with the RWQCB and that this is a formal request for technical reports pursuant to California Water Code Section 13267 (b). Any extensions of agreed upon time deadlines must be confirmed in writing by either this Division or the RWQCB.

Should you have any questions concerning the contents of this letter or the status of this case please contact the undersigned at 271-4320.

Sincerely,

Barney M. Chan

Barney M. Chan,
Hazardous Materials Specialist,

cc: Gil Jensen, Alameda County District Attorney, Consumer & Environmental Protection
Lester Feldman, SFRWQCB
Howard Hatayama, DOHS
Mr. John Werfal, Gettler-Ryan Inc.