Final
September 07, 2011

Review of Leaking Underground Storage Tank Cases
Not in Cleanup Fund and Open Over 15 Years

Orange County Local Oversight Program

Prepared as in-kind task as part of Cooperative Agreement LS-97952501-3 between U.S. EPA Region 9 and the California State Water Resources Control Board
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Executive Summary

The Draft version of this report was submitted on June 18, 2010, with a request for a follow-up meeting and input from Orange County Local Oversight Program (LOP) into the “Next Steps for Agency” column of the case cleanup status spreadsheet.

Orange County LOP met with USEPA Region 9 and Sullivan International Group, Inc. in a conference call on May 23, 2011 to discuss the draft report and their next steps for each case. The agency acknowledged several challenges with these cases. A few of the challenges mentioned by Orange County LOP include the presence of free product, the risk of vapor intrusion at several sites, an offsite fuel oxygenate plume, nearby municipal production wells, and delayed Regional Board closure approval.

LOP staff also discussed a property with a recalcitrant RP who continues to perform annual groundwater monitoring but claims to not have the financial resources to proceed with remediation. They have not proceeded towards enforcement, as this may cause the RP to become less cooperative.
**Orange County LOP**

**Apparent Case Status: Initial and After**

TOTAL NUMBER OF CASES REVIEWED = 13  
NUMBER OF ACTIVE LUST CASES ON NOVEMBER 1, 2010 = 415 CASES  
DRAFT REVIEW REPORT PREPARED AND SENT TO AGENCY ON June 18, 2010  
MEETING WITH AGENCY ON May 23, 2011

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<tr>
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Initial Assessment Percentage of Cases (6-18-2010)

- 54% Appears close to completion
- 7.66% Appears near completion within 1-year
- 23% Appears to be on track
- 7.66% Appears NOT to be on track
- 7.66% Appears to be stuck

Post Meeting Assessment Percentage of Cases (05-23-2011)

- 54% Appears close to completion
- 7.66% Appears near completion within 1-year
- 7.66% Appears to be on track
- 7.66% Appears NOT to be on track
- 23% Appears to be stuck
- Other - Not Non-CUF, Older than 15-years Case
**CASE REVIEW SUMMARY TABLE**  
**(ORANGE COUNTY LOP)**

| Appears close to completion | Appears close to completion | O.C.1 - FLEET SERVICE | TW | Q - Government Entity (Include School, Hospital, Utility) | 8/25/1995 | Agency is waiting on concurrence from the Regional Water Quality Control Board to grant closure. | Complete closure process in 2 years (includes well decommission) |
| Appears near completion within 1 year | Appears to be On Track | EXXON #7-315 | TW | Z - Major Oil Company | 9/13/1985 | Additional Groundwater sampling is to be conducted at this site. Status should be revised to "On Track" as closure is not expected within 1 year. | Complete additional groundwater sampling and evaluate site for closure or further remediation |
| Appears near completion within 1 year | Appears near completion within 1 year | ARCO #1365 | TW | Z - Major Oil Company | 11/1/1981 | Apparent Type of RF is exempt, this is not a small private business, but rather a major oil company. Case is still considered near completion and should be closed within 1 year. | Complete closure process in 2 years (includes well decommission) |
| Appears near completion within 1 year | Other Entered in the Cleanup Fund | CHEVRON #11-1787 | KL | Z - Major Oil Company | 4/9/1985 | Case is moving towards closure, and is now in CUF | Not Applicable |
| Appears near completion within 1 year | Appears near completion within 1 year | LOS ANGELES TIMES - SOUTH TRACT | TW | Z - Major Oil Company | 5/26/1985 | Site requires one more round of sampling prior to consideration for closure. Status will remain "Appears near to completion within 1 year." | Complete closure process in 2 years (includes well decommission) |
| Appears near completion within 1 year | Appears near completion within 1 year | MOBI #18-H48 | TW | Z - Major Oil Company | 9/12/1981 | Closure had been delayed pending the completion of a nearby production well. However, completion has been delayed by 1 year and agency staff are now on proceed with low risk closure for the site. Staff notes that they will consider requiring the case should it impact the production well once it comes online. | Complete closure process in 2 years (includes well decommission) |
| Appears near completion within 1 year | Appears to be On Track | MOBI #19-HW | SK | Z - Major Oil Company | 4/4/1993 | Site is on track, but not ready for closure within 1 year. MTBE and TBA were reported in monitoring wells and significant impacts to the capillary fringe were reported prior to free product moving outside of an adjacent release. It is also reported that a production well located to the north of the site is impacting local groundwater gradients, and has renewed the local flow direction. An additional investigation of the fuel Isomerase plume will be conducted prior to closure consideration. | Fund for new/additional remediation investigation (RI)/risk assessment |
| Appears near completion within 1 year | Appears to be On Track | POWER-CHEVROLET OF BUDGE | TW | Z - Small Private Business | 4/17/1996 | Injection wells are scheduled to be installed next week for SCD. After remediation the site will still need one additional year of verification monitoring. Case should be revised to "On Track." | Continue current remediation until low-risk criteria is met |
| Appears to be on track | Appears to be On Track | UNICAL LOP #6399 | TW | Z - Major Oil Company | 11/2/1996 | Free product is still present at this site, and a work plan for SCD and surfactant injections has been accepted. Case is "On Track." | Continue current remediation until low-risk criteria is met |
| Appears to be on track | Appears to be On Track | CHEVRON-A21-115A / AMERICAN SAVINGS BANK | TW | Z - Major Oil Company | 5/9/1996 | A work plan for vehicle delineation and site assessment was approved in December 2010. The Agency is now awaiting the results of this work. Agency staff reported that there have been no missed deadlines or gaps in site work for this site. This case remains "On Track." | Complete delineation and assessment, conduct additional remediation if needed and prepare site for closure |
| Appears to be on track | Appears to be On Track | FEDERAL EXPRESS | GW | Z - Industry (Railroad, Steel etc) | 1/18/1995 | Remedial excavation was conducted at the site in May 2010. Confirmation soil samples still showed elevated results, but water samples were amenable to low-risk closure. Now that the excavation back RF has had a year to equilibrate, the RF will be conducting a soil vapor survey to determine what if any-risk vapor intrusion poses for this property. This case remains "On Track." | Fund for new/additional remediation investigation (RI)/risk assessment |
| Appears NOT to be on track | Appears to be On Track | TOSECO - TU #3494 | TE | Z - Major Oil Company | 8/25/1994 | A Corrective Action Plan for mobile DPE and SCD was accepted and a work plan for VI assessment is pending. This case is now "On Track." | Continue current remediation until low-risk criteria is met |
| Appears to be truck | Appears to be Truck | C & K ACTION REPAIR | TW | Z - Small Private Business | 7/12/1995 | Agency staff describe the RF as recertificant. The RF conducts annual groundwater sampling events but will not conduct additional investigations or remediation, claiming financial hardships | Ensure RF compliance (includes identify RF, enforcement, EAF account etc) |

Final Review of LUST Cases, Not in the CUF and Over 15 Years, Orange County LOP
Attachment 1:

Case Review Power Point Slides from Draft Report

The contents of this attachment are provided in electronic format only.
Activities Conducted to Date Based on GeoTracker Info

T0605901891

**Assessment last 5 years**
- Confirmation borings advanced and groundwater monitoring conducted in 2008
- Periodic groundwater monitoring was conducted at the site from 1995 to 2008

**Remediation last 5 years**
- DPE system installed in May 2006 and operated until February 2008

**Assessment older than 5 years**
- Monitoring wells were first installed at the site in 1995
- Additional wells were installed in 1996, and 1997
- Periodic groundwater monitoring was conducted at the site from 1995 to 2008
- Additional soil borings advanced in 2003

**Remediation older than 5 years**
- USTs, dispensers, product lines and 273 cubic yards of soil removed from site in 1998
- DPE Pilot test conducted 2004

Preliminary Data from GeoTracker and reviewed on April 22, 2008.
IMPEDEMENTS TO CLOSURE  T0605901891
as reported by regulatory agency

PROCEDURAL IMPEDIMENTS
• Monitoring Wells Not Yet Abandoned –

BENEFITS OF ADDITIONAL WORK
• Verify Remedial Action Effectiveness -

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT
• Groundwater Already Impacted

Review Conclusions  T0605901891

• In a letter dated 11/26/2007, OCLOP approved site closure pending soil sampling and verification of remediation, and post remediation monitoring

• Remedial actions ceased 2/2008 due to very low concentrations remaining. Site appears ready for closure.

• Discussion: (1)When will monitoring wells be destroyed and site closed? (2) What is the value of keeping this site open?
EXXON #7-3515 (T0605900112)  
17551 MACARTHUR, IRVINE, CA 92614

Case Age: 25 years  
RP Identified by Regulator: EXXONMOBIL REFINING & SUPPLY  
Primary COC: Gasoline  
Current Land Use: Active Chevron station

Possible Reasons Why This Case Is So Old
- Appearance of MTBE 1/1998 indicated that a new release had occurred. MtBE now almost gone. Remaining highest concentrations across MacArthur from site.  
- Closure request denied in 2000 and assessment resumed.  
- Continued Petroleum usage site.

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info T0605900112

Assessment last 5 years
- Ongoing GW sampling since 1992, now 11 MWs quarterly and 8 MWs semi-annual  
- CSM submitted 1/2008  
- CAP dated 9/2006

Remediation last 5 years
- AS/SVE system in operation since 2004.

Assessment older than 5 years
- 9/1985 soil borings around UST and MWs installed, 1/1987 soil borings and MWs installed  
- 4/1994 CAP submitted  
- 1/1997 soil investigation  
- 2001 soil and grab GW samples

Remediation older than 5 years
- UST removal/replacement in 12/1987  
- UST removal/replacement in 7/1992  
- 24-hr DPE in 2/2002  
- AS/SVE feasibility study in 2003  
- 48-hr LPH removal test in 2003
IMPEDEMENTS TO CLOSURE T0605900112
as reported by regulatory agency

IMPEDEMENTS TO CLOSURE

PLUME INSTABILITY
Groundwater Contamination Plume Not Stable or Decreasing - Verification Monitoring Not Complete –

PROCEDURAL IMPEDIMENTS
Monitoring Wells Not Yet Abandoned –

BENEFITS OF ADDITIONAL WORK
Verify Remedial Action Effectiveness –

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT /

<table>
<thead>
<tr>
<th>SENSITIVE RECEPTOR</th>
<th>TIME FRAME FOR IMPACT</th>
<th>COMMENTS</th>
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<tbody>
<tr>
<td>Groundwater</td>
<td>Already Impacted</td>
<td></td>
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</tbody>
</table>

Review Conclusions T0605900112

• WP to conduct a rebound test of the air sparge/soil vapor extraction system approved by agency 3/2010.

• Ongoing sampling and remediation since beginning of release and data in GT since 2001.

• Closure review indicated “groundwater contamination plume not stable or decreasing.” However, it appears this is not the case, as most on-site well concentrations have dropped significantly. Remaining concentrations across MacArthur Blvd. to NW are the highest levels.

• Procedural Impediments to Closure mention monitoring wells not yet abandoned. Is site closure awaiting well abandonment?

• Discussion: Next step – how to move this case towards cleanup closure? Where are sensitive receptors located relative to this site? Has potential of additional leak site to northwest across MacArthur Blvd. been explored?
ARCO #1365 (T0605900645)
6370 MANCHESTER, BUENA PARK, CA 90621

Case Age: 25 years
RP Identified by Regulator: Daniel Monson of Atlantic Richfield Company (Corporation, Tank Owner)
Primary COC: Gasoline
Current Land Use: Parking lot for commercial business district

Possible Reasons Why This Case Is So Old
• Closure requested in 2005 and again in 4/2009, no staff reply to these requests noted in GeoTracker.
• Historical free product site (removal 1985 to 1994).
• Concentrations detected in two wells probably originate from off-site contamination from two adjacent LUST sites, EXXON #7-2314 (T0605900107) and CHEVRON #20-2031 (T0605902305).

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info
T0605900645

Assessment last 5 years
• Ongoing quarterly sampling, now 17 MWs sampled annually.

Remediation last 5 years
• None documented – “verification monitoring” status as of 2003
• Source removed prior to this time frame

Assessment older than 5 years
• Periodic groundwater sampling of varying frequencies (annual to quarterly) since 1985
• Quarterly sampling since 2004

Remediation older than 5 years
• UST closure and removal in 11/1985
• Excavate and dispose (13,000 cubic meters) from 7/1994 to 10/1994
Review Conclusions T0605900645


- Closure requested in 2005 and again in 4/2009; no staff reply to these requests noted in GeoTracker.

- Dissolved fuel oxygenate concentrations detected in two wells likely originate from one or multiple off-site sources east of the site.

- Remaining levels on site do not appear to pose a threat. Site appears to be a candidate for low risk closure. Site is a parking lot.

- Discussion: Next step – how to move this case towards closure as most source removed, tanks gone in 1985, 13,000 cubic meters soil removed in 1995, offsite sources exist for MtBE? Case appears ready for low risk closure.
CHEVRON #11-1787 (T0605902360)
590 COAST, LAGUNA BEACH, CA 92651

Case Age: 25 years
RP Identified by Regulator: CHEVRONTEXACO
Primary COC: Gasoline
Current Land Use: Active Thrifty Oil station

Possible Reasons Why This Case Is So Old
- Case status has been open-verification monitoring since 2/1996 (14 years).
- No remedial activities in the last five years.
- Data indicates decreasing trends in all wells except one, down-gradient of the site.
- Concentrations have dropped to asymptotic levels, site appears to be a candidate for low-risk closure. Closure requested in 2006.

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info
T0605902360

Assessment last 5 years
- 3/2006 soil borings and GW not encountered.
- Ongoing quarterly sampling, now 10 MWs sampled semi-annually.

Assessment older than 5 years
- Quarterly GW sampling since 1992
- 10/2004 soil and GW sampling
- 3/2006 soil borings and GW not encountered.

Remediation last 5 years
- None documented – “verification monitoring” status as of 1996 (14 years)
- Closure requested in 2006

Remediation older than 5 years
- Vapor extraction from 7/1993-3/1996
- GW extraction (date not specified)
**IMPEDIMENTS TO CLOSURE**  T0605902360

as reported by regulatory agency

**IMPEDIMENTS TO CLOSURE**

**GROUNDWATER IMPACTS**
Groundwater Impacted Above Background –

**BENEFITS OF ADDITIONAL WORK**
Protect Designated Beneficial Uses –

**SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT**

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<th>SENSITIVE RECEPTOR</th>
<th>TIME FRAME FOR IMPACT</th>
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<td>Groundwater</td>
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</table>

**Review Conclusions**  T0605902360


- Joint sampling conducted with adjacent Chevron station (9-1966) located southeast of the site. Trend of decreasing concentrations, except one down-gradient and offsite well.


- Site appears to be candidate for low-risk closure. Currently is an active gas station site.

- *Discussion*: Next step – how to move this case towards cleanup closure? Open for 25 years. What sensitive receptors are threatened and where are they located?
Case Age: 19 years
Primary COC: Gasoline
RP Identified by Regulator: Los Angeles Times (Corporation)
Current land use: LA Times newspaper printing and distribution facility

Possible Reasons Why This Case Is So Old

• Periodic remedial activities: remediation was focused in the north area from 1998-2001 and resumed in the south area in 02/2001.
• Closure requested in 2002 and 2003, again in 2009 and denied in 4/2010 due to concentrations of benzene and TPHg; additional sampling requested.

Activities Conducted to Date Based on GeoTracker Info

Assessment last 5 years
- Ongoing quarterly GW monitoring of 13 MWs since 1991, now semi-annual
- Verification soil samples collected and data submitted 01/2003
- Two years between last sampling events (3Q2009 and 1Q2007)

Remediation last 5 years

Assessment older than 5 years
- Soil samples collected in 6/1990 indicated release from WO UST
- Ongoing site assessment activities (e.g. Soil sampling and MWs installed in 09/1990, 10/1991, 08/1992, 02/1996)

Remediation older than 5 years
- 6/1990 release from WO UST; USTs removed in 1995
- SVE conducted 1995-1996
- HVDPE 02/1998-02/2001 was focused on the north area and remediation resumed in the south area in 2001

NOTE: Data queried from GeoTracker and reviewed in June 2010
Review Conclusions

- Two areas of former USTs includes this case and **LOS ANGELES TIMES-NORTH TANKS (T0605901160)**. USTs removed in the north area in 1991 and USTs removed in the south area in 1995.

- A closure request report was resubmitted 12/3/2009 for the south area. Regulator submitted a response 4/28/2010 requesting several additional rounds of sampling because benzene and TPHg “increased significantly from the last sampling event in 3/2007 and more than 10-fold from the last detectable concentrations found in samples collected in 9/2006.” Sampling requested for second and third quarters 2010.

- **Discussion**: Where are the sensitive receptors that are threatened relative to the location of this plume? After 19 years being open, site appears close to being ready for closure?
MOBIL #18-KA8 (T0605900199)
1701 WHITTIER, LA HABRA, CA 90631

Case Age: 19 years
RP Identified by Regulator: EXXONMOBIL REFINING & SUPPLY
Primary COC: GASOLINE, OTHER PETROLEUM, WASTE OIL / MOTOR / HYDRAULIC / LUBRICATING
Current Land Use: Vacant Lot

Possible Reasons Why This Case Is So Old
• Case status has been open-verification monitoring since 2/2005.
• No remedial activities since 2005.
• Historically, up to 0.69 feet of free product was present in one well from 10/1999 to 7/2001, but long gone.
• Vacant Lot, no indoor air risk from soil vapor survey.

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info T0605900199

Assessment last 5 years
• Closure request dated 7/2007 (denied)
• 10 MWs sampled annually.
• Depth-discreet GW sampling conducted 1/2009
• SV survey report 9/2008, not a threat concluded
• Additional confirmation soil report 6/2008
• Soil investigation in 2007
• Confirmation soil boring report, request for remedial shutdown. Background review for divestment dated 8/2005

Remediation last 5 years
• SVE and AS system shutdown for post-remedial monitoring 2/2005

Assessment older than 5 years
• Limited Phase I in 1991
• Ongoing quarterly GW monitoring since 1993
• Vapor survey in 1994

Remediation older than 5 years
• USTs removed in 10/1986, 3/1987, 10/1991 and soil over-excavation
• SVE wells installed 1995 and 1997
• 2/2000 USTs replaced
• Air sparge well installed 10/2000
• 1/2001 SVE operated until 5/2004
• 2/2001 LNAPL manually removed
• Property divestment in 5/2004 – everything removed
Review Conclusions T0605900199

• Closure requested and denied in 2007 and additional soil, groundwater, and vapor sampling required was conducted in 2008. Soil vapors shown to not be a risk. Site appears to be ready for low-risk closure.


• Discussion: Site open almost 20 years, a vacant lot, not risk to indoor air, low-risk closure candidate?
MOBIL #18-FHW (T0605999019)
12972 NEWPORT, TUSTIN, CA 92780

Case Age: 15 years
Primary OCC: Gasoline
RP Identified by Regulator: ExxonMobil Refining & Supply
Current Land Use: Oil Change and Lube

Possible Reasons Why This Case Is So Old

• Site appears to be impacted by a release at the nearby El Toro Pipeline (Defense Energy Support Center) case, and possibly a nearby Chevron facility.
• Municipal well located 1,100 feet northwest of site.

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info
T0605999019

Assessment last 5 years
• Confirmation borings advanced in 2007
• Periodic groundwater monitoring continues at the site
• SCM submitted for site in 2008

Remediation last 5 years
• SVE operated at site from 2004 until 2007

Assessment older than 5 years
• Soil borings advanced 1995. One monitoring well installed
• Additional monitoring wells installed 1996
• Additional borings advanced in 2001
• Periodic groundwater monitoring has been conducted at the site since 1997

Remediation older than 5 years
• All USTs, piping and dispensers were removed from the site in 1995
• Excavate and dispose conducted at the site in 1995
• VES pilot test conducted in 2001
• SVE system began operation at site in 2004
IMPEDIMENTS TO CLOSURE T0605999019  
as reported by regulatory agency

PLUME INSTABILITY
• Verification Monitoring Not Complete –

GROUNDWATER IMPACTS
• Groundwater Impacted Above Other Cleanup Goal -

BENEFITS OF ADDITIONAL WORK
• Verify Remedial Action Effectiveness –
• Protect Designated Beneficial Uses -

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT
• Groundwater Already Impacted

Review Conclusions T0605999019

• Site has been impacted by a release at a nearby DOD facility, UST site appears near closure. Site is an existing oil change business, commercial usage.

• A Municipal well is located 1100 feet northwest of the site, does not appear to be threatened.

• Post remediation monitoring shows the TPHg plume is stable or decreasing. Confirmation soil samples show no impacts to soil from 0 to 20 feet bgs.

• TPH as JP5 (migrating on site from the DESC facility) is currently the primary contaminant in groundwater beneath the site, not from USTs at site according to evidence presented in Site Conceptual Model.

• Once this site is closed it is expected that the monitoring wells will be turned over to the El Toro Pipeline (DESC) for continued monitoring.

• DESC will continue to monitor sentinel wells associated with the municipal well due to presence of JP5.

• Discussion: Benefits of continued monitoring vs. low-risk closure? Close petroleum UST portion of site and allow DESC facility to monitor their release?
POWER CHEVROLET OF IRVINE (T0605901988)
21 AUTO CENTER, IRVINE, CA 92618

Case Age: 15 years
Primary COC: Diesel, Gasoline
RP Identified by Regulator: NONE
Current Land Use: Closed Auto Dealership

Possible Reasons Why This Case Is So Old

• Long gaps between monitoring events.
• OC regulator stated in 2005 site was MNA and closure candidate.
• Commercial usage site with asphalt cover.
• “Verification Monitoring Not Complete” is the only impediment to closure.

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info
T0605901988

Assessment last 5 years

• Site investigation with two soil borings conducted in 2005. The borings were subsequently converted in to a SVE well and a monitoring well
• Soil Vapor assessment conducted in 2008
• An additional monitoring well was installed in 2008
• Groundwater sampling events were conducted at the site in 2005, 2008 and 2009

Remediation last 5 years

• SVE Well installed 2005, and a DPHVE / SVE pilot test was conducted

Assessment older than 5 years

• Soil samples taken in 1995 at the time of UST removal
• Soil Borings were advanced in 1995
• Monitoring wells were installed at the site in 1995, 1996, and 2002
• Groundwater sampling events were conducted at the site in 1996, and 2002

Remediation older than 5 years

• USTs removed from site in 1995
• SVE Well installed 1996
IMPEDIMENTS TO CLOSURE T0605901988
as reported by regulatory agency

PLUME INSTABILITY
• Verification Monitoring Not Complete –

BENEFITS OF ADDITIONAL WORK
• Verify Remedial Action Effectiveness -

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT
• Groundwater Already Impacted

Review Conclusions T0605901988
• Groundwater plume appears to be small and localized to former tank pit area.

• Wells with hydrocarbon detections show a long term decreasing trend. Site appears to be MNA and a closure candidate.

• Due to a newly installed monitoring well (MW-11), OCHCA is requiring 4 quarterly monitoring events to assess site conditions. OCHCA has also denied low risk closure until Benzene in MW-1 decreases to a level closer to the low-risk closure level of 250µg/L.

• Discussion: Benefits of Continued MNA/Passive Remediation vs. Enhanced Bio-remediation, Active Remediation or Low-risk Closure? Where are the nearest sensitive receptors located from site? Commercial site, asphalt covered, low-risk, closeable within 1 year?
UNOCAL COP #6399 (T0605902472)
26282 OSO, MISSION VIEJO, CA 92691

Case Age: 18 years (original leak 1985)
Primary COC: Gasoline
RP Identified: ConocoPhillips Company
Current land use: Active Service Station

Possible Reasons Why Is This Case Is So Old
• Ongoing site assessment and remediation since 1994 – Free product was prevalent onsite and recovery is ongoing.
• Continued petroleum usage site.
• Remediation proposed and WP requested in 3/2010.

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info T0605902472

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<tr>
<th>Assessment last 5 years</th>
<th>Remediation last 5 years</th>
</tr>
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<tbody>
<tr>
<td>• Ongoing GW sampling (7 semi-annual and 6 remained quarterly due to free product evaluation, reduction verification, and not shown reliable consistency</td>
<td>• SVE was shutdown due to faults in the controller in 8/2007</td>
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<tr>
<td></td>
<td>• Ongoing free product recovery since 5/2008, when a skimmer pump system installed.</td>
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<td></td>
<td>• Feasibility Study/Corrective Action for additional remediation was submitted 6/2009</td>
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</table>

<table>
<thead>
<tr>
<th>Assessment older than 5 years</th>
<th>Remediation older than 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Site Assessment activities ongoing since 1985</td>
<td>• 8/1985 USTs removed and replaced</td>
</tr>
<tr>
<td>• Quarterly GW sampling since 1994</td>
<td>• 9/1992 leak from hole in product line; FP removed</td>
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<td>• 9/1994 dispenser islands and product lines removed and soil excavated.</td>
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<td></td>
<td>• SVE from 7/1999 to 8/2007</td>
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</table>
IMPEDIMENTS TO CLOSURE as reported by regulatory agency

SITE ASSESSMENT INCOMPLETE
Extent of Contamination Has Not Been Determined –

INADEQUATE SOURCE CONTROL
Remaining Source Poses Threat to Groundwater –

PLUME INSTABILITY
Groundwater Contamination Plume Not Stable or Decreasing –

GROUNDWATER IMPACTS
Groundwater Impacted Above Background –
Groundwater Impacted Above Other Cleanup Goal –

BENEFITS OF ADDITIONAL WORK Remove / Reduce Source Mass –

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

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<td>Groundwater</td>
<td>Already Impacted</td>
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Review Conclusions

• Ongoing site assessment and remediation activities occurred since 1985 with tank removal.

• No water supply wells located within 1 mile from site.

• Free product recovery system is ongoing and a Feasibility Study/Corrective Action report was submitted 9/2009 for additional/alternative remediation activities. Regulator responded in letter dated 3/2010; bench scale testing of surfactant injection and ISCO was chosen and WP requested, but a deadline was not provided.

• Discussion: Next step – how to move this case towards cleanup closure? Where are nearest sensitive receptors? What is the remediation plan for this site?
Case Age: 16 years
RP Identified by Regulator: Chevron-Texaco Corp. and Royal Paper Corp.
Primary COC: Gasoline
Current Land Use: Commercial - Shopping Mall

Possible Reasons Why This Case Is So Old
• No activities for 5-years, from 1994 to 1999.

Activities Conducted to Date Based on GeoTracker Info T0605901793

Assessment last 5 years
• Ongoing site assessment: Quarterly GW monitoring since 1999

Remediation last 5 years
• Ozone injection pilot test WP submitted 9/2009

Assessment older than 5 years
• After 1991 leak discovery, soil borings and MWs installed between 1992-1994
• 1999 soil borings and MWs installed
• 2004 soil confirmation samples and another MW installed

Remediation older than 5 years
• Soil excavation and disposal 9/1999
IMPEDEMENTS TO CLOSURE  T0605901793

as reported by regulatory agency

IMPEDEMENTS TO CLOSURE
INADEQUATE SOURCE CONTROL
Remaining Source Poses Threat to Groundwater –

PLUME INSTABILITY
Groundwater Contamination Plume Not Stable or Decreasing –

GROUNDWATER IMPACTS
Groundwater Impacted Above Background - Groundwater Impacted Above Other Cleanup Goal –

BENEFITS OF ADDITIONAL WORK
Remove / Reduce Source Mass –

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

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Review Conclusions  T0605901793

• No activities for 5-years, from 1994-1999.


• Remediation is currently being conducted and quarterly GW monitoring is necessary to evaluate its effectiveness. Last report submitted for 4Q2009.

• Discussion: Next step – how to move this case towards cleanup closure? Enforce field work and deliverable deadlines? Where are nearest sensitive receptors?
Case Age: 15 years  
Primary COC: Gasoline  
RP Identified by Regulator: Federal Express Corp.  
Current Land Use: Vacant Building

Possible Reasons Why This Case Is So Old

• No remedial activities have been performed to date, except for UST removal and soil over-excavation.
• Soil vapor survey results from 2010 show contaminant levels above CHHSLs. Site consultant recommends additional excavation of contaminated soil.
• Years passed between release and actions

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info  
T0605901840

**Assessment last 5 years**
- Periodic groundwater monitoring is ongoing
- Site Conceptual Model submitted 5/2009
- Soil Vapor Survey conducted 2010

**Remediation last 5 years**
- NONE DOCUMENTED

**Assessment older than 5 years**
- Soil samples after UST removal, closure report submitted 5/1995
- Quarterly GW monitoring since 2000 and quarterly/semi-annual since 2005

**Remediation older than 5 years**
- UST removed and soil over-excavation in 1994
IMPEDIMENTS TO CLOSURE T0605901840
as reported by regulatory agency

GROUNDWATER IMPACTS
• Groundwater Impacted Above Background –
• Groundwater Impacted Above Other Cleanup Goal

UNACCEPTABLE RISK
• Unacceptable Risks to Human Health from Vapor Intrusion –

PROCEDURAL IMPEDIMENTS
• Site Data And Reports Not Uploaded to Geotracker –

BENEFITS OF ADDITIONAL WORK
• Protect Human Health -

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT
• Groundwater Already Impacted

Review Conclusions T0605901840

• 2/2010 soil vapor survey recommended remedial excavation of petroleum impacted soil.

• Remedial excavation workplan was approved with conditions on 3/31/2010. One condition of approval is that a minimum of four consecutive quarters of groundwater monitoring will be required after remedial activities.

• No report regarding this work has been submitted to date.

• Discussion: What are the acceptable residual soil contamination levels for low risk closure? Should the remedial excavation fail to reach these levels, what is the path to closure? Where are nearest sensitive receptors located?
Case Age: 16 years
Primary COC: Gasoline
RP Identified by Regulator: ConocoPhillips Company
Current Land Use: Smog Check Facility

Possible Reasons Why This Case Is So Old
• LPH still present in the subsurface.
• Remedial activities have been limited to pilot testing, excavation, and natural attenuation.
• Some evidence for onsite migration of contaminants from nearby LUFT sites.

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info T0605900570

**Assessment last 5 years**
- Soil Vapor survey conducted 2006
- MTBE/TBA evaluation report submitted in 2006
- Additional monitoring wells installed in 2007 and 2009
- A work plan for soil vapor survey was submitted to the agency 4/15/2010
- Periodic groundwater monitoring conducted 1995 to present

**Remediation last 5 years**
- DPE and mass removal activities conducted 2009

**Assessment older than 5 years**
- Limited Site assessment conducted 1994
- Periodic groundwater monitoring conducted 1995 to present

**Remediation older than 5 years**
- DPE performed at site in 1999
- SVE pilot test conducted 2002
- USTs were removed from site, and excavate and dispose conducted 2003
- Air Sparge testing conducted 2004
IMPEDEMENTS TO CLOSURE as reported by regulatory agency

SITE ASSESSMENT INCOMPLETE
- Potential Risks, Threats, And Other Environmental Concerns Have Not Been Adequately Identified And Assessed

INADEQUATE SOURCE CONTROL
- Remaining Source Poses Threat to Groundwater - FP

PLUME INSTABILITY
- Groundwater Contamination Plume Not Stable or Decreasing –

GROUNDWATER IMPACTS
- Groundwater Impacted Above Background –
- Groundwater Impacted Above Other Cleanup Goal –
- Groundwater Will Not Meet Relevant WQOs Before the Beneficial Use of the Groundwater is Needed –

BENEFITS OF ADDITIONAL WORK
- Complete CSM and Our Understanding of Hydrogeologic Regime and Fate and Transport of Contaminants –
- Remove / Reduce Source Mass -

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT
- Groundwater Already Impacted

Review Conclusions

- Three additional cases for this address were closed between 1990 and 2000. No details for these cases are available in GeoTracker.

- Site has been well characterized, but has seen only limited remediation.

- 2010 Workplan for oxygen injection was rejected due to the presence of LPH in the subsurface. Site consultant has recommended against fixed air sparging, DPE, and pump and treat systems for site remediation due to the possible impact these would have on the current site occupant and surrounding businesses.

- TPHg and Benzene are still present in groundwater at 93,000 µg/L, 17,000 µg/L, respectively. LPH is still present in MW-1 at a thickness of .01 feet.

- Discussion: (1) If oxygen injection is unacceptable to the regulator, and a fixed DPE or air sparge system are considered too intrusive for the current site occupant by the RP, what methods of remediation are left? (2) If no active remediation is implemented, what is the benefit of continued MNA vs. low-risk closure? What is the plan for getting this site through cleanup to closure?
C & W ACTION RENTALS (T0605901872)
16401 CONSTRUCTION CIRCLE WEST, IRVINE, CA 92606

Case Age: 15 years
Primary COC: DIESEL, GASOLINE, WASTE OIL / MOTOR / HYDRAULIC / LUBRICATING
RP Identified by Regulator: ACTION ENTERPRISES LLC
Current Land Use: Construction Equipment Rentals

Possible Reasons Why This Case Is So Old
• Extent of soil contamination has not been determined; soil has not been evaluated for MTBE contamination.
• RP Appears to be recalcitrant.

NOTE: Data queried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info
T0605901872

Assessment last 5 years
• Periodic (Semi-annual and annual) groundwater monitoring has been ongoing since 2007

Remediation last 5 years
• NONE DOCUMENTED

Assessment older than 5 years
• Sporadic groundwater monitoring conducted 1995 to 2001

Remediation older than 5 years
• NONE DOCUMENTED
IMPEDIMENTS TO CLOSURE  T0605901872

as reported by regulatory agency

SITE ASSESSMENT INCOMPLETE
• Extent of Contamination Has Not Been Determined –

PLUME INSTABILITY
• Groundwater Contamination Plume Not Stable or Decreasing –
• Verification Monitoring Not Complete -

PROCEDURAL IMPEDIMENTS
• Monitoring Wells Not Yet Abandoned –

BENEFITS OF ADDITIONAL WORK
• Fill-in RI Data Gaps -

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT
• Groundwater Already Impacted

Review Conclusions  T0605901872

• No detailed site history for this site is available in GeoTracker.

• RP appears recalcitrant and has not responded to Staff letters requiring soil samplings and semi-annual groundwater monitoring.

• In a letter dated 10/16/2008 (as well as letters dated June 26, 2008, and November 20, 2007), OCLOP stated that the lateral and vertical extent of oxygenate contamination must be delineated prior to site closure being granted. A work plan was requested, but does not appear to have been submitted. Additionally, OCLOP has requested further plume delineation through the installation of an additional down-gradient monitoring well. This work has never been performed.

• In a letter dated July 10, 2009, OCLOP stated that it required semi-annual groundwater monitoring for this site, however the RP has only submitted annual reports since 2007.

• Discussion: How to obtain RP compliance and map out a path towards closure? Enforcement or referral to RWQCB or DA? EAR account?