



AMCO Chemical Superfund Site

U.S. Environmental Protection Agency \$ Region 9 \$ San Francisco, CA \$ September 2008

EPA Draft Remedial Investigation Report is Now Available

The U.S. Environmental Protection Agency (EPA) has released the Draft Remedial Investigation (RI) report for the AMCO Chemical Superfund Site.

The report summarizes the investigation that EPA conducted to characterize the nature and extent of contamination at the Site, such as the kinds of contaminants, where they are located, and at what depth.

This fact sheet provides a very brief summary of the report findings. **The primary finding is that most of the contamination at the former AMCO facility and adjacent areas is under concrete pavement. This pavement provides a protective layer that isolates workers and residents from the contaminated soil, soil gas and groundwater underneath.**

To conduct the RI, the EPA took samples from groundwater, soil, soil gas, ambient air and locally grown produce. These samples were taken from locations on and around the former AMCO facility and analyzed for chemicals that could be associated with operations at the Site.

EPA also used the RI data to conduct a human health risk assessment (HHRA). This assessment is a baseline evaluation that assumes exposure to contaminated media under current conditions, without consideration of future remediation or natural breakdown of contaminants. The HHRA evaluated the potential current and future adverse health effects to people posed by contaminants from the Site.

This fact sheet provides a brief summary of the key highlights of the RI report.

EPA will continue to collect data and update the report while we undertake the next phase of the Superfund process: the Feasibility Study (FS). In this phase, EPA develops cleanup objectives and evaluates possible cleanup technologies using information from the Remedial Investigation and the risk assessment. The FS evaluates each cleanup alternative against a standard set of criteria used in the selection of Superfund cleanup actions. The development and evaluation of alternatives will be described in the Feasibility Study, scheduled to be released in 2009.

Following the FS, EPA will issue a proposed plan that describes the alternatives that were analyzed, including the preferred option for cleanup of any contamination that poses a significant threat to human health or the environment. This plan is expected to be available to the public in late 2009. There will be a comment period to allow the public to provide input on the proposed plan. EPA will consider this input and the input from state and local agencies before selecting the remedy for the Site.

Throughout the process, there will be ample opportunity for public meetings, discussion, and other forms of communication.



How can you learn more about the Remedial Investigation and provide input?

Attend a community focus group - EPA will organize small community meetings/workshops (often called focus groups) to discuss the report's findings.

Read the Remedial Investigation report - EPA invites you to read the report, which is available at the site information repositories and online at EPA Region 9's website at <http://www.epa.gov/region09/amco> (See the last page of this fact sheet for repository locations and contact information).

Findings of the Remedial Investigation

The full report is a technical document that has four volumes and is several hundred pages long. The report includes a description of areas at the AMCO Site that were investigated. There is also a summary for the main sections that distills the investigation results down to the key findings:

Nonresidential Areas: Groundwater & Soil Gas

- § A layer of contaminant liquid that is several feet thick in places was observed floating on groundwater beneath the concrete pavement in the central area of the former AMCO facility.
- § The highest concentrations of contaminants in groundwater and soil gas (primarily volatile organic compounds or VOCs, substances that evaporate readily at normal temperatures and pressures) were generally observed in the central and south-central areas of the former AMCO facility. However, other distinct areas of elevated contamination concentrations in groundwater and soil gas were observed beneath pavement of the large vacant lot on Center Street and beneath the Union Pacific Rail Road/Amtrak yard south of the facility, suggesting that separate releases of contaminants have occurred in these areas.

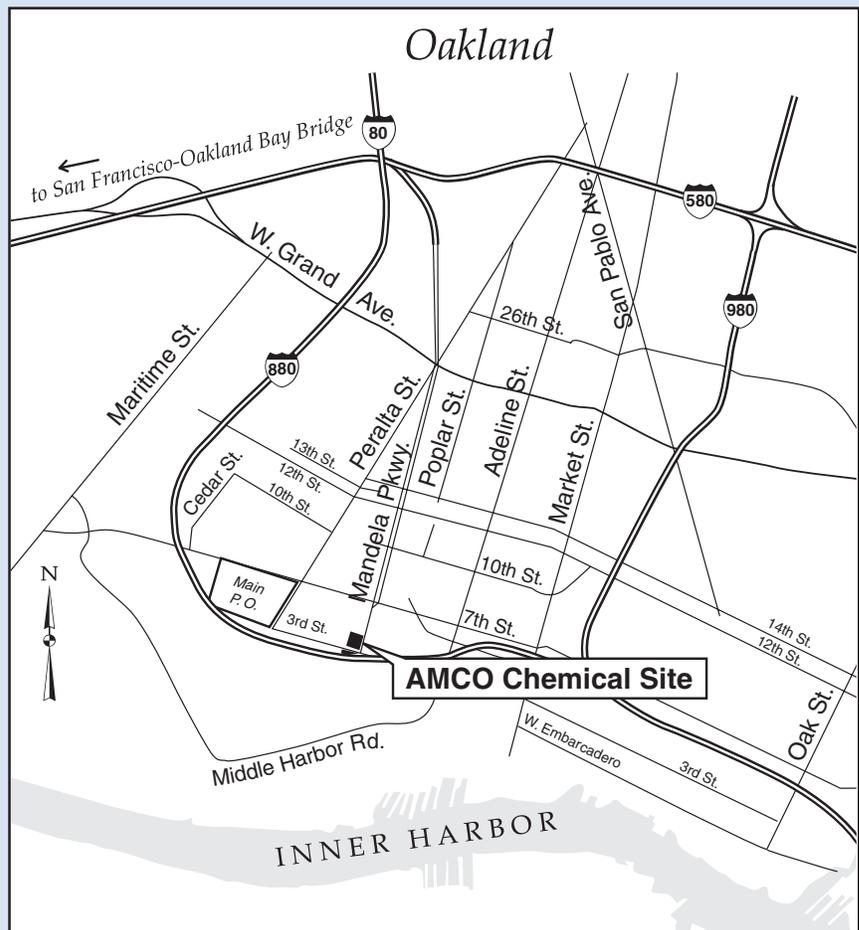
Nonresidential areas: Soil

- § The distributions of contaminants in soil are less centralized and more widespread than in groundwater.

Site Summary

The AMCO Chemical Superfund Site is located in South Prescott, a residential neighborhood located in the "West Oakland" area of the City of Oakland. The site, located one and a half miles southwest of downtown, is bordered by residences, industrial property, and land that may be redeveloped for mixed residential and commercial use.

Beginning in the 1960s and continuing for nearly 29 years, the AMCO Chemical Company off-loaded chemicals from a rail spur on site, stored them in drums and storage tanks and then transferred them to smaller containers for resale. Chemicals handled at the former facility are those found in diesel fuel and dry cleaning, industrial cleaning and degreasing agents. All containers were removed and AMCO ended its operation in 1989, when DC Metals acquired the property and paved the facility with concrete. DC Metals conducted scrap metals operations on the AMCO block from the 1960s through the 1990s.



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§ At the former AMCO facility and off-facility locations, the concentrations of several contaminants in soil would pose an unacceptable risk to site workers. However, the current concrete pavement at the former AMCO facility and off-facility locations provides a protective layer that isolates workers from the contaminated soil underneath.

Residential properties: Soil gas, crawlspace air and ambient air

§ Several VOCs were detected above screening levels in the soil gas, ambient air, and crawlspace air samples. VOCs at the AMCO Chemical Superfund Site include benzene, TCE, PCE and chloroform. Of the VOCs detected above screening levels, many were also detected at background locations, indicating that not all VOCs in this area originate from the former AMCO facility. None of the VOCs were detected at concentrations that would pose an immediate health threat to residents.

Nonresidential properties:

§ Several VOCs were detected above screening levels in crawlspace air samples collected from the facility office. No VOC detections exceeded acute reference concentrations, indicating that there is no immediate health threat to workers. The primary source of the VOCs in residential soil gas and crawlspace air is groundwater, not soil.

At the former AMCO facility and off-facility locations, the concentrations of several contaminants in soil gas and groundwater would pose an unacceptable risk to site workers. However, the current concrete pavement at the former AMCO facility and off-facility locations provides a protective layer that isolates workers from the contaminated soil gas and groundwater underneath.

Homegrown produce

§ Concentrations of metals and VOCs in sampled homegrown produce are below levels of concern for ingestion.

Are contaminants moving?

Several contaminants have limited mobility in the environment (i.e., stay in the soil), and the observed distribution of these compounds appears to be confined to the immediate vicinities of their historic suspected source areas.

Metals are relatively immobile in the environment; exceptions under current Site conditions are arsenic, iron, and manganese, which are prevalent in groundwater.

Removal Action During the Remedial Investigation

EPA conducted a removal action in 2007 to remove soils with high lead concentrations at several residential properties adjacent to or near the former AMCO facility. These concentrations in the soil posed an immediate risk to residents, particularly children. EPA removed contaminated soil from all residential parcels occupying the same block as the former AMCO facility. EPA arranged for this removal to be completed before the major investigative work was completed, in order to ensure that the most significant health threats were removed as quickly as possible.

Arsenic concentrations in soil were generally within the range of background concentrations, suggesting that the arsenic concentrations in groundwater are associated with naturally occurring arsenic in soil, not from contaminant releases at the AMCO site or elsewhere.

Some of the contaminants are undergoing significant naturally occurring breakdown in groundwater. This breakdown is causing significant shrinking in the central portion of the plume, resulting in relatively stable concentrations of some contaminants over time at most locations. However, concentrations of a few contaminants (breakdown products) appear to be increasing at some locations, indicating that naturally occurring breakdown alone is not sufficient to fully control the movement of the plume.

Human Health Risk Assessment

Based on the data from the Remedial Investigation, EPA prepared a human health risk assessment. This assessment describes how EPA measures and quantifies current and future risks to human health posed by chemicals that could be associated with the AMCO Site. Based on the risk assessment, EPA makes decisions on where cleanup actions are needed and what level of cleanup is needed.

The risk assessment takes into consideration the toxicity of each contaminant (what amount or concentration of the contaminant can cause an adverse health effect), how you can come in contact with it (exposure pathways) and the duration (short term or long term) to which you might be exposed to the specific chemical.

The risk assessment includes an evaluation of the potential adverse health effects to people resulting from exposure to chemicals in soil at the former AMCO facility and adjacent parcels (on- and off-facility locations) and in groundwater at the Site.

In addition, a screening level evaluation of potential exposure to contaminated soil gas and air (ambient and crawlspace) was performed for on- and off-facility locations as well as residential parcels adjacent to the former AMCO facility and South Prescott Park. Screening level evaluations were also performed to assess potential exposure to contaminants in soil at residential properties and in homegrown produce.

How can you be exposed?

EPA determined that workers can be exposed to the contaminants at the Site through incidental ingestion of soil, inhalation of particulates and vapors, and dermal contact with soil. Current and future residents in the vicinity could be exposed to contaminants through the same pathways described for workers. **However, the**

current pavement at the former AMCO facility and in adjacent areas provides a protective layer that isolates people from the contaminated soil, soil gas, and groundwater underneath.

Groundwater at the site contains elevated levels of contaminants that could pose a significant health risk through ingestion or dermal contact (for example, while showering or bathing). **However, groundwater at the Site is not currently used as a potable water source, nor is it likely to be in the future. Oakland residents receive their drinking water from the East Bay Municipal Utility District.**

Key Contacts

The public is invited to read the draft RI report and tell us what you think. EPA welcomes questions about the Site. If you need more information on the work being conducted, please contact:

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EPA's toll free number is 1-800-231-3075.

What are the Next Steps?

Following the Remedial Investigation, EPA will formulate potential cleanup alternatives to reduce the risk to human health posed by the Site. These alternatives will be described in the Feasibility Study, scheduled to be released for public review in 2009. EPA will describe its preferred alternative in a proposed plan that will be made available for comment before EPA selects a cleanup remedy.

Timeline of activities for the AMCO Chemical Superfund Site



What is an information repository?

The Information Repository is one tool the public can use to learn about activities at the AMCO Site. This is where you can find up-to-date information, technical reports and reference materials. Repositories are established for all Superfund sites where cleanup activities are expected to last for more than 45 days. Typical locations include public libraries or municipal offices.

The information repositories for the AMCO Site are located at:

West Oakland Public Library
1801 Adeline Street
Oakland, CA 94607
(510) 238-7352

U.S. EPA Region 9 – Superfund Records Center
95 Hawthorne Street, 4th Floor
San Francisco, CA 94105
(415) 536-2000

Where to learn more

You can access the Draft Remedial Investigation Report and other documents about the AMCO Superfund site in the following ways:

Visit EPA's web page for the AMCO site:
<http://www.epa.gov/region09/amco>

Visit the site repositories (locations are listed at left)



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