

SNAPS Overview

The California Air Resources Board (CARB) and California's Office of Environmental Health Hazard Assessment (OEHHA) developed the Study of Neighborhood Air near Petroleum Sources (SNAPS) to examine air quality in communities near oil and gas operations. This newsletter describes a group of air pollutants monitored in Lost Hills: volatile organic compounds (VOCs), including BTEX (benzene, toluene, ethylbenzene, and xylenes). Air monitoring data for these pollutants is being analyzed and will be presented in the Lost Hills Draft Final Report, to be released in 2021 for public comment, and CARB and OEHHA will produce a comprehensive health assessment as part of this report. The information included in this newsletter is intended to inform Lost Hills residents and others about common air pollutants that may impact human health under certain conditions.

*If you have questions or concerns, we are available to talk one-on-one. Please email or call us to schedule a meeting.

VOCs

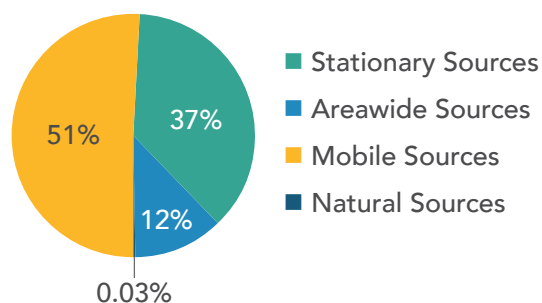
VOCs include a wide range of substances emitted as gases from a variety of sources, including consumer products, natural sources (such as trees), vehicles, and oil and gas infrastructure. VOCs are known to contribute to the formation of smog. CARB implements policies to regulate VOC emissions, including regulations to control on-road motor vehicle evaporative and refueling emissions, and regulations to control the amount of VOCs in consumer products (e.g. paint, solvents) to reduce emissions of these smog-forming pollutants. By monitoring for VOCs at the SNAPS trailer, CARB expected to gather VOC data from potential sources in Lost Hills, including local sources, the oil field, and vehicular traffic.

BTEX is a group of VOCs that are of particular interest in the SNAPS program. These substances are often present in petroleum products and can have negative health impacts. BTEX, including benzene, a known carcinogen, can be found in ambient air from several sources (Figure 1) including:

- Mobile sources (e.g., combustion of diesel and unleaded gasoline in cars and trucks)

- Stationary sources (e.g., landfills)
- Areawide sources (e.g., fugitive emissions from oil and gas wells, consumer products, paved road dust)
- Natural sources (e.g., wildfires)

Figure 1. San Joaquin Valley Air Basin total BTEX emissions sources compiled from the 2010 California Toxics Inventory.



How Were They Measured in Lost Hills?

SNAPS measured VOCs using two approaches. The first method involved collecting air samples over a 24-hour period in the SNAPS monitoring trailer. These VOC samples were then transported to CARB's laboratory in Sacramento and contract laboratories to analyze the samples using a variety of techniques. The laboratories provided reports that include the names and concentrations of pollutants measured in the air samples. The second method involved directly measuring the concentration of VOCs in air at the monitoring trailer. This method separated and identified VOCs based on their unique individual properties (gas chromatography) and were measured every hour.

Some pollutants were measured by both methods. This allows the SNAPS team to cross-check measurements between the two approaches and ensure data are accurate. These measurement approaches allowed SNAPS to measure a large number of VOCs to support health risk assessments and source attribution (i.e., determining where pollutants might be coming from).

General Program Information

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Report Air Quality/Odor Concerns

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