



Linda S. Adams  
Secretary for  
Environmental Protection

# California Regional Water Quality Control Board

## San Francisco Bay Region

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Arnold Schwarzenegger  
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### Corrective Action Plan Proposed for ARCO Service Station No. 2128 2230 Barrett Avenue Richmond, California

Fact Sheet: February 2009

The Regional Water Quality Control Board (Water Board) is issuing this fact sheet to notify the community about the on-going and proposed environmental investigation and cleanup activities associated with ARCO Service Station No. 2128 (site), located at 2230 Barrett Avenue in Richmond, California, and to invite public comment on the Corrective Action Plan (CAP) for the subject site.

The 30-day comment period runs from February 9 to March 10, 2009. Written comments may be sent, post-marked no later than March 10, 2009, to the following address:

Regional Water Quality Control Board  
Attention: Barbara Sieminski  
1515 Clay Street, Suite 1400  
Oakland, California 94612  
Email: [bsieminski@waterboards.ca.gov](mailto:bsieminski@waterboards.ca.gov)

The site is an active ARCO retail gasoline service station located on the southwestern corner of Barrett Avenue and 23<sup>rd</sup> Street in Richmond (see attached figure). Soil and groundwater beneath the site have been impacted by fuel leaks from underground storage tanks (USTs). A brief description of the release, interim actions, proposed cleanup measures, and site information sources is attached to this notification letter.



### **Problem Description:**

Several environmental investigations have been conducted at the site since 1987 to assess the distribution of gasoline contamination in the soil and groundwater onsite and offsite, and to evaluate potential technologies to clean up the site. The investigations included collection of soil samples during replacement of the tanks, dispensers and fuel lines, drilling soil borings, installation of onsite and offsite groundwater monitoring wells, collecting soil vapor samples, conducting pilot soil vapor extraction (SVE) testing and performing quarterly groundwater monitoring and sampling.

The investigation results indicate that soil and groundwater beneath the site have been impacted by fuel leaks from station operations. The highest concentrations of dissolved petroleum hydrocarbons are present beneath the tanks and pump islands area in the northeastern portion of the site. The dissolved hydrocarbon plume extends offsite to the west following the predominant groundwater flow.

### **Previous Cleanup Action:**

The primary sources of contamination, leaking tanks and product lines, have been removed/replaced at the site. A waste oil tank was removed from the western side of the existing station building in 1987. The waste oil tank pit was overexcavated, however, removal of all contaminated soil was not accomplished due to the presence of groundwater at the bottom of the excavation. The gasoline tanks and product lines were replaced in 1992. The gasoline tank pit was overexcavated, and approximately 1,150 cubic yards of soil were removed from the site. Approximately 10,000 gallons of water were pumped out of the tank pit and transported offsite for disposal. Approximately 65 cubic yards of gasoline contaminated soil were removed from the site during product line upgrade in 2002. During the facility upgrades, vault boxes and piping for a future remediation system were installed at the site.

In 1991, a SVE pilot test was conducted at the site to evaluate potential use of the SVE for site remediation. The results indicated that that SVE is a viable cleanup method for the site. In 1993, several vapor extraction and air sparging (AS) wells were installed at the site for a future remediation system.

A risk based corrective action evaluation was performed at the site in 2002. The results indicated that hydrocarbons remaining beneath the site should not pose a significant risk to off-site residents and commercial workers, and that the plume is naturally attenuating at least locally. Continued groundwater sampling was recommended to monitor plume stability.

### **Proposed Cleanup Action:**

In January 2009, a CAP has been submitted to the Water Board, which evaluated previous investigations and cleanup actions at the site, and recommended a preferred remedial alternative to complete the site cleanup. The CAP proposes to implement SVE and AS to remediate petroleum hydrocarbons beneath the site, using the existing SVE and AS wells. SVE will directly remove petroleum hydrocarbons from impacted soil beneath the site. AS will enhance natural volatilization of hydrocarbons in groundwater and also introduce oxygen into saturated zone that will stimulate

biodegradation of petroleum hydrocarbons adsorbed to soil and dissolved in groundwater.

**For More Information:**

If you have questions, please contact:

Regional Water Quality Control Board  
Barbara Sieminski  
telephone: (510) 622-2423;  
email: [bsieminski@waterboards.ca.gov](mailto:bsieminski@waterboards.ca.gov)  
address: 1515 Clay St, Ste 1400  
Oakland, CA 94612

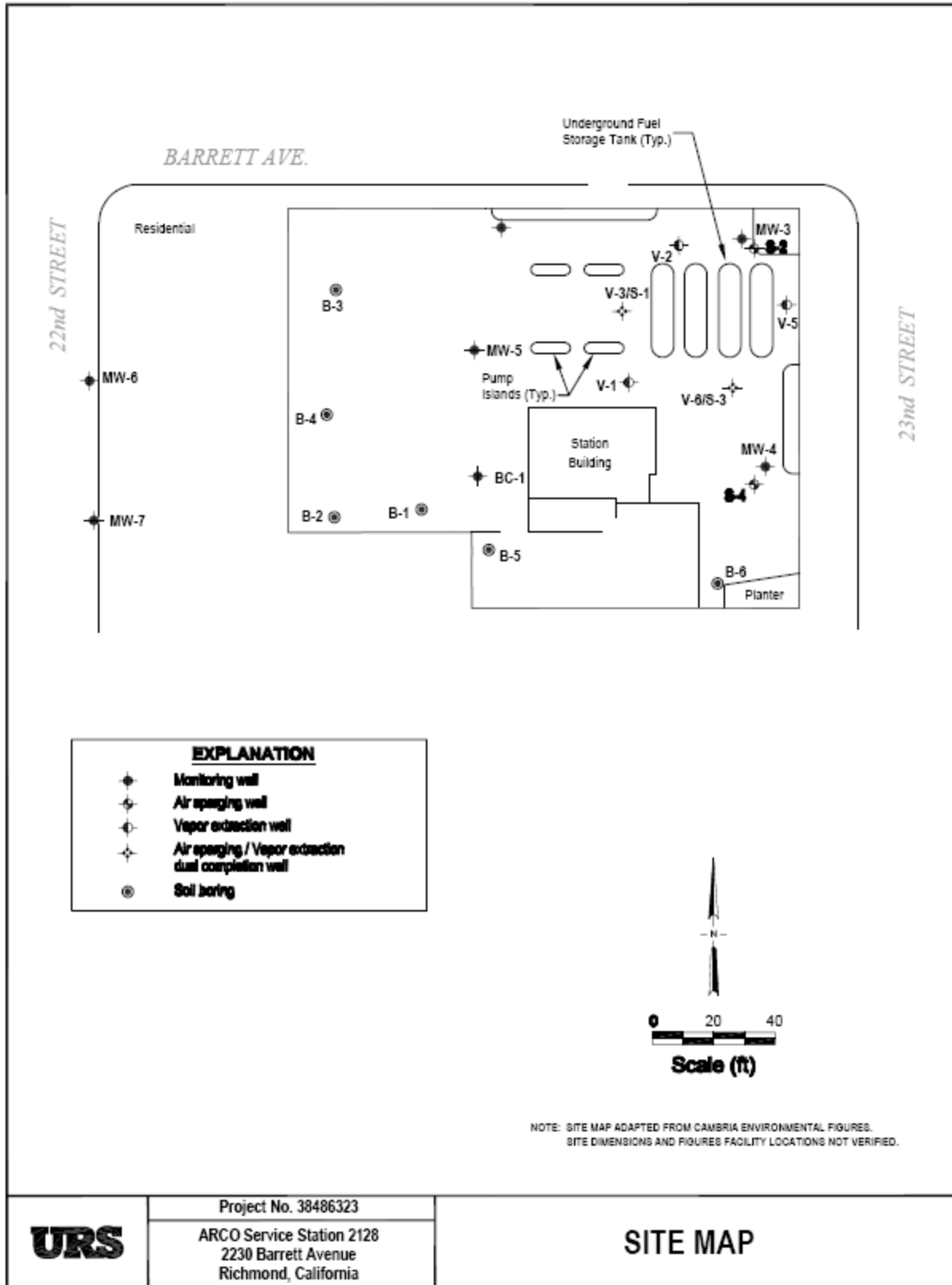
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**Information Repositories:**

The environmental site assessment reports, CAP, as well as other documents related to the site are available for public review at the following locations:

Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay St, Ste 1400, Oakland, CA 4612  
Telephone: 510-622-2430

State Water Resources Control Board Website:  
<http://www.waterboards.ca.gov/sanfranciscobay>  
or Geotracker database:  
<http://geotracker.swrcb.ca.gov>  
Case # 07-0019  
Global ID: T0601300019



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