

**ExxonMobil**  
**Environmental Services Company**  
4096 Piedmont Avenue #194  
Oakland, California 94611  
510 547 8196 Telephone  
510 547 8706 Facsimile

**Jennifer C. Sedlachek**  
Project Manager

**ExxonMobil**

May 9, 2013

Ms. Barbara Jakub  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**RECEIVED**

By Alameda County Environmental Health at 8:28 am, May 13, 2013

**Subject: Low Threat UST Case Closure Checklist**  
**Former Exxon RAS #70234**  
**3450 35<sup>th</sup> Avenue, Oakland, California**  
**ACHCSA File No. RO0002515**

Dear Ms. Jakub:

Attached for your review and comment is a copy of the *Low Threat UST Case Closure Checklist* for the above-referenced site. The document, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, is submitted in response to correspondence from the Alameda County Health Care Services Agency dated January 18, 2013 and March 22, 2013.

Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or comments, please contact me at 510.547.8196.

Sincerely,



Jennifer C. Sedlachek  
Project Manager

Attachment: ETIC Low Threat UST Case Closure Checklist

- c: w/ attachment:  
Mr. William D. Spencer, FWS Highland LLC, 99 South Hill Drive, Brisbane, CA 94005  
Mr. Shay Wideman, The Valero Companies, Environ. Liability Mgt., P.O. Box 696000, San Antonio, TX 78269
- c: w/o attachment:  
Mr. Thomas E. Neely, ETIC Engineering, Inc.

9 May 2013

Ms. Jennifer C. Sedlachek  
ExxonMobil Environmental Services Company  
4096 Piedmont Avenue #194  
Oakland, California 94611

**Subject: Alameda County Environmental Health, Low Threat UST Case Closure Checklist  
Former Exxon Service Station 70234  
3450 35<sup>th</sup> Avenue, Oakland, California  
ACHCSA File No. RO0002515**

Dear Ms. Sedlachek:

At the request of ExxonMobil Environmental Services Company on behalf of ExxonMobil Oil Corporation (ExxonMobil), ETIC Engineering, Inc. (ETIC) has prepared the attached Alameda County Environmental Health, Low Threat UST Case Closure Policy Compliance and Identification of Impediments to Case Closure Checklist for Former Exxon Service Station 70234, located at 3450 35<sup>th</sup> Avenue in Oakland, California. This checklist is being submitted in response to e-mails dated 18 January 2013 and 22 March 2013 from the Alameda County Health Care Services Agency (ACHCSA).

It should be noted that responses and information in the checklist are based upon currently available information. As additional information becomes available, the checklist should be reviewed and updated accordingly.

If you have any questions or comments, please contact Mr. Hamidou Barry at (925) 602-4710 ext. 2145 or Mr. Tom Neely at ext. 2161.

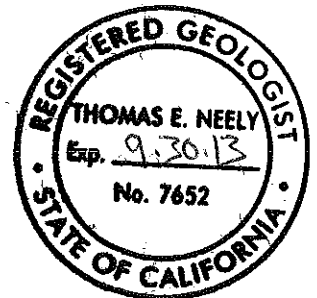
Respectfully yours,



Hamidou Barry  
Project Manager



Thomas E. Neely, PG, CHG, QSD  
Senior Hydrogeologist



Attachment:

Alameda County Environmental Health, Low Threat UST Case Closure Policy Compliance and Identification of Impediments to Case Closure Checklist

**ALAMEDA COUNTY ENVIRONMENTAL HEALTH  
LOW THREAT UST CASE CLOSURE POLICY COMPLIANCE AND  
IDENTIFICATION OF IMPEDIMENTS TO CASE CLOSURE CHECKLIST**

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Agency Name : Alameda County Environmental Health	Date:
ACEH Case Worker: Barbara Jakub	Fuel Leak Case No: RO000 2515
Site Name: Valero #3832 (Former Exxon #70234)	GeoTracker Global ID: T06019757161
Site Address: 3450 35th Avenue, Oakland, CA	USTCF Claim No:

\_\_\_\_\_ has reviewed the above listed site for consideration of case closure using the framework provided by the State Water Resources Control Board Low-Threat Underground Storage Tank Case Closure Policy (LTCP), adopted on May 1, 2012, and effective August 17, 2012. The results of our review indicate that the site  PASSES  FAILS the LTCP criteria.

Section 25296.10 of the California Health and Safety Code (H&SC) requires that sites be cleaned up to protect human health, safety, and the environment. The current conceptual site model  is  is not adequate to determine that residual petroleum constituents at the site do not pose a significant risk to human health, safety, or the environment.

**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA A**

<b>General Criteria a:</b>	<input type="checkbox"/> <b>YES</b>	<input type="checkbox"/> <b>NO</b>	<input type="checkbox"/> <b>NE</b>
<b>Is the Unauthorized Release Located within the Service Area of a Public Water System?</b>			
<p><b>LTCP Statement:</b> "This policy is protective of <u>existing water supply wells</u>. <u>New water supply wells</u> are unlikely to be installed in the shallow groundwater near former UST release sites. However, it is difficult to predict, on a statewide basis, where new wells will be installed, particularly in rural areas that are undergoing new development. This policy is limited to areas with available public water systems to reduce the likelihood that new wells in developing areas will be inadvertently impacted by residual petroleum in groundwater. Case closure outside of areas with a public water system should be evaluated based upon the fundamental principles in this policy and a site specific evaluation of developing water supplies in the area. For purposes of this policy, a <u>public water system</u> is a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year."</p>			
<b>Does the public water system have 15 or more service connection or regularly serves at least 25 individuals daily at least 60 days of the year?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Name of public water system agency?			
East Bay Municipal Utility District	<input checked="" type="checkbox"/> Yes		
Zone 7 Water Agency	<input type="checkbox"/> Yes		
City of Hayward Water	<input type="checkbox"/> Yes		
Alameda County Water District	<input type="checkbox"/> Yes		
<b>Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with General Criteria a?</b>			
Has confirmation that the property has a hook-up and uses the public water system been provided?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Has a well search been conducted to identify wells located within 2,000 feet of the site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Are there existing water supply wells or other sources of water in the vicinity of the site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Domestic Water Supply Wells	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA
Irrigation Wells	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA
Other Capture Systems	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Are existing supply wells or other sources of water used by property owners/tenants in the vicinity of the site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Have existing supply wells or other sources of water been sampled for chemicals of concern associated with the release site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Have supply wells or other sources of water been properly abandoned and well destruction records been provided?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)</b>			

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



## LOW THREAT CLOSURE POLICY - GENERAL CRITERIA A

### Case Notes

EBMUD map indicates that the site is within the EBMUD service area.  
A well search has been performed within 1,500 m for public wells, and 300m for private wells. Need to evaluate presence of water wells within 2,000 ft per ACHCSA requirement.  
An updated evaluation of wells should be performed with the ACHCSA-specified search radius.

**\*\*\*End of General Criteria a Evaluation\*\*\***

**KEY: NE = Identified Data Gap - Needs Further Evaluation    NA = Not Applicable**

**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA B**

<b>General Criteria b:</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> NE
<b>Does the Unauthorized Release Consist only of Petroleum?</b>			
<p><b>LTCP Statement:</b> "For purposes of this policy, petroleum is defined as crude oil, or any fraction thereof, which is liquid at standard conditions and temperature and pressure, which means 60 degrees Fahrenheit and 14.7 pounds per square inch absolute including the following substances: motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils, including any additives and blending agents such as oxygenates contained in the formulation of the substances."</p>			
<b>Site Contaminants Detected in Soil, Soil Gas, Groundwater, and Surface Water</b>			
<b>Petroleum</b>			
	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Motor fuels	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
TPH middle distillates	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Residual fuels	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Fuel oxygenates	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Lead scavengers	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Aromatic compounds	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
TPH middle distillates	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
<b>Non Petroleum Contaminants</b>			
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
VOCs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Dioxans & Furans	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Other PAHs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
PCBs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Phenols	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Metals	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
<b>Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with General Criteria b?</b>			
	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Description of the site history?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Types of products or chemicals used at the site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
History of types of releases other than petroleum?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA
Presentation of sampling results for all chemicals other than petroleum such as volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), phenol, 1,4-dioxane, dibenzofurans, or dioxins?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)			

**KEY: NE = Identified Data Gap - Needs Further Evaluation    NA = Not Applicable**

**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA B**

**Case Notes**

Petroleum detections have been reported in tables of the Site Assessment Report of April 2009.

**\*\*\*End of General Criteria b Evaluation\*\*\***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA C**

<b>General Criteria c:</b>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																
<b>Has the Unauthorized ("Primary") Release from the UST System been Stopped?</b>				<b>YES</b>	<b>NO</b>	<b>NE</b>																
<p><b>LTCP Statement:</b> "The tank, pipe, or other appurtenant structure that released petroleum into the environment (i.e. the primary source) has been removed, repaired or replaced. It is not the intent of this policy to allow sites with ongoing leaks from the UST system to qualify for low-threat closure."</p>																						
<p>Have the tank(s), piping, dispenser islands, or other appurtenant structures that released petroleum into the environment been removed, repaired or replaced?</p>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																
<table border="1"> <tr> <td>Tanks?</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Product piping?</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Dispenser islands?</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Other structures?</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table>				Tanks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Product piping?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dispenser islands?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other structures?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
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Other structures?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																			
<p>Have the tanks, piping, and/or dispenser islands been moved to a different location at the site?</p>				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
<p>Were/are the tanks permitted by a local regulatory agency having jurisdiction over USTs?</p>				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
<table border="1"> <tr> <td>Have the operating records been reviewed (i.e., operating permit, types of products dispensed, tanks construction, tank capacity, tank tightness tests, etc)?</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Was a tank removal permit issued by the local regulatory agency?</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Was a tank removal report submitted?</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>				Have the operating records been reviewed (i.e., operating permit, types of products dispensed, tanks construction, tank capacity, tank tightness tests, etc)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Was a tank removal permit issued by the local regulatory agency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Was a tank removal report submitted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
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Was a tank removal permit issued by the local regulatory agency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																			
Was a tank removal report submitted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																			
<p>Is there indication that new release(s) have occurred subsequent to the initial release?</p>				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
<table border="1"> <tr> <td>Are there spikes or increasing concentration trends in historic data subsequent to the initial release?</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Are there new detections of free product subsequent to the initial release in historic data?</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Have new contaminants been detected in historic data subsequent to the initial release?</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>				Are there spikes or increasing concentration trends in historic data subsequent to the initial release?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there new detections of free product subsequent to the initial release in historic data?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Have new contaminants been detected in historic data subsequent to the initial release?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
Are there spikes or increasing concentration trends in historic data subsequent to the initial release?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																			
Are there new detections of free product subsequent to the initial release in historic data?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																			
Have new contaminants been detected in historic data subsequent to the initial release?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																			
<p>Have new petroleum hydrocarbons or other hazardous products been dispensed of at the site since the initial release occurred?</p>				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																
<p>Is there indication of new impacts from offsite sources?</p>				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA C**

**CSM Minimum Requirements**

Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with General Criteria c?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Description of the history of releases and the actions taken to stop each release?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Evaluation and accounting for changing contaminant concentrations over the full time period of site investigations?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Data from other sites in the vicinity with unauthorized releases of petroleum hydrocarbons or other hazardous materials	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Hazardous Materials Business Plans (historic and current)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
CUPA UST permits and inspection reports	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA

(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)

**Case Notes:**

\*\*\*End of General Criteria c Evaluation\*\*\*

**KEY: NE = Identified Data Gap - Needs Further Evaluation    NA = Not Applicable**

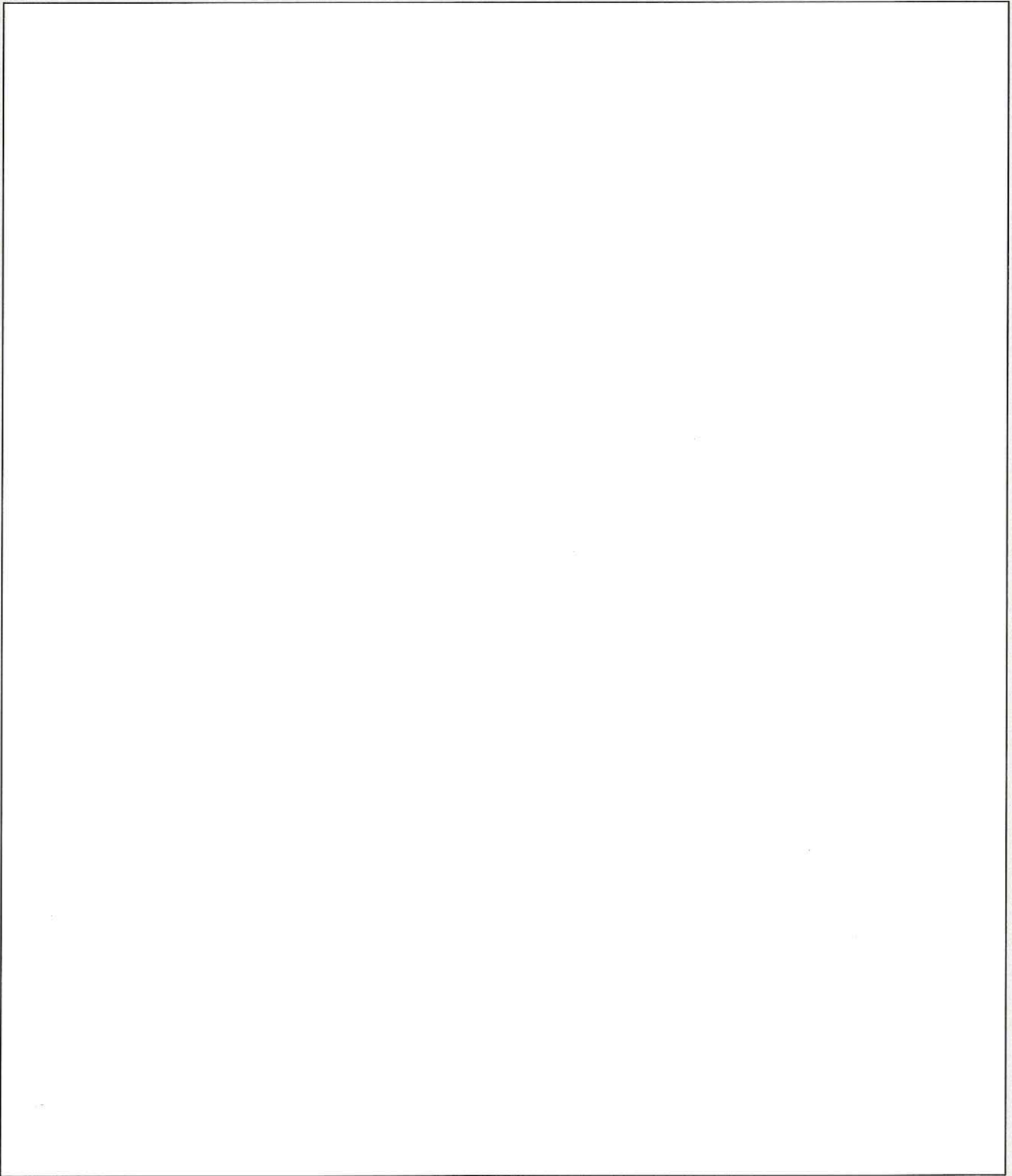
**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA D**

<b>General Criteria d:</b>	<input type="checkbox"/> <b>YES</b>	<input type="checkbox"/> <b>NO</b>	<input type="checkbox"/> <b>NE</b>	<input checked="" type="checkbox"/> <b>NA</b>															
<b>Has Free Product been Removed to the Maximum Extent Practicable?</b>																			
<p><b>LTCP Statement:</b> "At petroleum unauthorized release sites where investigations indicate the presence of free product, free product shall be removed to the maximum extent practicable. In meeting the requirements of this section:</p> <p>(a) Free product shall be removed in a manner that minimizes the spread of the unauthorized release into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable laws;</p> <p>(b) Abatement of free product migration shall be used as a minimum objective for the design of any free product removal system; and</p> <p>(c) Flammable products shall be stored for disposal in a safe and competent manner to prevent fires or explosions."</p>																			
<b>Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with General Criteria d?</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Has the presence of free product been evaluated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		<input type="checkbox"/> NA															
Has a description of investigation and monitoring activities that have been undertaken to assess whether free product is present been provided?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		<input type="checkbox"/> NA															
Has a preferential pathway study been conducted to determine the probability of free product encountering geologic and anthropogenic preferential pathways and conduits that can act as contaminant migration pathways to or from the site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		<input type="checkbox"/> NA															
Has tabulation and an evaluation of historic groundwater levels and flow direction and identification of a smear zone been provided?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		<input type="checkbox"/> NA															
Has data including tables and figures showing any observation and measurements of free product been provided?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		<input type="checkbox"/> NA															
Has an evaluation of the adequacy of the monitoring well network and appropriateness of screen interval to detect free product been conducted?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		<input type="checkbox"/> NA															
Has an evaluation of whether free product removal is practicable, or if not practicable, a description of the conditions that prevent free product removal been conducted?	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>															
Has free product removal been implemented?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		<input checked="" type="checkbox"/> NA															
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Absorbent Materials</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 2px;">Bailing</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 2px;">Skimmer</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 2px;">HVDPE</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 2px;">Other Methods:</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> </table>	Absorbent Materials	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Bailing	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Skimmer	<input type="checkbox"/> Yes	<input type="checkbox"/> No	HVDPE	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Other Methods:	<input type="checkbox"/> Yes	<input type="checkbox"/> No				
Absorbent Materials	<input type="checkbox"/> Yes	<input type="checkbox"/> No																	
Bailing	<input type="checkbox"/> Yes	<input type="checkbox"/> No																	
Skimmer	<input type="checkbox"/> Yes	<input type="checkbox"/> No																	
HVDPE	<input type="checkbox"/> Yes	<input type="checkbox"/> No																	
Other Methods:	<input type="checkbox"/> Yes	<input type="checkbox"/> No																	
Has a description of corrective action(s) that were taken to remove product, dates of removal actions, and volumes removed been provided?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		<input checked="" type="checkbox"/> NA															
Is free product removal still being conducted?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		<input checked="" type="checkbox"/> NA															
Does data indicate rebound of free product subsequent to product removal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		<input checked="" type="checkbox"/> NA															
<b>(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)</b>																			

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA D**

**Case Notes**



**\*\*\*End of General Criteria d Evaluation\*\*\***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA E**

<b>General Criteria e:</b>	<input type="checkbox"/> <b>YES</b>	<input type="checkbox"/> <b>NO</b>	<input checked="" type="checkbox"/> <b>NE</b>
<b>Has a Conceptual Site Model that <u>Adequately</u> Assesses the Nature, Extent, and Mobility of the Release been Developed?</b>			

**LTCP Statement:** "The Conceptual Site Model (CSM) is a fundamental element of a comprehensive site investigation. The CSM establishes the source and attributes of the unauthorized release, describes all affected media (including soil, groundwater, and soil vapor as appropriate), describes local geology, hydrogeology and other physical site characteristics that affect contaminant environmental transport and fate, and identifies all confirmed and potential contaminant receptors (including water supply wells, surface water bodies, structures and their inhabitants). The CSM is relied upon by practitioners as a guide for investigative design and data collection. Petroleum release sites in California occur in a wide variety of hydrogeologic settings. As a result, contaminant fate and transport and mechanisms by which receptors may be impacted by contaminants vary greatly from location to location. Therefore, the CSM is unique to each individual release site. All relevant site characteristics identified by the CSM shall be assessed and supported by data so that the nature, extent and mobility of the release have been established to determine conformance with applicable criteria in this policy. The supporting data and analysis used to develop the CSM are not required to be contained in a single report and may be contained in multiple reports submitted to the regulatory agency over a period of time."

Has a CSM that <u>adequately</u> assesses the nature, extent, and mobility of the release in affected media in the vicinity of the site been developed?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																					
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Groundwater assessment?</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/> Yes</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/> No</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/> NA</td> </tr> <tr> <td>Surface water assessment?</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/> No</td> <td style="text-align: center;"><input type="checkbox"/> NA</td> </tr> <tr> <td>Soil assessment?</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/> No</td> <td style="text-align: center;"><input type="checkbox"/> NA</td> </tr> <tr> <td>Soil vapor assessment?</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/> No</td> <td style="text-align: center;"><input type="checkbox"/> NA</td> </tr> <tr> <td>Indoor Air assessment?</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/> No</td> <td style="text-align: center;"><input type="checkbox"/> NA</td> </tr> </table>	Groundwater assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA	Surface water assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA	Soil assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA	Soil vapor assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA	Indoor Air assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA			
Groundwater assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA																				
Surface water assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA																				
Soil assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA																				
Soil vapor assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA																				
Indoor Air assessment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA																				
Has the CSM been developed in accordance with industry standards?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA																				
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">SWRCB CA LUFT Manual, September 2012</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/> Yes</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/> No</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/> NA</td> </tr> <tr> <td>ITRC Vapor Intrusion Pathway: A Practical Guideline (ITRC 2007)</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input type="checkbox"/> No</td> <td style="text-align: center;"><input type="checkbox"/> NA</td> </tr> <tr> <td>ASTM Method 1689-95 - Standard Guide for Developing Conceptual Site Models for Contaminated Sites</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input type="checkbox"/> No</td> <td style="text-align: center;"><input type="checkbox"/> NA</td> </tr> <tr> <td>ASTM Method 2531-6 - Standard Guide for Development of Conceptual Models for Light Nonaqueous-Phase Liquids Released to the Subsurface</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input type="checkbox"/> No</td> <td style="text-align: center;"><input type="checkbox"/> NA</td> </tr> <tr> <td>DTSC Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (October 2011)</td> <td style="text-align: center;"><input type="checkbox"/> Yes</td> <td style="text-align: center;"><input type="checkbox"/> No</td> <td style="text-align: center;"><input type="checkbox"/> NA</td> </tr> </table>	SWRCB CA LUFT Manual, September 2012	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	ITRC Vapor Intrusion Pathway: A Practical Guideline (ITRC 2007)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	ASTM Method 1689-95 - Standard Guide for Developing Conceptual Site Models for Contaminated Sites	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	ASTM Method 2531-6 - Standard Guide for Development of Conceptual Models for Light Nonaqueous-Phase Liquids Released to the Subsurface	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	DTSC Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (October 2011)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SWRCB CA LUFT Manual, September 2012	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA																				
ITRC Vapor Intrusion Pathway: A Practical Guideline (ITRC 2007)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA																				
ASTM Method 1689-95 - Standard Guide for Developing Conceptual Site Models for Contaminated Sites	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA																				
ASTM Method 2531-6 - Standard Guide for Development of Conceptual Models for Light Nonaqueous-Phase Liquids Released to the Subsurface	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA																				
DTSC Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (October 2011)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA																				
Is the CSM presented in one comprehensive document or has a summary document been submitted that identifies the documents where the requisite CSM elements are located?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA																				
Is the CSM representative of current site conditions?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA																				
Does the final closure review validate the CSM?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA																				

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA E**

**Case Notes**

<b>Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with General Criteria e?</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Site history?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Receptor survey?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Description of releases?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Geologic and hydrogeologic assessment?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Identified stratigraphic and manmade migration pathways?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Identified controls on contaminant migration?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Delineation of the lateral and vertical extent of contamination in all affected media?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Assessment of vapor intrusion pathways?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Groundwater monitoring and evaluation of plume stability?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Description of the type and effectiveness of corrective actions?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Identification of data gaps?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**Case Notes:**

A CSM adequately addresses the nature and mobility of the release. The extent of impacts needs further assessment. Potential receptors need further assessment.

\*\*\*End of General Criteria e Evaluation\*\*\*

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA F**

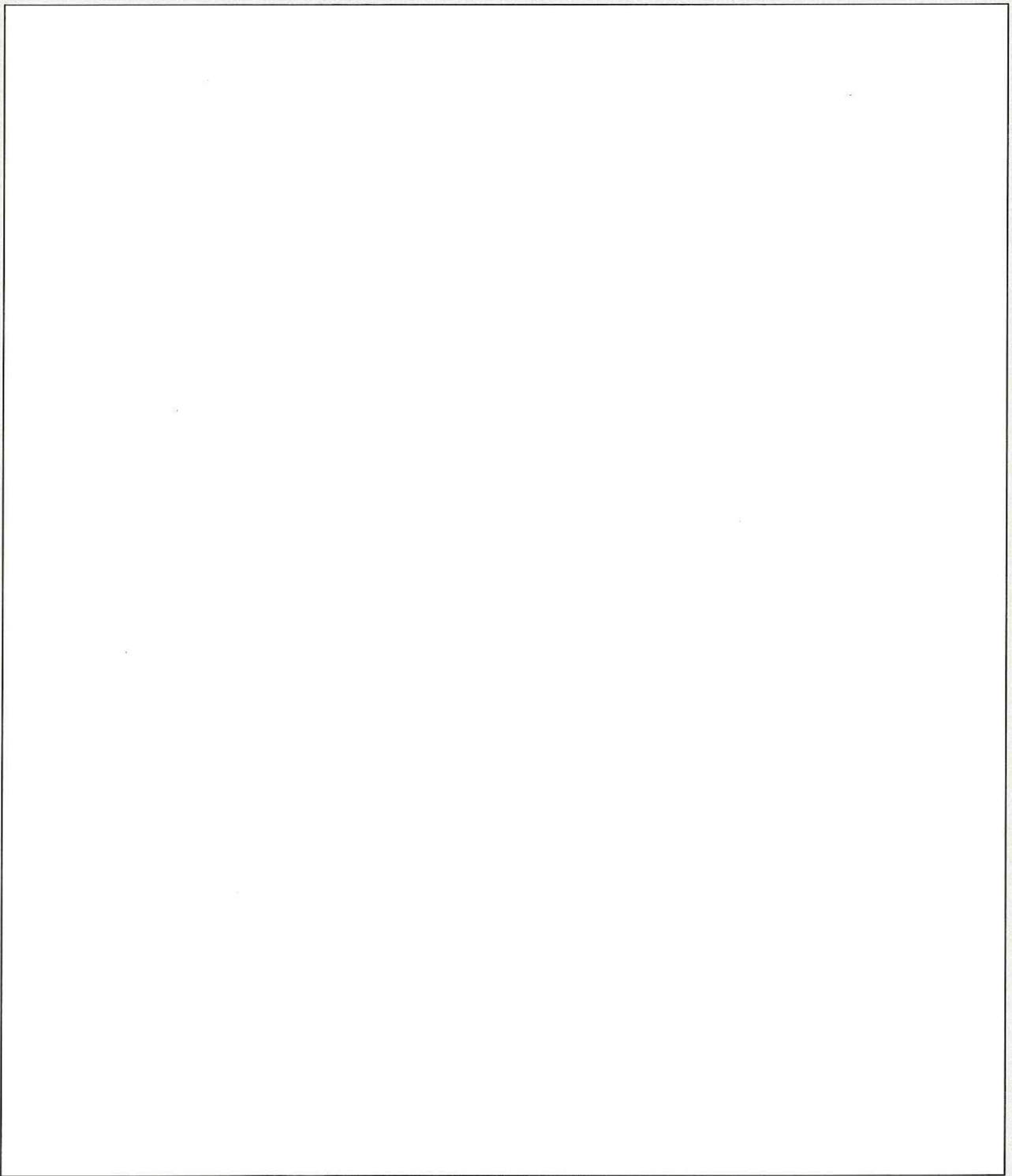
<b>General Criteria f:</b>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Has Secondary Source been Removed to the Extent Practicable?</b>				<b>YES</b>	<b>NO</b>	<b>NE</b>
<p><b>LTCP Statement:</b> "Secondary source" is defined as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Unless site attributes prevent secondary source removal (e.g. physical or infrastructural constraints exist whose removal or relocation would be technically or economically infeasible), petroleum-release sites are required to undergo secondary source removal to the extent practicable as described herein. "To the extent practicable" means implementing a cost-effective corrective action which removes or destroys-in-place the most readily recoverable fraction of source-area mass. It is expected that most secondary mass removal efforts will be completed in one year or less. Following removal or destruction of the secondary source, additional removal or active remedial actions shall not be required by regulatory agencies unless (1) necessary to abate a demonstrated threat to human health or (2) the groundwater plume does not meet the definition of low threat as described in this policy."</p>						
Has secondary source been removed to the extent practicable?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Petroleum-impacted soil?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE		
Petroleum-impacted groundwater?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE		
Is corrective action currently in progress to remove or destroy-in-place the most readily recoverable fraction of source-area mass?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NE
Petroleum-impacted soil remediation?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>		
Petroleum-impacted groundwater remediation?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>		
Have the current site remediation efforts been in progress for more than one year?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>
Petroleum-impacted soil?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
Petroleum-impacted groundwater?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
Is site remediation cost effective?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE		
Is site remediation progressing adequately?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE		
Are additional removal or active remedial actions necessary to remove or abate a demonstrated threat to human health?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Petroleum-impacted soil?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE		
Petroleum-impacted groundwater?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE		
<b>Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with General Criteria f?</b>				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
History of corrective actions for the site including the types of cleanup actions taken, dates of the actions, and mass removed?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Figures depicting the location(s) of the removal action?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Confirmation sampling results which demonstrate the effectiveness of secondary source removal?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Narrative description of the actions and areas of success or infeasibility of actions?				<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
For in-situ corrective actions, presentation of long-term monitoring data that demonstrate that concentration have not rebounded following the cessation of corrective action?				<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA
<b>(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)</b>						

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA F**

**Case Notes**



**\*\*\*End of General Criteria f Evaluation\*\*\***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA G**

**General Criteria g:**

**Has Soil or Groundwater been Tested for MTBE and Results Reported in Accordance with Health and Safety Code Section 25296.15?**

<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> NE
--	--------------------------------	--------------------------------

**LTCP Statement:** "Health and Safety Code section 25296.15 prohibits closing a UST case unless the soil, groundwater, or both, as applicable have been tested for MTBE and the results of that testing are known to the Regional Water Board. The exception to this requirement is where a regulatory agency determines that the UST that leaked has only contained diesel or jet fuel. Before closing a UST case pursuant to this policy, the requirements of section 25296.15, if applicable, shall be satisfied."

**Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with General Criteria g?**

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE

Presentation of sufficient data to assess whether MTBE is or was present in soil at or in the vicinity of the site?

Presentation of sufficient data to assess whether MTBE is or was present in groundwater at or in the vicinity of the site?

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

**Case Notes:**

Table 3A from the Site Assessment Report of April 2009 presents MTBE data for soil.  
The 2Q2012 monitoring report presents MTBE data for groundwater.

**\*\*\*End of General Criteria g Evaluation\*\*\***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA H**

<b>General Criteria h:</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Does a Nuisance as Defined by Water Code Section 13050 Exist at the Site?</b>		<b>YES</b>	<b>NO</b>	<b>NE</b>
<p><b>LTCP Statement:</b> "Water Code section 13050 defines "nuisance" as anything which meets <u>all</u> of the following requirements:</p> <p>(1) Is injurious to health, <u>or</u> is indecent or offensive to the senses, <u>or</u> an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.</p> <p>(2) Affects at the same time an entire community or neighborhood, <u>or</u> any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.</p> <p>(3) Occurs during, <u>or</u> as a result of, the treatment <u>or</u> disposal of wastes.</p> <p>For the purpose of this policy, waste means a petroleum release."</p>				
<b>Does a nuisance condition currently exist (or potentially could exist) as defined by the LTCP above?</b>		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Is injurious to health?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Is indecent or offensive to the senses?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Is an obstruction to the free use of property so as to interfere with the comfortable enjoyment of life or property?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Is a result of the treatment or disposal of waste?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
<b>Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with General Criteria h?</b>		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Description of whether site contamination is present in locations that have the potential to pose nuisance conditions during common or reasonably expected site activities?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Surface soils?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	
Near surface soils?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	
Utility corridors?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	
Groundwater?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	
Surface water?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	
Soil gas?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	
Basements or other subsurface structures?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	
Descriptions of the type and vertical and lateral extent of shallow soil?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Descriptions of the lateral extent of surface soil contamination, and depths to contamination?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Presentation of analytical results for surface soil, shallow soil, soil gas, groundwater, and surface water samples?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Discussion of odors or visual evidence of contamination?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Presentation of preferential pathway and utility conduit surveys?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Evaluation of potential points for exposure such as groundwater or free product seeps into basements or surface water bodies or conveyances?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Description of surface water runoff from the property to storm drains, other sites, or other surface water body receptors?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Description of the current and expected future use of the site and impacted or potentially impacted property in the site vicinity?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
<b>(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)</b>				

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

**LOW THREAT CLOSURE POLICY - GENERAL CRITERIA H**

**Case Notes**

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**\*\*\*End of General Criteria h Evaluation\*\*\***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - GROUNDWATER**

<b>Does the site meet the LTCP criteria for groundwater, <u>or</u> does the site qualify for the Soil Only Case exemption?</b>	<input type="checkbox"/> <b>YES</b>	<input type="checkbox"/> <b>NO</b>
--	--	---------------------------------------

**LTCP Statement:** "This policy describes criteria on which to base a determination that threats to existing and anticipated beneficial uses of groundwater have been mitigated or are de minimis, including cases that have not affected groundwater.

State Water Board Resolution 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* is a state policy for water quality control and applies to petroleum UST cases. Resolution 92-49 directs that water affected by an unauthorized release attain either background water quality or the best water quality that is reasonable if background water quality cannot be restored. Any alternative level of water quality less stringent than background must be consistent with the maximum benefit to the people of the state, not unreasonably affect current and anticipated beneficial use of affected water, and not result in water quality less than that prescribed in the water quality control plan for the basin within which the site is located. Resolution No. 92-49 does not require that the requisite level of water quality be met at the time of case closure; it specifies compliance with cleanup goals and objectives within a reasonable time frame.

Water quality control plans (Basin Plans) generally establish "background" water quality as a restorative endpoint. This policy recognizes the regulatory authority of the Basin Plans but underscores the flexibility contained in Resolution 92-49.

It is a fundamental tenet of this low-threat closure policy that if the closure criteria described in this policy are satisfied at a petroleum unauthorized release site, attaining background water quality is not feasible, establishing an alternate level of water quality not to exceed that prescribed in the applicable Basin Plan is appropriate, and that water quality objectives will be attained through natural attenuation within a reasonable time, prior to the expected need for use of any affected groundwater.

If groundwater with a designated beneficial use is affected by an unauthorized release, to satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed below. A plume that is "stable or decreasing" is a contaminant mass that has expanded to its maximum extent: the distance from the release where attenuation exceeds migration."

**"Sites with Releases that Have Not Affected Groundwater** - Sites with soil that does not contain sufficient mobile constituents [leachate, vapors, or light non-aqueous-phase liquids (LNAPL)] to cause groundwater to exceed the groundwater criteria in this policy shall be considered low-threat sites for the groundwater medium. Provided the general criteria and criteria for other media are also met, those sites are eligible for case closure. For older releases, the absence of current groundwater impact is often a good indication that residual concentrations present in the soil are not a source for groundwater pollution."

<b>Does the site qualify for the Soil Only Case EXEMPTION?</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No															
<b>If the site <u>does not</u> qualify for the soil only exemption, then, is the contaminant plume stable or decreasing in areal extent?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No															
<b>If the contaminant plume is stable or decreasing, then does it meet <u>all of the additional characteristics</u> of one of the five (5) LTCP classes?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Class 1</td> <td style="width: 20%; text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="width: 30%; text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 2px;">Class 2</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 2px;">Class 3</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 2px;">Class 4</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> <tr> <td style="padding: 2px;">Class 5</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> Yes</td> <td style="text-align: center; padding: 2px;"><input type="checkbox"/> No</td> </tr> </table>	Class 1	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Class 2	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Class 3	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Class 4	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Class 5	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Class 1	<input type="checkbox"/> Yes	<input type="checkbox"/> No															
Class 2	<input type="checkbox"/> Yes	<input type="checkbox"/> No															
Class 3	<input type="checkbox"/> Yes	<input type="checkbox"/> No															
Class 4	<input type="checkbox"/> Yes	<input type="checkbox"/> No															
Class 5	<input type="checkbox"/> Yes	<input type="checkbox"/> No															

**(Refer to Next Page for Contaminant Plume Classification Characteristics)**

(Media Specific Criteria for Groundwater Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation    NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - GROUNDWATER**

**Groundwater Contaminant Plume Classification Characteristics**

<b>If the Contaminant Plume is Stable or Decreasing, then</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
<b>Does the contaminant plume meet all of the additional characteristics of one of the five (5) LTCP classes listed below?</b>			
<b>Class 1</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Is < 100 feet in length	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
There is no free product	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
The nearest existing water supply well is > 250 feet from the defined plume boundary	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
The nearest existing surface water body is > 250 feet from the defined plume boundary	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
<b>Class 2</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Is < 250 feet in length	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
There is no free product	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
The nearest existing water supply well is > 1,000 feet from the defined plume boundary	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
The nearest existing surface water body is > 1,000 feet from the defined plume boundary	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NE
The dissolved concentration of benzene is <3,000 µg/L	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
The dissolved concentration of MTBE is <1,000 µg/L	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NE
<b>Class 3</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Is < 250 feet in length	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Free product has been removed to the maximum extent practicable, may still be present below the site where the release originated, but does not extend off-site	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
The plume has been stable or decreasing for a minimum of 5 years	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
The nearest existing water supply well is > 1,000 feet from the defined plume boundary	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
The nearest existing surface water body is > 1,000 feet from the defined plume boundary	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NE
The property owner is willing to accept a land use restriction if the regulatory agency requires a land use restriction as a condition for closure	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
<b>Class 4</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Is < 1,000 feet in length	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
There is no free product	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
The nearest existing water supply well or surface water body is > 1,000 feet from the defined plume boundary	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NE
The nearest existing surface water body is > 1,000 feet from the defined plume boundary	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NE
The dissolved concentration of benzene is <1,000 µg/L	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
The dissolved concentration of MTBE is <1,000 µg/L	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NE
<b>Class 5</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE
Based on an analysis of site specific conditions at the site under current and reasonable anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE

(Media Specific Criteria for Groundwater Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - GROUNDWATER**

**Sites Not Meeting the Characteristics of the Five Groundwater Plume Classes**

Indicate those conditions that do not meet the characteristics of one of the five classes of sites listed in the LTCP.

<b>Plume Length (That Exceeds Water Quality Objectives)</b>			
≥ 100 feet and < 250 feet	<input type="checkbox"/>	Yes	
≥ 250 feet and < 1,000 feet	<input type="checkbox"/>	Yes	
≥ 1,000 feet	<input type="checkbox"/>	Yes	
Unknown	<input checked="" type="checkbox"/>	Yes	
<b>For Sites with Free Product</b>			
Free product in groundwater	<input type="checkbox"/>	Yes	<input type="checkbox"/> No <input type="checkbox"/> UNK
Free product has been removed to the maximum extent practicable	<input checked="" type="checkbox"/>		<input type="checkbox"/> No <input type="checkbox"/> UNK
The plume has been stable or decreasing for 5-Years	<input type="checkbox"/>		<input type="checkbox"/> No <input checked="" type="checkbox"/> UNK
The owner is willing to accept a Land Use Restriction (if required)	<input type="checkbox"/>		<input type="checkbox"/> No <input checked="" type="checkbox"/> UNK
Free product extends offsite	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> <input type="checkbox"/> UNK
<b>Benzene Concentration</b>			
≥ 1,000 µg/L and < 3,000 µg/L	<input checked="" type="checkbox"/>	Yes	
≥ 3,000 µg/L	<input type="checkbox"/>	Yes	
Unknown	<input type="checkbox"/>	Yes	
<b>MTBE Concentration</b>			
≥ 1,000 µg/L	<input checked="" type="checkbox"/>	Yes	
Unknown	<input type="checkbox"/>	Yes	
<b>Nearest Supply Well (From Plume Boundary)</b>			
≤ 250 Feet	<input type="checkbox"/>	Yes	
> 250 Feet and ≤ 1,000 Feet	<input type="checkbox"/>	Yes	
Unknown	<input checked="" type="checkbox"/>	Yes	
<b>Nearest Surface Water Body (From Plume Boundary)</b>			
≤ 250 Feet	<input type="checkbox"/>	Yes	
> 250 Feet and ≤ 1,000 Feet	<input checked="" type="checkbox"/>	Yes	
Unknown	<input checked="" type="checkbox"/>	Yes	

**KEY: NE = Identified Data Gap - Needs Further Evaluation    NA = Not Applicable**

**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - GROUNDWATER**

**CSM Minimum Required Information**

<b>Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with Media Specific Criteria for Groundwater?</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Sufficient data been presented to demonstrate that site characterization activities have defined the horizontal and vertical extent of the plume?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Demonstration of plume stability using a valid technical analysis that considers the accuracy of data from the wells, well placement within the plume, and changes in horizontal and vertical extent of the plume?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Evaluation of factors such as seasonal variability, water level changes, sampling methods, well construction, and other factors that can affect data quality?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
A recent well survey that uses all available well information from both the Department of Water Resources and local agencies (Zone 7 Water Agency of Alameda County Public Works as appropriate)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
The location of surface water bodies and water supply wells located within 2,000 feet of the site presented on a site figure with benzene and MTBE isoconcentration contours?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
A table identifying each water supply well along with the well construction details?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
A discussion of surface water bodies within 2,000 feet of the site and details on hydraulic connection with the groundwater plume?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
A discussion of current and reasonable anticipated near-term future scenarios at the site and in the vicinity of the site and possible Land Use Restrictions?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA

(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - GROUNDWATER**

**Case Notes**

On page 18 the Benzene concentration "Yes" should not be checked.  
On page 18 the Nearest Surface Water Body "Unknown" should not be checked.

**\*\*\*End of Groundwater Criteria Evaluation\*\*\***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - VAPOR INTRUSION TO INDOOR AIR**

<b>Does the site meet one of the three petroleum vapor intrusion to indoor air specific criteria (a, b, or c), <u>or</u> qualify for the active commercial fueling facility exemption?</b>		<input type="checkbox"/> <b>YES</b>	<input type="checkbox"/> <b>NO</b>
<p><b>LTCP Statement:</b> "Exposure to petroleum vapors migrating from soil or groundwater to indoor air may pose unacceptable human health risks. This policy describes conditions, including bioattenuation zones, which if met will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks. In many petroleum release cases, potential human exposures to vapors are mitigated by bioattenuation processes as vapors migrate toward the ground surface. For the purposes of this section, the term "bioattenuation zone" means an area of soil with conditions that support biodegradation of petroleum hydrocarbon vapors.</p> <p>The low-threat vapor-intrusion criteria described below apply to sites where the release originated and impacted or potentially impacted adjacent parcels when:</p> <p>(1) existing buildings are occupied or may be reasonably expected to be occupied in the future, <u>or</u></p> <p>(2) buildings for human occupancy are reasonably expected to be constructed in the future.</p> <p>Appendices 1 through 4 (attached) illustrate four potential exposure scenarios and describe characteristics and criteria associated with each scenario. Petroleum release sites shall satisfy the media-specific criteria for petroleum vapor intrusion to indoor air and be considered low-threat for the vapor-intrusion-to-indoor-air pathway if:</p> <p>a. Site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1 through 3 as applicable, or all of the characteristics and criteria of scenario 4 as applicable; <u>or</u></p> <p>b. A site-specific risk assessment for the vapor intrusion pathway is conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency; <u>or</u></p> <p>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health.</p> <p>Exception: Exposures to petroleum vapors associated with historical fuel system releases are comparatively insignificant relative to exposures from small surface spills and fugitive vapor releases that typically occur at active fueling facilities. Therefore, satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk."</p>			
<b>Does the site qualify for an EXEMPTION from the Petroleum Vapor Intrusion to Indoor Air criteria (i.e., the site is an active commercial petroleum fueling facility)?</b>		<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
Are release characteristics reasonably believed to pose an unacceptable health risk to facility users or nearby facilities?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input checked="" type="checkbox"/> NE	
<b>a. Do site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1 through 3 as applicable, <u>or</u> all of the characteristics and criteria of scenario 4?</b>		<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
Scenario 1: Unweathered LNAPL in groundwater		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Scenario 2: Unweathered LNAPL in soil		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Scenario 3: Dissolved benzene concentrations in groundwater (oxygen ≥ 4%)		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Scenario 4: Dissolved phase benzene concentrations in groundwater (oxygen < 4%)		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>(Refer to Next Page for Scenario 1 through 4 Characteristics)</b>			
<b>b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?</b>		<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
<b>c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?</b>		<input type="checkbox"/> <b>Yes</b>	<input type="checkbox"/> <b>No</b>
(Media Specific Criteria for Vapor Intrusion to Indoor Air Evaluation Continued on Next Page)			

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - VAPOR INTRUSION TO INDOOR AIR**

**Scenarios 1 through 3: Bioattenuation Zone Characteristics**

**Scenario 1: Unweathered LNAPL in Groundwater**

The bioattenuation zone is a continuous zone provides a separation of at least 30 feet vertically between the LNAPL in groundwater and the foundation of existing or potential buildings; <u>and</u>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	<input checked="" type="checkbox"/> NA
Total TPH (TPH-g and TPH-d combined) are less than 100 mg/kg throughout the entire depth of the bioattenuation zone	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA

**Scenario 2: Unweathered LNAPL in Soil**

The bioattenuation zone is a continuous zone that provides a separation of at least 30 feet vertically between the LNAPL in soil and the foundation of existing or potential buildings; <u>and</u>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE	<input checked="" type="checkbox"/> NA
Total TPH (TPH-g and TPH-d combined) are <100 mg/kg throughout the entire lateral and vertical extent of the bioattenuation zone	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA

**Scenario 3: Dissolved Phase Benzene Concentrations in Groundwater**

<b>Sites without oxygen data or where oxygen is &lt;4% and benzene concentrations &lt; 100 µg/l (Figure A)</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
The bioattenuation zone is a continuous zone that provides a separation of at least 5 feet vertically between the dissolved phase benzene and the foundation of existing or potential buildings; <u>and</u>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Contains total TPH (TPH-g and TPH-d combined) < 100 mg/kg throughout the entire depth of the bioattenuation zone	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>Sites without oxygen data or where oxygen is &lt;4% and benzene concentrations ≥ 100 µg/L but &lt; 1,000 µg/L (Figure B)</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
The bioattenuation zone is a continuous zone that provides a separation of at least 10 feet vertically between the dissolved phase benzene and the foundation of existing or potential buildings	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>Sites with oxygen ≥ 4% and benzene concentrations &lt; 1,000 µg/L (Figure C)</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
A continuous zone that provides a separation of at least 10 feet vertically between the dissolved phase benzene and the foundation of existing or potential buildings	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Contains total TPH (TPH-g and TPH-d combined) < 100 mg/kg throughout the entire depth of the bioattenuation zone	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA

(LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - VAPOR INTRUSION TO INDOOR AIR**

**Scenario 4 Characteristics: Direct Measurement of Soil Gas Concentrations  
(No Bioattenuation Zone)**

Were soil gas samples obtained from the required locations?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>Beneath or adjacent to an existing building:</b> Soil gas samples collected at least 5 feet below the bottom of the building foundation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>Future construction:</b> Soil gas samples from at least five feet below ground surface	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Were soil gas samples collected in accordance with DTSC Advisory with DTSC Advisory – Active Soil Gas Investigations (April 2012)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA

Are <u>all</u> of the following criteria for a bioattenuation zone satisfied?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
There is a minimum of five vertical feet of soil between the soil vapor measurements and the foundation of an existing building or ground surface of future construction; <u>and</u>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
TPH (TPHg + TPHd) is less than 100 mg/kg (measured in at least two depths within the five-foot zone); <u>and</u>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Oxygen is ≥ 4% measured at the bottom of the five-foot zone	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA

If the bioattenuation zone criteria are <u>all satisfied</u> , then do soil gas concentrations meet the following criteria?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>Residential</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Benzene <85,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Ethylbenzene <1,100,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Napthalene <93,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>Commercial</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Benzene <280,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Ethylbenzene <3,600,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Napthalene <310,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA

If the bioattenuation zone criteria are <u>not satisfied</u> , then do soil gas concentrations meet the following criteria?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>Residential</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Benzene <85 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Ethylbenzene <1,100 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Napthalene <93 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
<b>Commercial</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Benzene <280 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Ethylbenzene <3,600 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA
Napthalene <310 µg/m <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NE	<input type="checkbox"/> NA

(LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - VAPOR INTRUSION TO INDOOR AIR**

**Additional questions for sites that do not meet the LTCP Criteria (a, b, or c):**

<b>Soil Gas Samples</b>	
Insufficient number to be representative	<input type="checkbox"/> Yes
Temporal variability not evaluated	<input type="checkbox"/> Yes
No soil gas samples	<input checked="" type="checkbox"/> Yes
Taken incorrectly	<input type="checkbox"/> Yes
Not taken at two depths within 5 foot zone	<input type="checkbox"/> Yes
High spatial or temporal variability	<input type="checkbox"/> Yes
Insufficient analytes	<input type="checkbox"/> Yes
<b>Exposure Type</b>	
Residential	<input type="checkbox"/> Yes
Commercial	<input type="checkbox"/> Yes
<b>Free Product</b>	
In groundwater	<input type="checkbox"/> Yes
In soil	<input type="checkbox"/> Yes
Unknown	<input type="checkbox"/> Yes
<b>TPH in the Bioattenuation Zone</b>	
< 5 feet (No Biozone)	<input type="checkbox"/> Yes
≥ 5 feet and < 10 feet	<input type="checkbox"/> Yes
≥ 10 feet and < 30 feet	<input type="checkbox"/> Yes
≥ 30 Feet	<input type="checkbox"/> Yes
30 Feet BioZone compromised (TPH>100 µg/L)	<input type="checkbox"/> Yes
Unknown	<input checked="" type="checkbox"/> Yes
<b>Oxygen Data in Bioattenuation Zone</b>	
No oxygen data	<input checked="" type="checkbox"/> Yes
Oxygen < 4%	<input type="checkbox"/> Yes
Oxygen ≥ 4%	<input type="checkbox"/> Yes
<b>Benzene in Groundwater</b>	
≥ 100 µg/L and < 1,000 µg/L	<input checked="" type="checkbox"/> Yes
≥ 1,000 µg/L	<input type="checkbox"/> Yes
Unknown	<input type="checkbox"/> Yes
<b>Soil Gas Benzene</b>	
≥ 85 µg/m <sup>3</sup> and < 280 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
≥ 280 µg/m <sup>3</sup> and < 85,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
≥ 85,000 µg/m <sup>3</sup> and < 280,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
≥ 280,000 µg/m <sup>3</sup>	<input type="checkbox"/>
Unknown	<input checked="" type="checkbox"/> Yes
<b>Soil Gas Ethylbenzene</b>	
≥ 1,100 µg/m <sup>3</sup> and < 3,600 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
≥ 3,600 µg/m <sup>3</sup> and < 1,100,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
≥ 1,100,000 µg/m <sup>3</sup> and < 3,600,000	<input type="checkbox"/> Yes
≥ 3,600,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
Unknown	<input checked="" type="checkbox"/> Yes
<b>Soil Gas Napthalene</b>	
≥ 93 µg/m <sup>3</sup> and < 310 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
≥ 310 µg/m <sup>3</sup> and < 93,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
≥ 93,000 µg/m <sup>3</sup> and < 310,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
≥ 310,000 µg/m <sup>3</sup>	<input type="checkbox"/> Yes
Unknown	<input checked="" type="checkbox"/>

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - VAPOR INTRUSION TO INDOOR AIR**

**CSM Minimum Required Information**

<b>Has the <u>minimum required information</u> listed below been provided in the CSM for evaluation of case compliance with the Media Specific Criteria for Vapor Intrusion to Indoor Air?</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Sufficient data to demonstrate that site characterization is complete and that the data demonstrate that the site-specific conditions satisfy all the assumptions, characteristics, and screening criteria of scenarios 1 through 3, <u>or</u> all the assumptions, characteristics, and screening criteria of scenario 4?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Evidence of unweathered LNAPL in soil or groundwater?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Soil data to demonstrate that total TPH concentrations (TPH-g and TPH-d combined) in soil are < 100 mg/kg throughout the specified bioattenuation zone depth?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Depth of foundation of existing or potential buildings?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Soil gas data to demonstrate that a continuous bioattenuation zone is or is not present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Concentrations of benzene in groundwater?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Oxygen data in the bioattenuation zone?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Results and evaluation of preferential pathway and utility conduit surveys to determine whether a continuous bioattenuation zone is present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Evaluation of data representativeness, quality, spatial distribution, and temporal variability relative to current or potential receptors and sources?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA
Evaluation to assess whether nearby facilities potentially may be impacted by petroleum vapor intrusion?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Sufficient data to demonstrate that through the use of mitigation measures or institutional controls, exposure to petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA

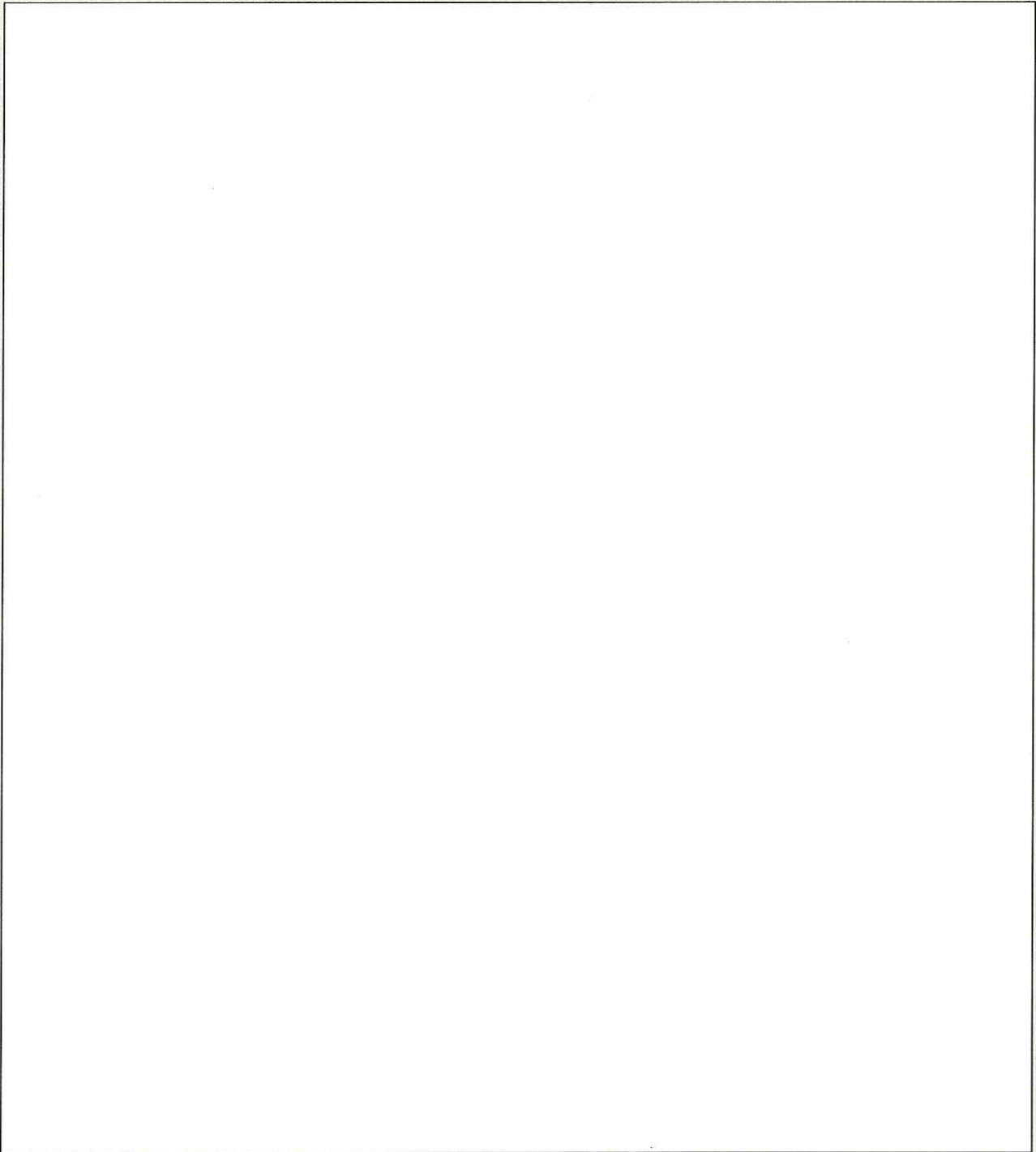
(Refer to Att. 1 - CSM Checklist for Identification of Data Gaps)

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - VAPOR INTRUSION TO INDOOR AIR**

**Case Notes**



**\*\*\*End of Vapor Intrusion to Indoor Air Evaluation\*\*\***

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**

**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - DIRECT CONTACT AND OUTDOOR AIR EXPOSURE**

<b>Does the site satisfy the Media-Specific Criteria for Direct Contact and Outdoor Air Exposure, <u>or</u> does the site qualify for the exemption?</b>	<input type="checkbox"/> <b>YES</b>	<input type="checkbox"/> <b>NO</b>
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**LTCP Statement:** "This policy describes conditions where direct contact with contaminated soil or inhalation of contaminants volatilized to outdoor air poses a low threat to human health. Release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if they meet any of the following:

- a. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs). The concentration limits for 0 to 5 feet bgs protect from ingestion of soil, dermal contact with soil, and inhalation of volatile soil emissions and inhalation of particulate emissions. The 5 to 10 feet bgs concentration limits protect from inhalation of volatile soil emissions. Both the 0 to 5 feet bgs concentration limits and the 5 to 10 feet bgs concentration limits for the appropriate site classification (Residential or Commercial/Industrial) shall be satisfied. In addition, if exposure to construction workers or utility trench workers is reasonably anticipated, the concentration limits for Utility Worker shall also be satisfied; or
- b. Maximum concentration of petroleum constituents in soil are less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health; or
- c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health."

<b>Does the site qualify for an EXEMPTION from Direct Contact and Outdoor Air Exposure Criteria (i.e., is the upper 10 feet of soil free of petroleum contamination)?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No									
<b>If the site does not qualify for the exemption, then does the site satisfy the media-specific criteria (a, b, <u>or</u> c) for direct contact and outdoor air exposure?</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No									
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px;">           a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth bgs?  <b>(Refer to Next Page for Concentrations Limits Evaluation)</b> </td> <td style="width: 10%; text-align: center; padding: 5px;"> <input type="checkbox"/> Yes         </td> <td style="width: 10%; text-align: center; padding: 5px;"> <input type="checkbox"/> No         </td> </tr> <tr> <td style="padding: 5px;">           b. Are the maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?         </td> <td style="text-align: center; padding: 5px;"> <input type="checkbox"/> Yes         </td> <td style="text-align: center; padding: 5px;"> <input type="checkbox"/> No         </td> </tr> <tr> <td style="padding: 5px;">           c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?         </td> <td style="text-align: center; padding: 5px;"> <input type="checkbox"/> Yes         </td> <td style="text-align: center; padding: 5px;"> <input type="checkbox"/> No         </td> </tr> </table>	a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth bgs? <b>(Refer to Next Page for Concentrations Limits Evaluation)</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	b. Are the maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth bgs? <b>(Refer to Next Page for Concentrations Limits Evaluation)</b>	<input type="checkbox"/> Yes	<input type="checkbox"/> No									
b. Are the maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?	<input type="checkbox"/> Yes	<input type="checkbox"/> No									
c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?	<input type="checkbox"/> Yes	<input type="checkbox"/> No									

(Media Specific Criteria for Direct Contact and Outdoor Air Exposure Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation    NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - DIRECT CONTACT AND OUTDOOR AIR EXPOSURE**

**Maximum Concentrations of Petroleum Constituents in Soil (Scenario a)**

**Table 1 – Concentrations of Petroleum Constituents in Soil  
That will Have No Significant Risk of Adversely Affecting Human Health**

Chemical	Residential		Commercial/Industrial		Utility Worker
	0 to 5 ft bgs (mg/kg)	5 to 10 ft bgs (mg/kg)	0 to 5 ft bgs (mg/kg)	5 to 10 ft bgs (mg/kg)	0 to 10 ft bgs (mg/kg)
<b>Benzene</b>	1.9	2.8	8.2	12	14
<i>Max Soil Conc<sup>1</sup></i>	U.66 <i>Insert</i>	U.27 <i>Insert</i>	U.66 <i>Insert</i>	U.27 <i>Insert</i>	U.66 <i>Insert</i>
<b>Ethylbenzene</b>	21	32	89	134	314
<i>Max Soil Conc<sup>1</sup></i>	U.12 <i>Insert</i>	U.064 <i>Insert</i>	U.12 <i>Insert</i>	U.064 <i>Insert</i>	U.12 <i>Insert</i>
<b>Napthalene</b>	9.7	9.7	45	45	219
<i>Max Soil Conc<sup>1</sup></i>	<i>Insert</i>	<i>Insert</i>	<i>Insert</i>	<i>Insert</i>	<i>Insert</i>
<b>PAH</b>	0.063	NA	0.68	NA	4.5
<i>Max Soil Conc<sup>1</sup></i>	<i>Insert</i>	<i>Insert</i>	<i>Insert</i>	<i>Insert</i>	<i>Insert</i>

Notes:

1. The maximum concentrations of petroleum constituents in soil should be compared to those listed in Table 1 (Technical Justification for Soil Screening Levels for Direct Contact and Outdoor Air Exposure Pathways, SWRCB)
2. Based on the seven carcinogenic poly-aromatic hydrocarbons (PAHs) as benzo(a)pyrene toxicity equivalent [BaPe]. Sampling and analysis for PAHs is only necessary where soil is affected by either waste oil or Bunker C oil.

**Are both the 0 to 5 feet bgs concentration limits 5 to 10 feet bgs concentration limits for the appropriate site classification satisfied?**

Yes     No     NE

Residential: 0 to 5 feet bgs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Residential: 5 to 10 feet bgs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Commercial/Industrial: 0 to 5 feet bgs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Commercial/Industrial: 5 to 10 feet bgs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE

**If exposure to construction or utility trench workers is reasonably anticipated, are the concentration limits for the Utility Worker satisfied?**

Yes     No     NE

**Have the requirements for using the screening levels in Table 1 been satisfied (i.e., have the model assumptions presented in the SWRCB document entitled "Technical Justification for Soil Screening Levels for Direct Contact and Outdoor Air Exposure Pathways" been met?**

Yes     No     NE

Is the area of impacted soil where a particular exposure occurs ≤ 82 feet by 82 feet?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Is the receptor located at the downgradient edge for inhalation exposure?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Is the wind speed < 2.25 meters per second (7.38 feet per second) on average?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE
Are there different exposure scenarios than residential, commercial/industrial, utility worker) at the site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NE

(LTCP Media Specific Criteria for Direct Contact and Outdoor Air Exposure Evaluation Continued on Next Page)

**KEY: NE = Identified Data Gap - Needs Further Evaluation    NA = Not Applicable**

**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - DIRECT CONTACT AND OUTDOOR AIR EXPOSURE**

**Additional Questions FOR Sites That Do Not Meet the LTCP Criteria**

Indicate only those conditions that do not meet the Direct Contact and Outdoor Air Exposure scenarios:

<b>Exposure Type:</b>	
Residential	<input type="checkbox"/> Yes
Commercial	<input type="checkbox"/> Yes
Utility Worker	<input type="checkbox"/> Yes
<b>Petroleum Constituents in Soil:</b>	
≤ 5 feet bgs	<input type="checkbox"/> Yes
> 5 feet bgs and ≤ 10 feet bgs	<input type="checkbox"/> Yes
Unknown	<input type="checkbox"/> Yes
<b>Soil Concentrations of Benzene:</b>	
> 1.9 mg/kg and ≤ 2.8 mg/kg	<input type="checkbox"/> Yes
> 2.8 mg/kg and ≤ 8.2 mg/kg	<input type="checkbox"/> Yes
> 8.2 mg/kg and ≤ 12 mg/kg	<input type="checkbox"/> Yes
> 12 mg/kg and ≤ 14 mg/kg	<input type="checkbox"/>
> 14 mg/kg	<input type="checkbox"/> Yes
Unknown	<input checked="" type="checkbox"/> Yes
<b>Soil Concentrations of Ethylbenzene:</b>	
> 21 mg/kg and ≤ 32 mg/kg	<input type="checkbox"/> Yes
> 32 mg/kg and ≤ 89 mg/kg	<input type="checkbox"/> Yes
> 89 mg/kg and ≤ 134 mg/kg	<input type="checkbox"/> Yes
> 134 mg/kg and ≤ 314 mg/kg	<input type="checkbox"/> Yes
> 314 mg/kg	<input type="checkbox"/> Yes
Unknown	<input checked="" type="checkbox"/> Yes
<b>Soil Concentrations of Naphthalene:</b>	
> 9.7 mg/kg and ≤ 45 mg/kg	<input type="checkbox"/> Yes
> 45 mg/kg and ≤ 219 mg/kg	<input type="checkbox"/> Yes
> 219 mg/kg	<input type="checkbox"/> Yes
Unknown	<input checked="" type="checkbox"/> Yes
<b>Soil Concentrations of PAH:</b>	
> 0.063 mg/kg and ≤ 0,68 mg/kg	<input type="checkbox"/> Yes
> 0.68 mg/kg and ≤ 4.5 mg/kg	<input type="checkbox"/> Yes
> 4.5 mg/kg	<input type="checkbox"/> Yes
Unknown	<input checked="" type="checkbox"/>
<b>Area of Impacted Soil:</b>	
Area of Impacted Soil > 82 by 82 Feet	<input type="checkbox"/> Yes
Unknown	<input checked="" type="checkbox"/> Yes

This case should be closed in spite of not meeting policy criteria:  Yes

List Reasons:

**KEY: NE = Identified Data Gap - Needs Further Evaluation NA = Not Applicable**



**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - DIRECT CONTACT AND OUTDOOR AIR EXPOSURE**

**CSM Minimum Required Information**

<b>Has the minimum required information listed below been provided in the CSM for evaluation of case compliance with following Media Specific Criteria for Direct Contact and Outdoor Air Exposure?</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Sufficient data to demonstrate that site characterization is complete for the prescribed depth ranges of 0 to 5 feet and 5 to 10 feet bgs in order to assess potential direct contact and outdoor air exposure?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Figures and tables showing the soil data for each of the prescribed depth ranges with a comparison to the screening levels for each exposure scenario?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Analytical data for all chemicals of concern including total petroleum hydrocarbons in order and an assessment of whether unique conditions not considered in the Policy may exist at the site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Evaluation of data for data representativeness, quality, spatial distribution relative to current or potential receptors and sources, and temporal variability?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
Description of the current and expected future land use, redevelopment, or construction for the site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
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	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA

**(Refer to Att. 1 - CSM Detailed Evaluation Checklist for Identification of Data Gaps)**

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**LOW THREAT CLOSURE POLICY  
MEDIA SPECIFIC CRITERIA - DIRECT CONTACT AND OUTDOOR AIR EXPOSURE**

**Direct Contact and Outdoor Air Exposure: Case Notes**

On page 29 the Soil Concentration of Benzene Unknown "Yes" should not be checked.  
On page 29 the Soil Concentration of Ethylbenzene Unknown "Yes" should not be checked.

**\*\*\*End of Direct Contact and Outdoor Air Exposure Criteria Evaluation\*\*\***

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