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

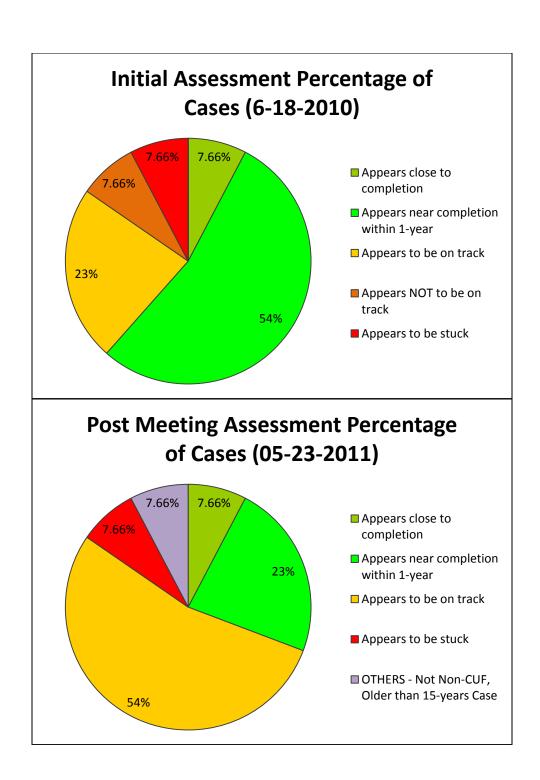
TOTAL NUMBER OF CASES REVIEWED = 13

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

Apparent Case Status	Initial Assessment Number of Cases (6-18-2010)	Post Meeting Assessment Number of Cases (05-23-2011)
CASE CLOSED	0	0
Appears close to completion	1	1
Appears near completion within 1-year	7	3
Appears to be on track	3	7
Appears NOT to be on track	1	0
Appears to be stuck	1	1
Unable to determine (Insufficient information in GeoTracker)	0	0
NOT FEDERAL UST CASE	0	0
OTHERS - Not Non-CUF, Older than 15-years Case	0	1



CASE REVIEW SUMMARY TABLE (ORANGE COUNTY LOP)

ESTIMATED STATUS IN THE CLEANUP PIPELINE?	CHANGE IN STATUS IN THE CLEANUP PIPELINE WITH AGENCY ON 05/23/201	ICASE LEAD AGENCY: ORANGE	GLOBAL ID	CASE WORKER	APPARENT TYPE OF RP	RELEASE DATE	DISCUSSION NOTES FROM MEETING/CALL (05-23-2011)	NEXT STEPS FOR AGENCY
Appears close to completion	Appears close to completion	U C I - FLEET SERVICE	<u>T0605901891</u>	JW	G - Government Entity (include School, Hospital, Utility)	8/25/1995	Agency is waiting on concurrance from the Regional Water Quality Control Board to grant closure	Complete closure process in 1-year (includes well decommission)
Appears near completion within 1-year	Appears to be On Track	EXXON #7-3515	<u>T0605900112</u>	JW	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	<u>T0605900645</u>	DB	Z - Major Oil Company	11/1/1985	Apparent Type of RP is incorrect, 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 1-year (includes well decommission)
Appears near completion within 1-year	Other Entered in the Cleanup Fund	CHEVRON #11-1787	<u>T0605902360</u>	KL	Z - Major Oil Company	4/8/1985	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 TANKS	<u>T0605999595</u>	DB	O - Other (Individual, Homes etc)	5/10/1991	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 1-year (includes well decommission)
Appears near completion within 1-year	Appears near completion within 1-year	MOBIL #18-KA8	<u>T0605900199</u>	TE	Z - Major Oil Company	9/12/1991	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 set to proceed with low risk closure for the site. Staff notes that they will consider reopening this case should it impact the production well once it comes online.	Complete closure process in 1-year (includes well decommission)
Appears near completion within 1-year	Appears to be On Track	MOBIL #18-FHW	<u>T0605999019</u>	SK	Z - Major Oil Company	4/4/1995	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 capilary fringe were reported prior to free product moving onsite from 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 reversed the local flow direction. An additional investigation of the fuel oxygenate plume will be conducted prior to closure consideration.	Push for new/additional remedial investigation (RI)/risk assessment
Appears near completion within 1-year	Appears to be On Track	POWER CHEVROLET OF IRVINE	<u>T0605901988</u>	JW	S - Small Private Business	4/17/1995	Injection wells are scheduled to be installed next week for ISCO. 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	UNOCAL COP #6399	<u>T0605902472</u>	DB	Z - Major Oil Company	11/2/1992	Free product is still present at this site, and a work plan for ISCO 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 #21-1314 / AMERICAN SAVINGS BANK	<u>T0605901793</u>	DB	Z - Major Oil Company	5/9/1994	A work plan for verticle 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	T0605901840	GH	I - Industry (Railroad, Steel etc)	1/10/1995	Remedial excavation was conducted at the site in May 2010. Confirmation soil samples still showed elevated results, but water samples were ammenable to low risk closure. Now that the excavation back fill has had a year to equilibriate, the RP will be conducting a soil vapor survey to determine what if any risk vapor intrusion poses for this property. This case remains "On Track"	Push for new/additional remedial investigation (RI)/risk assessment
Appears NOT to be on track	Appears to be On Track	TOSCO - 76 #3494	<u>T0605900570</u>	TE	Z - Major Oil Company	8/25/1994	A Corrective Action Plan for mobile DPE and ISCO 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 stuck	Appears to be Stuck	C & W ACTION RENTALS	T0605901872	JW	S - Small Private Business	7/12/1995	Agency staff describe this RP as recacitrant. The RP conducts annual groundwater sampling events but will not conduct additional investigations or remediation, claiming financial hardship.	Ensure RP compliance (includes identify RP, enforcement, EAR account etc)

Attachment 1:

Case Review Power Point Slides from Draft Report

The contents of this attachment are provided in electronic format only.

UCI-FLEET SERVICE (T0605901891)

19182 JAMBOREE RD., IRVINE, CA 92612



Case Age: 15 years
Primary COC: Gasoline

RP Identified by Regulator: University of California,

Irvine

Current Land Use: University vehicle maintenance yard

Possible Reasons Why This Case Is So Old

- No Documents have been uploaded to GeoTracker by the RP since August 2008.
- Closure review lists Monitoring Well abandonment as the only impediment to closure.
- Remedial confirmation and well destruction appear to be only barriers to closure.

CLEANUP OVERSIGHT AGENCIES

ORANGE COUNTY LOP (LEAD) - CASE #: 95UT056

CASEWORKER: JULIE WOZENCRAFT - SUPERVISOR: ANTHONY MARTINEZ

SANTA ANA RWQCB (REGION 8) - CASE #: 083002742T

CASEWORKER: NANCY OLSON-MARTIN - SUPERVISOR: Ken Williams

NOTE: Data gueried from GeoTracker and reviewed in June 2010

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

- USTs, dispensers, product lines and 273 cubic yards of soil removed from site in 1998
- DPE Pilot test conducted 2004

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

- 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

OPEN - REMEDIATION

CLEANUP OVERSIGHT AGENCIES

ORANGE COUNTY LOP (LEAD) - CASE #: 85UT080

CASEWORKER: JULIE WOZENCRAFT - SUPERVISOR: ANTHONY MARTINEZ

SANTA ANA RWQCB (REGION 8) - CASE #: 083000147T

CASEWORKER: CARL BERNHARDT - SUPERVISOR: Ken Williams



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
- Off-site vapor assessment in 5/1991
- 1/1992 off-site MWs installed, 5/1993 and 12/1993 MWs installed
- 4/1994 CAP submitted
- 1/1997 soil investigation
- 2001 soil and grab GW samples

- UST removal/replacement in 12/1987
- SVE system operation in 3/1990
- UST removal/replacement in 7/1992
- SVE system in 12/1994 and in 7/1998
- 24-hr DPE in 2/2002
- AS/SVE feasibility study in 2003
- 48-hr LPH removal test in 2003

as reported by regulatory agency

IMPEDIMENTS 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 /

SENSITIVE RECEPTOR TIME FRAME FOR IMPACT COMMENTS

Groundwater Already Impacted

- 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?
- <u>Discussion</u>: 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).
- OPEN VERIFCATION MONITORING as of 6/2003.
- 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

- UST closure and removal in 11/1985
- Free product removal from 12/1985 to 3/1994
- Excavate and dispose (13,000 cubic meters) from 7/1994 to 10/1994

as reported by regulatory agency

IMPEDIMENTS TO CLOSURE

PLUME INSTABILITY

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

COMMENTS

SENSITIVE RECEPTOR TIME FRAME FOR IMPACT

Groundwater Already Impacted

- Verification monitoring status in GeoTracker since 2003. Tanks removed in 1985, 13,000 cubic meters of soil removed from site in 1994. Site appears ready for closure consideration.
- 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.
- <u>Discussion</u>: 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

OPEN - VERIFICATION MONITORING

CLEANUP OVERSIGHT AGENCIES ORANGE COUNTY LOP (LEAD) - CASE #: 85UT038

ANGE COUNTY LOP (LEAD) - CASE #: 8501038 CASEWORKER: <u>KEVIN LAMBERT</u> - SUPERVISOR: ANTHONY MARTINEZ CASEWORKER: UNASSIGNED - SUPERVISOR: NONE SPECIFIED

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

- Soil samples collected 5/1988, 4/1990, 12/1990, 7/1997, 10/2004, 3/2006
- 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

- USTs removed in 1963 and another set of USTs (and piping) removed in 1985 and in 1991.
- Vapor extraction from 7/1993-3/1996
- GW extraction (date not specified)

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
SENSITIVE RECEPTOR TIME FRAME FOR IMPACT COMMENTS

Groundwater Already Impacted

- Verification monitoring status in GeoTracker since 1996. Closure requested in 2006. Closure denied.
- 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.
- Well destruction report submitted 11/18/2009 for two consistently dry wells.
- Site appears to be candidate for low-risk closure. Currently is an active gas station site.
- <u>Discussion</u>: Next step how to move this case towards cleanup closure?
 Open for 25 years. What sensitive receptors are threatened and where are they located?

LOS ANGELES TIMES-SOUTH TANKS (T0605999595)

1375 SUNFLOWER, COSTA MESA, CA 92626



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

OPEN - VERIFICATION MONITORING

CLEANUP OVERSIGHT AGENCIES

AMARIE BAKER - SUPERVISOR: ANTHONY MARTINEZ CASEWORKER: DEN SANTA ANA RWQCB (REGION 8) - CASE #: SL8R156

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 T0605999595

Assessment last 5 years

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

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 last 5 years

- Vacuum extraction 2/2001-8/2001 for maintenance and also evaluated rebound test. Resumed on 12/2001-3/2002
- After verification sampling, remediation resumed 3/2005-4/2006

- 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

as reported by regulatory agency

IMPEDIMENTS TO CLOSURE

PLUME INSTABILITY

Significant Rebound In Concentrations After Remediation - Verification Monitoring Not Complete –

GROUNDWATER IMPACTS

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

BENEFITS OF ADDITIONAL WORK

Verify Remedial Action Effectiveness -

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

SENSITIVE RECEPTOR TIME FRAME FOR IMPACT COMMENTS
Groundwater Already Impacted

- 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.
- <u>Discussion</u>: 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

- Soil samples collected in 1991, 1993, 1995, 1997, 2000, 2004, 2007
- Limited Phase I in 1991
- Ongoing quarterly GW monitoring since 1993
- Vapor survey in 1994

- 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

as reported by regulatory agency

IMPEDIMENTS TO CLOSURE

GROUNDWATER IMPACTS

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

COMMENTS

WELL IMPACTS

Groundwater

Municipal Wells Potentially Impacted -

BENEFITS OF ADDITIONAL WORK Protect Human Health -

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

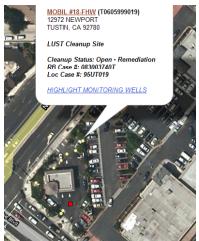
SENSITIVE RECEPTOR TIME FRAME FOR IMPACT

Already Impacted

- 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.
- Request for 5-year review submitted by authorized RP dated 4/2010. Latest GWMR submitted for 1Q2010 in 5/2010. Elevated levels of TPHg and benzene still detected.
- <u>Discussion</u>: 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 COC: 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 gueried 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

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 last 5 years

 SVE operated at site from 2004 until 2007

- 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

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 -

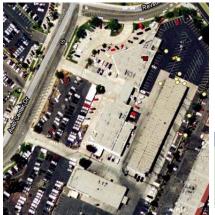
SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

Groundwater Already Impacted

- 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

OPEN - SITE ASSESSMENT CLEANUP OVERSIGHT AGENCIES ORANGE COUNTY LOP (LEAD) - CASE #: 95UT041 CASEWORKER: JULIE WOZENCRAFT - SUPERVISOR: ANTHONY MARTINEZ SANTA ANA RWQCB (REGION 8) - CASE #: 083002904T CASEWORKER: MANGY OLSOMMARTIN - SUPERVISOR: Ken Williams

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 gueried 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

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 last 5 years

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

- USTs removed from site in 1995
- SVE Well installed 1996

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

- 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

OPEN - REMEDIATION

CLEANUP OVERSIGHT AGENCIES

ORANGE COUNTY LOP (LEAD) - CASE #: 92UT130

CASEWORKER: DENAMARIE BAKER - SUPERVISOR: ANTHONY MARTINEZ

SAN DIEGO RWQCB (REGION 9) - CASE #: 9UT2362

CASEWORKER: UNASSIGNED - SUPERVISOR: NONE SPECIFIED

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 gueried from GeoTracker and reviewed in June 2010

Activities Conducted to Date Based on GeoTracker Info T0605902472

Assessment last 5 years

 Ongoing GW sampling (7 semiannual and 6 remained quarterly due to free product evaluation, reduction verification, and not shown reliable consistency

Remediation last 5 years

- SVE was shutdown due to faults in the controller in 8/2007
- Ongoing free product recovery since 5/2008, when a skimmer pump system installed.
- Feasibility Study/Corrective Action for additional remediation was submitted 6/2009

Assessment older than 5 years

- Site Assessment activities ongoing since 1985
- Quarterly GW sampling since 1994

- 8/1985 USTs removed and replaced
- 9/1992 leak from hole in product line; FP removed
- 9/1994 dispenser islands and product lines removed and soil excavated.
- SVE test in 6/1997, DPE test in 11/1997, and twoadditional DPE events conducted in 1/1998
- SVE from 7/1999 to 8/2007

as reported by regulatory agency

IMPEDIMENTS TO CLOSURE

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
SENSITIVE RECEPTOR TIME FRAME FOR IMPACT COMMENTS

Groundwater Already Impacted

- 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.
- <u>Discussion</u>: Next step how to move this case towards cleanup closure? Where are nearest sensitive receptors? What is the remediation plan for this site?

CHEVRON #21-1314 / AMERICAN SAVINGS BANK (T0605901793)

2252 HARBOR, COSTA MESA, CA 92626

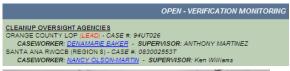


Case Age: 16 years

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.

NOTE: Data queried from GeoTracker and reviewed in June 2010

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

- Soil excavation and disposal 9/1999
- SVE extraction 12/2000-11/2001 and restarted in 1/2002-2/2002; 2003 recommendation for final system shutdown

as reported by regulatory agency

IMPEDIMENTS 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

SENSITIVE RECEPTOR TIME FRAME FOR IMPACT COMMENTS
Groundwater Already Impacted

- No activities for 5-years, from 1994-1999.
- Ongoing site assessment and remedial activities since 1999. Verification Monitoring status since 4/2002.
- Remediation is currently being conducted and quarterly GW monitoring is necessary to evaluate its effectiveness. Last report submitted for 4Q2009.
- <u>Discussion</u>: Next step how to move this case towards cleanup closure? Enforce field work and deliverable deadlines? Where are nearest sensitive receptors?

FEDERAL EXPRESS (T0605901840)

5321 SYSTEM, HUNTINGTON BEACH, CA 92649



Case Age: 15 years Primary COC: Gasoline

RP Identified by Regulator: Federal Express Corp.

Current Land Use: Vacant Building

OPEN - SITE ASSESSMENT

CLEANUP OVERSIGHT AGENCIES

ORANGE COUNTY LOP (LEAD) - CASE #: 95UT004

CASEWORKER: GENIECE HIGGINS - SUPERVISOR: ANTHONY MARTINEZ SANTA ANA RWQCB (REGION 8) - CASE #: 083002653T

CASEWORKER: CARL BERNHARDT - SUPERVISOR: Ken Williams

Possible Reasons Why This Case Is So Old

- No remedial activities have been performed to date, except for UST removal and soil overexcavation.
- •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 gueried 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

Assessment older than 5 years

- Soil samples after UST removal, closure report submitted 5/1995
- Soil and GW Investigation in 5/1996,
 Phase II GW Invest. in 8/1997, Phase
 III GW Invest. in 8/1999
- Quarterly GW monitoring since 2000 and quarterly/semi-annual since 2005

Remediation last 5 years

NONE DOCUMENTED

Remediation older than 5 years

 UST removed and soil over-excavation in 1994

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

- 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?

TOSCO - 76 #3494 (T0605900570)

100 WHITTIER, LA HABRA, CA 90631



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
- Monitoring wells installed 1995, 1996, 1997, and 2002
- Periodic groundwater monitoring conducted 1995 to present

- 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

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

- 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 μ g/L, 17,000 μ g/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

OPEN - REMEDIATION

CLEANUP OVERSIGHT AGENCIES

ORANGE COUNTY LOP (LEAD) - CASE #: 95UT046

CASEWORKER: JULIE WOZENCRAFT - SUPERVISOR: ANTHONY MARTINEZ

SANTA ANA RWCCB (REGION 8) - CASE #: 083002698T

CASEWORKER: CARL BERNHARDT - SUPERVISOR: Ken Williams



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 gueried 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

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

- 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?