

R0436

**Wickham, Jerry, Env. Health**

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**From:** Dennis Dettloff [DDettloff@deltaenv.com]  
**Sent:** Thursday, December 20, 2007 11:23 AM  
**To:** Wickham, Jerry, Env. Health  
**Subject:** 1771 First Street, Livermore

Mr. Wickham,

I just received a phone call from Adrienne Collins at TRC and she informed me that her technician just called her to tell her that currently at the site all of the monitoring wells are dry. Therefore, no groundwater samples will be collected at this site during the fourth quarter 2007.

Dennis S. Dettloff, PG  
Senior Project Manager - ConocoPhillips West  
Delta Consultants  
3164 Gold Camp Drive - Suite 200  
Rancho Cordova, CA 95670  
Direct Dial: 916-503-1261  
Fax: 916-638-8385



R0436

**Wickham, Jerry, Env. Health**

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**To:** Dennis Dettloff  
**Subject:** RE: 1771 First Street, Livermore

Dennis,

Total metals analysis is required but dissolved metals analysis should also be performed to evaluate sample quality. Major anions are chloride, sulfate, nitrate, and fluoride. Major cations are calcium, sodium, magnesium, potassium, and manganese.

Regards,  
Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
510-567-6791 phone  
510-337-9335 fax  
[jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org)

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**From:** Dennis Dettloff [mailto:DDettloff@deltaenv.com]  
**Sent:** Tuesday, December 18, 2007 2:47 PM  
**To:** Wickham, Jerry, Env. Health  
**Subject:** 1771 First Street, Livermore

Mr. Wickham,

I have requested that TRC, the company that does the groundwater sampling at this site for COP, to add the additional analysis that you requested in your letter dated December 7, 2007. However, TRC would like to know if you want dissolved CAM 17 or total, and what major anions and major cations you would like analyzed for? Please let me know ASAP so that I can pass this information on to TRC.

Thanks,

Dennis S. Dettloff, PG  
Senior Project Manager - ConocoPhillips West  
Delta Consultants  
3164 Gold Camp Drive - Suite 200  
Rancho Cordova, CA 95670  
Direct Dial: 916-503-1261  
Fax: 916-638-8385



12/19/2007

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



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ENVIRONMENTAL HEALTH SERVICES

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

December 7, 2007

William Borgh  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568

Subject: Fuel Leak Case No. RO0000436 and Geotracker Global ID T0600101777, Unocal #4186, 1771 First Street, Livermore, CA 94550

Dear Mr. Borgh and Mr. and Ms. Vadakkekunnel:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted document entitled, "Work Plan Addendum," dated October 30, 2007. The Work Plan Addendum appears to be as an addendum to a previous document entitled, "Work Plan for Additional Ozone Injection Well Installation," dated July 12, 2007. When submitting an addendum in the future, please clearly identify the original document in the introduction section of the addendum. The "Work Plan for Additional Ozone Injection Well Installation," dated July 12, 2007 proposed the installation of seven additional ozone sparge wells within the middle water-bearing layer typically encountered roughly 35 to 45 feet bgs. The Work Plan Addendum presents plans for decommissioning of eight ozone sparge wells, installation of four ozone sparge wells to replace decommissioned wells, and installation of seven additional monitoring wells. The proposed monitoring well installations are acceptable and may be implemented without submittal of a revised work plan provided that the technical comment 1 below is addressed during the proposed field investigation.

We have several technical comments regarding the proposed additional ozone sparge wells. We request that you submit a revised Work Plan that addresses the comments below. In addition, we request that you analyze groundwater samples for metals and general chemistry during one quarterly monitoring event to evaluate whether ozone sparging has mobilized metals.

We request that you address the following technical comments, perform the proposed work, and send us the technical reports requested below.

**TECHNICAL COMMENTS**

1. **Proposed Groundwater Monitoring Wells.** The proposed methods for groundwater monitoring well installation are generally acceptable. However, we request that the proposed lower zone monitoring well upgradient of the USTs be moved to a downgradient location as shown on the attached Revised Figure 2.

2. **Number of Proposed Ozone Injection Wells.** Figure 2 of the Work Plan Addendum only shows proposed locations for the four ozone sparge wells proposed in the Work Plan Addendum and does not show the seven sparge wells proposed in the Work Plan dated July 12, 2007 Work Plan. In the Work Plan for Additional Ozone Injection Well Installation dated July 12, 2007, a total of seven sparge well were proposed within the middle water-bearing zone. In the October 31, 2007 Work Plan Addendum, two additional sparge wells were proposed in the middle water-bearing zone. However, it appears that both the July 12, 2007 Work Plan and October 31, 2007 Work Plan Addendum propose sparge wells at the same location adjacent to well U-3. Therefore, it appears that eight additional sparge wells are actually proposed in the middle water-bearing zone. For clarity and completeness, please show all proposed sampling locations on one map in the Revised Work Plan requested below.
3. **Proposed Injection Wells in Shallow Water-Bearing Zone.** We note that sparge wells are proposed in the shallow water-bearing zone with screen intervals from 22.5 to 24 feet bgs. However, water levels throughout 2007 were greater than 25 feet bgs. It is not clear that these shallow sparge wells will provide much benefit given the very limited time that the sparge wells are likely to be submerged. Please explain the benefits of these shallow sparge wells in the Revised Work Plan requested below. The Work Plan Addendum proposes the decommissioning of sparge well SP5 and SP8. Please see technical comment 4 regarding the need for decommissioning of sparge well 5. Since sparge wells SP5 and SP8 are located in the same boreholes as sparge wells SP5S and SP8S, respectively, decommissioning sparge wells SP5 and SP8 will also destroy sparge wells SP5S and SP8S. The Work Plan Addendum then proposes the replacement of sparge wells SP5S and SP8S. If it is determined that the shallow sparge wells may provide some benefit in the future, it is not clear why these sparge wells should be decommissioned at the present time. In the revised Work Plan requested below, please explain why you cannot cap off and discontinue use of sparge wells SP8 and SP5 (if necessary) and continue to use sparge wells SP5S and SP8S seasonally as opposed to decommissioning all sparge wells and replacing SP5S and SP8S with similarly constructed wells.
4. **Decommissioning of Sparge Wells SP4 and SP5.** Our previous technical comment in correspondence dated August 29, 2007 regarding the need to decommission sparge wells SP4 and SP5 does not appear to have been addressed. The Work Plan Addendum proposes decommissioning of sparge wells SP1 through 5, SP5S, SP8, and SP8S. Based on our review of CPT boring results, existing sparge wells SP-4 and SP-5 may be screened within the middle sand and gravel layer; replacement of these sparge wells may not be necessary. There appears to be an inconsistency between soil types and depths to lithologic contacts reported in the CPT borings and boring logs from adjacent sparge wells. It appears that the boring logs for the sparge wells that are presented in the report entitled, "Groundwater Monitoring Well and Ozone Microsparge System Installation Report," dated February 6, 2002, are not accurate. The sparge well borings were apparently drilled without sampling. The depths of lithologic changes could not be accurately determined from the sparge well borings. Nearby CPT borings indicate that the middle sand and gravel layer is deeper in the eastern portion of the site; therefore, ozone injection wells SP-4 and SP-5 are likely screened within the middle sand and gravel layer. Please revise the plans for additional ozone injection wells accordingly in the Revised Work Plan requested below.

5. **Lower Water-Bearing Zone.** The lowermost sand and gravel layer extends from approximately 60 feet bgs to more than 80 feet bgs. Grab groundwater samples from this lowermost sand and gravel layer detected TPHg at concentrations up to 26,000 µg/L, MTBE at concentrations up to 630 µg/L, and TBA at concentrations up to 290 µg/L. No groundwater monitoring or remediation is currently conducted within this layer. In our previous correspondence dated August 29, 2007, we requested that you propose additional groundwater monitoring wells and evaluate the need to install additional ozone injection wells within this lower sand and gravel layer. In the Revised Work Plan requested below, please describe how you have or will evaluate the need to install additional ozone injection wells and how those injection wells will be incorporated into the existing system.
6. **Evaluation for Potential Mobilization of Metals.** In-situ chemical oxidation can oxidize some metals to a more soluble form, thereby increasing their migration potential. During the next scheduled groundwater monitoring event, we request that you analyze groundwater samples from each of the monitoring wells for CAM 17 metals using EPA Method 6010, hexavalent chromium using EPA Method 7199, total dissolved solids using EPA Method 160.1, major anions using EPA Method 300.0, and major cations using EPA Method 6010B. The purpose of these analyses is to provide data for an evaluation as to whether ozone treatment is mobilizing metals in groundwater. Please present these results and your evaluation in the First Quarter 2008 Groundwater Monitoring Report.
7. **Quarterly Groundwater Monitoring.** Please continue quarterly groundwater monitoring and present the results in the Quarterly Reports requested below. We wish to correct one statement made in the "Quarterly Report – Third Quarter 2007," dated October 31, 2007. In the section entitled, Recent Correspondence, the text should have read, "ACHA submitted a letter to COP requesting a work plan for installation of additional ozone injections wells," rather than oxygen injection wells.

#### **TECHNICAL REPORT REQUEST**

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

- **February 14, 2008** – Revised Work Plan for Additional Injection Wells
- **45 days following sampling event** – Quarterly Report (To include summary report, remedial performance summary, and quarterly monitoring 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

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](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

#### 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.

William Borgh  
Thomas and Celine Vadakkekunnel  
RO0000436  
December 7, 2007  
Page 5

**UNDERGROUND STORAGE TANK CLEANUP FUND**

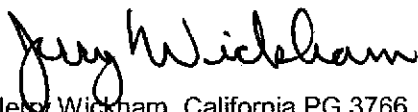
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

**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 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org).

Sincerely,



Jerry Wickham, California PG 3766, CEG 1177, and CHG 297  
Hazardous Materials Specialist

Attachment: Revised Figure 2

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

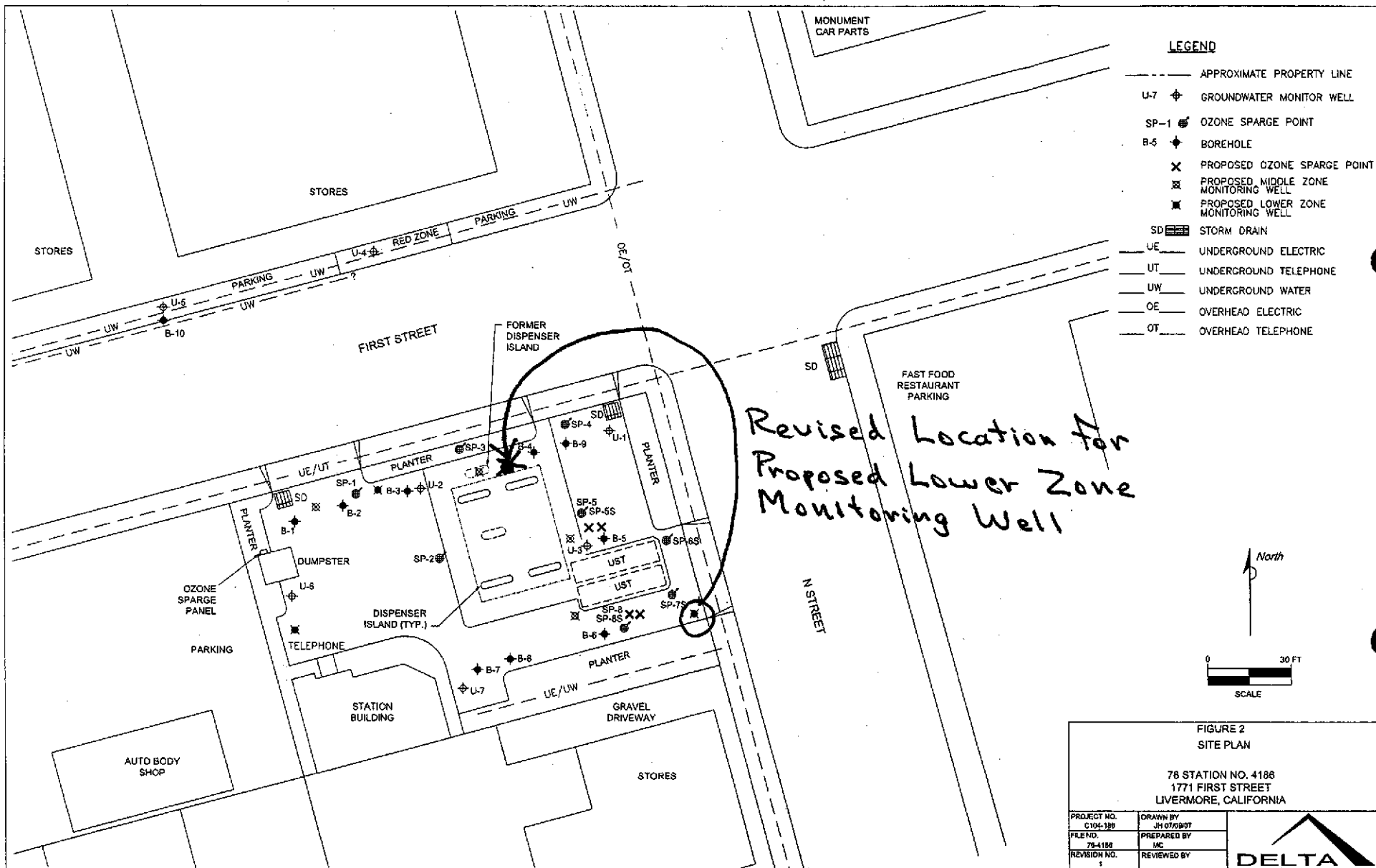
cc: Cheryl Dizon, QIC 80201  
Zone 7 Water Agency  
100 North Canyons Parkway  
Livermore, CA 94551

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

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

Donna Drogos, ACEH  
Jerry Wickham, ACEH  
File

# Attachment A: Revised Figure 2





ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
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

August 29, 2007

William Borgh  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568

Subject: Fuel Leak Case No. RO0000436 and Geotracker Global ID T0600101777, Unocal #4186, 1771 First Street, Livermore, CA 94550

Dear Mr. Borgh and Mr. and Ms. Vadakkekunnel:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted reports entitled, "Work Plan for Additional Ozone Injection Well Installation," dated July 3, 2007 and received by ACEH on August 2, 2007 and "Quarterly Report – Second Quarter 2007," dated July 31, 2007. The "Work Plan for Additional Ozone Injection Well Installation," proposes the installation of 7 additional ozone injection wells. We concur that additional ozone injection wells are needed at the site to improve the ability of the system to address residual contamination. However, we have several comments regarding the proposal to install additional ozone injection wells at a generally uniform depth across the site. In addition, the groundwater monitoring network appears to be largely limited to shallow groundwater above the zones where groundwater cleanup is proposed. Therefore, we request that you prepare and **submit a revised Work Plan by October 30, 2007** that addresses the technical comments below.

**TECHNICAL COMMENTS**

1. **Groundwater Monitoring of Water-Bearing Sand and Gravel Units.** The April 2006 cone penetrometer borings and depth discrete groundwater sampling along with previous investigations at the site, have shown that there are three coarse-grained water-bearing layers at the site. Dissolved phase hydrocarbons have been detected in each of the three water-bearing layers. Wells U-1, U-2, and U-3 monitor an upper silty sand with gravel layer that extends from ground surface to depths of approximately 20 to 25 feet bgs. The lower portions of the well screens for monitoring wells U-1, U-2, and U-3 are within a fine-grained unit that typically extends from the base of the silty sand with gravel to a depth of approximately 35 feet bgs.

A silty sand to sand layer, typically extending from approximately 35 to 44 feet bgs, was encountered in all cone penetrometer borings at the site. Wells U-4, U-5, U-6, and U-7 are screened across this middle sand layer. Wells U-4 and U-5 are off-site wells and U-6 and U-

7 are cross gradient wells. No source area wells or on-site downgradient wells currently monitor this middle sand layer. Grab groundwater samples from this middle sand layer detected TPHg at concentrations up to 23,000 micrograms per liter ( $\mu\text{g/L}$ ), MTBE at concentrations up to 1,100  $\mu\text{g/L}$ , and TBA at concentrations up to 250  $\mu\text{g/L}$ . Please note that the proposed additional ozone injection wells are targeting the middle sand layer. Please propose additional source area and downgradient groundwater monitoring wells within the middle sand layer.

The lowermost sand and gravel layer extends from approximately 60 feet bgs to more than 80 feet bgs. Grab groundwater samples from this lowermost sand and gravel layer detected TPHg at concentrations up to 26,000  $\mu\text{g/L}$ , MTBE at concentrations up to 630  $\mu\text{g/L}$ , and TBA at concentrations up to 290  $\mu\text{g/L}$ . No groundwater monitoring or remediation is currently conducted within this layer. We request that you propose additional groundwater monitoring wells and evaluate the need to install additional ozone injection wells within this lower sand and gravel layer. Please present these plans in the Revised Work Plan requested below.

2. **Proposed Additional Injection Wells.** The July 3, 2007 Work Plan proposes installation of additional ozone injection wells at seven locations that are adjacent to existing sparge wells and/or CPT borings. We concur that additional injection wells are necessary because it appears that many of the injection wells are screened within fine-grained soils that may be retarding the distribution of the ozone. However, based on our review of CPT boring results, existing sparge wells SP-4 and SP-5 may be screened within the middle sand and gravel layer; replacement of these sparge wells may not be necessary. There appears to be an inconsistency between soil types and depths to lithologic contacts reported in the CPT borings and boring logs from adjacent sparge wells. It appears that the boring logs for the sparge wells that are presented in the report entitled, "Groundwater Monitoring Well and Ozone Microsparge System Installation Report," dated February 6, 2002, are not accurate. The sparge well borings were apparently drilled without sampling. The depths of lithologic changes could not be accurately determined from the sparge well borings. Nearby CPT borings indicate that the middle sand and gravel layer is deeper in the eastern portion of the site; therefore, ozone injection wells SP-4 and SP-5 are likely screened within the middle sand and gravel layer. Please revise the plans for additional ozone injection wells accordingly in the Revised Work Plan requested below. We have no objection to the remaining five proposed additional ozone injection wells. Please see technical comment 1 above regarding the need for additional ozone injection wells within the lower sand and gravel unit that is typically more than 60 feet bgs.
3. **Proposed Depth of Additional Ozone Injection Wells.** The proposed methods for installation of the additional injection wells are acceptable. Continuous sampling below 35 feet bgs is required to assure that the screen and filter pack for the additional injection wells are installed within the targeted coarse-grained layer. Please review existing cross sections to assure that the selected intervals are consistent with previous results.
4. **Future Status of Existing Ozone Injection Wells.** In the Revised Work Plan requested below, please clarify whether each of the existing ozone injection wells will be decommissioned or will continue to be used in the system.

5. **Shallow Ozone Injection Wells.** In the most recent groundwater monitoring report, the reported depth to water ranged from 27 to 38 feet bgs. The total depths of the shallow ozone injection wells are 25 to 26 feet bgs. Please describe whether the shallow ozone injection wells are currently used and how the system shuts down ozone injection during periods when water levels are below the sparge wells.
6. **Upgrade of Ozone System.** We have no objection to the recommendation to upgrade the existing ozone injection system to a more reliable system.
7. **Quarterly Groundwater Monitoring.** Please continue quarterly groundwater monitoring and present the results in the Quarterly Reports requested below. We wish to correct one statement made in the "Quarterly Report – Second Quarter 2007," dated July 31, 2007. In the section entitled, Recent Correspondence, the text should have read, "ACHA submitted a letter to COP requesting a work plan for installation of additional ozone injections wells," rather than oxygen injection wells.

#### TECHNICAL REPORT REQUEST

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

- **October 30, 2007** – Revised Work Plan for Additional Injection Wells and Monitoring Wells
- **45 days following end of each quarter** – Quarterly Report (To include summary report, remedial performance summary, and quarterly monitoring 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

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.

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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](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

#### 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.

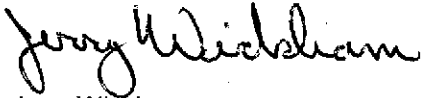
#### AGENCY OVERSIGHT

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.

William Borgh  
Thomas and Celine Vadakkekunnel  
RO0000436  
August 29, 2007  
Page 5

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

Dennis Dettloff  
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

AGENCY

DAVID J. KEARS, Agency Director



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May 23, 2007

Shelby Lathrop  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568

Subject: Fuel Leak Case No. RO0000436 and Geotracker Global ID T0600101777, Unocal #4186, 1771 First Street, Livermore, CA 94550

Dear Ms. Lathrop and Mr. and Ms. Vadakkekunnel:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted reports entitled, "Additional Subsurface Assessment and Oxygen Injection Test Report," dated April 26, 2007 and "Quarterly Report – Fourth Quarter 2006," dated January 12, 2007. The "Additional Subsurface Assessment and Oxygen Injection Test Report," presents the results of soil and groundwater sampling from three cone penetration test (CPT) borings and the results of oxygen injection tests.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

**TECHNICAL COMMENTS**

1. **Submittal of Reports.** As discussed in the Technical Report Request below, reports are to be submitted in electronic form to both the county's ftp site and State Water Resources Control Board (SWRCB) Geotracker website. We note that the most recent, "Quarterly Report – First Quarter 2007," dated May 2, 2007 was uploaded only to the Geotracker website. We request that the "Quarterly Report – First Quarter 2007" and all future groundwater monitoring reports also be uploaded to Alameda County's ftp site.
2. **Additional Injection Wells.** We concur with the conclusion in the "Additional Subsurface Assessment and Oxygen Injection Test Report," dated April 26, 2007, that additional injection wells will be necessary. Based on the results of the injection test, it appears that the fine-grained soils in which the lower sparge wells are screened are retarding the distribution of the ozone. As a result, contamination within the overlying sand and gravel unit that is typically encountered at depths of roughly 35 to 45 feet bgs is not being effectively treated. Since the deeper sparge wells are all within the lower clay zone and the stratigraphy is generally consistent across the site, we suspect that additional sparge wells are necessary throughout the site in order to effectively treat residual contamination in this sand and gravel

Shelby Lathrop  
Thomas and Celine Vadakkekunnel  
RO0000436  
May 23, 2007  
Page 2

unit. Since well U-3 is screened above the sand and gravel unit, groundwater sampling results from well U-3 do not provide data to assess whether treatment is effective in the sand and gravel unit in this area of the site. Therefore, we do not concur that results from well U-3 indicate that groundwater contamination in the sand and gravel unit is being effectively treated in the area of well U-3. Please present plans in the Work Plan requested below for installation of additional injection wells throughout the site.

- 3. Boring Log for Boring B-9 and Cross Section A-A'.** Please review the soil boring log for boring B-9 for consistency with previous boring B-4 and the CPT data for B-9. It appears that a coarse-grained layer is present at approximately 59.5 feet bgs in boring B-4 and a coarse-grained layer is also shown at this depth on the CPT log for boring B-9. Please revise boring B-9 accordingly on cross sections in future reports.

#### **TECHNICAL REPORT REQUEST**

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

- **August 3, 2007** – Work Plan for Additional Injection Wells
- **45 days following end of each quarter** – Quarterly Report (To include summary report, remedial performance summary, and quarterly monitoring 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**

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

Shelby Lathrop  
Thomas and Celine Vadakkekunnel  
RO0000436  
May 23, 2007  
Page 3

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](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

#### 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

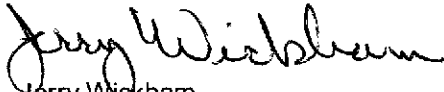
If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section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



Shelby Lathrop  
Thomas and Celine Vadakkekunnet  
RO0000436  
May 23, 2007  
Page 4

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

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

Donna Drogos, ACEH  
Jerry Wickham, ACEH  
File

RO436

**Wickham, Jerry, Env. Health**

---

**To:** Dennis Dettloff

**Subject:** RE: 1771 First Street, Livermore, California

Based upon your request, the schedule for report submittal for case RO436 is extended to April 27, 2007.

Regards,

*Jerry Wickham*

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda, CA 94502-6577

510-567-6791 phone

510-337-9335 fax

[jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org)

---

**From:** Dennis Dettloff [mailto:DDettloff@deltaenv.com]

**Sent:** Tuesday, April 17, 2007 9:20 AM

**To:** Wickham, Jerry, Env. Health

**Subject:** 1771 First Street, Livermore, California

Mr. Wickham,

As you and I discussed via telephone, I would like to ask for an extension to submit the site assessment report for the above referenced site. I would like to request a due date of April 27, 2007.

If you have any questions don't hesitate to contact me at the number below.

Thank You,

Dennis S. Dettloff, PG

Senior Project Manager - ConocoPhillips West

Delta Environmental Consultants

3164 Gold Camp Drive - Suite 200

Rancho Cordova, CA 95670

Direct Dial: 916-503-1261

Fax: 916-638-8385



4/17/2007

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

November 20, 2006

Shelby Lathrop  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568

Subject: Fuel Leak Case No. RO0000436, Unocal #4186, 1771 First Street, Livermore, CA –  
Work Plan Approval

Dear Ms. Lathrop and Mr. and Ms. Vadakkekunnel:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site and the documents entitled, "Work Plan – Additional Subsurface Assessment," dated October 31, 2006 and "Quarterly Report," dated November 3, 2006. The work plan, which was prepared on ConocoPhillips behalf by Delta Environmental Consultants, Inc., proposes three soil borings to delineate the extent of contamination. The proposed scope of work presented in the Work Plan is acceptable for implementation provided that the requested modifications in the technical comments below are addressed during the field investigation.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

**TECHNICAL COMMENTS**

1. **Proposed Boring Locations and Depth of Borings.** The three proposed boring locations are acceptable. Two of the proposed boring locations, B-8 and B-9, are adjacent to boring locations where CPT data, soil samples, and depth-discrete groundwater samples were previously collected in April 2006. The April 2006 borings extended to depths of approximately 65 feet bgs. The proposed borings will extend to the top of a clay aquitard or a maximum depth of 100 feet bgs. The CPT borings should be terminated approximately 5 feet into the fine-grained aquitard layer, which is expected to be encountered between 70 and 90 feet bgs.
2. **Proposed Soil Sampling.** The proposed soil sampling and screening is acceptable for proposed boring B-10. However, we are not requiring soil sampling at boring locations B-8 and B-9 because soil samples were collected in April 2006 from adjacent borings B-7 and B-4, respectively.

3. **Proposed Groundwater Sampling in Proposed Borings B-8 and B-9.** The proposed collection of grab groundwater samples near the base of the lowermost sand and gravel unit above the clay aquitard from borings B-8 and B-9 is acceptable since depth-discrete groundwater samples were previously collected from the middle sand and gravel layer and the upper portion of the lower sand and gravel layer in adjacent borings B-7 and B-4, respectively. However, we request that pore pressure dissipation tests be conducted at the base of the shallow sand and gravel layer, which was previously observed at depths of approximately 20 to 25 feet bgs. If groundwater is present at the base of the shallow sand and gravel layer, we request that depth-discrete groundwater samples be collected and analyzed to assess the extent of contamination within the shallow sand and gravel layer.
4. **Proposed Groundwater Sampling in Proposed Boring B-10.** No depth-discrete groundwater sampling was previously conducted in the area of proposed boring B-10. Therefore, we request that depth-discrete groundwater samples be collected from each significant water-bearing layer observed on the CPT boring log for boring B-10. Based on the stratigraphy observed in previous CPT borings from the site, water-bearing layers for grab groundwater sampling are likely to include, but not be restricted to, the middle sand and gravel layer, the upper portion of the lowermost sand and gravel layer, and the base of the lowermost sand and gravel layer. The intervals for depth-discrete groundwater sampling are to be selected using the CPT boring results. As discussed in technical comment 4 above, we request that a pore pressure dissipation test be conducted at the base of the shallow sand and gravel layer, which was previously observed in boring U-5 approximately 23 feet bgs. If groundwater is present at the base of the upper sand and gravel layer, we request that a depth-discrete groundwater samples be collected and analyzed to assess the extent of contamination within the upper sand and gravel layer.
5. **Injection Test.** The proposed injection of oxygen in sparge wells SP-6S, SP-5S, and SP-5 and monitoring of dissolved oxygen and hydrocarbon vapors in well U-3 is acceptable. However, we request that dissolved oxygen and hydrocarbon vapors be monitored in each of the adjacent sparge wells as well as monitoring well U-3 during the injection tests. The results of the injection tests are to be presented in the Soil and Groundwater Investigation Report requested below. Based on the results from the injection test, recommendations for improvements to the remediation system are also to be presented in the Soil and Groundwater Report requested below.
6. **Quarterly Groundwater Monitoring.** Please continue quarterly groundwater monitoring and present the results in the Quarterly Reports requested below. We previously requested that TBA be included as an analyte for future groundwater monitoring events. We also note that the concentration of TBA detected in groundwater from well U-3 increased from 2,000 micrograms per liter ( $\mu\text{g/L}$ ) in December 2005 to 18,000  $\mu\text{g/L}$  in June 2006. However, TBA was not analyzed in groundwater samples collected from other wells in June and September 2006. Therefore, we reiterate the request to **include TBA as an analyte in all groundwater samples collected for future monitoring events.**

### TECHNICAL REPORT REQUEST

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

- **April 19, 2007** – Soil and Groundwater Investigation Report
- **45 days following end of each quarter** – Quarterly Report (To include summary report, remedial performance summary, and quarterly monitoring 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

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.

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### 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.

Shelby Lathrop  
Thomas and Celine Vadakkekunnel  
November 20, 2006  
Page 4

**PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS**

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**UNDERGROUND STORAGE TANK CLEANUP FUND**

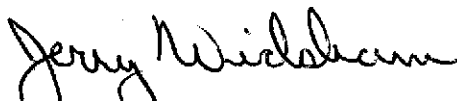
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

**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: 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

Shelby Lathrop  
Thomas and Celine Vadakkekunnel  
November 20, 2006  
Page 5

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

Sunil Ramdass  
SWRCB Cleanup Fund  
1001 I Street, 17<sup>th</sup> floor  
Sacramento, CA 95814-2828

Donna Drogos, ACEH  
Jerry Wickham, ACEH  
File

**Alameda County Environmental Cleanup  
Oversight Programs  
(LOP and SLIC)**

ISSUE DATE: July 5, 2005

REVISION DATE: May 31, 2006

PREVIOUS REVISIONS: October 31, 2005,  
December 16, 2005

SECTION: Miscellaneous Administrative Topics & Procedures

SUBJECT: Electronic Report Upload (ftp) Instructions

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.

**REQUIREMENTS**

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements must be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:  
RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

**Additional Recommendations**

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in Excel format. These are for use by assigned Caseworker only.

**Submission Instructions**

**1) Obtain User Name and Password:**

- a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
  - i) Send an e-mail to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org).
  - or
  - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of: **ftp Site Coordinator.**
- b) In the subject line of your request, be sure to include "ftp PASSWORD REQUEST" and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker)** you will be posting for.

**2) Upload Files to the ftp Site**

- a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
  - (i) Note: Netscape and Firefox browsers will not open the FTP site.
- b) Click on File, then on Login As.
- c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
- d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
- e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

**3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs**

- a) Send email to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org) notify us that you have placed a report on our ftp site.
- b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., [firstname.lastname@acgov.org](mailto:firstname.lastname@acgov.org))
- c) The subject line of the e-mail must start with the RO# followed by Report Upload. (e.g., Subject: RO1234 Report Upload)



R0436

STATE OF CALIFORNIA - THE RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES

ARNOLD SCHWARZENEGGER, Governor

CENTRAL DISTRICT  
3251 S Street  
Sacramento, CA 95816  
(916) 227-7632  
(916) 227-7600(Fax)

NORTHERN DISTRICT  
2440 Main Street  
Red Bluff, CA 96080  
(530) 529-7300  
(530) 529-7322 (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) 543-4604 (Fax)

WELL COMPLETION REPORT RELEASE AGREEMENT-AGENCY  
(Government and Regulatory Agencies and their Authorized Agents)

Project/Contract No. C104186011 County Alameda  
COP# 4186

Township, Range, and Section T3S, R2E, Sec 8 Radius (mils)

(Must include entire study area and a map that shows the area of interest.)

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

Make a study, or,

Perform an environmental cleanup study associated with an unauthorized release of a contaminant within a distance of 2 miles.

In accordance with Section 13752, information obtained from these reports shall be kept confidential and shall not be disseminated, published, or made available for inspection by the public without written authorization from the owner(s) of the well(s). The information shall be used only for the purpose of conducting the study. Copies obtained shall be stamped CONFIDENTIAL and shall be kept in a restricted file accessible only to agency staff or the authorized agent.

Daniel J. Davis  
Authorized Agent

3164 Gold Camp Dr. Suite 200  
Address

Pancho Cordova, CA 95670  
City, State, and Zip Code

Signature Daniel J. Davis

Title Senior Project manager

Telephone (916) 503-1260

Fax (916) 638-8385

Date 11-1-06

E-mail ddavis@deltaenv.com

Alameda County Health Agency  
Government or Regulatory Agency

1131 Harbor Bay Parkway, Suite 250  
Address

Alameda, CA 94502  
City, State, and Zip Code

Signature Jerry Wickham

Title Hazardous Materials Specialist

Telephone (510) 567-6741

Fax (510) 337-9335

Date 11-02-06

E-mail jerry.wickham@acgov.org

6 June 2001

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

September 1, 2006

Shelby Lathrop  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568

Subject: Fuel Leak Case No. [REDACTED] Unocal #4186, 1771 First Street, Livermore, CA

Dear Ms. Lathrop and Mr. and Ms. Vadakkekunnel:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site and the documents entitled, "Work Plan - Additional Soil Boring Assessment," dated August 24, 2006 and "Quarterly Monitoring Report," dated April 17, 2006. The work plan, which was prepared on ConocoPhillips behalf by Delta Environmental Consultants, Inc., proposes three soil borings to delineate the vertical extent of contamination. However, the Work Plan proposes the borings in upgradient or cross gradient locations that do not appear to take into account the current extent of the plume, conceptual models of vertical plume migration, or results from the April 2006 soil borings, which provided significant information on site stratigraphy and contaminant distribution. Therefore, the Work Plan must be revised as discussed further in the technical comments below.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

**TECHNICAL COMMENTS**

1. **Stratigraphy and Contaminant Distribution.** The April 2006 cone penetrometer borings and depth discrete groundwater sampling along with previous investigations at the site, have clearly shown that there are three coarse-grained water-bearing layers at the site. Dissolved phase hydrocarbons have been detected in each of the three water-bearing layers. Wells U-1, U-2, and U-3 monitor an upper silty sand with gravel layer that extends from ground surface to depths of approximately 20 to 25 feet bgs. The lower portions of the well screens for monitoring wells U-1, U-2, and U-3 are within a fine-grained unit that typically extends from the base of the silty sand with gravel to a depth of approximately 35 feet bgs. The "shallow" sparge points (SP-5s, SP-6s, SP-7s, and SP-8s) appear to be injecting ozone immediately below this upper silty sand with gravel layer; however, it is unclear how effective this treatment has been.

A silty sand to sand layer, typically extending from approximately 33 to 40 feet bgs, was encountered in all cone penetrometer borings at the site. Wells U-4, U-5, U-6, and U-7 are screened across this middle sand layer and the "lower" sparge points appear to be injecting ozone immediately below this silty sand to sand layer. It is also unclear how effective the treatment in the middle sand layer has been. Grab groundwater samples from this middle sand layer detected TPHg at concentrations up to 23,000 micrograms per liter ( $\mu\text{g/L}$ ), MTBE at concentrations up to 1,100  $\mu\text{g/L}$ , and TBA at concentrations up to 250  $\mu\text{g/L}$ .

The lowermost sand and gravel layer extends from approximately 60 feet bgs to more than 70 feet bgs. Grab groundwater samples from this lowermost sand and gravel layer detected TPHg at concentrations up to 26,000  $\mu\text{g/L}$ , MTBE at concentrations up to 630  $\mu\text{g/L}$ , and TBA at concentrations up to 290  $\mu\text{g/L}$ . No groundwater monitoring or remediation is currently conducted within this layer and the vertical extent of contamination below the lowermost samples collected from this layer is not known. Therefore, as previously requested, additional investigation is required to assess the vertical extent of contamination. Please see the technical comment below regarding proposed boring locations.

2. **Plume Stability.** The furthest downgradient monitoring well is well U-5. MTBE concentrations in well U-5 display an increasing trend over time. TPHg concentrations also appear to be increasing over time; however, there is significant variability in the results. The trend in TBA concentrations is unknown since TBA is not an analyte for quarterly groundwater sampling (please see technical comment 8 below regarding groundwater monitoring). No monitoring wells are installed within the lowermost sand and gravel layer; therefore, no data are available over time to indicate whether the plume is expanding. However, based on the apparent expansion of the plume within the middle sand layer and likely vertical migration, the plume within the lowermost sand and gravel layer may also be expanding.
3. **Upgradient Investigation.** Our previous June 22, 2006 correspondence included a comment requesting background as to why investigation was being proposed in the upgradient direction since the contamination observed on site was consistent with an on-site source. The response did not identify a potential upgradient source and indicated that historical records will be reviewed in the future. We have reviewed ACEH files and did not find potential off-site sources of fuel hydrocarbons upgradient of the site. The basis for proposed further investigation upgradient remains unclear. We do not concur with additional upgradient investigation until some justification is presented.
4. **Site History Review.** In our June 22, 2006 correspondence, we requested that you research the site history to evaluate whether historic releases have occurred and whether potential sources such as tanks, dispensers, and product lines were located in different areas of the site than their current locations. This information was to be used as a basis in planning additional investigation. The August 24, 2006 Work Plan proposes a historical review, apparently after additional investigation. Historical information is to be used in planning investigations rather than reviewed after investigation. Therefore, we concur with the proposal to review site history to identify recent or historical releases but request that this information be used in planning site investigation activities and presented in the revised Work Plan requested below. Please present plans for any additional investigation that may be necessary based on the review of site history in the revised Work Plan requested below.

5. **Proposed Boring Locations.** The three proposed boring locations, which are upgradient and crossgradient of the USTs and dispensers are not acceptable to define the vertical extent of contamination within the lower sand and gravel unit. Vertical plume migration occurs in the downgradient direction due to the downward vertical hydraulic gradient at the site and vertical dispersion. Additional investigation in the upgradient direction will not define the vertical extent of contamination. Therefore, we request that you review the site history, stratigraphy, hydrogeology, and contaminant distribution to propose more suitable soil boring locations. Based on plume expansion in the downgradient direction, one boring will be required in the area of well U-5.
6. **Geologic Cross Sections.** In order to better understand site stratigraphy and contaminant distribution, we request that the geologic cross sections that were provided in the "Soil Boring Assessment Report," dated May 26, 2006 be revised and expanded to incorporate monitoring wells and sparge points (including screen intervals), where groundwater was first encountered in borings and the static water levels, screen intervals for monitoring wells and grab groundwater samples, observations of free product, staining, or odor, and analytical results for soil and groundwater samples. In addition, the depth and thickness of soil layers shown on the cross sections do not appear to be consistent with the depth and thickness of soil layers on the cone penetrometer data (please review borings B-4 and B-5 in particular). Please present the updated cross sections in the revised Work Plan requested below.
7. **Review of Remedial System.** We concur with the proposed review of remediation system design. Please present the results of this review in the Soil and Groundwater Investigation Report requested below.
8. **Quarterly Groundwater Monitoring.** Please continue quarterly groundwater monitoring and present the results in the Quarterly Reports requested below. TBA has been detected in each of the water-bearing layers at the site. Please add fuel oxygenates as analytes for future groundwater sampling. The "Quarterly Report for First Quarter 2006" dated May 4, 2006 submitted to ACEH included only a Quarterly Summary Report and did not include the Quarterly Monitoring Report and Quarterly Remedial Performance Summary. Please submit the entire Quarterly Summary Report for First Quarter 2006 consolidated into one document similar to the "Quarterly Report for Fourth Quarter 2005" dated February 15, 2006. We note that the three components of the quarterly report are sometimes submitted as separate titled submittals on the Geotracker website. We request that you consolidate quarterly reporting into one document submitted both to the ACEH ftp site and Geotracker website to allow simplified access and tracking of submittals.

#### TECHNICAL REPORT REQUEST

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

- **September 15, 2006** – Quarterly Summary Report for Second Quarter 2006 (To include summary report, remedial performance summary, and quarterly monitoring report)

- **November 3, 2006** – Revised Work Plan
- **December 8, 2006** – Quarterly Summary Report for Third Quarter 2006 (To include summary report, remedial performance summary, and quarterly monitoring report)
- **120 days following ACEH approval of Work Plan** – 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](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

#### 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

Shelby Lathrop  
Thomas and Celine Vadakkekunnel  
September 1, 2006  
Page 5

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**

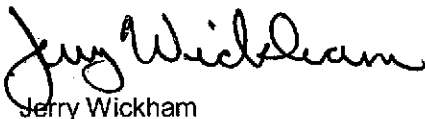
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

#### **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: 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

Sunil Ramdass, SWRCB Cleanup Fund, 1001 I Street, 17<sup>th</sup> floor  
Sacramento, CA 95814-2828

Donna Drogos, ACEH  
Don Hwang, ACEH  
Jerry Wickham, ACEH  
File

**Alameda County Environmental Cleanup  
Oversight Programs  
(LOP and SLIC)**

**ISSUE DATE:** July 5, 2005

**REVISION DATE:** May 31, 2006

**PREVIOUS REVISIONS:** October 31, 2005,  
December 16, 2005

**SECTION:** Miscellaneous Administrative Topics & Procedures

**SUBJECT:** Electronic Report Upload (ftp) Instructions

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.

**REQUIREMENTS**

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:  
RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

**Additional Recommendations**

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

**Submission Instructions**

- 1) Obtain User Name and Password:
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org)  
or
    - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of: **ftp Site Coordinator**.
  - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker)** you will be posting for.
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape and Firefox browsers will not open the FTP site.
  - b) Click on File, then on Login As.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., [firstname.lastname@acgov.org](mailto:firstname.lastname@acgov.org))
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload)

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



R

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

June 22, 2006

Shelby Lathrop  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568

Subject: Fuel Leak Case No. RO000-436, Unocal #6034, 1771 First Street, Livermore, CA

Dear Ms. Lathrop and Mr. and Ms. Vadakkekunnel:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site and the document entitled, "Soil Boring Assessment Report," dated May 26, 2006. The report, which was prepared on ConocoPhillips behalf by Delta Environmental Consultants, Inc., presents results from seven soil borings at the site. The "Soil Boring Assessment Report," concludes that groundwater in upper and lower water-bearing zones have been impacted by petroleum hydrocarbons and recommends the installation of two monitoring wells, continued ozone sparge remediation, and continued groundwater monitoring.

ACEH requests that you address the following technical comments, perform the proposed work, and send us the reports described below.

**TECHNICAL COMMENTS**

- Proposed Upgradient Monitoring Wells.** The "Soil Boring Assessment Report," recommends the installation of two upgradient monitoring wells to investigate possible off-site sources. We are not aware of potential off-site sources of fuel hydrocarbons in the upgradient direction. Please identify any possible sources of fuel hydrocarbons upgradient of the site and clarify the basis for additional investigation in the upgradient direction. In addition to testing the hypothesis that contamination is entering the site from an off-site source, we request that you also test the hypothesis that the contamination is from recent or historic releases from the site. Please research the site history to evaluate whether historic releases have occurred and whether potential sources such as tanks, dispensers, and product lines were located in different areas of the site than their current locations. Please also evaluate whether groundwater flow directions are or have been variable, historic water levels, and how the ozone sparging system may be affecting the observed distribution of dissolved phase hydrocarbons. Please present these results and plans to test these hypotheses in the Work Plan requested below.



2. **Vertical Extent of Contamination.** Fuel hydrocarbons were detected in each of the grab groundwater samples collected from the lower water-bearing zone. The highest concentration of total petroleum hydrocarbons in the gasoline range (26,000 micrograms per liter) was detected in grab groundwater sample B-7, which was collected from the lower water-bearing zone at 57 feet bgs. Coarse-grained soils were encountered to the total depth of the borings, which was up to 80 feet bgs. Due to the detection of elevated concentrations of dissolved fuel hydrocarbons in the deep water-bearing zone, we request that you conduct further assessment to define the vertical extent of contamination. Please consider the collection of grab groundwater samples below the depths where elevated concentrations of dissolved hydrocarbons were detected during the April 2006 investigation. A clay layer, which may represent a regional aquitard, has been encountered at depths of approximately 60 to 85 feet bgs at several fuel leak sites in the surrounding area of Livermore. We request that you advance a minimum of two borings to sufficient depths to evaluate whether the aquitard is present at the site. Please present plans to complete the definition of the vertical extent of contamination in the Work Plan requested below.
  
3. **Quarterly Groundwater Monitoring.** Please continue quarterly groundwater monitoring and present the results in the Quarterly Summary Reports requested below.

#### **TECHNICAL REPORT REQUEST**

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

- **August 15, 2006** – Quarterly Summary Report for Second Quarter 2006 (To include summary report, remedial performance summary, and quarterly monitoring report)
  
- **August 25, 2006** – Work Plan
  
- **November 15, 2006** – Quarterly Summary Report for Third Quarter 2006 (To include summary report, remedial performance summary, and quarterly monitoring 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.

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#### 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.

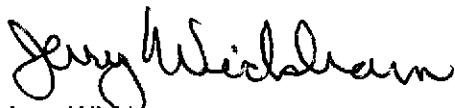
#### AGENCY OVERSIGHT

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.

Shelby Lathrop  
Thomas and Celine Vadakkekunnel  
June 22, 2006  
Page 4

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

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

January 12, 2006

Shelby Lathrop  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568

Subject: Fuel Leak Case No. [REDACTED] Unocal #6034, 1771 First Street, Livermore, CA

Dear Ms. Lathrop and Mr. and Ms. Vadakkekunnel:

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," dated January 4, 2006. The Work Plan was prepared on ConocoPhillips behalf by Delta Environmental Consultants, Inc. The Work Plan proposes soil borings at seven locations to collect soil samples and depth-discrete grab groundwater samples to delineate the horizontal and vertical extent of contamination. ACEH concurs with the proposed scope of work provided that the technical comments 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](mailto:jerry.wickham@acgov.org)) prior to the start of field activities.

**TECHNICAL COMMENTS**

- 1. Intervals for Depth-Discrete Grab Groundwater Samples.** We concur with the proposed continuous CPT logging and proposed soil sampling to a depth of 60 feet bgs in the initial boring at each of the seven proposed boring locations. The CPT log and soil sample descriptions from the initial boring are to be used to select depth intervals for collection of grab groundwater samples in subsequent borings at each location. The Work Plan currently indicates that grab groundwater samples will be collected from depths of approximately 25 and 35 feet bgs. These estimated depths are generally acceptable (please see comment 2 regarding vertical extent); however, the depths must be adjusted as necessary to target saturated coarse-grained layers that represent potential contaminant migration pathways. The sand and gravel layer that is typically encountered at depths of approximately 33 to 40 feet bgs is to be a primary target for depth-discrete grab groundwater sampling.

The Work Plan currently indicates that all three soil borings at each proposed location will be extended to a depth of 60 feet bgs. As discussed above, the initial boring is to be extended to a depth of 60 feet bgs for logging purposes and soil sampling. Subsequent borings are to

be extended to the specific depths selected for collection of depth-discrete groundwater samples. Please present sampling results in the Soil and Groundwater Investigation Report requested below.

2. **Vertical Extent of Contamination.** The vertical extent of contamination has not been defined for the site. The Work Plan currently proposes the collection of grab groundwater samples at estimated depths of 25 and 35 feet bgs at each proposed boring location. As requested in our July 15, 2005 correspondence, soil and groundwater samples are to be collected below the sand and gravel layer that is typically encountered at depths of 33 to 40 feet bgs. Therefore, we request that one or more (to be based on number of separate coarse-grained layers encountered in the interval) grab groundwater samples be collected from coarse-grained layers within the interval from approximately 40 to 60 feet bgs at a minimum of two soil boring locations (proposed source area soil boring location and a minimum of one proposed downgradient location). Please present sampling results in the Soil and Groundwater Investigation Report requested below.
3. **Cross Sections.** The cross section (northwest-southeast orientation) previously provided in the August 25, 2005 Work Plan was helpful in interpretation of the hydrogeology of the site. Please include this cross section in future work plans or reports for the site. We recommend that you supplement the northwest-southeast-oriented cross section with a second cross section that is oriented in a northeast-southwest direction. The cross sections are to be available to field personnel for reference during the field investigation to help in the selection of depth intervals for grab groundwater sampling.
4. **Quarterly Reporting.** Three separate documents were submitted to report site activities during the third quarter of 2005 (Quarterly Summary Report, Quarterly Remedial Performance Summary, and Quarterly Monitoring Report). This resulted in seven separate titled submittals for the third quarter of 2005 on the Geotracker website. Please consider some consolidation of quarterly reporting to allow easier access and tracking of submittals. Wells U-3 and U-6 were sampled as part of the remedial performance monitoring on July 11, 2005 and September 13, 2005 and were sampled again on September 23, 2005 as part of the quarterly monitoring. You may wish to consider a reduced frequency of sampling for wells U-3 and U-6 to be more cost effective. However, the complete analytical results for wells U-3 and U-6 should be compiled on one table. Currently, remedial performance monitoring results do not appear on the Table 2 - "Historic Fluid Levels and Selected Analytical Results," in the Quarterly Monitoring Report. As an example, the analytical data from remedial performance sampling conducted at wells U-3 and U6 on July 11, 2005 and September 13, 2005 do not appear on Table 2 - "Historic Fluid Levels and Selected Analytical Results," in the Quarterly Monitoring Report. Please revise the table to include all data collected from each of the monitoring wells in the future quarterly reports requested below.

#### **TECHNICAL REPORT REQUEST**

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

- **February 15, 2006** – Quarterly Summary Report for First Quarter 2006 (To include summary report, remedial performance summary, and quarterly monitoring report)
- **May 15, 2006** – Quarterly Summary Report for First Quarter 2006 (To include summary report, remedial performance summary, and quarterly monitoring report)
- **May 24, 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

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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](mailto: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.

**Wickham, Jerry, Env. Health**

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**From:** Wickham, Jerry, Env. Health  
**Sent:** Tuesday, November 15, 2005 9:02 AM  
**To:** 'Daniel Davis'  
**Cc:** Lia Holden; Lathrop, Shelby Suzanne  
**Subject:** RE: COP Site 4186, Livermore

Daniel,

The proposal to install one upgradient well is similar to the original work plan for this site submitted May 23, 2005. We had significant comments on that work plan which were listed in our July 15, 2005 correspondence. The proposal to install one upgradient well does not address any of our July 15, 2005 comments. I don't have an objection to a new consultant reviewing and suggesting improvements to the proposed work but installing one upgradient well will not provide much new information. In fact, I don't foresee an upgradient well providing the items you list at the end of the second paragraph. Due to the change in personnel, if you would like to ask for an extension and re-submit the work plan, that is acceptable but please do not assume that our July 15, 2005 comments can be ignored based on results from an upgradient well.

Regards,

*Jerry Wickham*

Hazardous Materials Specialist  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Suite 250  
Alameda, CA 94502-6577  
510-567-6791 phone  
510-337-9335 Fax  
[jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org)

---

**From:** Daniel Davis [<mailto:DDavis@deltaenv.com>]  
**Sent:** Thursday, November 10, 2005 11:12 AM  
**To:** Wickham, Jerry, Env. Health  
**Cc:** Lia Holden  
**Subject:** COP Site 4186, Livermore

November 10, 2005

Mr. Wickham -

Delta Environmental Consultants, Inc. has taken over project management of a number of sites in Alameda County from the previous consultant ATC. For the site referenced above, I am planning on implementing part of the work plan approved by you for further site characterization (your letters dated July 15, 2005 and September 9, 2005 to Shelby Lathrop of ConocoPhillips in response to work plans prepared by ATC).

Because it is a work plan developed by another consultant, I plan on initially drilling and constructing one well (U-9) at the site. The planned monitor well U-9 is upgradient of monitor well U-3 which is located in the area of apparent highest concentrations of petroleum hydrocarbons. Monitor well U-9 will be drilled to a total depth 50 feet below ground surface (bgs). Soil samples will be collected at 30, 35, 40, 45, and 50 feet bgs for analysis to further characterize vertical extent of contamination. The well will be constructed to total depth 40 feet bgs and screened within the sand-gravel unit at approximately 34-40 feet bgs. This plan is in keeping with the approved work plan and addresses your concern regarding characterization of the vertical extent of contamination at the site. Following well development, and groundwater sampling and analysis, a report will be prepared a which time

9/15/2006

consideration of additional work can be discussed. My primary reason for limiting the scope of the work plan at this time is to minimize the number of additional wells that may be necessary for further characterization. Drilling one well at this time will provide additional data on (1) depth and thickness of the sand-gravel layer, (2) the limits of contamination within this stratigraphic unit, and (3) potential contamination of the groundwater in this unit.

The drilling has been scheduled for December 8 and a permit has been submitted for the well. Please let me know if this approach to implementing the work plan meets with your approval.

Sincerely,

Daniel J. Davis, R.G.  
Senior Project Manager  
Delta Environmental Consultants, Inc.  
916-503-1260

9/15/2006



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

September 9, 2005

Shelby Lathrop  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Subject: Fuel Leak Case No. ~~RC0000430~~, Unocal #4186, 1771 First Street, Livermore, CA –  
Work Plan Approval

Dear Ms. Lathrop:

Alameda County Environmental Health (ACEH) staff has reviewed the case file and the work plan entitled, "Revised Work Plan – Agency Response and Further Site Characterization Activity," dated August 12, 2005 prepared for the above referenced site on behalf of ConocoPhillips by ATC Associates, Inc. The Agency Response and Revised Work Plan address technical comments provided by ACEH in correspondence dated July 15, 2005. ACEH concurs with the Agency Response and Revised Work Plan provided that technical comment 1 below is addressed during the field investigation.

We request 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](mailto:jerry.wickham@acgov.org)) prior to the start of field activities.

**TECHNICAL COMMENTS**

- 1. Soil Samples.** The Revised Work Plan indicates that soil samples will be logged continuously in the monitoring well borings and that a minimum of two soil samples will be collected for laboratory analysis from each boring. We request that soil samples be collected for laboratory analyses at all significant changes in soil type and at depths where staining, odor, or elevated photoionization detector (PID) readings are observed. Please implement this soil sampling protocol during the proposed field investigation and present the results in the Soil and Groundwater Investigation Report requested below.
- 2. Vertical Extent of Contamination.** The Revised Work Plan indicates that the boring for proposed monitoring well U-9 will be advanced to 45 feet below grade to sample soil below the deepest previous sampling interval. ACEH is concerned that advancing the boring for well U-9 to 45 feet below grade, which is only 5 feet deeper than contamination has already been detected, will not be sufficient to define the vertical extent of contamination. However, ACEH is willing to defer judgment on the need for soil and groundwater sampling at deeper intervals until the results of the currently proposed investigation are available.

### TECHNICAL REPORT REQUEST

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

- **November 15, 2005** – Quarterly Monitoring Report for the Third Quarter 2005 and Evaluation of Remedial System Performance
- **January 31, 2006** – Soil and Groundwater Investigation Report
- **February 15, 2006** – Quarterly 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.

### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) now request submission of reports in electronic form. The electronic copy is intended to replace the need for a paper copy and is expected to 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 Instructions." 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. 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 monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all reports is required in Geotracker (in PDF format). Please visit the State Water Resources Control Board for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic\\_reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

### 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**

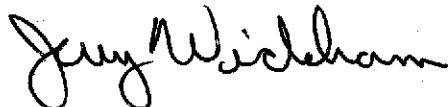
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

**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: 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



7

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

July 15, 2005

Shelby Lathrop  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568

Subject: Fuel Leak Case No. [REDACTED] Unocal #4186, 1771 First Street, Livermore, CA

Dear Ms. Lathrop:

Alameda County Environmental Health (ACEH) staff has reviewed the case file and the documents entitled, "Work Plan – Site Assessment," dated May 23, 2005, and "Quarterly Summary Report – First Quarter 2005," dated April 29, 2005, both prepared for the above referenced site on behalf of ConocoPhillips by ATC Associates, Inc. The work plan proposed the installation of one monitoring well in a location that is upgradient from the USTs and dispensers. ACEH concurs with the installation of an upgradient well; however, please see the technical comments below regarding the proposed depth of the upgradient well. ACEH is concerned with the adequacy of the characterization of the lateral and vertical extent of contamination for the site and is requesting additional investigation as described in the technical comments below. Please submit a revised Work Plan that includes additional investigation to address the technical comments below. Based on staff review of the documents referenced above, we request that you address the following technical comments, perform the proposed work, and send us the reports described below.

**TECHNICAL COMMENTS**

1. **Site Background and Activity.** The Site Background and Activity section of the "Work Plan-Site Assessment," dated May 23, 2005 indicates that six soil samples were collected beneath the fuel dispensers and along the product delivery piping on June 6, 1996 during dispenser and piping replacement activities. Analytical results for the soil samples were reported as not detected. A soil gas survey conducted on September 10, 1997 found an area of elevated concentrations of petroleum hydrocarbons in soil vapor, localized around the UST complex. We do not have records in our files of further investigations, repairs, or removal of the USTs and associated piping. Please provide additional background information on the USTs and piping to document that the cause of elevated concentrations of petroleum hydrocarbons detected in soil vapor was located and repaired. This information is to be provided in the Revised Work Plan requested below.
2. **Lateral Extent of Contamination within Gravel Layer.** ACEH is concerned that the lateral extent of contamination within a sand and gravel layer that is typically encountered at depths

of 35 to 40 feet bgs has not been defined by the existing monitoring wells installed at the site. The layer is an approximately 5-foot thick layer consisting of gravel or sand with gravel; the top of the layer is observed in site borings at depths of approximately 34 to 37 feet bgs. This gravel layer is the uppermost coarse-grained layer that is fully submerged. The highest PID reading observed in boring U-3 was the lowermost soil sample collected within the gravel layer at approximately 38 feet bgs. A shallower sand layer that typically extends to a depth of approximately 24 feet bgs is above the water table or only the base of the layer is saturated.

Six ozone sparge points were installed at depths of 42 to 45 feet bgs, apparently to remediate this gravel layer typically encountered at depths of approximately 35 to 40 feet bgs. Monitoring wells U-6 and U-7, which are in cross gradient locations from the USTs, are the only monitoring wells at the site that appear to monitor the gravel layer. All remaining monitoring wells at the site are screened above the gravel layer, at depths less than 35 feet bgs. Therefore, the extent of groundwater contamination within this gravel layer zone has not been defined and the effectiveness of the remedial system is not being monitored within this layer. Additional investigation is required to define and monitor the lateral extent of contamination within this gravel layer. At a minimum, monitoring wells are to be installed within this sand and gravel layer near the locations of existing wells U-2, U-3, and U-5. The use of grab groundwater samples collected along transects oriented perpendicular to groundwater flow should be considered prior to installation of monitoring wells. Please include your plan to characterize the lateral extent of contamination within the Revised Work Plan requested below. Cross sections that show the relationship between site stratigraphy and existing and proposed sampling locations are required in the Revised Work Plan.

3. **Source Area Contamination.** Please use the information that will be provided in response to comment 1, to design and propose an investigation that will define the extent of soil contamination in the source area. Please include your proposal in the Revised Work Plan requested below.
4. **Vertical Extent of Contamination.** The vertical extent of contamination has not been defined for the site. The highest PID reading was observed in the lowermost soil sample collected in boring U-3. Please propose one additional soil boring or CPT boring within the source area to collect soil and groundwater samples beneath the sand and gravel layer typically encountered at depths of 35 to 40 feet bgs.
5. **Proposed Upgradient Monitoring Well.** The "Proposed Scope of Work," on Page 3 of the Work Plan indicates that one monitoring well will be installed to a depth of approximately 45 feet below ground surface (bgs). In contrast, the "Monitor Well Installation and Soil Sampling Procedures," on Page 4 indicates that the well screen will extend from approximately 25 to 35 feet bgs. Please clarify using a cross section in the Revised Work Plan requested below, the proposed target interval for the proposed upgradient well.
6. **Remedial System Performance.** The ozone injection system incurred a large amount of downtime during the first quarter of 2005. ACEH concurs that more frequent site visits are needed after the ozone sparge system is repaired. ACEH also concurs with the proposed engineering system review during the second quarter 2005.

### **TECHNICAL REPORT REQUEST**

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

- **August 15, 2005** - Quarterly Monitoring Report for the Second Quarter 2005
- **August 30, 2005** - Revised Work Plan
- **November 15, 2005** - Quarterly Monitoring Report for the Third Quarter 2005
- **February 15, 2006** - Quarterly 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.

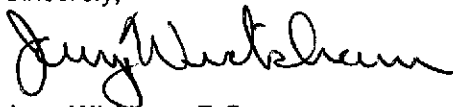
Shelby Lathrop  
Thomas and Celine Vadakkekunnel  
July 15, 2005  
Page 4

**AGENCY OVERSIGHT**

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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

RO0000436

November 28, 2001

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

**RE: Work Plan Approval for Tosco SS #4186, 1771 1<sup>st</sup> St., Livermore, CA**

Dear Mr. DeWitt:

I have completed review of Gettler-Ryan Inc.'s November 2001 *Work Plan for Installation of Monitoring Wells and Ozone Microsparging System* that was prepared for the above referenced site. The proposal to install groundwater monitoring wells and sparge points at the site is acceptable.

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

eva chu  
Hazardous Materials Specialist

email: Jed Douglas



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 4121

September 6, 2000

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

**RE: Workplan Approval for 1771 First Street, Livermore, CA**

Dear Mr. DeWitt:

I have completed review of Gettler-Ryan Inc.'s August 2000 *Work Plan for Monitoring Well Installation* prepared for the above referenced site. The proposal to install two off-site groundwater monitoring well across First Street is acceptable. Field work should commence within 90 days of the date of this letter. Please provide 72 hours advance notice of field activities.

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

eva chu  
Hazardous Materials Specialist

c: Jed Douglas, G-R, 1364 North McDowell Blvd., Suite B2, Petaluma,  
CA 94954-1116

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 4121

July 12, 2000

Mr. Dave DeWitt  
Tosco  
2000 Crow Canyon Place, Suite 4000  
San Ramon, CA 94583

**RE: Monitoring Well Installation at 1771 First Street, Livermore, CA**

Dear Mr. DeWitt:

I have completed review of Gettler-Ryan Inc.'s May 2000 *Site Conceptual Model (SCM) for Tosco (76) Service Station No. 4186* report prepared for the above referenced site. Based on the SCM, the site is assigned an investigation priority category of Class A. Class A requires the determination of cleanup priority as soon as possible.

Gettler Ryan proposed to install additional groundwater monitoring wells to delineate the lateral extent of hydrocarbons in groundwater. After further discussions with Mr. Jed Douglas, it was agreed that the additional groundwater monitoring wells should be installed offsite, across First Street. The wells will be screened from approximately 20 to 45 feet below ground surface or across the more permeable gravel lens at approximately 35 feet bgs. A formal workplan for the installation of the wells should be submitted for review. This letter is a tentative approval for the installation of two groundwater monitoring wells across First Street and west/northwest of the subject site. The workplan is due within 30 days of the date of this letter, **or by August 14, 2000.**

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

eva chu  
Hazardous Materials Specialist

c: Jed Douglas, Gettler Ryan, 1364 North McDowell Blvd., Suite B2, Petaluma,  
CA 94954-1116

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 4121

March 13, 2000

Mr. David DeWitt  
Tosco Marketing  
2000 Crow Canyon, Suite 4000  
San Ramon, CA 94583

**RE: Site Conceptual Model (SCM) for Tosco SS #4186, 1771 First Street,  
Livermore, CA**

Dear Mr. DeWitt:

I have completed review of Gettler-Ryan Inc.'s February 2000 *First Quarter 2000 Groundwater Monitoring & Sampling Report* prepared for the above referenced site. That report summarized the groundwater monitoring event that took place on January 24, 2000. Groundwater from Well U-3, immediately downgradient of the UST complex, contained 42,000ppb MTBE (using Method 8260). It appears that the MTBE concentration in Well U-3 is exhibiting an increasing trend.

Impacted groundwater at this site is located above an aquifer that is a source of water supply for a community and may be within a 1000 feet radius of a drinking water well. At this time, a Site Conceptual Model (SCM) should be prepared for the site. Guidelines for the SCM preparation can be obtained from the SWRCB's *Draft Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenated*. I will send that document to you via e-mail. The SCM is due within 60 days of the date of this letter, **or by May 16, 2000.**

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

eva chu  
Hazardous Materials Specialist

attachment via e-mail ([dewittDB@aires.76products.com](mailto:dewittDB@aires.76products.com))

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 4121

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

**RE: PSA for 1771 1st Street, Livermore, CA**

Dear Ms. Berry:

I have reviewed Pacific Environmental Group, Inc's October 1997 Soil Gas Survey Results for the above referenced site. Soil gas vapors were collected from beneath the product dispensers and lines, and near the USTs. Laboratory analysis identified up to 4,500 ppb TPHg, 120 ppb benzene, and 8,000 ppb MtBE. It appears an unauthorized release of petroleum hydrocarbons may have occurred at the site. Therefore, further investigations are required to confirm the release, as well as to determine the lateral and vertical extent, and severity of soil and ground water contamination.

Such an investigation shall be in the form of a **Preliminary Site Assessment**, or PSA. The information gathered by the PSA will be used to determine an appropriate course of action to remediate the site, if deemed necessary. The PSA must be conducted in accordance with the RWQCB Staff Recommendations for the Initial Evaluation and Investigation of Underground Tanks, and Article 11 of Title 23, California Code of Regulations. The major elements of such an investigation are summarized in the attached Appendix A.

The PSA proposal is due **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. Subsequent reports are to be submitted quarterly until this site qualifies for RWQCB "sign off." All reports and proposals must be submitted under seal of a California Registered Geologist, Certified Engineering Geologist, or Registered Civil Engineer.

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

eva chu  
Hazardous Materials Specialist

enclosure  
toscol.1



# Transfer of Eligible Local Oversight Case

STID 4121 Date of input/By: NO 2/19/98

Date: 2/19/98 From: awa chw

Site Name: 1771 1st St. Unocal <sup>service</sup> station # 4186

Address: 1771 1st St. City: Livermore Zip: 94550

**To be eligible for LOP, case must meet 3 qualifications:**

1.   Tanks Removed? # of removed? \_\_\_\_\_ Date removed: \_\_\_\_\_
2.   Samples received? Contamination level: .110 ppm & Vapor benzene  
 Type of test 8.0ppm MtBE vapor  
 Contamination should be over 100 ppm TPH to qualify for LOP
3.   Petroleum? Circle Type(s): • Avgas • leaded • unleaded • fuel oil • jet  
 • diesel • waste oil • kerosene • solvents

**Procedure to follow should your site meet all the above qualifications:**

1. a.  Close the deposit refund case.  
 b.  Account for **ALL** time you have spent on the case.  
 c.  Turn in account sheet to Leslie.  
 If there are funds still remaining it is still better to transfer the case to LOP as the rate for LOP allows more overhead. **DO NOT** attempt to continue to oversee the site simply because there are funds remaining!

Remaining DepRef \$'s: \_\_\_\_\_  
 DepRef Case Closed with Candyce/Leslie? **Y N** (If no, explain why below.)

2. Submit the completed **A** and **B** permit application forms to **NORMA**.
3. Give the entire case to the proper LOP staff.

Tank removal closed 1/14/94 in LOP db.  
 entry date 6/14/93