



Indoor Air Update

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Synertek Building 1 Superfund Site, Santa Clara, California

This is the first of several updates being provided to the owners and tenants of 3050–3070 Coronado Drive and 3111 Coronado Drive in Santa Clara, California, regarding upcoming indoor air sampling in the buildings connected with the Synertek Building 1 Superfund Site, which is located at 3050-3070 Coronado Drive in Santa Clara, California. The sampling is being conducted as part of a study to determine if certain volatile organic compounds (VOCs) are migrating as vapors from groundwater into the indoor air of nearby buildings (a process known as “vapor intrusion”).

Background

The Regional Water Quality Control Board (Regional Board) is the lead regulatory agency overseeing environmental activities at the Synertek Site, with assistance from the United States Environmental Protection Agency (EPA).

Trichloroethene (TCE) is the main chemical we are concerned about in this investigation, and it was not detected above health protective screening levels in previous indoor air sampling conducted at the 3050-3070 Coronado Drive buildings.

However, EPA recently issued supplemental guidance on conducting vapor intrusion investigations. This guidance contains new indoor air screening levels for TCE and also recommends testing a commercial building both when the heating, ventilation, and air condition (HVAC) system is operating and when the HVAC system is not operating.

Although the results of the HVAC-off testing are not considered representative of the building indoor air quality during a typical workday, this information will be used to assess the potential for vapor intrusion into a particular building.

Next Steps

Based on the groundwater and indoor air data available to date, the Coronado Drive buildings are considered to be at low risk for vapor intrusion, however, some additional indoor air and subslab soil gas sampling will be conducted to ensure that the air quality in the buildings fully meets EPA’s requirements for protecting against vapor intrusion.

More on the Synertek Site

The Synertek Site is located at 3050–3070 Coronado Drive in Santa Clara, California. Beginning in 1974, the site was used for semiconductor manufacturing, which involved using solvents stored in underground tanks.

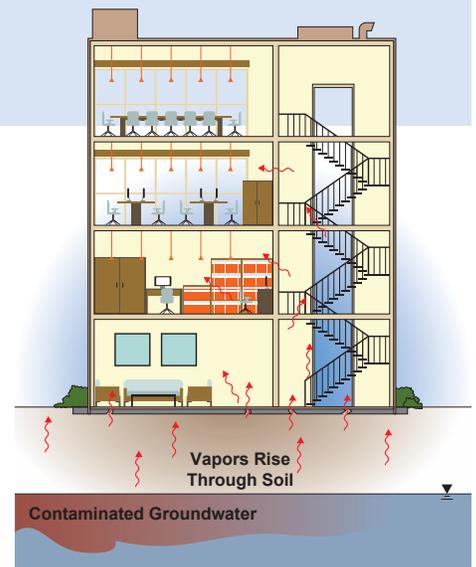


Figure 1: Vapor intrusion into a building

In 1985, manufacturing operations ceased, the underground storage tanks were removed, and it was discovered that solvents containing volatile organic compounds (VOCs), including trichloroethene (TCE), had leaked from the tanks.

Sampling indicates shallow groundwater beneath the Site (5–10 feet below the ground surface) has been impacted by VOCs, including TCE, and extends to the north-northeast for approximately 800 feet, to the vicinity of Augustine Drive.



Note: Your drinking water is not affected by the groundwater contamination from the site. Your drinking water comes from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains, not from groundwater in this area. In addition, Santa Clara’s drinking water is routinely tested to make sure it meets all state and federal drinking water standards.

A groundwater extraction and treatment system operated from 1987 to 2001 to treat the contaminated groundwater, which reduced the average TCE concentration by 93 percent. After the extraction wells reduced contamination levels as far as the technology would allow, the Regional Board in 2001 approved shutdown of the system so that natural breakdown (“natural attenuation”) in the groundwater could be studied.

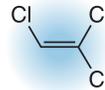
Groundwater was then treated onsite in 2011 through “enhanced bioremediation,” which involves injecting nutrients into the ground to stimulate the already occurring natural attenuation to further break down the contamination.

A large network of groundwater monitoring wells are present at the site, which are sampled twice a year to ensure that the plume continues to be stable and not migrate any further.

More on TCE

TCE has been identified as the main chemical of concern at the Synertek Site, but it can also be present in indoor air from other sources. TCE belongs to a chemical category called VOCs – volatile organic compounds – which are contained in products commonly used in industry, around the home and in the workplace, such as silicone lubricants, paints, paint strippers, cleaning supplies, permanent markers, and dry-cleaned clothing. TCE can also be present in outdoor air in urban environments like Santa Clara.

VOCs can move as vapors from groundwater through soil under certain conditions. If vapors move under a structure, it is possible for them to pass through cracks and other openings in the foundation and accumulate inside. If this happens, and if the levels of VOCs are high enough and prolonged enough, it may create a health risk for occupants.



For More Information

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Visit EPA’s website for more information on the Synertek Building 1 Site:

<http://www.epa.gov/region9/cleanup/california.html>

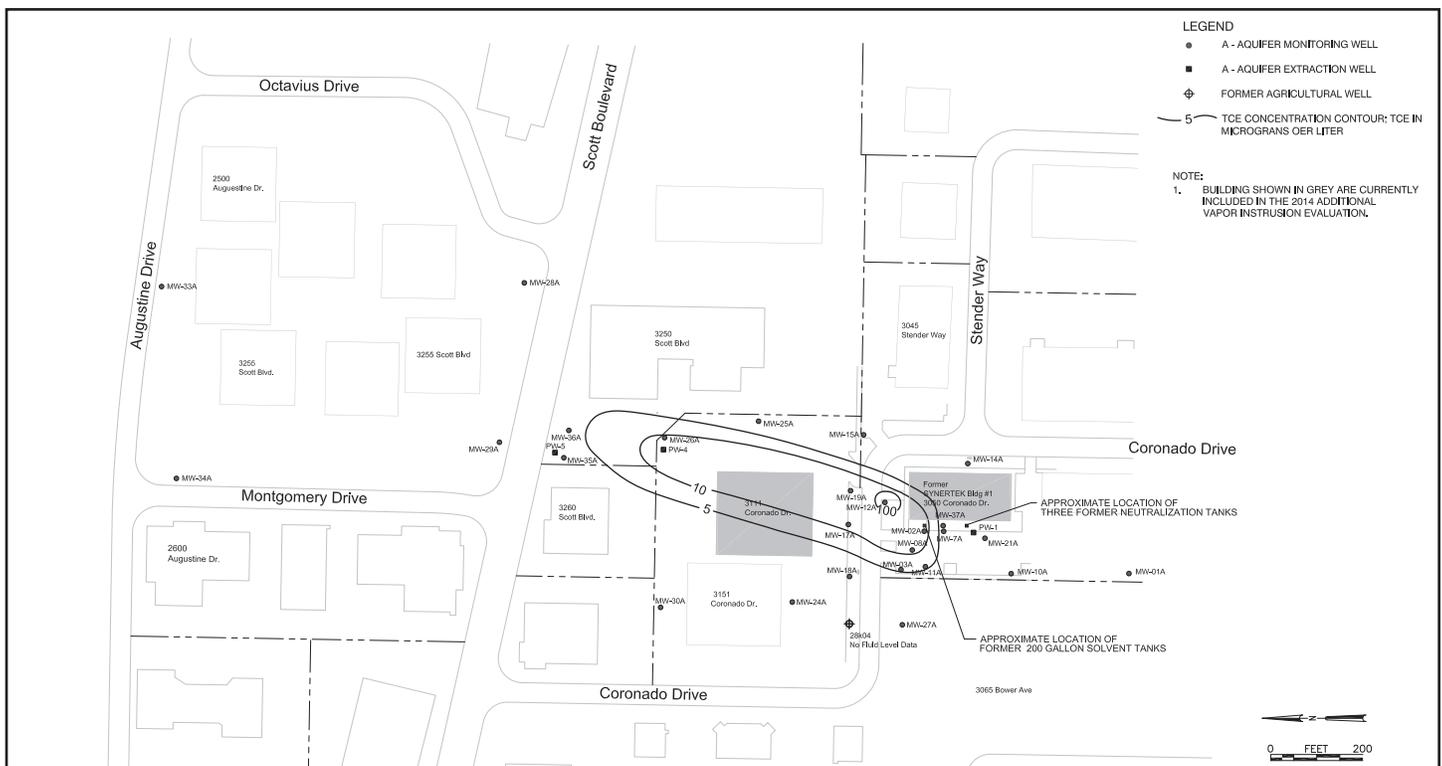


Figure 2: TCE Concentrations (micrograms per liter or ug/L) in Shallow Groundwater