



AMCO Superfund Site

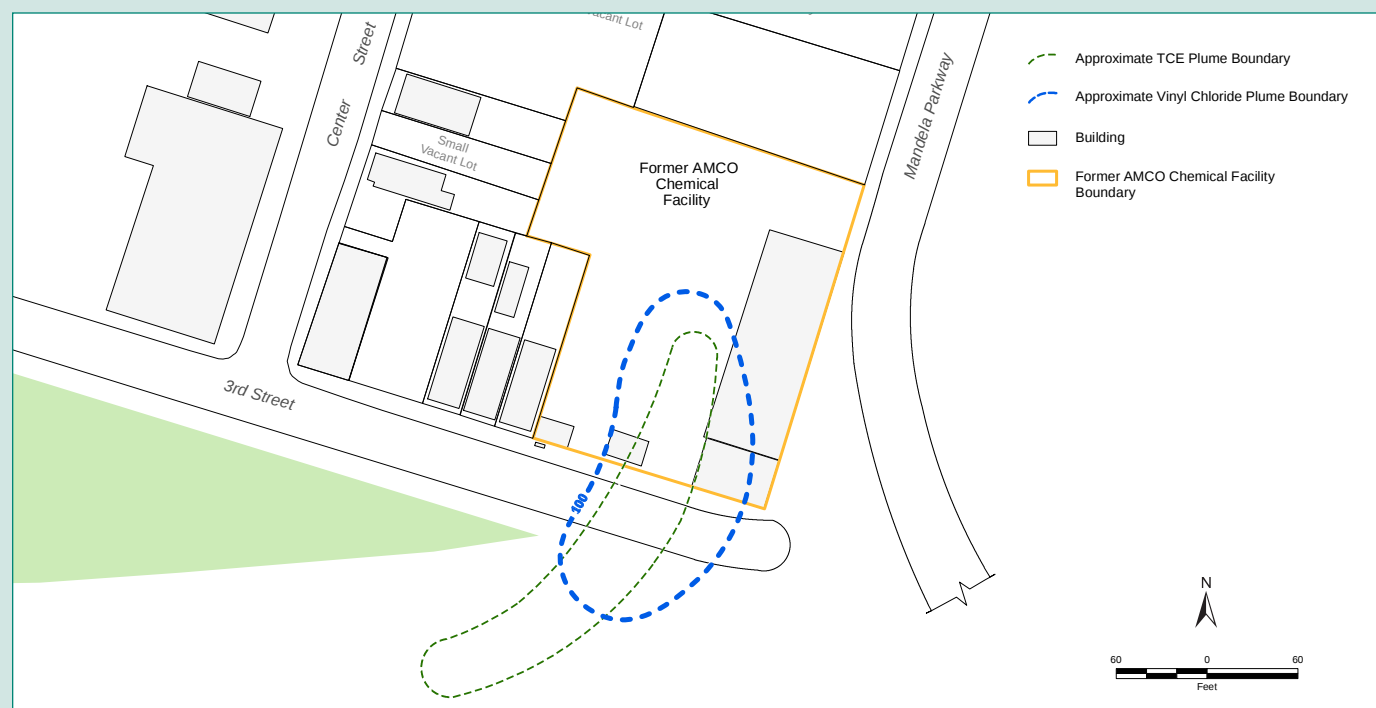
U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • March 2017

EPA Begins Cleanup at AMCO

After almost a year of design and construction, the United States Environmental Protection Agency (EPA) is ready to turn on the treatment system that will clean up volatile organic compounds (VOCs) in the groundwater and soil at the AMCO Superfund Site (Site). VOCs are a family of organic compounds that easily become vapors or gases. The VOCs at AMCO include trichloroethylene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (*See page 3 for more*). VOCs are released from many common items, including solvents, paints, glues, gasoline, and dry cleaning fluids. The contaminants at AMCO were released into the soil and groundwater while the Site operated as a chemical distribution facility from the 1960s until 1989. The community and EPA are celebrating this Site cleanup milestone with a community event on March 18th, 2017. All are welcome to attend! (*See page 4 for details*)

The Groundwater Plume

The contaminated groundwater plume begins below the former AMCO chemical facility and flows south under 3rd street and the 880 freeway. It is important to note that the groundwater beneath the Site is not being used as a drinking water source.



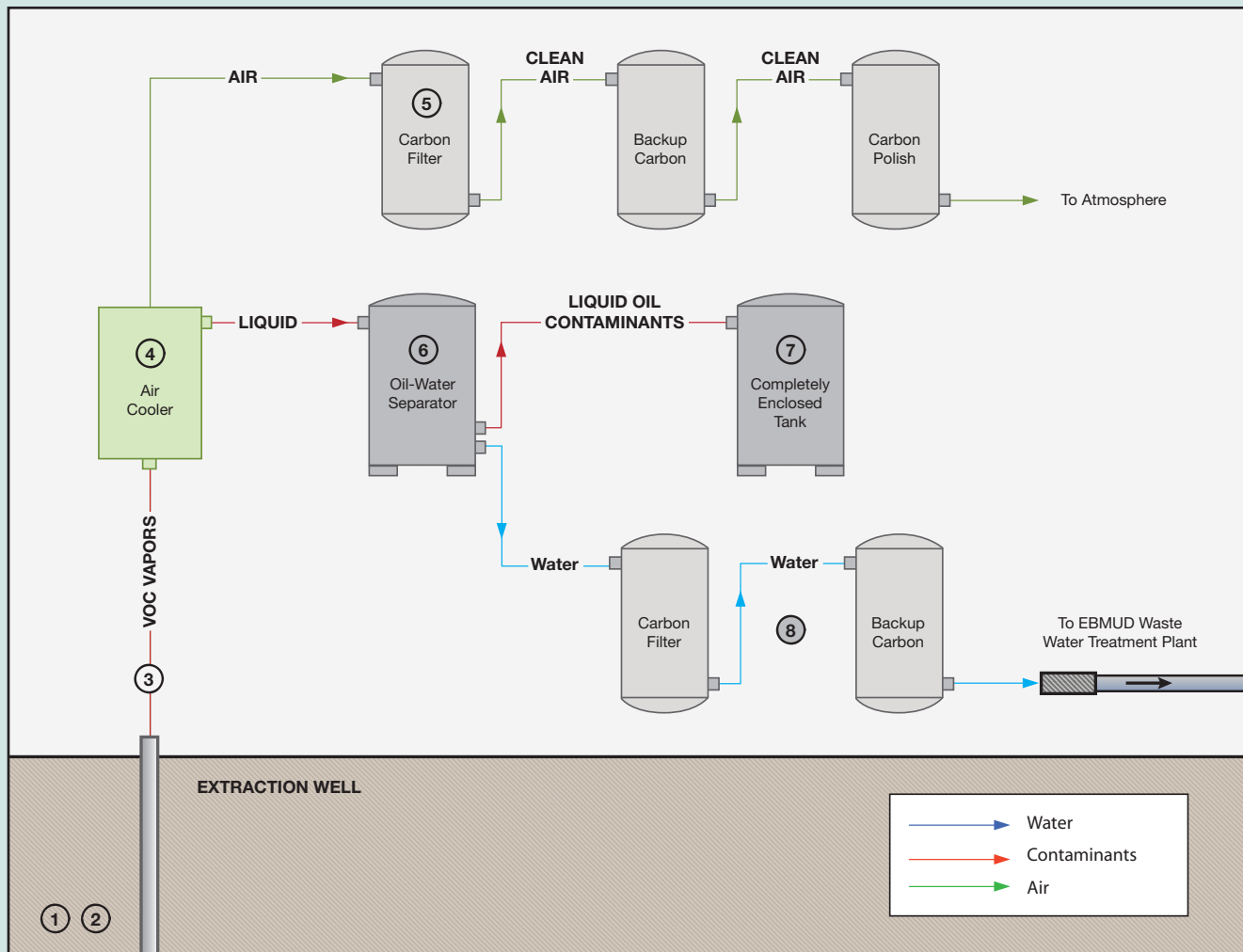
How Does the Treatment System Work?

The treatment system uses a process called Electric Resistive Heating (ERH), which is a type of underground thermal heating. EPA contractors have installed underground electrodes throughout the contaminated area on the AMCO property. When the system is turned on, electricity will run through these electrodes, heating the soil and groundwater to vaporize the VOC contaminants. Heating the soil and groundwater will evaporate the contaminants, therefore allowing the system to better capture them. The contaminated vapor will then be collected by a closed underground extraction system and transferred to an above-ground treatment system.

At AMCO, EPA has installed 69 heating electrodes. Due to the number of high voltage power lines, the treatment area will not be accessible to the public during the entire treatment process. The businesses in the AMCO property warehouse will continue to operate, but they will not be able to access the treatment system at any time.

Steps of the Treatment System Process

1. The system is turned on and electricity starts flowing to the underground electrodes, heating the soil and groundwater.
2. The VOC contaminants begin to turn into vapors.
3. The vacuum extraction system sucks the vapors out of the ground.
4. The heated, moist vapor is cooled, condensing back into liquid and air, and separated.
5. The separated air is then passed through carbon filters to clean it, and clean air is discharged to the atmosphere.
6. The separated liquid is then passed through an oil/water separator, and separated into two streams: water and oil (contaminated material)
7. The oil/contaminated material is collected in a completely contained tank and sent offsite for disposal.
8. The water stream is passed through more carbon filters to be cleaned and then sent to the EBMUD wastewater treatment system.



How hot will the ground become while the system is operating?

The treatment system will heat the soil and groundwater to a maximum of 100° C, the boiling point of water. This temperature is required to volatilize (evaporate) the contaminants, but it is low enough to avoid damage to building infrastructure. People walking down the street will not even notice a change in temperature. The streets and any area outside of the treatment system will be safe to use as normal.

What's the time frame?

The system will be turned on in late February and will run for approximately eight to ten months. When the system is turned off at the end of that time, it will need a cooling-off period of a few months. EPA's goal is to finish treatment and remove the system by the end of 2017.

Ongoing Monitoring

EPA's mission is to protect human health and the environment. Throughout this cleanup process, EPA will be continuously monitoring at 16 locations within and outside the system to ensure public health is protected. Some of these air monitors will be placed around the perimeter of the site to test for additional chemicals beyond what is typically found in the neighborhood air. The treatment system will also have monitoring points underground, where the public will be able to view data including temperature and contaminant levels as the system works.

What Are We Cleaning Up?

The primary contaminants of concern that the treatment system will target are trichloroethylene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE) in soil and vinyl chloride in groundwater.

Trichloroethylene

TCE is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet, burning taste.

How is TCE used?

TCE was mainly used as a solvent to remove grease from metal parts. TCE is also used in adhesives and paint removers.

Cis-1,2-dichloroethene

Cis-1,2-DCE is a highly flammable, colorless liquid with a sharp, harsh odor.

How is cis-1,2-DCE used?

Cis-1,2-DCE is used to make solvents and is an ingredient in a variety of chemical mixtures.

Vinyl Chloride

Vinyl chloride is typically a colorless gas with a mild, sweet odor. It is a manufactured substance that does not occur naturally.

How is Vinyl Chloride used?

It is used primarily to make polyvinyl chloride (PVC) which is used to make a wide variety of plastic products including: pipes, cable coatings and packaging materials.

Community Notification Plan

In coordination with the Community Advisory Group and neighbors near the site, EPA has developed a Community Notification Plan to be implemented during the cleanup. Below are some key features of the plan:

- Public website with continuous updates to sampling and data collection at the treatment system
- Resident notification & action plan in case of an emergency
- 24-hour hotline: 415-264-2058
- 24-hour site security, including security personnel, lights and cameras
- Perimeter air monitoring

The full plan can be read at response.epa.gov/AMCONPL



AMCO Superfund Site

For More Information about the site, please contact:

EPA Contacts

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Para ver esta hoja de información en español, por favor visite response.epa.gov/AMCONPL o contacte a los siguientes representantes de la EPA.

YOU'RE INVITED!

Flip the Switch:
A Community Event

Come and join us to celebrate an event years in the making! We'll have booths, tours of the treatment system and a ribbon cutting at 1PM. All are welcome!



WHEN March 18, 2017

TIME 11:00AM - 2:00PM

Ribbon Cutting at 1:00PM

WHERE WOEIP Office, 349 Mandela Pkwy,
Oakland, CA 94607

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