



# Purity Oil Sales Superfund Site

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • July 2010

## Soil Vapor Extraction Start-Up

### Introduction

The United States Environmental Protection Agency (EPA) is preparing for the start-up of a Soil Vapor Extraction (SVE) System at the Purity Oil Sales Superfund Site. The scheduled start date for the operation of the SVE system is July 13, 2010. The SVE system is being implemented at the site to clean up Volatile Organic Compound (VOCs) present in the soils beneath the site. This fact sheet aims to explain why and how we're implementing SVE at the site.

### Background

The Purity Oil Sales Superfund Site (Purity, or the site) is located at 3281 South Maple Avenue in Malaga, directly south-east of the City of Fresno. The site consists of approximately 7 acres, and is a former used-oil recycling facility where from 1934 until 1975 waste oil and by-products of the recycling process were disposed of in several unlined waste pits. The waste pits were filled with construction debris in 1975.

Purity was included on the National Priorities List (NPL) in 1983. The EPA signed a Record of Decision (ROD) in 1992 to guide the cleanup actions of the site and set cleanup goals. The cleanup was separated into two operable units: one for groundwater and tanks, and one for soils. Chevron is the responsible party for the cleanup and is leading the cleanup efforts at the site under the oversight of EPA.

Soil cleanup began in 2000, but acidic sludge was encountered at the site and construction was halted. The remedy was re-evaluated and in 2006, a ROD

Amendment was issued to address the acidic sludge. From 2006 until 2008, approximately 40,000 cubic yards of contaminated soil was excavated, neutralized, and covered on-site with an impermeable layer referred to as a cap. The cap is maintained regularly and is inspected quarterly.

### Why are we using SVE at the site?

SVE is being used at the site to clean up the contamination that still remains in the vadose zone. The vadose zone is the area above the groundwater table but under the soils that were neutralized and capped in 2008. Currently, the neutralized material is present to approximately 29 feet below the top of the cap. There are shallow, intermediate, and deep groundwater aquifers present, and the shallow aquifer begins at approximately 66 feet below ground level. All three aquifers are sampled four times a year to monitor the status of the contamination. The vadose zone soils contain a significant amount of contamination that will be addressed by the SVE system.

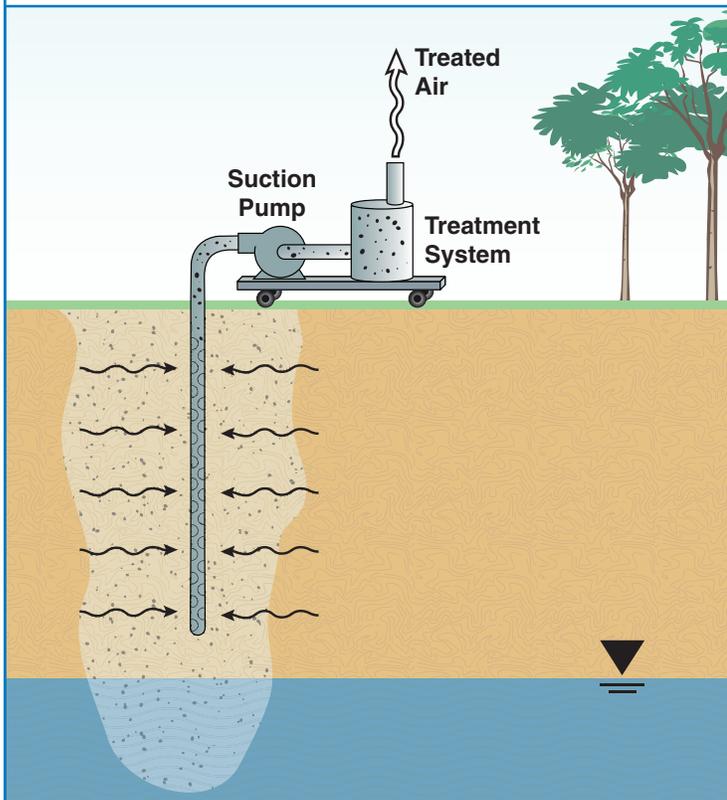


Location of the Purity Oil Sales Superfund Site

There is no exposure pathway, or way that people can come into contact with the contamination from the vadose zone soils, because the soils are covered by the cap. However, there is potential for the contamination to feed into the groundwater below the site. Although there are no drinking water wells located within one mile of the site, the cleanup still aims to protect groundwater for any potential future uses and users.

## What is an SVE System?

SVE systems are designed to remove contaminants that have a tendency to volatilize or evaporate easily. SVE removes volatile organic compounds (VOCs) and some semi-volatile organic compounds (SVOCs) by applying a vacuum throughout a system of underground wells that removes contaminants from the vadose zone soils in vapor form. Contaminants are pulled to the surface as vapor or gas and treated to meet air quality standards prior to being released to the atmosphere. The system installed at Purity Oil Sales will be treated by four, 3,000-lb canisters filled with carbon. As contamination passes through these chambers, the carbon will absorb the contaminants and the remaining air will be emitted from the system. Samples will be taken to ensure that air coming out of the system meets all air quality requirements.



### Conceptual diagram of SVE system

The underground pipe is connected to a suction system that moves the contaminated soil vapor out of the ground and into a treatment system.

## Will I notice any changes around the Site?

If you've passed the site in the last several months, you may have noticed an increase in activity and traffic. This was due to the construction of the SVE system, when wells and monitoring points were being drilled and equipment was being set up. Now that the system is ready to start up, there will be personnel coming and going on-site to inspect and monitor the effectiveness of the SVE system.

As the system continues operating, EPA will continue to keep the community informed on the progress of the cleanup. All questions or comments regarding the SVE System at the Purity Oil Sales Superfund site, or any other general questions or comments should be directed to the contacts provided below.

## Information Repositories

### Fresno County Central Library

2420 Mariposa Street  
Fresno, CA 93721  
Telephone: (559) 488-3195

### EPA Superfund Records Center

95 Hawthorne Street, Suite 403S  
San Francisco, CA 94105-3901  
Telephone: (415) 536-2000

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