

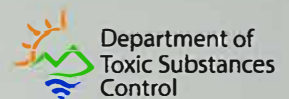


Response Team members set up air sampling equipment on November 10, 2018, in Area I of the Santa Susana Field Laboratory to measure air contaminants after the Woolsey Fire.

# DTSC Final Summary Report of Woolsey Fire

Impacts at SSFL & Surrounding Communities Sampling Results

December 2020



**S T A T E   O F   C A L I F O R N I A**

**Gavin Newsom**  
Governor

**Jared Blumenfeld**  
Secretary of the California Environmental Protection Agency

**Meredith Williams, Ph.D.**  
Acting Director, Department of Toxic Substances Control

Department of Toxic Substances Control  
1001 I Street  
P.O. Box 402  
Sacramento, California 95812-4025

## EXECUTIVE SUMMARY

The Woolsey Fire started on November 8, 2018, in the Woolsey Canyon area south of Simi Valley in Ventura County and burned a total of 96,949 acres (approximately 151.5 square miles) in Ventura and Los Angeles counties.<sup>1</sup> Approximately 80 percent of the Santa Susana Field Laboratory (SSFL) was burned in the fire.

Upon learning of the fire on November 8, the Department of Toxic Substances Control (DTSC) mobilized resources to collect and evaluate data to evaluate whether the fire potentially released radiation and hazardous compounds from the SSFL site. Due to the scale and complexity of the activity, DTSC created a Response Team of federal, state, and local agencies. These agencies have scientists, engineers, and technicians with expertise in evaluating releases of radiation and hazardous compounds.

On November 9, DTSC and the Response Team developed a plan to take measurements and sample air, ash, and soil at the SSFL site and surrounding communities for potential contaminants from SSFL. The initial plan included taking measurements and samples at eight locations within the SSFL site and at 10 downwind off-site locations. Measurements are typically observations recorded from a field instrument. Samples are collected in the field and analyzed in a laboratory. Based on a larger burn area than originally considered, the number of offsite sample locations was increased from 10 to 22 and some of the originally planned locations were adjusted.

DTSC collected environmental measurements and samples with other Response Team members on November 11, 12, 13, and 14, 2019. A part of the ongoing SSFL air monitoring program, particulate and radionuclide air data were collected at SSFL's air monitoring stations before, during, and after the fire. Some other Response Team members also continued to collect measurements after the fire.

Taking real-time measurements and sampling air, ash, and soil on the SSFL site and in nearby communities provides DTSC with multiple lines of evidence to determine if the fire caused releases of SSFL contaminants. For example, Response Team members used instruments to take real-time measurements for radiation and heavy metals and collected samples of air, soil, and ash to determine if they contained such contaminants from SSFL. The Response Team used atmospheric air modeling to help identify areas where potential releases from SSFL may have traveled to identify areas to collect data.

On December 18, 2018, DTSC issued an interim report that summarized the fire response activities between November 8 and November 30, 2018. The interim report's purpose was to help us initially determine if monitoring and sampling activities identified SSFL contaminants released by the fire. The interim report presented DTSC's initial conclusions using these multiple lines of evidence: **data from sampling and**

---

<sup>1</sup> <https://www.fire.ca.gov/incidents/2018/11/8/woolsey-fire/>

measurements did not detect the release of chemical or radiological contaminants from SSFL.

This final version of the report incorporates additional data and information not available when the interim report was circulated. This final report reaches the same conclusion as the interim report: data from multiple lines of evidence did not identify a release of contaminants from SSFL. Like the interim report, this final report also finds the risk from exposure to smoke during the Woolsey Fire was not higher than what is normally associated with wildfire.

Some SSFL site features and infrastructure were damaged by the Woolsey Fire, including portions of the stormwater collection and treatment systems. The Los Angeles Regional Water Quality Control Board (LARWQCB), which regulates stormwater discharging from SSFL, verified that The Boeing Company (Boeing) took actions to prevent ash, debris, and contaminated stormwater from leaving the SSFL site. Sampling of surface water discharges in compliance with LARWQCB regulation continued after the fire.

There were exceedances of stormwater Effluent Limits reported in stormwater samples collected after the fire. The constituents exceeding Effluent Limits were almost exclusively from stormwater originating in burned areas and were primarily due to soil erosion and the burning of vegetation, piping, and treated wood. Over the course of the season, post-fire response actions and vegetation recovery resulted in stormwater effluent quality returning to pre-fire levels. The post-fire surface water conditions were generally consistent with published studies<sup>2</sup> that show wildfires in mostly undeveloped areas exhibit increases in many constituents.

Facilities that store hazardous materials were not affected by the fire. With one exception, the fire did not affect SSFL facilities that previously handled radioactive materials. The exception, Building 4029 is within the burn area and was exposed to enough heat or smoke to create scorch marks on the exterior.

The severity of the fire which consumed 80 percent of SSFL and destroyed or damaged almost 2,000 structures in surrounding communities. Fortunately in this case SSFL and the surrounding communities did not experience potentially devastating contaminant releases. However, climate change is increasing the frequency and severity of catastrophic wildfires in California. Climate change is also predicted to increase extreme storm events that, alone and in combination with the projected increase in wildfires, create an increased potential for floods, mudslides, and debris flows in the Los Angeles region.

---

<sup>2</sup> [https://www.dtsc-ssfl.com/files/lib\\_surface\\_water/surface\\_water/ExpertPanelPresentation\\_LARWQCB\\_050919.pdf](https://www.dtsc-ssfl.com/files/lib_surface_water/surface_water/ExpertPanelPresentation_LARWQCB_050919.pdf)

Reacting to the issues created by such a significant emergency event has provided DTSC with an opportunity to better prepare for future events at SSFL. Ongoing site monitoring will be conducted at SSFL, including a continuation of the air monitoring program, and DTSC will conduct inspections after fire and significant storm events to look for soil movement or erosion. Additionally, DTSC will verify that the Hazardous Materials Release Plans and Spill Prevention and Response Plans submitted by other agencies comply with DTSC's regulatory authority and good practice.