



## Cleanups at former manufactured gas sites exemplify DTSC's mission

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A huge white tent is a sure sign that something ambitious is under way at a downtown street corner in San Rafael. Under that tent, the California [Department of Toxic Substances Control](#) (DTSC) is supervising the cleanup of a former manufactured gas plant that was dismantled in the 1960s – leaving behind contaminated soil.

Pacific Gas & Electric is cleaning the three-acre site so it can eventually be redeveloped. BioMarin, a pharmaceutical company, bought the property for expansion purposes.

The tent serves to protect the surrounding area by containing the dust raised by the excavation equipment during the remediation process. The inside air will be exchanged using carbon filtration devices and will be monitored, ensuring the air outside remains unaffected.

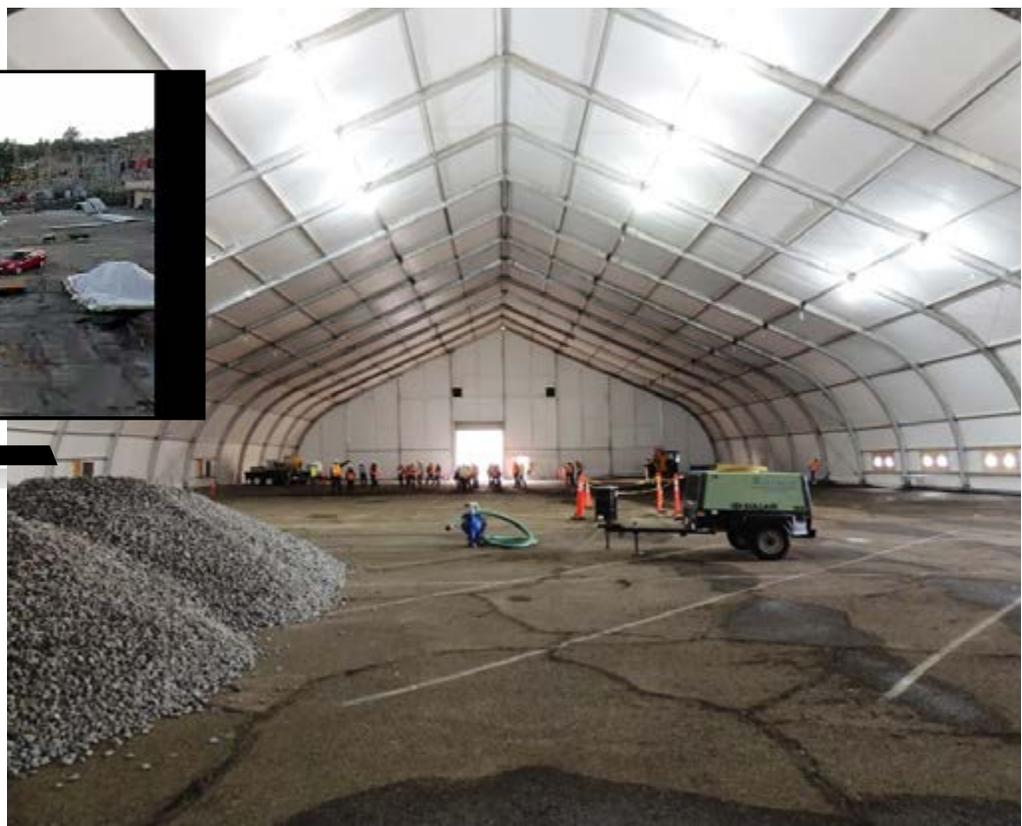
Petroleum compounds, polycyclic aromatic hydrocarbons (PAH), cyanide and metals are among the pollutants. They are a lingering reminder of the manufacturing gas plant, which generated power until natural gas and electricity made it obsolete.

The plant operated from the late 1870s to the 1930s. The property was later used as a service center and then for storage and parking.



Click the image above to see a time-lapse view of the tent's construction in San Raphael.

Right: the interior of the tent.





## Manufactured gas plants

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It was one of dozens of such plants in California. Most were obsolete by World War II. DTSC struck agreements with utility companies in the 1980s to investigate and clean up the sites. Thirty-nine of 70 former sites under DTSC's oversight have been cleaned up, for a total of about 55 acres returned to productive use.

About 160 acres remain to be remediated, and most of those should be completed in three to five years. The property in San Rafael and sites in Fresno, Merced and San Luis Obispo are among those. In Fresno, cleanup of a 12-acre site is underway and will continue into the fall of 2017. The San Rafael cleanup should take about a year.

About 35,000 cubic yards – or 2,200 truckloads – of contaminated soil will be removed in San Rafael and shipped to a licensed disposal facility. About 20,500 cubic yards will be removed in Fresno. A service center is on a portion of the Fresno property. That will likely be razed and a new service center constructed, said Jeff Gymer, DTSC project manager based in Clovis.

The Merced cleanup will include the removal of about 7,260 cubic yards of soil and the in-situ treatment of about 2,910 cubic yards of soil. The majority of the cleanup will occur in 2017.

Gymer also is overseeing the cleanup of a second former MGP site in Fresno and one in San Luis Obispo. Cleanup of both will start in 2016 and include the removal or treatment of a total of about 29,000 cubic yards of impact soil.

Many manufactured gas plants are near populated areas, so it is important to make them safe. “We are eliminating exposure routes,” he said.

These projects embody one of DTSC's key goals: Protecting public health and the environment and making brownfields green again.



The tent in San Raphael at early (left) and late (right) stages of construction.

