Set Update Fact Sheet

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San Francisco, CA

Montrose and Del Amo Superfund Sites

Background

The Montrose Chemical Corporation Superfund site ("Montrose site") includes the location of a former dichloro-diphenyltrichloroethane (DDT) manufacturing plant. The plant made the chemical from 1947 to 1982. In 1989, EPA included the Montrose site as part of its Superfund cleanup program. DDT manufacturing work had severely contaminated (polluted) the soil and groundwater beneath and nearby the former plant property.

The Del Amo Superfund site ("Del Amo site") is made up of three former manufacturing plants built to support World War II efforts. The former Del Amo facility is east of the former Montrose plant property. In 2002, EPA included the Del Amo site as part of its Superfund cleanup program. The Del Amo site, like the Montrose site, also had contaminated soil and groundwater beneath and nearby the former facility.

Groundwater contamination from both sites has mixed. As such, EPA is managing the cleanup of the groundwater contamination at both sites as one project.

What is a Superfund Site?

In 1980, Congress passed the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly called the "Superfund law." This law was passed in response to public concern about health and environmental risks from hazardous waste sites. This law allows EPA to clean up certain contaminated sites and requires companies responsible for the contamination to pay for or do the cleanup. Other types of pollution are handled by other environmental laws.



This fact sheet gives the latest information on EPA's work to clean up both Superfund sites and opportunities for you to learn more about the cleanup and engage with EPA.

Site Map: Montrose and Del Amo Superfund Sites

Harbor Gateway, Los Angeles County, CA / Harbor Gateway, condado de Los Angeles, CA



Del Amo Commercial Building Indoor Air Investigation

Background

Vapor intrusion is the process where certain chemicals underground volatilize (evaporate) and move into the indoor air of overlying buildings. The chemicals can enter a building by moving through cracks and/or other openings in the building's foundation. (*See Figure 1 for more information on vapor intrusion.*) As a follow-up to the 2015 Del Amo site's Five-Year Review—a report done every five years to ensure EPA's cleanup plan continues to protect public health—EPA evaluated historic vapor intrusion data to see if vapor intrusion should be investigated at commercial buildings near the site. EPA determined vapor intrusion investigations were needed at nine commercial buildings.

In September 2017 and March 2018, Shell Oil Company (Shell), under EPA oversight, sampled indoor and outdoor air at two commercial buildings on the Del Amo site. Samples were taken from beneath the Coca-Cola building. Additionally, samples were taken beneath and inside of the LSC Communications (formally RR Donnelly) building.

Sampling was done to see if chemicals from the Del Amo site were affecting the indoor air quality of the buildings. In buildings with central heating, ventilation, and air conditioning (HVAC) systems, sampling is done during multiple seasons. This ensures sampling results are accurate under all indoor HVAC conditions.

The sampling confirmed that there are no health risks due to vapor intrusion at the Coca-Cola or LSC buildings. The Del Amo parties are developing plans to continue monitoring any vapor intrusion issues at these buildings.

In addition, in November 2018, the air beneath two additional buildings within the Del Amo site boundaries were sampled. Results showed there are no health risks due to vapor intrusion. A second sampling event will be done in Spring 2019. Four additional properties have been or are scheduled to be sampled.



Figure 1: What is Vapor Intrusion? Vapor intrusion is the process where certain underground contaminants volatilize (evaporate) and move into indoor air of overlying buildings through cracks and other openings in the building's foundation.



Figure 2: The location of the two buildings sampled for indoor air contamination.

Soil Cleanup Work at the Del Amo Site

In late 2018, Shell completed a soil cleanup pilot study at the Coca-Cola property, under EPA oversight. The goal of the pilot study was to see if a soil vapor extraction (SVE) system would effectively clean up the soil. SVE is a cleanup technology that removes chemicals called "volatile organic compounds" from contaminated soil. Results from the pilot study showed that using an SVE system at the Coca-Cola property would effectively remove contaminants from the ground while protecting property workers and nearby residents.

EPA is currently planning a community open house meeting to discuss the pilot study results. We hope to host this meeting later this year.

Non-Aqueous Phase Liquid (NAPL) and Dense Non-Aqueous Phase Liquid (DNAPL)

A mixture (blob) of chemicals that does not easily dissolve in water is called NAPL by scientists. In general, NAPL and water do not mix (i.e. like oil and water), making it difficult to remove NAPL from under the ground. Sometimes, NAPL is made of chemicals heavier than water (and, therefore, would sink in water). This variety of NAPL is referred to as Dense Non-Aqueous Phase Liquid (DNAPL).

Using Electrical Resistance Heating (ERH) Cleanup Study to Clean Up Dense Non-Aqueous Phase Liquid (DNAPL) at the Montrose Site

Under EPA oversight, Montrose Chemical Corporation (Montrose) successfully concluded an electrical resistance heating (ERH) pilot study at the end of April 2019. Using ERH, more than 22,000 pounds of underground chemicals were removed (and properly disposed of) from the former Montrose plant property. Montrose expects to send EPA a report summarizing the results of the pilot study in Summer 2019. These results will be posted on EPA's website when available.

The results of this pilot study will be used by EPA to help develop a final cleanup plan (called a "Record of Decision" or ROD) for the DNAPL. The ROD is expected to be completed in 2020.



Confirmation sampling after ERH pilot study

How does the technology work?

The technology uses electricity through long metallic rods, called "electrodes," installed underground throughout the property. The soil underground resists electricity and heats the soil and groundwater, vaporizing the contaminants. The system then collects this contaminated vapor through an underground network of vacuums and moves it to an above-ground treatment system. Air sampling instruments monitored air quality during the pilot study near the former Montrose property.

Cleaning Up Groundwater at the Montrose and Del Amo Sites

In 2013, under EPA oversight, Montrose began building a groundwater treatment system on the former Montrose property. Montrose started testing the system in 2015 and found it was not operating properly. Since then, Montrose has been working with EPA to redesign portions of the system.

In December 2017, under EPA oversight, Montrose began a functional test of the groundwater treatment system. To date, the groundwater treatment system has successfully removed over 10,000 pounds of contaminants from the groundwater. The functional test demonstrated that the treated water met all applicable standards. The functional test is ongoing, and more work is needed to ensure the treatment system can work as intended.

The fifth annual groundwater monitoring event is scheduled for Fall 2019. During this event, more than 450 groundwater monitoring wells at both sites will be checked to record any changes in water flow and selected wells will be sampled for contaminants. Under EPA oversight, the monitoring event will be done by the companies responsible for cleaning up the contamination at both sites. Results from the monitoring event will be included in a "Monitoring and Aquifer Compliance

Report" (MACR) that will be submitted to EPA and posted to the sites' webpages when available.

In 2019, Montrose has started to install seven new wells to monitor deep groundwater aquifers at the Montrose site. Also, this year, companies responsible for cleaning up the groundwater at the Del Amo site have started to install nine new wells. All work has been done with EPA oversight.

Remedial Investigation



The remedial investigation is an in-depth study to determine the extent of contamination and risks to human health and the environment.



Please note that no one is drinking or using groundwater contaminated by the Sites. Drinking water provided to residents and businesses in the area is safe to drink.

Soil Gas Investigation at the JCI Jones Portion of the Montrose Site

A vapor intrusion investigation by EPA (February 2015-December 2016) found the chemical tetrachloroethene (known as "PCE") in the soil gas—the air between soil particles—in a small industrial area south of the former Montrose property. This area is the JCI Jones Chemicals, Inc. (Jones) property.

In response, Jones, under EPA oversight, developed a soil-gas monitoring plan in 2018. To view a copy of the plan, visit EPA's Montrose site webpage. This plan will help EPA understand the likelihood of vapor intrusion happening. JCI Jones started the field work on this plan in March 2019 which is ongoing.



Soil gas sampling near the Boys & Girls Club.

Get Involved!

EPA commits to sending email updates on cleanup work every quarter to interested stakeholders. You can sign-up for the Del Amo & Montrose Superfund sites email distribution by clicking on the link in the bottom-right corner of both websites.



Community Involvement Plan



EPA representative speaks with community members at a public meeting.

EPA is revising the Montrose and Del Amo Community Involvement Plan (CIP). The Montrose and Del Amo Superfund sites impact the same community in the southern portion of greater Los Angeles, California. Therefore, EPA is preparing one CIP to address community involvement and outreach at both sites. The CIP is a strategy unique to the sites to enable meaningful community involvement throughout the Superfund cleanup process.

EPA plans to issue the final CIP online and in the local information repositories later this year.



Informational material on Sites at the Carson Public Library in Carson.

How Do I Get More Information?

EPA Contact

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Information Repositories

An information repository is placed near a Superfund site and contains documents, reports, and letters about site cleanup activities.

Carson Public Library

151 East Carson Street Carson, CA 90745 (310) 830 – 0901

Websites

Del Amo: http://www.epa.gov/superfund/delamo Montrose: http://www.epa.gov/superfund/montrose **Katy Geissert Civic Center Library** 3301 Torrance Boulevard Torrance, CA 90503 (310) 618 – 5959 United States Environmental Protection Agency, Region 9 75 Hawthorne Street (SFD-6-3) San Francisco, CA 94105 Attn: Romie Duarte (Montrose/Del Amo 6/19) FIRST-CLASS MAIL POSTAGE & FEES PAID U.S. EPA Permit No. G-35

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Sitios Superfund Montrose & Del Amo Superfund Sites

Join Us! / ¡Acompáñenos!

Community "Open House" Event Reunión Informativa para la Comunidad

> Wednesday, June 19, 2019 *miércoles 19 de junio 2019* 4:30 p.m. – 7:30 p.m.

Torrance Cultural Arts & Multi Cultural Center Green Room – 3330 Civic Center Drive Torrance, CA 90503



Mobile Information Center Centro de Información Móvil

EPA will be hosting a mobile information repository on June 18th and 19th. At the MIC, the public is invited to speak with EPA staff and see documents covering the history of the Del Amo and Montrose sites. / EPA tendrá un repositorio de información móvil el 18 y 19 de junio. En la MIC, se invita al público a hablar con el personal de la EPA y ver los documentos que cubren la historia de los sitios de Del Amo y Montrose.

Tuesday, June 18, 2019 martes 18 de junio 2019 11:00 a.m. – 2:00 p.m. Wednesday, June 19, 2019 *miércoles 19 de junio 2019* 11:00 a.m. – 2:30 p.m.

At the corner of / *En la esquina de* W. 204th Street and Budlong Avenue Torrance, CA 90502