

Final

April 4, 2011

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

Stanislaus County Local Oversight Program

**Prepared as in-kind task as part of Cooperative Agreement LS-
96934701-1 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 November 17, 2010, with a request for a follow-up meeting and input from Stanislaus County Local Oversight Program (LOP) into the “Next Steps for Agency” column of the case cleanup status spreadsheet.

Stanislaus County LOP met with USEPA Region 9 and Sullivan International Group, Inc. via conference call on February 28, 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 Stanislaus County LOP are: an uncooperative responsible party (RP); denial of closure by their associated Regional Board; and insufficient personnel resources. Stanislaus County LOP has made progress on the case that has the uncooperative RP despite the RP’s reluctance to do any work because the RP was unaware that petroleum contamination existed at the site when purchased. For another case, the agency requested the site be considered for low risk closure by the Regional Board, but was denied because of the deemed possibility that the contamination at the site may have potentially contributed to groundwater contamination at a down-gradient site, despite that there is no evidence contaminant migration exists.

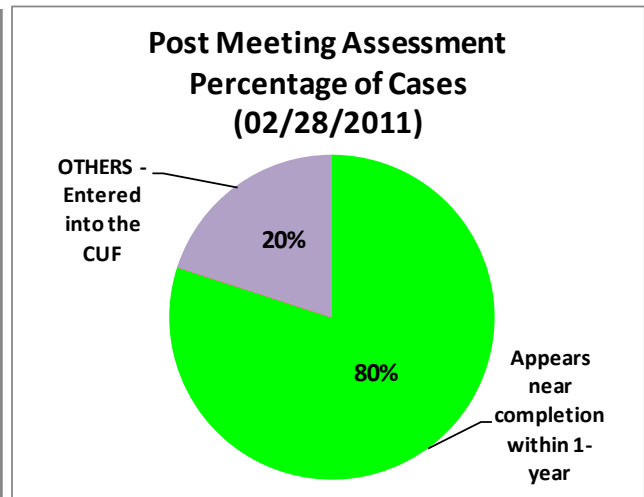
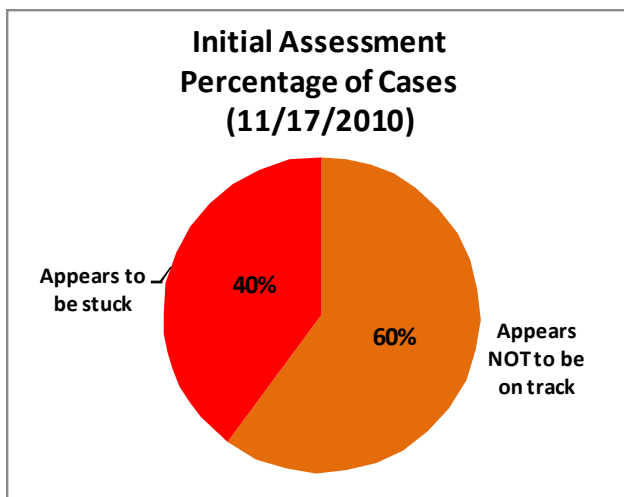
Stanislaus County LOP

Apparent Case Status: Initial and After

TOTAL NUMBER OF CASES REVIEWED = 5
 NUMBER OF ACTIVE LUST CASES ON NOVEMBER 1, 2010 = 68 CASES
 DRAFT REVIEW REPORT PREPARED AND SENT TO AGENCY ON NOVEMBER 17, 2010
 MEETING WITH AGENCY ON FEBRUARY 28, 2011

APPARENT STATUS OF CASES REVIEWED – INITIAL REVIEW AND AFTER MEETING TO DISCUSS CASES

Apparent Case Status	Initial Assessment Number of Cases (11-17-2010)	Post Meeting Assessment Number of Cases (02-28-2011)
CASE CLOSED	0	0
Appears close to completion	0	0
Appears near completion within 1-year	0	4
Appears to be on track	0	0
Appears NOT to be on track	3	0
Appears to be stuck	2	0
Unable to determine (Insufficient information in GeoTracker)	0	0
NOT FEDERAL UST CASE	0	0
OTHERS - Entered into the CUF	0	1



Aging Non-CUF Case Summary Review Table

ESTIMATED STATUS IN THE CLEANUP PIPELINE? (11-17-2010)	CHANGE IN STATUS IN THE CLEANUP PIPELINE (BASED ON MEETING/CALL WITH AGENCY) ON 02-28-2011	SITE NAME (CASE LEAD AGENCY: STANISLAUS COUNTY LOP)	GLOBAL ID	CASE WORKER	PRIMARY COC (In GeoTracker)	APPARENT TYPE OF RP	RELEASE DATE	DISCUSSION NOTES FROM MEETING/CALL (02-28-2011)	NEXT STEP FOR AGENCY * NOTES FROM AGENCY (02/28/2011)
Appears NOT to be on track	Appears near completion within 1-year	ARCO - T AND T	T0609900052	Nicole Damin	Gasoline	S - Small Private Business	7/20/1987	<ul style="list-style-type: none"> •In the Emergency, Abandoned, and Recalcitrant (EAR) Account Program •Remediation efficiency has diminished •Still significant mass in smear zone •Submitted pre-approval request to the EAR for next steps for assessment and remediation •Site closure is expected within the next year •Site assessment for 6 months (GW Monitoring) •For the next 6 months after, continue monitoring and pilot study of direct injections with reducing agent similar to ORCs •Post-injection monitoring •Request site for low-risk closure with remaining mass in place 	Push for additional/alternate remediation (current remediation ineffective)
Appears NOT to be on track	Appears near completion within 1-year	FERNANDES SPEED SHOP	T0609900165	Nicole Damin	Gasoline	O - Other (Individual, Homes etc)	8/14/1990	<ul style="list-style-type: none"> •In the EAR •GW monitoring was shut-down •Closure requested 3 times, denied by R55 due to possibility of contaminant migration contributing to a downgradient site, but this has not been proven •Intend to upload reports to GeoTracker •Will request GW and vapor sampling and risk assessment •Depending on results, will request site closure •One more round of GW sampling •Subsurface vapor sampling (not indoor air) •Tier 2 risk assessment •Depending on results, site will be considered for closure 	Update missing GT information (data, report, unassigned caseworker etc.)
Appears NOT to be on track	Appears near completion within 1-year	MONFREDINI PROPERTY AKA GADDYS SHELL	T0609900313	Amber Minami	Multiple	Z - Major Oil Company	12/11/1992	<ul style="list-style-type: none"> •Not in the EAR •RP was unaware of UST and contamination, generally unwilling •Refused to insert ORC socks and conduct groundwater monitoring, but recently conducted a vapor survey as required •Waiting on results of vapor survey and depending on results, will submit a closure request 	Solicit case closure proposal/request
Appears to be stuck	OTHERS - Entered into the CUF	LAND E AUTO SHORT PROPERTY	T0609900108	Amber Minami	Unknown	O - Other (Individual, Homes etc)	3/15/1989	<ul style="list-style-type: none"> •RP deceased, 12-year estate lawsuit •Now in CUF, will not be evaluated in the final report 	Not Applicable
Appears to be stuck	Appears near completion within 1-year	THREE STAR GAS	T0609900123	Amber Minami	Gasoline	Z - Major Oil Company	6/19/1989	<ul style="list-style-type: none"> •In the EAR •Three years ago, soil vapor extraction pilot test was conducted •In general, not much GW contamination in area; urban setting with GW at 35-fbg •Will request site assessment and risk assessment •One more round of GW sampling •Subsurface vapor sampling •Tier 2 risk assessment •Depending on results, site will be considered for closure 	Push for new/additional remedial investigation (RI)/risk assessment

Attachment 1:

Case Review Power Point Slides from Draft Report

The Power Point slides from the draft report have not been updated and are not intended to reflect the current status of the cases at the time the final report was produced. They are to be used solely for reference.

1. T0609900052 (ARCO - T AND T)
2. T0609900165 (FERNANDES SPEED SHOP)
3. T0609900313 (MONFREDINI PROPERTY AKA GADDYS SHELL)
4. T0609900108 (L AND E AUTO SHORT PROPERTY)
5. T0609900123 (THREE STAR GAS)

ARCO - T AND T (T0609900052)
402 DOWNEY, MODESTO , CA 95354



Case Age: 23 years
RP Identified by Regulator: T & T ARCO
Primary COC: GASOLINE
Current Land Use: Smog check station

OPEN - REMEDIATION

CLEANUP OVERSIGHT AGENCIES
 STANISLAUS COUNTY LOP (LEAD) - CASE #: 2135
 CASEWORKER: NICOLE DAMN - SUPERVISOR: NONE SPECIFIED
 CENTRAL VALLEY RWQCB (REGION 55) - CASE #: 500056
 CASEWORKER: MICHAEL SMITH - SUPERVISOR: Joe Mello



NOTE: Data queried from GeoTracker and reviewed in November 2010

Possible Reasons Why This Case Is So Old

- Appears no activity for nine years from 10/1990 to 10/1999.
- Remedial activities not effective, highly elevated concentrations still detected.

Activities Conducted to Date Based on GeoTracker Info T0609900052

Assessment last 5 years

- Ongoing groundwater monitoring until 11/2009, now three wells sampled semi-annually and annually

Remediation last 5 years

- Vapor extraction test in 10/2005
- SVE operated from 12/2003 to 7/2008
- Hydrogen peroxide injection episodes in 4/2008 and 6/2008
- Ongoing ozone sparging, began 7/2007

Assessment older than 5 years

- Preliminary soil/groundwater investigation in 1/1988
- Soil sampling after UST removal in 10/1990
- Site assessment activities since 10/1990

Remediation older than 5 years

- During product line repair in 7/1987 and release discovered
- Three USTs removed in 1990
- Vapor extraction test and air sparge pilot test in 2001
- SVE installed in 2003

IMPEDIMENTS TO CLOSURE T0609900052

as reported by regulatory agency

CLOSURE REVIEW - THIS CASE IS NOT READY FOR CLOSURE AS OF 10/5/2009

IMPEDIMENTS TO CLOSURE**PLUME INSTABILITY**

Significant Rebound In Concentrations After Remediation - *Following the cessation of hydrogen peroxide injection the constituents of concern rebounded to pre-injection concentrations. Ozone sparging is currently being conducted at the site.*

UNACCEPTABLE RISK

Unacceptable Risks to Human Health from Vapor Intrusion - *A soil vapor study has not been conducted at this site.*

BENEFITS OF ADDITIONAL WORK

Restore Beneficial Uses - *Continue remediation at the site to reduce the concentrations of TPHg, benzene, and MTBE in groundwater.*

Protect Human Health - *Conduct a soil vapor survey to ensure that there is no risk for indoor air intrusion.*

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

SENSITIVE RECEPTOR	TIME FRAME FOR IMPACT	COMMENTS
Groundwater	Already Impacted	TPHg, benzene, and MTBE
Indoor Air (Residential or Commercial)	Undetermined	An evaluation for the possibility of indoor air intrusion has not been conducted at this time.

Review Conclusions T0609900052

- Correspondence from agency dated 6/2009 indicated that it did not appear that the ozone injections were effective and scheduled a meeting to discuss the remedial system on 8/2009. The agency then scheduled a mandatory office hearing on 10/06/2010; results of the meeting are unknown.
- Closure review indicates vapor intrusion assessment has not been conducted.
- Last sampling event reported 11/2009, elevated levels of contaminants still detected. Following the cessation of hydrogen peroxide injections, the constituents of concern rebounded to pre-injection concentrations.
- *Discussion: Next step – how to move this case toward closure? Establish timeline and enforce deadlines? Case appears to not be on track.*

FERNANDES SPEED SHOP (T0609900165)

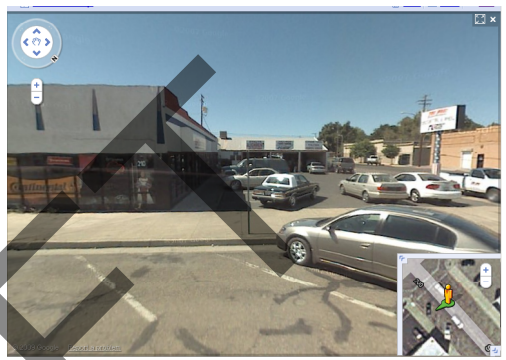
214 CENTER, TURLOCK , CA 95380



Case Age: 20 years
RP Identified by Regulator: INDIVIDUALS
Primary COC: GASOLINE
Current Land Use: Commercial/Industrial

OPEN - VERIFICATION MONITORING

CLEANUP OVERSIGHT AGENCIES
 STANISLAUS COUNTY LOP (LEAD) - CASE #: 2035
 CASEWORKER: NICOLE DAMN - SUPERVISOR: NONE SPECIFIED
 CENTRAL VALLEY RWQCB (REGION 6S) - CASE #: 500187
 CASEWORKER: MICHAEL SMITH - SUPERVISOR: Joe Mello



NOTE: Data queried from GeoTracker and reviewed in November 2010

Possible Reasons Why This Case Is So Old

• Case recommended for closure by the LOP in 4/2006, then the agency requested a soil vapor survey, which was conducted in 2009.

Activities Conducted to Date Based on GeoTracker Info

T0609900165

Assessment last 5 years

- Ongoing groundwater sampling
- MW installed in 2005
- Vapor survey in 10/2009

Remediation last 5 years

- Oxidation reduction compound socks installed in 6/2006 until 5/2007

Assessment older than 5 years

- Soil and ground water sampled in 6/1997
- Two soil borings advanced in 6/1997
- MWs installed in 1/1998

Remediation older than 5 years

- USTs removed and soil over-excavated in 8/1990

IMPEDIMENTS TO CLOSURE T0609900165

as reported by regulatory agency

CLOSURE REVIEW - THIS CASE IS NOT READY FOR CLOSURE AS OF 10/6/2009

IMPEDIMENTS TO CLOSURE**UNACCEPTABLE RISK**

Unacceptable Risks to Human Health from Vapor Intrusion - *The vapor intrusion pathway near the highest offsite groundwater concentration was not evaluated.*

PROCEDURAL IMPEDIMENTS

Regional Water Board Objects to Closure - *Groundwater was not sampled for methanol. Vapor intrusion pathway near the highest offsite groundwater concentration was not evaluated. Constituents of concern in groundwater from FW-5 exceeds WQO's.*

BENEFITS OF ADDITIONAL WORK

Protect Human Health - *In order to satisfy the requests of the RWQCB, the Department is conducting an additional soil vapor survey and resampling all wells at the site.*

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

SENSITIVE RECEPTOR	TIME FRAME FOR IMPACT	COMMENTS
Groundwater	Already Impacted	Groundwater at the site has historically been impacted by TPHg, TPHd, and benzene.
Indoor Air (Residential or Commercial)	Undetermined	The vapor intrusion pathway near the highest offsite groundwater concentration was not evaluated.

Review Conclusions T0609900165

- Closure review indicated that the vapor intrusion pathway near the highest off site groundwater concentration was not evaluated. Also, In addition to gasoline UST, there was a UST used for methanol and groundwater was not sampled for this contaminant.
- Vapor survey conducted in 10/2009 detected no contaminants above commercial CHHSLs. Appears there is not a vapor issue.
- *Discussion: Next step – how to move this case toward closure? Establish timeline and enforce deadlines? Has methanol been evaluated? Update conceptual site model, sensitive receptor survey, and reconsider for closure? Case appears to not be on track at present.*

MONFREDINI PROPERTY AKA GADDYS SHELL (T0609900313)

402 MAIN, TURLOCK , CA 95380



Case Age: 18 years

RP Identified by Regulator: GADDYS SHELL

Primary COC: BENZENE, GASOLINE, OTHER SOLVENT OR NON-PETROLEUM HYDROCARBON, TOLUENE, XYLENE

Current Land Use: Commercial

SITE **OPEN - REMEDIATION**

CLEANUP OVERSIGHT AGENCIES
 STANISLAUS COUNTY LOP (LEAD) - CASE #: 375
 CASEWORKER: AMBER MINAM - SUPERVISOR: NICOLE DAMIN
 CENTRAL VALLEY RWQCB (REGION 5S) - CASE #: 500375
 CASEWORKER: MICHAEL SMITH - SUPERVISOR: Joe Mello



NOTE: Data queried from GeoTracker and reviewed in November 2010

Possible Reasons Why This Case Is So Old

- Soil investigation in 1992, prior to redevelopment, petroleum hydrocarbon contamination discovered up to 2,900 mg/kg TPHg.
- In 1997, agency issued directive letter for further investigation of the contaminant plume at the site that was subsequently placed on hold.
- No activity until 2003. Gap in sampling from 2007 to 2009.

Activities Conducted to Date Based on GeoTracker Info T0609900313

Assessment last 5 years

- Additional soil/groundwater investigation in 2006
- Ongoing groundwater sampling, gap from 12/2007 to 9/2009

Remediation last 5 years

- Corrective Action Plan dated 1/2006, ORC socks were installed

Assessment older than 5 years

- Soil investigation in 11/1992
- Soil/groundwater investigation in 2003
- MWs installed in 2004

Remediation older than 5 years

- None

IMPEDIMENTS TO CLOSURE T0609900313

as reported by regulatory agency

CLOSURE REVIEW - THIS CASE IS NOT READY FOR CLOSURE AS OF 10/12/2009

IMPEDIMENTS TO CLOSURE**GROUNDWATER IMPACTS**

Groundwater Impacted Above Background - *The most recent groundwater monitoring and sampling event conducted on October 30, 2007 reported TPHg and benzene at maximum groundwater concentrations of 23,000 ug/L and 13 ug/L, respectively*

UNACCEPTABLE RISK

Unacceptable Risks to Human Health from Vapor Intrusion - *A soil vapor survey has not been conducted at this site.*

BENEFITS OF ADDITIONAL WORK

Restore Beneficial Uses - *Installation of the ORC Advanced socks to remediate groundwater at the site. Protect Human Health - In order to evaluate the risk to human health from indoor vapor intrusion, a soil vapor survey shall be conducted.*

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

SENSITIVE RECEPTOR	TIME FRAME FOR IMPACT	COMMENTS
Groundwater	Already Impacted	TPHg and BTEX constituents.
Indoor Air (Residential or Commercial)	Undetermined	No soil vapor survey.

Review Conclusions T0609900313

- Site history does not mention USTs.
- Appears no activities between initial investigation in 1992 to 2003. Appears only one directive letter from agency in 1997 and the case was subsequently put on hold.
- No groundwater sampling from 2007 to 2009. Last event in 12/2009 showed up to 19,000 ppb TPHg in groundwater and other contaminants elevated.
- Agency directed reinstallation of ORC socks in three wells to enhance bioremediation in 12/2009 correspondence. Three wells now on annual sampling schedule. Appears concentrations decreased over time, but may need more consistent data to establish overall trend.
- *Discussion: Next step – how to move this case toward closure? Establish timeline and enforce deadlines? Update sensitive receptor survey and conceptual site model? Has source of contamination been removed? Site appears to not be on track at present.*

L AND E AUTO SHORT PROPERTY (T0609900108)

1411 YOSEMITE, MODESTO , CA 95354



Case Age: 22 years
RP Identified by Regulator: SHORT FAMILY TRUST
Primary COC: DIESEL, GASOLINE
Current Land Use: Commercial/Industrial

OPEN - SITE ASSESSMENT

CLEANUP OVERSIGHT AGENCIES
 STANISLAUS COUNTY LOP (LEAD) - CASE # 90
 CASEWORKER: AMBER MINAMI - SUPERVISOR: NICOLE DAMN
 CENTRAL VALLEY RWQCB (REGION 5S) - CASE # 500125
 CASEWORKER: MICHAEL SMITH - SUPERVISOR: Joe Mello



NOTE: Data queried from GeoTracker and reviewed in November 2010

Possible Reasons Why This Case Is So Old

- Case recommended for closure by the LOP in 4/2006 and rescinded by the Regional Board in 6/2006 due to inadequate assessment and VI concerns.
- No activities after initial sampling in 1989 until 2003.

**Activities Conducted to Date Based on GeoTracker Info
 T0609900108**

Assessment last 5 years

- Grab groundwater samples collected 12/2005, 1/2006, and 2/2006
- Sensitive receptor survey 3/2002

Remediation last 5 years

- None

Assessment older than 5 years

- Soil sampling after excavation and borings drilled in 1989
- Grab groundwater sample collected 8/2003

Remediation older than 5 years

- Four tanks removed and surrounding soil excavated in 1989

IMPEDIMENTS TO CLOSURE T0609900108

as reported by regulatory agency

IMPEDIMENTS TO CLOSURE**SITE ASSESSMENT INCOMPLETE**Incomplete Conceptual Site Model (CSM) - *Site assessment has not been initiated at this site.***UNACCEPTABLE RISK**Unacceptable Risks to Human Health from Vapor Intrusion - *A soil vapor survey has not been conducted at this site.***BENEFITS OF ADDITIONAL WORK**Complete CSM and Our Understanding of Hydrogeologic Regime and Fate and Transport of Contaminants - *In order to define the lateral and vertical extent of soil and groundwater at this site, additional site assessment is required.*Protect Human Health - *In order to evaluate the risk to human health from indoor vapor intrusion a soil vapor survey shall be conducted.***SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT**

SENSITIVE RECEPTOR	TIME FRAME FOR IMPACT	COMMENTS
Groundwater	Already Impacted	TPHg and BTEX constituents
Indoor Air (Residential or Commercial)	Undetermined	No soil vapor survey

Review Conclusions T0609900108

- Closure review indicates no assessment has been conducted. There has been limited assessment, soil and grab groundwater sampling.
- Correspondence from agency in 5/2008 indicated the application to the cleanup fund was denied because the eligibility rights were not assigned to the estate. Per a court order, the original properties were divided between Short Family Investment Company (SFIC) and the Estate of Robert R. Jorgensen, deceased. The USTCF indicated the rights need to be transferred in order to qualify for a claim.
- *Discussion: Next step – how to move this case toward closure? Establish timeline and enforce deadlines? Update sensitive receptor survey? Appears once eligibility rights are transferred, claim application can be resubmitted. Case appears to be stuck at present.*

THREE STAR GAS (T0609900123)
 1131 YOSEMITE, MODESTO , CA 95354



Case Age: 21 years
RP Identified by Regulator: THREE STAR GAS
Primary COC: GASOLINE
Current Land Use: Commercial, appears vacant

OPEN - SITE ASSESSMENT

CLEANUP OVERSIGHT AGENCIES
 STANISLAUS COUNTY LOP (**LEAD**) - CASE #: 2097
 CASEWORKER: [AMBER MNAM](#) - SUPERVISOR: NICOLE DAMIN
 CENTRAL VALLEY RWQCB (REGION 5S) - CASE #: 500142
 CASEWORKER: [MICHAEL SMITH](#) - SUPERVISOR: Joe Mello

Possible Reasons Why This Case Is So Old

- Vapor extraction wells installed in 2008, but remediation has not begun. No other remedial activities.

NOTE: Data queried from GeoTracker and reviewed in November 2010



**Activities Conducted to Date Based on GeoTracker Info
 T0609900123**

Assessment last 5 years

- Ongoing groundwater sampling and data in GeoTracker since 2001

Remediation last 5 years

- SVE proposed
- Vapor extraction wells installed 7/2008

Assessment older than 5 years

- Soil and ground water sampled in 6/1997
- MWs installed 12/1997 and 3/2000
- Soil boring advanced 2/2002

Remediation older than 5 years

- USTs removed in 11/1996

IMPEDIMENTS TO CLOSURE T0609900123

as reported by regulatory agency

CLOSURE REVIEW - THIS CASE IS NOT READY FOR CLOSURE AS OF 10/7/2009**IMPEDIMENTS TO CLOSURE****INADEQUATE SOURCE CONTROL**

Remaining Source Poses Threat to Groundwater - SVE is proposed for remediation. At this time, remedial action has not begun.

GROUNDWATER IMPACTS

Groundwater Impacted Above Background - During the 1Q09 sampling event, maximum concentrations of TPHg, benzene, and MTBE were reported in the groundwater sample collected from IP-2 at 36,000 ug/L, 4,500 ug/L, and 290 ug/L, respectively.

UNACCEPTABLE RISK

Unacceptable Risks to Human Health from Vapor Intrusion - A soil vapor survey has not been conducted at this site.

BENEFITS OF ADDITIONAL WORK

Remove / Reduce Source Mass - In order to remediate the soil and groundwater at the site a soil vapor extraction system is proposed. Protect Human Health - In order to evaluate the risk to human health from indoor vapor intrusion, a soil vapor survey shall be conducted.

SENSITIVE RECEPTORS LIKELY TO BE IMPACTED AND TIME FRAME FOR IMPACT

SENSITIVE RECEPTOR	TIME FRAME FOR IMPACT	COMMENTS
Groundwater	Already Impacted	TPHg, benzene, and MTBE
Indoor Air (Residential or Commercial)	Undetermined	A soil vapor survey has not been conducted at this site.

Review Conclusions T0609900123

- Elevated contaminant levels detected.
- Vapor extraction wells installed in 2008 and remediation has not begun.
- Regulator requested a scope of work and cost estimate for the SVE system and was due 4/2009. It does not appear this was completed (not in GeoTracker).
- *Discussion: Next step – how to move this case toward closure? Establish timeline and enforce deadlines? Update sensitive receptor survey? Has remediation scope of work and cost estimate been submitted? Case appears to be stuck at present, based on data in GeoTracker.*