



# Montrose Del Amo Winter 2024 Site Updates

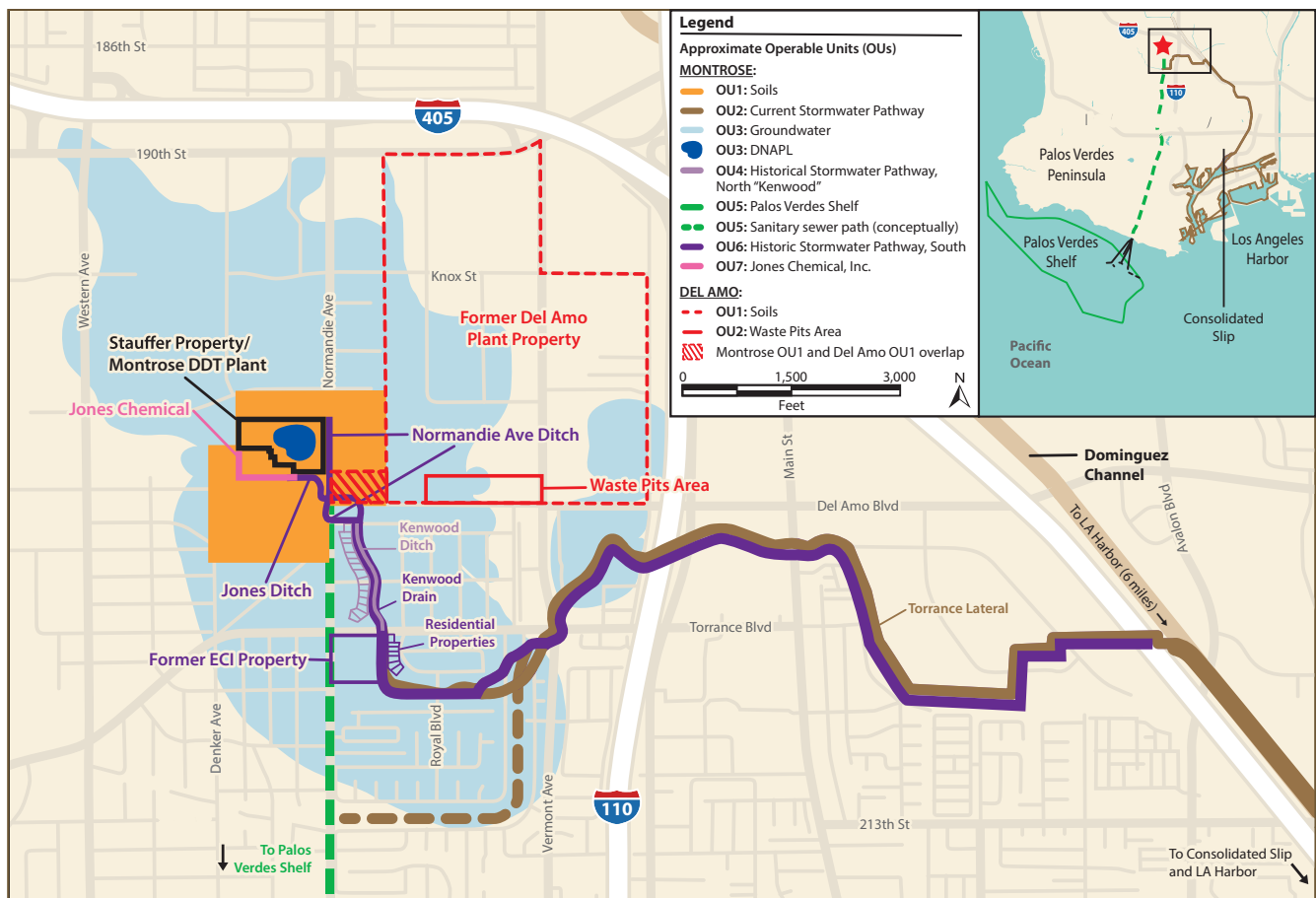
## Montrose Del Amo Superfund Site

U.S. Environmental Protection Agency • Pacific Southwest Region • December 2024

**Montrose:** The Montrose Chemical Corporation of California manufactured a pesticide known as DDT (dichlorodiphenyl-trichloroethane) from 1947 until 1982. The manufacturing plant contaminated groundwater and soil with DDT and other chemicals like chlorobenzene. Stormwater carried these chemicals to the ocean and contaminated the stormwater pathway and the Palos Verdes Shelf, an underwater offshore area of the Pacific Ocean. In 1985, the property of the now-closed Montrose plant was paved over with asphalt to contain waste and prevent contact with contamination.

**Del Amo:** The Del Amo facility is immediately east of the former Montrose property. Built by the U.S. government to make rubber from 1943 to 1972, the plant disposed of waste using six unlined pits and three unlined evaporation ponds. These “waste pits” were closed in 1972 and covered with soil. Tests showed a long list of toxins including benzene, toluene, ethylbenzene, xylene, and polycyclic aromatic hydrocarbons contaminated soil and groundwater. Today, much of the 280-acre site is redeveloped as an industrial park.

**Continue reading to learn about recent and upcoming work at the site.**



## The Montrose and Del Amo sites are broken down by Operable Units

### What is an Operable Unit?

- Superfund sites are often large and complex. EPA divides them into smaller areas called “Operable Units” (referred to as OUs).
- OUs are managed separately to address a particular site problem or specific contamination type and location (such as soil or water).
- Each OU has its own cleanup plan, schedule, and dedicated EPA staff.

The Montrose and Del Amo sites combined have ten OUs.

## Montrose OU1: Soils

Montrose is preparing a **Feasibility Study** on contamination at the former Montrose plant property and eight adjacent properties.

- The **Feasibility Study** will identify options for cleanup.
- EPA will use the study to create a **Proposed Plan** which explains the cleanup strategies EPA is considering for the official cleanup plan, which is called the **Record of Decision**. The **Proposed Plan** will be presented to the public for review and comment.

2024

Prepare **Feasibility Study**.

2025 onward

Complete **Feasibility Study** and present **Proposed Plan** to the community for public comment.

## Montrose OU3D: Dense Non-aqueous Phase Liquid (DNAPL)

2019

Pilot study of both SVE and ERH systems successfully cleaned up DNAPL in soil and groundwater at a portion of the site.

2022 - 2024

SVE system built to full-scale and started operating in the area where most of the DNAPL is present. In 2024 the ERH system was installed.

2025

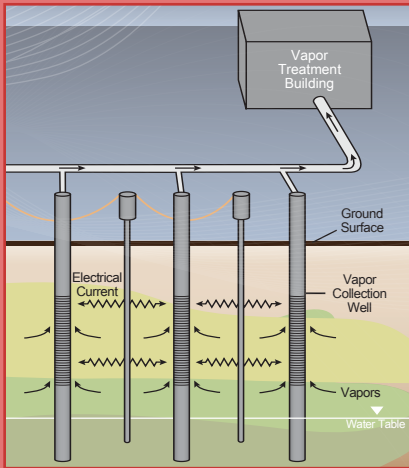
ERH system expected to be turned on in early 2025 after approval of the electrical system by the electrical utility. ERH remedy will run for 8-12 months.

The **Soil Vapor Extraction (SVE)** and **Electrical Resistance Heating (ERH)** systems work together to remove and contain the **Dense Non-aqueous Phase Liquid (DNAPL)** which is found in the soil and groundwater at the site.

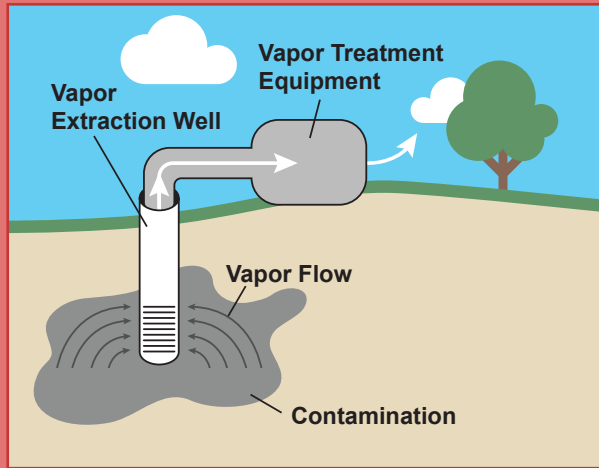
As of October 2024, the systems removed:

- 460,125 pounds of volatile organic compounds and
- 48,878 gallons of DNAPL.

**NAPLs or Non-Aqueous Phase Liquids** are mixtures of chemicals that do not easily dissolve in water. For instance, oil in salad dressing will stay separated from water. Sometimes, NAPLs are made of chemicals that are heavier than water and will sink in it. These are referred to as **dense NAPL** or **DNAPL**. NAPLs made of chemicals that are lighter than water will float on the surface. These are called **Light Non-Aqueous Liquids** or **LNAPL**. At OU3D, **DNAPL** is mostly made up of chlorobenzene and DDT.



ERH systems vaporize contaminants in soil to be cleaned by the SVE system.



SVE systems clean contaminant vapors in soil.

ERH and SVE systems work together to remove chemicals in soil that are in the form of vapors. ERH heats the soil to vaporize the DNAPL contamination. Then, the SVE system captures vapors out of the soil, removes the chemicals, and releases clean air to the environment. The released air is tested to ensure it meets all federal and state regulations.

## Montrose OU6: Southern Historic Stormwater Pathway

2022

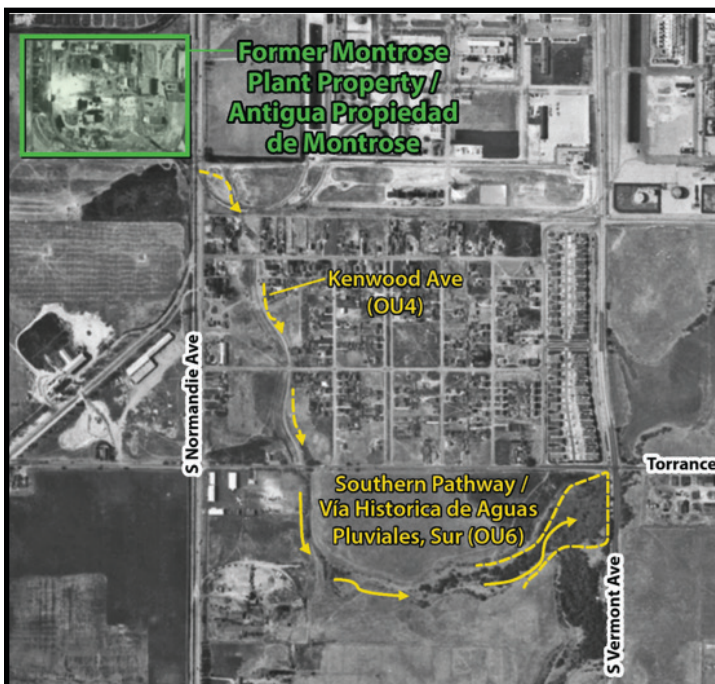
Under EPA oversight, Montrose tested the soil to look for DDT in a part of the pathway that hadn't been investigated before between Royal Boulevard Landfill and Vermont Avenue.

2024

EPA approved the **Remedial Investigation Report**. Montrose submitted the **Human Health Risk Assessment**.

2025

EPA will evaluate the type of cleanup strategy that may be required based on the **Remedial Investigation** and **Human Health Risk Assessment**.



Map of OU6, the Southern Historic Stormwater Pathway shown in relation to the former Montrose property in the upper left.

The 2022 soil investigation tested soil at 29 locations, each location looking at soil from multiple depths. The results showed that the top 10 feet of soil did not contain DDT above the background level of 10 mg/kg (milligrams of DDT per kilograms of soil). The background level is the amount of DDT found in the soil unrelated to contamination by the Montrose Superfund site. Many populated environments have measurable levels of DDT in the soil from former agricultural and mosquito control activities, and historical home lawn and garden care.

The **Remedial Investigation Report** compiles information on the type and amount of contamination in the area to develop a cleanup strategy.

The **Human Health Risk Assessment** estimates the nature and probability of adverse health events in humans who may be exposed to chemicals in contaminated environmental media, now or in the future.

# Montrose OU7: Jones Chemical



2024

Revisions made to several work plans for the **Remedial Investigation**, including Health and Safety, Monitoring and Reporting, and Operations and Maintenance.

2025

Jones will do soil-gas sampling and install groundwater monitoring wells as part of the **Remedial Investigation**.

2026

Jones will conduct a **Human Health Risk Assessment**.

Jones Chemical (Jones) is continuing its work on the **Remedial Investigation** which includes collecting data on the contamination to create a **Feasibility Study**. Once Jones completes the Remedial Investigation and Feasibility Study, EPA will use the information to create a **Proposed Plan** to identify options for cleanup.

As a part of the ongoing **Remedial Investigation**, Jones recently sampled groundwater and will do more soil-gas sampling and groundwater monitoring in 2025.

# Dual Site OU3G: Groundwater



2013

Began construction of the chlorobenzene pump and treat system. Treatment system started being tested for operation in 2015 with major upgrades added to improve reliability and automation.

2024

Chlorobenzene pump and treat system transitioned from the Remedial Action Construction phase to the Long-Term Operations and Maintenance phase following its final successful functional test.

2025

Federal Register notice and public comment period on the TCE plume cleanup agreement (Consent Decree) will open once an agreement is reached.

The groundwater contamination at OU3G is made up of three main contaminants:

- chlorobenzene,
- trichloroethylene (TCE), and
- benzene.

Each of these contaminants makes up a contaminant **plume**.


A **plume** is a body of polluted groundwater. Each contaminant plume has its own cleanup strategy. Together, the three cleanup strategies meet a common set of cleanup goals under the **Record of Decision** for OU3G.

The chlorobenzene pump and treat system is designed to treat chlorobenzene in addition to TCE and benzene that is mixed in with the chlorobenzene plume. EPA is in the process of finalizing the cleanup agreement specific to the TCE plume and continues to monitor the natural breakdown of the benzene plume.

The chlorobenzene plume pump and treat system continues to effectively treat groundwater. As of September 2024, the system has:

- treated 353 million gallons of water and
- removed 89,765 pounds of contaminants.

Annual groundwater sampling was completed in September 2024 and results will be available in February 2025. Data from previous sampling show the approach to cleaning up the groundwater continues to work as intended.



No one drinks or uses groundwater contaminated by the sites. Drinking water provided to residents and businesses in the area is safe to drink.





Aerial view of the pump and treat system at OU3G: Dual Site Groundwater.

## Del Amo OU1: Soils and NAPL

The cleanup is complete at a portion of OU1 (16% of OU1) and EPA proposed to “delete,” or remove, this portion of the site from the Superfund cleanup program. The proposed deletion area only includes the soil contamination. The groundwater contamination at the site is not a part of the proposed deletion and will stay a part of the Superfund site. Cleanup work at the rest of the Del Amo site will continue as usual.

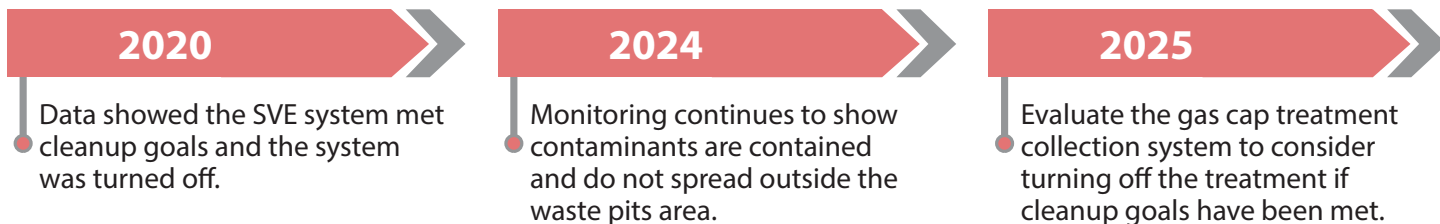
- The public comment period for the proposed deletion closed on November 16th, 2024.
- EPA is writing a responsiveness summary that will address all comments and questions and will issue a final decision in Spring 2025.

At the rest of OU1, a cleanup strategy for contaminated soils and **Light Non-Aqueous Phase Liquid (LNAPL)** (see page 2) is in place. In May 2023, the **Soil Vapor Extraction (SVE)** (see page 2) system was turned on to treat this contamination.

2023 - 2027

- SVE system installed and running to clean up shallow and deep soil. System expected to run for approximately four years.

# Del Amo OU2: Waste Pits



The cleanup plan at the Waste Pits is made up of a **Soil Vapor Extraction (SVE)** system and a gas cap treatment collection system. It is currently in the Operations and Maintenance phase of the Superfund process. The gas cap treatment is working as expected.

## 2025 Five-Year Review

**Five-Year Reviews** are required by the Superfund law for sites when:

- The site's plan to address contamination (called a **remedy**) takes more than five years to complete, or
- when waste remains on site as part of the remedial action.

The Five-Year Review will ensure the remedy is working as EPA intended.

**EPA will do two Five-Year Reviews in 2025:**



1. The first review covers
  - Del Amo Operable Unit 1 (Soils and NAPL)
  - Del Amo Operable Unit 2 (Waste Pits)
2. The second review looks at groundwater contamination and covers
  - Dual Site Operable Unit 3G (Groundwater)
  - Montrose Operable Unit 3D (DNAPL contamination)

### What is Included in a Five-Year Review?

- An inspection of the site and cleanup technologies.
- A review of monitoring data, operating data, and maintenance records.
- A check for new and relevant regulations (such as new state or local laws) passed since EPA made its original cleanup decision.

## EPA Wants to Hear from You!

In 2025, EPA will seek input from the community and stakeholders while doing the Five-Year Reviews.

If you are interested in receiving a questionnaire, please contact either:

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