STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2013-0067-UST

In the Matter of Underground Storage Tank Case Closure Pursuant to Health and Safety Code Section 25296.40 and the Low-Threat Underground Storage Tank Case Closure Policy

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BY THE EXECUTIVE DIRECTOR:[1]

By this order, the Executive Director directs closure of the underground storage tank (UST) case at the site listed below, pursuant to subdivision (a) of section 25296.40 of the Health and Safety Code.[2] The name of the petitioner, the site name, the site address, the Underground Storage Tank Cleanup Fund (Fund) claim number if applicable, the lead agency, and case number are as follows:

Mr. John Porter
The Benbow Inn
445 Lake Benbow Drive, Garberville, CA 95542
Fund Claim No. 16837
Humboldt County Local Oversight Program, Case No. 12783

I. STATUTORY AND PROCEDURAL BACKGROUND

Upon receipt of a petition from a UST owner, operator, or other responsible party, section 25296.40 authorizes the State Water Resources Control Board (State Water Board) to close or require closure of a UST case where an unauthorized release has occurred, if the State Water Board determines that corrective action at the site is in compliance with all of the requirements of subdivisions (a) and (b) of section 25296.10. The State Water Board, or in certain cases the State Water Board Executive Director, may close a case or require the closure

[1] State Water Board Resolution No. 2012-0061 delegates to the Executive Director the authority to close or require the closure of any UST case if the case meets the criteria found in the State Water Board's Low-Threat Underground Storage Tank Case Closure Policy adopted by State Water Board Resolution No. 2012-0016.

[2] Unless otherwise noted, all references are to the California Health and Safety Code.

of a UST case. Closure of a UST case is appropriate where the corrective action ensures the protection of human health, safety, and the environment and where the corrective action is consistent with: 1) Chapter 6.7 of division 20 of the Health and Safety Code and implementing regulations; 2) Any applicable waste discharge requirements or other orders issued pursuant to division 7 of the Water Code; 3) All applicable state policies for water quality control; and 4) All applicable water quality control plans.

State Water Board staff has completed a review of the UST case identified above, and recommends that this case be closed. The recommendation is based upon the facts and circumstances of this particular UST case. A UST Case Closure Summary has been prepared for the case identified above and the bases for determining compliance with the Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closures (Low-Threat Closure Policy or Policy) are explained in the Case Closure Summary.

Low-Threat Closure Policy

In State Water Board Resolution No. 2012-0016, the State Water Board adopted the Low-Threat Closure Policy. The Policy became effective on August 17, 2012. The Policy establishes consistent statewide case closure criteria for certain low-threat petroleum UST sites. In the absence of unique attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents, cases that meet the general and media-specific criteria in the Low-Threat Closure Policy pose a low-threat to human health, safety, and the environment and are appropriate for closure under Health and Safety Code section 25296.10. The Policy provides that if a regulatory agency determines that a case meets the general and media-specific criteria of the Policy, then the regulatory agency shall notify responsible parties and other specified interested persons that the case is eligible for case closure. Unless the regulatory agency revises its determination based on comments received on the proposed case closure, the Policy provides that the agency shall issue a uniform closure letter as specified in Health and Safety Code section 25296.10. The uniform closure letter may only be issued after the expiration of the 60-day comment period, proper destruction or maintenance of monitoring wells or borings, and removal of waste associated with investigation and remediation of the site.

Health and Safety Code section 25299.57, subdivision (l)(1) provides that claims for reimbursement of corrective action costs that are received by the Fund more than 365 days after the date of a uniform closure letter or a letter of commitment, whichever occurs later, shall not be reimbursed unless specified conditions are satisfied.

II. FINDINGS

Based upon the UST Case Closure Summary prepared for the case attached hereto, the State Water Board finds that corrective action taken to address the unauthorized release of petroleum at the UST release site identified as:

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ensures protection of human health, safety, and the environment and is consistent with Chapter 6.7 of division 20 of the Health and Safety Code, and implementing regulations, the Low-Threat Closure Policy and other water quality control policies and applicable water quality control plans.

Pursuant to the Low-Threat Closure Policy, notification has been provided to all entities that are required to receive notice of the proposed case closure, a 60-day comment period has been provided to notified parties, and any comments received have been considered by the State Water Board in determining that the case should be closed.

The UST case identified above may be the subject of orders issued by the Regional Water Quality Control Water Board (Regional Water Board) pursuant to division 7 of the Water Code. Any orders that have been issued by the Regional Water Board pursuant to division 7 of the Water Code, or directives issued by a Local Oversight Program (LOP) agency for this case should be rescinded to the extent they are inconsistent with this Order.

III. ORDER

IT IS THEREFORE ORDERED that:

A. The UST case identified in Section II of this Order, meeting the general and media-specific criteria established in the Low-Threat Closure Policy, be closed in accordance with the following conditions and after the following actions are complete. Prior to the issuance of a uniform closure letter, the Petitioner is ordered to:

1. Properly destroy monitoring wells and borings unless the owner of real property on which the well or boring is located certifies that the wells or borings will be maintained in accordance with local or state requirements;

2. Properly remove from the site and manage all waste piles, drums, debris, and other investigation and remediation derived materials in accordance with local or state requirements; and

3. Within six months of the date of this Order, submit documentation to the regulatory agency overseeing the UST case identified in Section II of this Order that the tasks in subparagraphs (1) and (2) have been completed.

B. The tasks in subparagraphs (1) and (2) of Paragraph (A) are ordered pursuant to Health and Safety Code section 25296.10 and failure to comply with these requirements may result in the imposition of civil penalties pursuant to Health and Safety Code section 25299, subdivision (d)(1). Penalties may be imposed administratively by the State Water Board or Regional Water Board.

C. Within 30 days of receipt of proper documentation from the Petitioner that requirements in subparagraphs (1) and (2) of Paragraph (A) are complete, the regulatory agency that is responsible for oversight of the UST case identified in Section II of this Order shall notify the State Water Board that the tasks have been satisfactorily completed.

D. Within 30 days of notification from the regulatory agency that the tasks are complete pursuant to Paragraph (C), the Deputy Director of the Division of Water Quality shall issue a uniform closure letter consistent with Health and Safety Code section 25296.10, subdivision (g) and upload the uniform closure letter and UST Case Closure Summary to GeoTracker.

E. As specified in Health and Safety Code section 25299.39.2, subdivision (a) (2), corrective action costs incurred after a recommendation of closure shall be limited to $10,000 per year unless the State Water Board or its delegated representative agrees that corrective action in excess of that amount is necessary to meet closure requirements, or additional corrective actions are necessary pursuant to section 25296.10, subdivision (a) and (b). Pursuant to section 25299.57, subdivision (l) (1), and

except in specified circumstances, all claims for reimbursement of corrective action costs must be received by the Fund within 365 days of issuance of the uniform closure letter in order for the costs to be considered.

F. Any Regional Water Board or LOP agency directive or order that directs corrective action or other action inconsistent with case closure for the UST case identified in Section II is rescinded, but only to the extent the Regional Water Board order or LOP agency directive is inconsistent with this Order.

Executive Director

8/2/2013
Date

UST CASE CLOSURE SUMMARY

Agency Information

Agency Name: Humboldt County Department of Health and Human Services (County)	Address: 100 H Street, Eureka, CA 95501
Agency Caseworker: Mr. Robert Stone	Case No.: 12783

Case Information

USTCF Claim No.: 16837	Global ID: T0602393592
Site Name: The Benbow Inn	Site Address: 445 Lake Benbow Drive, Garberville, CA 95542 (Site)
Petitioner: Mr. John Porter	Address: 445 Lake Benbow Drive, Garberville, CA 95542
USTCF Expenditures to Date: $222,933	Number of Years Case Open: 11

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0602393592

Summary

The Low-Threat Underground Storage Tank Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Low-Threat Policy. This Case meets all of the required criteria of the Policy. A summary evaluation of compliance with the Policy is shown in **Attachment 1: Compliance with State Water Board Policies and State Law**. The Conceptual Site Model upon which the evaluation of the Case has been made is described in **Attachment 2: Summary of Basic Site Information.** Highlights of the Conceptual Site Model of the Case are as follows:

During November 2001, the current Site owners discovered a 1,500 gallon heating oil underground storage tank (UST) when a geotechnical investigation found petroleum constituents in the soil. The Benbow Inn is a historical structure and is bordered downgradient by the Eel River and Panther Creek. Approximately 265 cubic yards of contaminated soil and the UST were removed in January 2002.

The petroleum release is limited to shallow soil and groundwater downgradient of the heating oil UST location. Natural attenuation is occurring and concentrations of petroleum constituents in groundwater monitoring wells are expected to reach water quality objectives (WQOs) in a reasonable amount of time. Residual petroleum hydrocarbons in the subsurface are weathered causing the petroleum constituents to become semi-immobile and non-volatile. Benzene, toluene, ethyl benzene, xylenes (BTEX), and MTBE are not present.

Petroleum constituent concentrations in groundwater have decreased over time confirming that the remaining residual petroleum mass is naturally attenuating and degrading. Based on the facts in the record and the hydrologic and geologic conditions at the Site, the limited residual petroleum constituents that remain in soil and groundwater do not represent a significant threat to human health, safety, or the environment.

Rationale for Closure under the Policy

- General Criteria – Site **MEETS ALL EIGHT GENERAL CRITERIA** under the Policy.

- Groundwater Media-Specific Criteria – Site meets the criterion in **CLASS 5.** – Based on an analysis of Site-specific conditions, the contaminant plume is less than 250 feet in length and the nearest existing supply well or surface water body is greater than 200 feet from the defined plume boundary. Under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and the environment and water quality objectives will be achieved within a reasonable time frame.

- Petroleum Vapor Intrusion to Indoor Air Criteria – Site meets **CRITERIA (2) b.** Weathered light non-aqueous-phase liquids (LNAPL) is at a distance greater than 30 feet laterally and vertically from the existing building. Benzene in groundwater is non-detect. A site-specific risk assessment indicates that human health is protected to the satisfaction of the regulatory agency.

- Direct Contact and Outdoor Air Exposure Criteria – Site meets **CRITERIA (3) a.** Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 in the Policy. The estimated naphthalene concentrations in soil meet the thresholds in Table1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Objections to Closure

County staff objected to UST case closure because:

1. The extent and distribution of contamination in soil and groundwater is not clear and abatement of LNAPL has not been accomplished to the maximum extent practicable.

   RESPONSE: In January 2013, after the County's responses on the petition, Site monitoring wells were resampled. Results from the January 2013 sampling event indicate that the plume has continued to naturally attenuate, perimeter wells are non-detect. The extent of the groundwater plume is estimated to be less than 250 feet in the downgradient direction.

   On-site monitoring well MW-3 continues to have measurable sheens of LNAPL which have been demonstrated to be stable and decreasing. MW-3 is located over 40 feet laterally from building structures and near a grove of trees. The grove of trees is likely to be aiding in bioremediation, excavating them to reach the residual LNAPL would be impractical. Residual petroleum hydrocarbons in the subsurface are highly weathered, semi-immobile, and non-volatile.

The Benbow Inn
445 Lake Benbow Drive, Garberville

Recommendation for Closure

The corrective action performed at this Site ensures the protection of human health, safety, the environment and is consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations, applicable state policies for water quality control and the applicable water quality control plan, and case closure is recommended.

Prepared By: _____ 5/3/2013
Russell Hansen, PE No. 77684 Date
Water Resource Control Engineer

Reviewed By: _____ 5/3/2013
Benjamin Heningburg, PG No. 8130 Date
Senior Engineering Geologist

ATTACHMENT 1: COMPLIANCE WITH STATE WATER BOARD POLICIES AND STATE LAW

The Site complies with State Water Resources Control Board policies and state law. Section 25296.10 of the Health and Safety Code requires that Sites be cleaned up to protect human health, safety, and the environment. Based on available information, any residual petroleum constituents at the Site do not pose significant risk to human health, safety, or the environment.

The Site complies with the requirements of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]

Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations? The corrective action provisions contained in Chapter 6.7 of the Health and Safety Code and the implementing regulations govern the entire corrective action process at leaking UST sites. If it is determined, at any stage in the corrective action process, that UST case closure is appropriate, further compliance with corrective action requirements is not necessary. Corrective action at this Site has been consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations and, since this case meets applicable case-closure requirements, further corrective action is not necessary, unless the activity is necessary for case closure.	☒ Yes ☐ No
Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this Site?	☐ Yes ☒ No
If so, was the corrective action performed consistent with any order?	☐ Yes ☐ No ☒ NA
General Criteria General criteria that must be satisfied by all candidate sites:	
Is the unauthorized release located within the service area of a public water system?	☒ Yes ☐ No
Does the unauthorized release consist only of petroleum?	☒ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	☒ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☒ Yes ☐ No ☐ NA
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	☒ Yes ☐ No

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

Has secondary source been removed to the extent practicable?	☒ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code, Section 25296.15?	☒ Yes ☐ No
Does nuisance as defined by Water Code, section 13050 exist at the Site?	☐ Yes ☒ No
Are there unique Site attributes or Site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ☒ No
Media-Specific Criteria Candidate sites must satisfy all three of these media-specific criteria: **1. Groundwater:** 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:	
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	☒ Yes ☐ No ☐ NA
Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites? If YES, check applicable class: ☐ **1** ☐ **2** ☐ **3** ☐ **4** ☒ **5**	☒ Yes ☐ No ☐ NA
For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?	☐ Yes ☐ No ☒ NA
2. Petroleum Vapor Intrusion to Indoor Air: The Site is considered low-threat for vapor intrusion to indoor air if Site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.	
Is the Site an active commercial petroleum fueling facility? Exception: 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.	☐ Yes ☒ No
a. Do Site-specific conditions at the release Site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4? If YES, check applicable scenarios: ☐ **1** ☐ **2** ☐ **3** ☐ **4**	☐Yes ☐ No ☒ NA
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?	☒ Yes ☐ No ☐ NA

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?**	☐ Yes ☐ No ☒ NA
3. **Direct Contact and Outdoor Air Exposure:** The Site is considered low-threat for direct contact and outdoor air exposure if Site-specific conditions satisfy one of the three classes of sites (a through c).	
a. **Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?**	☒ Yes ☐ No ☐ NA
b. **Are 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?**	☐ Yes ☐ No ☒ NA
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?**	☐ Yes ☐ No ☒ NA

ATTACHMENT 2: SUMMARY OF BASIC INFORMATION (Conceptual Site Model)

Site Location/ History

- The Site is located near the fork of the Eel River and Panther creek. The Site is an operating Inn.
- The Site is bounded by the Eel River and Panther Creek to the Southwest and Highway 101 to the east.
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Primary Source of Release: Heating Oil UST system
- Discovery Date: 2001,
- Release Type: Petroleum[2]
- Eight monitoring wells have been installed.
- Free Product: Measurable LNAPL has been reported in MW-3.

Table A. USTs:

Tank No.	Size	Contents	Status	Date
1	1,500 gallon	Heating Oil	Removed	January 2002

Receptors

- Groundwater Basin: Garberville Town Area Groundwater Basin
- Groundwater Beneficial Uses: Municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND)
- Designated Land Use: Commercial, recreation, and residential
- Public Water System: Benbow Water Company
- Distance to Nearest Surface Waters: Panther Creek is located approximately 400 feet downgradient, to the southwest, of previous UST location. The Eel River is approximately 200 feet downgradient, to the south, of the estimated edge of plume
- Distance to Nearest Supply Wells: An on-site supply well is located 210 feet northwest (crossgradient) of the former UST location. A water sample collected from on-site supply well during March 2013 reported non-detect for petroleum hydrocarbons.

Geology/ Hydrogeology

- Average Groundwater Depth: ~14 feet below grade surface.
- Minimum Groundwater Depth: ~12 feet below grade surface.
- Groundwater Flow Direction: Southwest
- Geology: Quaternary river terrace deposits (sands and gravels) with mudstones from the Tertiary Yager Formation
- Hydrogeology: Groundwater beneath the Site is unconfined. The Site is located near the confluence of Panther Creek and the South Fork of the Eel River.

[2] "Petroleum" means crude oil, or any fraction thereof, which is liquid at standard conditions of temperature and pressure, which means at 60 degrees Fahrenheit and 14.7 pounds per square inch absolute.
(Health & Safety Code, § 25299.2)

Corrective Actions

- January 2002: Removal of USTs and over excavation of approximately 265 cubic yards of petroleum impacted soil.

Table B. Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 feet bgs (mg/kg)	Maximum 5-10 feet bgs (mg/kg)
Benzene	<0.005	<0.005
Ethylbenzene	<0.005	<0.005
Naphthalene	Not Analyzed	Not Analyzed
PAHs*	Not Analyzed	Not Analyzed

*Poly-aromatic hydrocarbons as benzo(a)pyrene toxicity equivalent

Table C: Concentrations of Petroleum Constituents in Groundwater

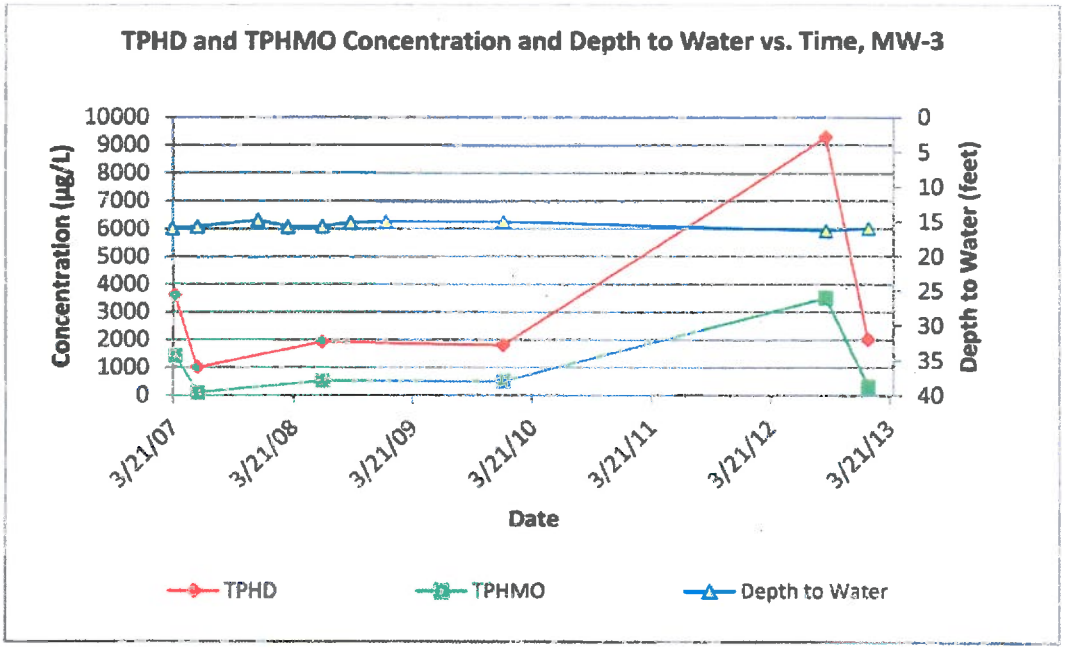
Sample	Sampling Date	TPHd (µg/L)	TPHmo (µg/L)	BTEX (µg/L)	MTBE (µg/L)
MW-1	12/30/2008	ND	ND	ND	ND
MW-2	12/30/2008	ND	ND	ND	ND
MW-3*	1/14/2013	**2,000**	**300**	ND	ND
MW-4	12/30/2008	ND	ND	ND	ND
MW-5	1/10/2013	ND	ND	ND	ND
MW-6	1/10/2013	ND	ND	ND	ND
MW-7	1/10/2013	ND	ND	ND	ND
MW-8	9/5/2012	180	ND	ND	ND
WQO		**50[1]**	**50[1]**	--	**5**

ND – sample has reached a level bellow laboratory detection limits
WQOs - Water Quality Objectives
[1] Taste and Odor threshold (McKee and Wolf)
MW-3* - reported a 0.03 feet LNAPL sheen prior to purging and groundwater sampling.

Groundwater Trends

- Reported TPHd and TPHmo in groundwater have demonstrated stable to decreasing trends overtime in all effected wells. Over the past five years, petroleum hydrocarbons in soil and groundwater near well MW-3 have not caused an increase in the lateral extent of the plume.

Figure 1. TPHd and TPHmo Concentrations for Well MW-3



Evaluation of Risk Criteria

- Maximum Petroleum Constituent Plume Length above WQOs: TPHd groundwater plume is estimated to be near 250 feet in length.
- Petroleum Constituent Plume Determined Stable or Decreasing: Yes
- Soil/Groundwater Sampled for MTBE: Yes, see Table C above
- Residual Petroleum Constituents Pose Significant Risk to the Environment: No
- Residual Petroleum Constituents Pose Significant Vapor Intrusion Risk to Human Health No – Site conditions demonstrate that the residual petroleum constituents in soil and groundwater are protective of human health.
- Residual Petroleum Constituents Pose a Nuisance[3] at the Site: No
- Residual Petroleum Constituents in Soil Pose Significant Risk of Adversely Affecting Human Health No. Site-specific risk assessments demonstrate that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health
- Residual Petroleum Constituents Pose Significant Direct Contact and Outdoor Air Exposure to Human Health: No – There are no soil samples results in the case record for naphthalene. However, the relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline.

[3] Nuisance as defined in California Water Code, section 13050, subdivision (m).

Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2% benzene and 0.25% naphthalene. Therefore, benzene concentrations can be directly substituted for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below the naphthalene thresholds in Table 1 of the Policy. Therefore, estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Figure 2. Location Map
Groundwater Samples Collected January 2013