Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Water Quality

1001 I Street, Sacramento, California 95814♦ (916) 341-5851
Mailing Address: P.O. Box 2231, Sacramento, California 95812
FAX (916) 341-5808 ♦ Internet Address: http://www.waterboards.ca.gov

Arnold Schwarzenegger
Governor

NOTICE OF OPPORTUNITY FOR PUBLIC COMMENT

ON UNDERGROUND STORAGE TANK CASE CLOSURE FOR COLD SPRINGS STORE, 1628 COLD SPRINGS ROAD, PLACERVILLE

NOTICE IS HEREBY GIVEN THAT the State Water Resources Control Board (State Water Board) will accept comments on the proposed underground storage tank (UST) case closure for Cold Springs Store at 1628 Cold Springs Road, Placerville.

Enclosed is a draft UST case closure summary that was prepared by State Water Board staff for the above-entitled matter. Pursuant to Health and Safety Code section 25296.40, the State Water Board will be considering, at a future board meeting, whether this UST case should be closed. You will separately receive an agenda for this meeting.

All comments shall be based solely upon evidence contained in the record or upon legal argument. Supplemental evidence will not be permitted except under the limited circumstances described in California Code of Regulations, title 23, section 2814.8.

Comment letters to the State Water Board **must be received by 12:00 noon on May 28, 2010**. Please send comments on the above subject matter to: Jeanine Townsend, Clerk to the Board, by email at commentletters@waterboards.ca.gov (If less than 15 megabytes in size), by fax to (916) 341-5620, or addressed to State Water Resources Control Board, 1001 I Street, Sacramento, CA 95814. Please provide the following information in the subject line: **UST Case Closure, Petition of Cold Springs Store, 1628 Cold Springs Road, Placerville**.

Please direct questions about this notice to Laura Fisher, Division of Water Quality at (916) 341-5870 or by e-mail: lfisher@waterboards.ca.gov.

May 11, 2010
Date

Jeanine Townsend
Clerk to the Board

State Water Resources Control Board

Division of Water Quality
1001 I Street • Sacramento, California 95814
P.O. Box 944212 • Sacramento, California • 94244-2120
(916) 341-5660 FAX (916) 341-5806 ♦ www.waterboards.ca.gov/cwphome/ustcf

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

DRAFT
UST Case Closure Summary
Cold Springs Store
1628 Cold Springs Road, Placerville

The Central Valley Water Board (Regional Board) concurs that the site where the subject unauthorized release originated, a mini market that had underground storage tanks (USTs), has been adequately cleaned up and no further action is required. However, the Regional Board contends that the case should remain open until either: (1) The concentration of MTBE at an affected nearby offsite domestic well meets water quality objectives (5 parts per billion [ppb]), through active remediation or natural attenuation; or (2) If water quality objectives are not met at that well, an alternative water supply is provided to the affected residence, the offsite domestic well is destroyed, and the neighboring owner of the residence with the offsite well agrees to record a deed notification so that future land owners are aware that groundwater may require treatment prior to use.

Trend monitoring indicates that the MTBE in offsite groundwater present in bedrock water bearing zones will disperse and diminish to less than 5 ppb in four to eight years. Currently the domestic well is being treated to remove MTBE. The offsite well owner has recently (April 27, 2010) been connected to water from a local water utility district, but the well owner would prefer to keep the domestic well in operation for landscape irrigation as water supplied by the utility district is more expensive. "Non-Potable Water" signage would be affixed to the hose bib/water spigots connected to the well. The low concentrations of MTBE will not affect the beneficial use of the well water for landscape irrigation. The case closure condition of a deed notification seems unreasonable because California law requires that real property owners and their licensed agents disclose environmental hazards, including contaminated water, in real estate transactions. The affected offsite property has been provided an alternative water supply, and the impacts from the release will diminish to water quality objectives in less than a decade. For these reasons closure of the case is appropriate without requiring destruction of the affected offsite domestic well and without the condition of a deed notification on the property of the affected offsite domestic well.

Background

This UST Case Closure Summary has been prepared in response to a petition to the State Water Resources Control Board (State Water Board) for closure of the UST case at 1628 Cold Springs Road (site). All record owners of fee title for this site as well as adjacent property owners and other interested parties have been notified of the recommendation for closure and were given an opportunity to provide comments. Note

that the Petitioner (Mr. Charles West) is the current owner of the site. The former owner (the Lively Trust) is the eligible claimant to the UST Cleanup Fund.

The site where the unauthorized release originated is a mini market located about 3.5 miles west northwest of the intersection of Highway 49 and Highway 50 near the confluence of Cold Springs Creek and Weber Creek. Groundwater found in monitoring wells at the site is unconfined at about 10 feet below ground surface (bgs) and under confining conditions in zones of fractured and weathered bedrock at about 20 feet and 45 feet bgs. The release has impacted an offsite domestic well located about 500 feet southerly of the site with an average concentration of MTBE during the last 12 months of 16 ppb.

Petitioner Information

Charles West, Cold Springs Store	1628 Cold Springs Rd., Placerville, CA 95667
Global ID: T0601700083	Years Case Open: 12
USTCF Claim No: 14478	USTCF Expenditures to Date: $994,016

Agency Information

Central Valley Regional Water Quality Control Board, Sacramento Office	Address: 11020 Sun Center Drive #200 Rancho Cordova, CA 95670-6114
RWQCB Case No: CAO 5-00-713	

Release Information:

- Tanks: Two 10,000 gallon gasoline USTs removed in August, 2001.
- Source of Release: UST system.
- Release Discovery Date: April 1998
- Affected Media: Groundwater, Soil
- Free Product: Not Detected
- Corrective Actions:
    - August 1998: Soil and groundwater investigation.
    - May 1999: Soil and groundwater investigation.
    - October 1999: Soil and groundwater investigation
    - November 1999: Soil vapor and groundwater investigation
    - December 2000: Soil and groundwater investigation.
    - July to November 2001: Groundwater/vapor extraction system installation.
    - August 2001: UST system removal and affected soil excavation.
    - May 2002 to May 2004: Groundwater/vapor extraction system operation. 6.47 million gallons of groundwater and 84.1 million cubic feet soil vapor extracted.
    - September 2005: Pump test of downgradient domestic well.
    - November 2007: Groundwater and soil vapor investigation.
    - June 2003 to November 2009: Monthly sample analysis of affected domestic supply well.

Site Description/ Conditions:

- GW Basin: American River Hydrologic Unit
- Beneficial Uses: MUN, AGR, IND, PRO
- Land Use: Residential/commercial (rural).
- Distance to Nearest Supply Well: Approximately 500 ft.
- Minimum Groundwater Depth: 5ft bgs
- Flow Direction: Southwest
- Geology: Alluvial deposits locally overlying fractured and weathered bedrock.
- Hydrogeology: Shallow unconfined and perched groundwater at about 10 feet bgs. Confined groundwater in fractured and weathered bedrock at about 20 feet bgs and deeper.
- Estimated time to meet Water Quality Objectives (WQOs): less than a decade.[1]

Site History:

During UST system up-grades in April 1998, affected soil was observed. Soil and groundwater investigations in 1998 and 1999 verified that a release of gasoline with the additive MTBE had occurred from the UST system that impacted soil and shallow groundwater. In October 2000, the Regional Board issued a Cleanup and Abatement Order (CAO). In May 2002 Regional Board issued a second CAO and Petitioner, who purchased the property from the Lively Trust, initiated soil and groundwater remediation activities (groundwater pump and treat and soil vapor extraction). Active remediation ceased in May 2004. In September 2005, as directed by the Regional Board, a "limited pump-test"[2] was performed on the affected domestic well. The sampling results of the affected domestic well for the last ten years are shown in Figure 1.

By letter dated January 24, 2009, Petitioner requested No Further Action from the Regional Board. The request was denied. In September 2009, Petitioner petitioned the State Water Board for case review and closure.

Sensitive Receptor/ Risk Evaluation/Conceptual Site Model:

Corrective actions in 1999 and 2000 inadvertently caused a limited mass of MTBE present in shallow soil and groundwater to mobilize to deeper groundwater bearing zones in fractured and weathered bedrock. After three hydrologic cycles of rising and falling water levels (winter 1999 through winter 2002), coupled with the presence of vertical conduits (primarily MW-3,), the limited mass of MTBE was depleted (moved down gradient) to the point were concentrations were less than WQOs in groundwater beneath Petitioner's site. No further corrective actions are needed at the site to be protective of human health and safety. The MTBE released to the bedrock water bearing zones in 1999/2000 that has affected the domestic well located about 500 feet

[1] Groundwater at the site where the unauthorized release originated has already achieved WQOs. This estimate relates to concentrations detected in off-site groundwater and water produced by the affected domestic well.
[2] The express purpose of the test was to extract MTBE rather then assess aquifer variables or well performance.

down-gradient, will continue to migrate with the regional groundwater as a transient, diminishing, dispersing pulse (i.e., plug flow dispersion) (See Figure 1).

Specifically with regard to the affected domestic well and downgradient domestic wells, there are two water bearing units at the site, small alluvial deposits adjacent to the creek and underlying permeable zones in bedrock[3]. The alluvial deposits are recharged with seasonal precipitation and high creek flows and discharge via evapotranspiration and return flow to the creek. Regional groundwater in the underlying fractured bedrock is recharged with seasonal precipitation and surface runoff in the upper reaches of the watershed along with septic system leachate. The regional groundwater discharges via sub surface outflow and consumptive use (domestic wells). This latter regional flow regime is poorly characterized in the vicinity of the site and is inferred to be complex.

The initial corrective actions (installing monitor wells) allowed a limited volume (pulse) of shallow MTBE contaminated groundwater in the alluvial deposits, which previously discharged to the creek, to rapidly enter the deeper regional groundwater flow regime. There is no remaining MTBE in the source area of the former USTs so no additional MTBE is being added to the deeper, regional flow regime. Data indicate that upon entering the regional flow regime, the pulse of MTBE contamination propagated outward toward and is presently transiting through the area of the domestic well. The affected domestic well sampling results for February 2010 reported in GeoTracker indicated an MTBE concentration of 14 ppb.

With the source of MTBE at the site depleted as a result of the remediation activities, the “detached” pulse of MTBE-affected groundwater will continue to propagate with declining MTBE concentrations, due to dispersion and diffusion and dilution, reaching water quality objectives in less than a decade. While it is not possible to predict whether remnants of the MTBE pulse will reach downgradient wells, it is unlikely that concentrations of MTBE would exceed drinking water standards. The two nearest downgradient domestic wells have been tested with no detections of MTBE. It would be prudent as a part of the recommended closure to inform these owners that their wells should be periodically tested for petroleum as well as non-petroleum constituents.

Objection to closure and response:

In a February 4, 2010 memorandum, the Executive Officer of the Regional Board stated that site closure leaving residual petroleum contaminants at the site could occur “…with public water supply hook-ups…private well(s) destroyed and deed notifications placed so that any future land owners are aware the groundwater may require treatment prior to use…” The letter also expressed concern that the MTBE plume was not stable with an increasing concentration trend in the offsite domestic well and that other downgradient private wells should be sampled with modeling to show that such wells would not be threatened.

[3] Surface expression of bedrock in the vicinity of the site is granitic. However, several of the boring logs make reference to various types of sedimentary rocks as well.

Public water supply has now been provided to the house of the affected domestic well. Maintaining the affected domestic well for landscape irrigation purposes is reasonable considering that the low concentrations of MTBE will not affect landscape plants and such irrigation actually removes MTBE from groundwater. Non-Potable Water signage will be provided as discussed above. The two nearest downgradient domestic wells were sampled with no detections of petroleum constituents.

Although Regional Board staff concede that by law a homeowner/seller and real estate professional representing the seller are required to disclose all relevant information to a future purchaser, the Regional Board staff is concerned that the MTBE in the affected well might not be disclosed to a future purchaser.

With regards to downgradient domestic wells, as stated above, while it is not possible to predict whether remnants of the MTBE pulse will reach downgradient wells, if MTBE did reach these wells, it is unlikely that concentrations would exceed drinking water standards. The two nearest downgradient domestic wells have been tested with no detections of MTBE. It would be prudent as a part of the recommended closure to inform these owners that their wells should be periodically tested for petroleum as well as non-petroleum constituents.

Requiring the imposition of a deed notification at the offsite property is unreasonable given the facts and circumstances of this case. California law requires owners of real property and their licensed representatives to disclose environmental hazards, which include contaminated water, in real estate transactions (Cal. Civ. Code § 2079.7). Water quality objectives for MTBE are expected to be achieved in less than a decade. The residence has been connected to water from a local water utility, and although the domestic well will not be destroyed, use of the well water is intended to be limited to irrigation and appropriate cautionary signage will be affixed to the hose bib/water spigots. The landowner's duty to disclose the impacted groundwater during any real estate transaction that may occur within the next decade and the cautionary signage will sufficiently notify future landowners of the impacted groundwater and the limitations on use of water from the domestic well.

Closure:

1. Corrective actions have ensured the protection of human health, safety and the environment. Replacement water has been provided to the property where the affected domestic well is located. The domestic well will be kept in operation for landscape irrigation and hose bibs will be posted with non-potable water signage. It is unlikely that the impacted groundwater will be used as a source of drinking water during the time it takes to meet water quality objectives.

2. Imposition of a deed notice on the nearby property with the affected domestic well as a condition of case closure is unreasonable considering: the provision of an alternative water supply to the property; the existing statutory requirement to disclose environmental hazards in real estate transactions, case closure information available over the internet in the GeoTracker database; and the likelihood of meeting water quality objectives in less than a decade.

Will corrective action performed ensure the protection of human health, safety and the environment? Yes

Is corrective action and UST case closure consistent with State Water Board Resolution 92-49? Yes

Is achieving background water quality feasible? No
To remove all traces of residual petroleum constituents at the site would require significant effort and cost. If complete removal of detectable traces of petroleum constituents becomes the standard for UST corrective actions, the statewide technical and economic implications will be enormous. In this case and at considerable expense, numerous wells would have to be installed to extract affected groundwater for treatment (removal of MTBE) with subsequent discharge to nearby Weber Creek. Given the geology at the site, the technical feasibility of capturing affected water is questionable, yet the expense would be significant.

If achieving background water quality is not feasible, is the alternative cleanup level consistent with the maximum benefit to the people of the State? Yes
It is impossible to determine the precise level of water quality that will be attained given the limited residual petroleum hydrocarbons (MTBE) that remain offsite, but in light of all the factors discussed above, and the fact that the residual petroleum constituents will not unreasonably affect present and anticipated beneficial uses of groundwater, a level of water quality will be attained that is consistent with the maximum benefit to the people of the state.

Will the alternative cleanup level unreasonably affect present and anticipated beneficial uses of water? No.
Impacted groundwater is not being used as a source of drinking water as replacement water has been provided. The impacted water will continue to be beneficially used for landscape irrigation. Alternative cleanup levels do not unreasonably affect these beneficial uses of water or other present and anticipated uses of water.

Will the alternative level of water quality exceed water quality prescribed in applicable Basin Plan? No
The final step in determining whether cleanup to a level of water quality less stringent than background is appropriate for this site requires a determination that the alternative level of water quality will not result in water quality less than that prescribed in the relevant basin plan. Pursuant to State Water Resources Control Board Resolution 92-49, a site may be closed if the basin plan requirements will be met within a reasonable time frame.

Have factors contained in Title 23 of the California Code of Regulations, Section 2550.4 been considered? Yes
In approving an alternative level of water quality less stringent than background, the SWRCB has also considered the factors contained in California Code of Regulations,

title 23, section 2550.4, subdivision (d). As discussed earlier, the adverse effect on shallow groundwater has been mitigated with replacement water for drinking purposes. In addition, the potential for adverse effects on downgradient beneficial uses of groundwater is low, in light of the proximity of the groundwater supply wells, the current and potential future uses of groundwater in the area, the existing quality of groundwater, the potential for health risks caused by human exposure, the potential damage to wildlife, crops, vegetation, and physical structures, and the persistence and permanence of potential effects.

Finally, a level of water quality less stringent than background is unlikely to have any impact on surface water quality, in light of the volume and physical and chemical characteristics of petroleum constituents, the hydrogeological characteristics of the site and surrounding land, the quantity and quality of groundwater and direction of groundwater flow, the patterns of precipitation in the region, and the proximity of residual petroleum to surface waters.

Has the requisite level of water quality been met? No
Though the requisite level of water quality has not been met, the approximate time period in which the requisite level of water quality will be met is less than a decade. This is a reasonable period in which to meet the requisite level of water quality because replacement water has been provided to the property with the affected domestic well, safeguards will be instituted to prevent use of well water for drinking water, and downgradient wells are unlikely to be adversely affected and water quality objectives are expected to be met in less than a decade.

Summary and Conclusions:
Base on the hydrology, geology, and other factors at and in the vicinity of the site, the limited mass of MTBE in shallow soil and groundwater has been depleted and site conditions no longer present a threat to public health and safety, or environment. The MTBE released to deeper bedrock water bearing zones in 1999/2000 that has affected a domestic well will continue to migrate with the regional groundwater as a diminishing, dispersing pulse and will attenuate to less than WQOs in less than a decade. In the meantime, replacement water from the local utility district has been provided to the one affected domestic well owner and that will adequately protect human health, safety, and the environment. Case closure is appropriate.

_____ _____
Dennis Parfitt, CEG #1223 Date
Senior Engineering Geologist

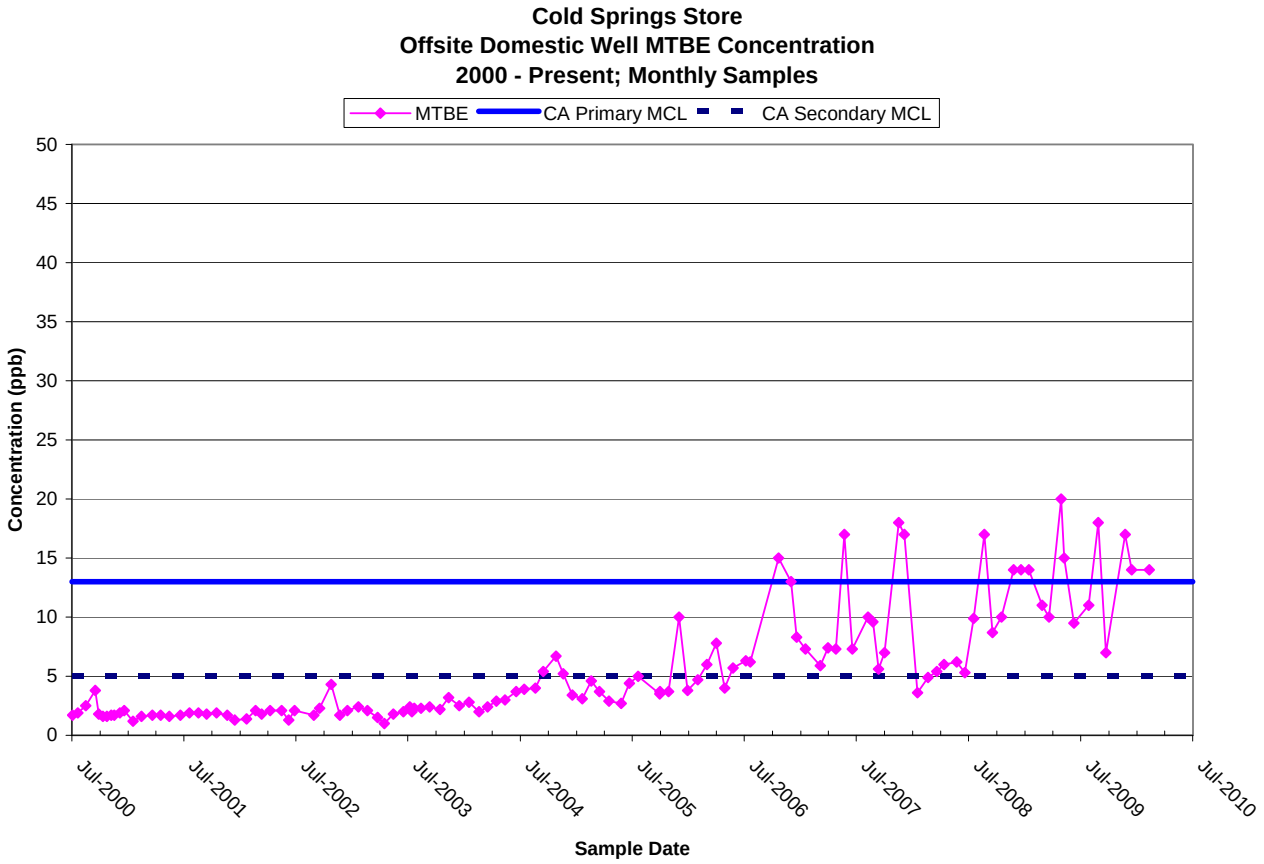

Figure 1. Concentration of MTBE in offsite domestic well vs. time

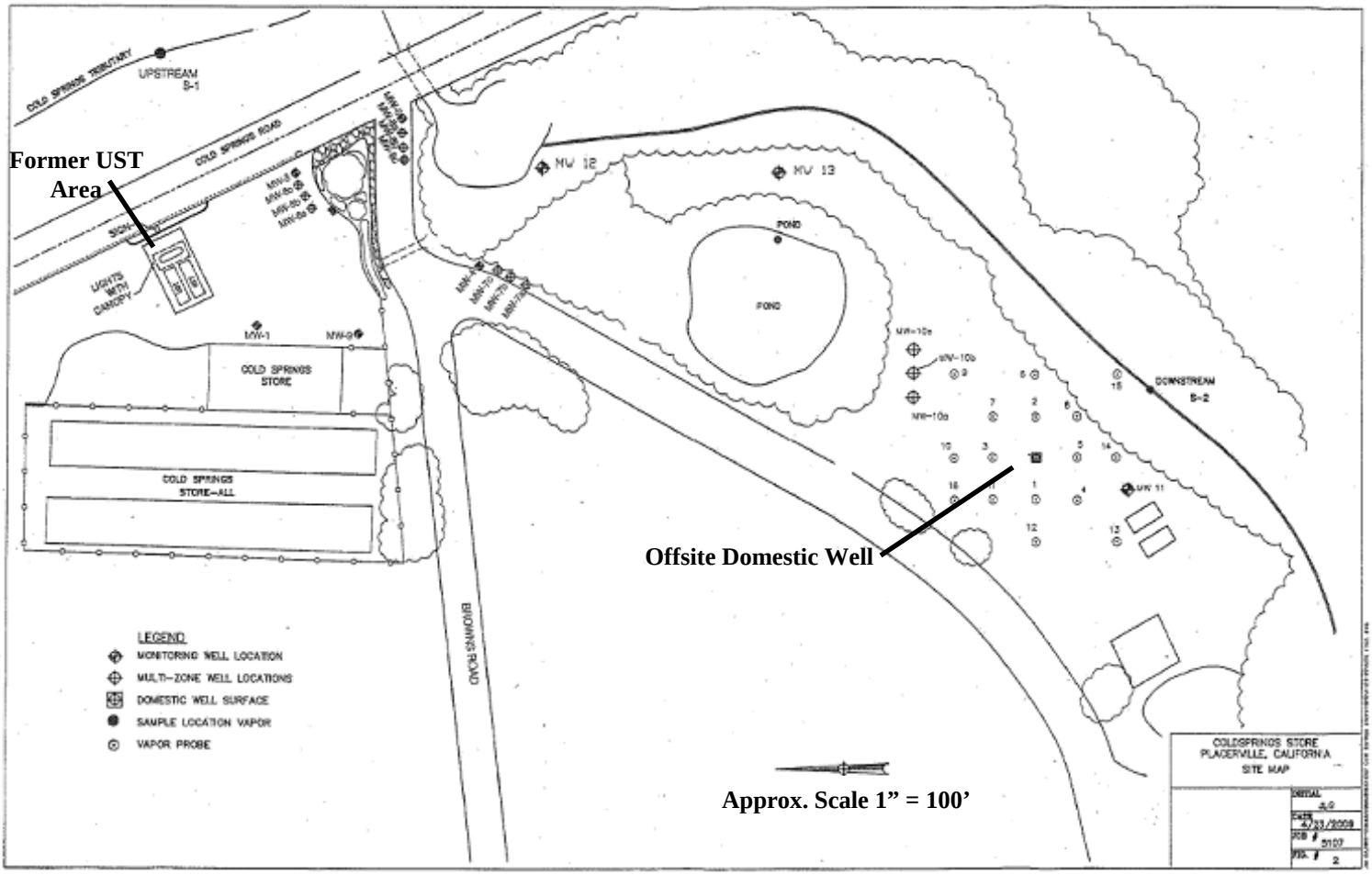

Figure 2. Site Location Map