Department of Toxic Substances Control

The Mission of the Department of Toxic Substances Control is to provide the highest level of safety, and to protect public health and the environment from toxic harm.

STATE OF CALIFORNIA

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

Fact Sheet, November 2011

Draft Response Plan For The Former AMOT Controls Available For Public Review

The Department of Toxic Substance Control (DTSC) invites the public to review and comment on the Final Draft Response Plan for the former AMOT Controls Site (Site), located at 401 1st Street in Richmond, California. The goal of the Response Plan is to remediate chlorinated solvent contamination in groundwater, soil gas and soil to ensure protection of human health and the environment. The contamination originated from past chemical releases at or in the vicinity of the AMOT Controls facility that formerly operated at the Site. The site investigation and extent of contamination are described in the Final Site Assessment Report (SAR, December 2009) approved by DTSC on December 29, 2009.

SITE LOCATION AND HISTORY

The former AMOT Controls Site is located at 401 1st Street in Richmond, California. The Site is bordered by A Street to the west, Nevin Avenue to the South, and 1st Street to the east. The Site is nearly entirely occupied by an approximately 79,500 square feet building constructed of reinforced concrete

PUBLIC COMMENT PERIOD
November 16, 2011 - December 20, 2011

DTSC encourages you to review and comment on the draft Revised Response Plan. DTSC is holding a 30-day public comment period from **November 16, 2011 through December 20, 2011**. All comments must be postmarked or recieved by **December 20, 2011**.

Please submit comments to:

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DTSC Project Manager
700 Heinz Avenue
Berkeley, Ca 94710
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masonry blocks with a 5" thick concrete slab floor. The building has been subdivided into multiple tenant units that are leased for various light industrial uses. The Site neighborhood contains a mix of older residences, apartments, churches, and industrial uses. The Site is generally flat, and the soils consist mostly of clays and silts, with bands or lenses of silty or clayey sand. Shallow groundwater may be encountered between depths of 15 to 25 feet below ground surface (bgs). Groundwater flow direction is generally toward the west.

- Prior to 1903, the Site was undeveloped.
- Between 1903 and 1947, the Site was occupied by residential buildings.
- In 1947, AMOT Controls (AMOT) began operations in a garage at the southeastern corner of the Site.
- By the early 1980's, the AMOT facility on the property had expanded to its present size.

The AMOT facility was used to manufacture metal parts for industrial control devices. The facility contained areas used for machining metal parts, storing hazardous substances, and painting. Metal shavings from machining activities were collected and stored indoors in a tooling area and eventually recycled. A hazardous materials storage area for drums of oils and cleaning solutions was located along the western wall of the building. A 500-gallon above ground tank for storing TCE was located in the southern part of the facility. The TCE tank was removed in the early 1980's. There are three transformers at the northwestern corner of the building. Water-based paints were used and stored in the middle of the building. In 2005, AMOT sold the property. Currently, the building is subdivided into units that are leased for use as office space, storage, and light industrial purposes.

ENVIRONMENTAL INVESTIGATIONS

Environmental investigations were conducted at the property between 2003 and 2008. Soils were tested for metals, volatile organic compounds (VOCs), petroleum hydrocarbons, and polychlorinated biphenyls (PCBs); groundwater samples were tested for metals, VOCs, and petroleum hydrocarbons; and soil gas samples were tested for VOCs. Investigations found that shallow groundwater (up to 25 feet below ground surface) is contaminated with halogenated volatile organic compounds (HVOCs) and petroleum hydrocarbons requiring remedial measures.

Trichloroethylene (TCE), a solvent used to clean metal parts, is the primary HVOC contaminant of concern in groundwater. Other HVOCs in groundwater include cis-1,2-dichloroethylene (cis-1,2-DCE), 1,1-dichloroethylene (1,1-DCE), tetrachloroethylene (PCE), and carbon tetrachloride. Concentrations of these HVOCs exceed Maximum Contaminant Levels (MCL) for drinking water. TCE-contaminated soil found in the central area of the Site exceeded the Environmental Protection Agency Regional Screening Level (RSL). TCE, cis-1,2-DCE and PCE were found in soil gas at concentrations which exceeded California Human Health Screening Levels (CHHLs) for soil gas.

The sources of the HVOC contamination at the Site are most likely chemical releases in the hazardous materials storage area and in the area of the aboveground storage tank in the southern part of the facility. In the central area of the Site, releases have resulted in an HVOC groundwater plume that originates beneath the building and extends off-site to the west (downgradient) beneath A Street. Elevated petroleum hydrocarbon concentrations were detected in portions of the HVOC plume. PCE, a cleaning solvent commonly associated with dry cleaners, may have been used by AMOT or released from a former dry cleaning facility to the east of the Site.

Based on a human health risk assessment, the high HVOC concentrations in groundwater beneath the on-site building represent a potential health risk concern for people who occupy the building. HVOCs in groundwater can migrate into soil gas, and HVOC-contaminated soil gas may subsequently move into the building and contaminate indoor air, a process called soil vapor intrusion. On the west side of A Street, downgradient of the Site, HVOC concentrations in groundwater are much lower and do not represent a health risk concern via the soil vapor intrusion pathway. Lastly, since HVOC-contaminated soil is located under the on-site building and contaminated groundwater is at least 15 feet below ground surface, there is no direct exposure to contaminated soil or groundwater

under current conditions.

As part of the environmental investigations, data were collected to determine if shallow groundwater to a depth of 25 feet below ground surface could be excluded as a potential source of drinking water, based on either high total dissolved solids or low sustained yield. The data showed that the estimated sustained yield for groundwater monitoring wells at the Site was less than the 200 gallons per day, which is the minimum requirement for drinking water wells. Based on this result, the shallow groundwater at the Site would not be considered a potential drinking water source.

CLEANUP PROPOSAL

The Response Plan proposes to clean up contaminated soil gas, groundwater, and soil at the Site. HVOC contamination in groundwater is an important concern due to off-site migration and because HVOCs in groundwater can migrate into soil gas, which could ultimately move into the on-site building through a process called soil vapor intrusion and cause contamination of indoor air. HVOC contamination in soil could also contribute to soil gas contamination.

Risk-based cleanup goals will be used for the cleanup of contaminated soil gas, groundwater and soil. Residential cleanup standards will be applied. For soil gas, the cleanup goals will be California Human Health Screening Levels (CHHSLs) for shallow soil gas under a residential land use scenario. For shallow groundwater (to a depth of 25 feet bgs), the cleanup goals will be risk-based concentrations (RBCs) that are protective of human health in the presence of soil vapor intrusion with residential land use. RBCs were selected as groundwater cleanup goals instead of Maximum Contaminant Levels (MCLs) for drinking water because shallow groundwater at the Site is not considered a potential drinking water source. The RBCs were calculated as part of the health risk assessment conducted for the Site. For soil, cleanup goals will be Regional Screening Levels (RSL).

In groundwater at the Site, TCE exceeds its RBC and requires active remediation. In soil gas, TCE, cis-1,2-DCE, and PCE exceed the CHHSLs and require active remediation. In soil, TCE exceeds the RSL and requires remediation. The Response Plan proposes the following remedial actions to cleanup HVOC contamination in groundwater, soil, and soil gas at the Site:

- Install and operate a Sub-Slab Depressurization (SSD) System in the TCE source area to remove contaminated soil vapor from the permeable fill underlying of the concrete slab building floor. By reducing concentrations of HVOCs beneath the floor slab, the potential impacts of soil vapor intrusion on indoor air will be reduced;
- Implement Dual Phase Extraction (DPE) to remove HVOC-contaminated groundwater and soil vapor from the area of the Site with the highest concentrations of TCE in groundwater. Operation of the DPE system to remove soil vapor will also help reduce HVOC concentrations in soil;
- Implement Enhanced Anaerobic Bioremediation (EAB) in areas of the HVOC plume downgradient of the main source area. The purpose of the EAB is to reduce HVOC concentrations in groundwater west of the on-site building;
- Groundwater and soil gas monitoring will be performed to document the remediation results and determine when cleanup goals have been attained;
- If Implementation of DPE and/or EAB do not cause HVOC concentrations in groundwater and soil gas to decrease, then In Situ Chemical Oxidation (ISCO) may be conducted to address HVOC contamination;
- Since cleanup goals for groundwater are RBCs instead of MCLs, a land use covenant (LUC) will be needed that prohibits installation of drinking water wells,
- An LUC will be implemented for the property if residential cleanup goals are not met. In this case, the Site will be cleaned up to commercial/industrial standards, and the LUC will restrict the property to commercial and industrial uses and prohibit sensitive uses such as a residence or a day care facility for children. If soil contaminated above residential RSLs is left in place under the building, a soil management plan will be required prior to any activities that could disturb this soil.

- After cleanup goals have been met, operation and maintenance (O&M) may be needed to ensure that Site conditions remain protective of human health and the environment. O&M activities could include groundwater and soil gas monitoring, site inspections, or operation of SSD, and/or DPE systems.
- The remediation measures proposed in the Response Plan for the cleanup of HVOCs are also expected to reduce petroleum hydrocarbon concentrations.

The cleanup of HVOC contamination in groundwater using EAB will generate intermediate breakdown products that are themselves potential contaminants of concern. For example, PCE is converted to TCE; TCE is converted to cis-1,2-DCE or trans-1,2-DCE; cis- and trans-1,2-DCE are converted to vinyl chloride; and vinyl chloride is converted to ethene. Ethene does not pose a health risk concern, but the other break down products need to be monitored to ensure that their concentrations do not exceed cleanup goals (RBCs for groundwater and CHHSLs for soil gas).

CALIFORNIA LAND REUSE AND REVITALIZATION CLEANUP

The California Land Reuse and Revitalization Act (CLRRA) of 2004 is designed to help return brownfield properties to productive uses. In addition, it requires Cal/EPA to provide a variety of information related to brownfields cleanups, and to develop a set screening values for hazardous substances commonly found at brownfields sites.

Environmental samples are collected to identify the chemicals present and the extent of contamination. Then, a Response Plan is proposed that complies with DTSC's requirements for remediation. The Response Plan identifies the proposal to clean up the property.

The public can provide comments during the 30-day public comment period for the Response Plan. DTSC considers and responds to all comments received before making a final decision on the clean up plan.

RESPONSE TO COMMENTS

After the close of the 30-day public comment period, DTSC will prepare a 'Response to Comments' to address all comments received from the community. Each person who submits comments regarding the proposed cleanup activities will receive a copy of DTSC's 'Response to Comments'. A copy of DTSC's 'Response to Comments' will also be available for review in the information repositories.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

DTSC has evaluated the Final Draft Response Plan, in accordance with the CEQA requirements, to determine if implementation the proposed Final Draft Response Plan will have any negative impacts on the environment. DTSC has determined that implementation of the Final Draft Response Plan will improve environmental quality, by reducing levels of HVOCs in soil, groundwater, and soil gas, and will not have a negative impact on the environment. Therefore, a Notice of Exemption has been prepared.

INFORMATION REPOSITORIES

The Final Draft Response Plan and supporting documents may be viewed or accessed at the following locations:

Richmond Library - Main Branch
325 Civic Center Plaza
Richmond, CA 94801
(510) 620-0561 (Call for Hours)

Department of Toxic Substance Control
File Room
700 Heinz Avenue
Berkeley, CA 94710
(510) 540-3800 (Call for Appointment)

FOR MORE INFORMATION

Contact any of the following individuals with any questions or concerns regarding the former AMOT Controls Site.

Questions regarding the Site, contact:
Allan Fone, DTSC Project Manager,
at (510) 540-3836 or AFone@dtsc.ca.gov

Questions regarding the public participation process, contact:
Tammy Pickens, DTSC Public Participation Specialist, at (916) 255-3594 or TPickens@dtsc.ca.gov

Questions regarding the media, contact:
Sandra Friedman, Public Information Officer
(714) 484-5383 or SFriedma@dtsc.ca.gov