



A look back at 2025

As we reflect on 2025, the Department of Energy’s (DOE) Energy Technology Engineering Center’s (ETEC) site team continued community engagement, moved into a new office and honored the memory of a longtime staff member.

Other highlights from this past year include site visits from local officials and a social media influencer, and ongoing progress related to groundwater, soil and air monitoring activities at the Santa Susana Field Laboratory (SSFL).

Read about these activities below. Scan the QR codes provided in the footnotes to read the stories online.

Cleanup Champion

The first quarter of 2025 brought somber news when the ETEC team learned about the passing of Stephanie “Stephie” Jennings, who dedicated more than a decade to cleanup efforts at SSFL as the former federal project deputy director. Jennings will be remembered for her more than 40-year career in environmental remediation project management. Read about [Jennings’ legacy](#).¹



Stephanie Jennings. Photo courtesy of John Jones.

Site Visits

Throughout the year, DOE hosted a number of site visits at SSFL, including one for local officials and another for a social media influencer.

In May, Simi Valley City Councilmember Joseph D. Ayala, Simi Valley City Manager Samantha Argabrite, and Rancho Simi Recreation and Park District Director Eric Lundstrom came to the site to learn about its history, DOE’s past operations and ongoing cleanup. Read about [their visit](#).²

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Environmental Management has a new leader



Timothy Walsh has taken over as the new head of the Department of Energy’s (DOE) Office of Environmental Management (EM). In October, Walsh stepped into the role of Assistant Secretary to provide strategic leadership for the safe and effective remediation of environmental legacies stemming from decades of nuclear weapons development and government-sponsored nuclear research.

Walsh is a seasoned engineering and construction executive with a military background, having served eight years in the U.S. Army Corps of Engineers, leading a platoon of combat engineers in Germany, overseeing construction projects in Turkey, and commanding a company of paratroopers in the 82nd Airborne Division during Operations Desert Shield and Desert Storm, for which he was awarded the Bronze Star.

In the private sector, Walsh directed construction of several large-scale, high-tech, fast-tracked projects in the United States and Brazil for the semiconductor, biotechnology and telecommunications industries. He also co-founded a vertically integrated real estate development, construction and property management firm.



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Social media influencer Andrew Walker returned to the site in July to collect footage for a video about DOE's System for Nuclear Auxiliary Power (SNAP) program. He toured the basement of Building 4024, also known as the SNAP Environmental Test Facility, to see where research and development was conducted, including SNAP-10. Read more about the [SNAP program](#).³

Community Commitment

The ETEC team moved into its new office at 980 Enchanted Way in Simi Valley in January, kicking off the year with a fresh start in a new space. Remaining local was paramount to the team's commitment to stay close to SSFL and remain part of the community it serves.

Engagement continued with the public scoping meetings held in March for the Supplemental Environmental Impact Statement (SEIS) for cleanup at SSFL. The SEIS builds on the 2018 Final Environmental Impact Statement that includes cleanup alternatives for soils and groundwater and building removal at ETEC. Read about the [SEIS meetings](#).⁴

Additionally, DOE hosted a booth at the Simi Valley street fair in May. DOE was among nearly 400 vendors that participated in the event that draws thousands of community members. The fair is an opportunity for the ETEC team to share about the work at SSFL and hear from the public. Read about the [street fair](#).⁵



Social media influencer Andrew Walker (right) interviews Josh Mengers, DOE's federal project director at ETEC, about the System for Nuclear Auxiliary Power (SNAP) program on July 28, 2025. Photo courtesy of Melissa Simon.



About 40 people attended the U.S. Department of Energy Office of Environmental Management's in-person open house March 18 for its Supplemental Environmental Impact Statement (SEIS) for cleanup at Santa Susana Field Laboratory. Attendees had the opportunity to engage one-on-one with experts, share ideas and provide comments on the SEIS. Photo courtesy of Lucas Ray.

method reporting limits (MRL) and backfill sources. The TPH study was performed to address a data gap for a specific group of chemicals, while the MRL study aimed to understand the contaminant concentrations an instrument can reliably detect and report. Backfill sampling tests potential sources for material to replace any soil that may be removed during cleanup. Read about [soil sampling events](#).⁷

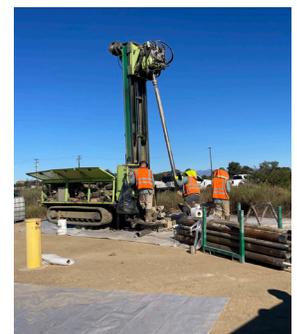
Air monitoring began in 2018 to establish the baseline level of particulate matter, volatile organic compounds and radionuclides at SSFL. That baseline helps distinguish between what is naturally occurring or what was previously present and if remediation activities might impact those levels. See the story on page 3.

Ongoing Progress

DOE is continuously monitoring groundwater, soil and air conditions at the site as part of the ongoing efforts to remediate SSFL.

In August, an innovative groundwater remediation pilot study was started at SSFL. Known as in-situ biological and chemical reduction, the study involves injecting amendments into the ground that create a reductive environment in-situ (or in-place) to stimulate natural degradation of the contaminants present. Read about the [pilot study](#).⁶

Additionally, DOE has conducted several soil sampling events to collect data for total petroleum hydrocarbons (TPH),



Drill rig installing a core hole in the HMSA to monitor the in-situ groundwater pilot. Photo courtesy of Josh Mengers.



Let's clear the air

Air monitoring program helps inform SSFL cleanup

By Melissa Simon

Air monitoring is one of many ongoing activities at the Santa Susana Field Laboratory (SSFL), where the Department of Energy (DOE) formerly operated the Energy Technology Engineering Center (ETEC) in Area IV.

DOE began conducting perimeter air monitoring in April 2018 to establish the baseline conditions of air quality for use during remediation activities at SSFL. That baseline – which includes amounts of particulate matter, volatile organic compounds (VOC) and radionuclides – helps distinguish between contributions from site remediation activities and regional air quality, both naturally occurring and from other local activities.

Stewart Williford, ETEC facility manager, said there are four perimeter air monitors that were installed in 2018 and two additional site-specific radiological air monitors that have been operating for at least 15 years when he began working at SSFL.

All six monitors operate continuously to collect data related to particulate matter in the air, Williford said. In addition to monitoring particulates, air samples are collected at the four perimeter locations using vacuum canisters and tested for VOCs.



Stewart Williford, ETEC facility manager, explains how the air monitor measures the particulates and how that data is recorded. *Photo courtesy of Melissa Simon.*



One of four perimeter air monitors installed in 2018 in Area IV at SSFL to collect data related to particulate matter in the air. DOE uses that information to help inform decisions for a safe cleanup. *Photo courtesy of Melissa Simon.*

The data is then used to help inform decisions for a safe cleanup at SSFL that protects the public.

“Once we do start digging for soil remediation, we’ll dig up spots we know are contaminated and we want to make sure none of that dust is leaving the site,” Williford said.

The data is compiled into quarterly reports for the California Department of Toxic Substances Control (DTSC), the state regulator overseeing final cleanup plans for SSFL, and posted online allowing the public to review the data.

While DOE is currently working with DTSC on plans to continue its soil and groundwater cleanup, other remediation has taken place over the years, including the completed demolition of all above-ground DOE-owned buildings in October 2021.

The air monitors are also used to analyze any potential radiological activity, said Lucas Ray, a radiological technician who has worked at SSFL since 2018. The particulates are collected on glass fiber filters that are changed twice a week in the perimeter monitors and once a week in the site-specific monitors.

The samples are then tested onsite for gross alpha and beta radiation, Ray said. The samples are also sent to an offsite laboratory for a full isotopic analysis, which shows if any specific radionuclides were detected.

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HOW CLEAN IS THE AIR AROUND US?

Many different environmental factors can impact the air we breathe.



WHAT CAN YOU LEARN ABOUT THE AIR NEAR YOU?

Have you ever wondered how windy days, pouring rain or exhaust from a vehicle affects the air you breathe? What about things that are harder to see or invisible to the eye, like dust, pollen or another person's cough or sneeze?

Breathing air is vital to life, but just how clean is the oxygen we're breathing in?

Depending on where we live, there are many different environmental factors that can impact the air around us — think about living in the country vs. the city.

Foreign particles in the air can be measured by special monitors that use vacuum canisters to collect samples, which can then be tested to determine what particulates are present. These samples can also help scientists understand amounts and types of particulate matter in the air in a specific region, air quality and even what type of pollution might be present.

Using common household items, you can create your own air pollution catcher to see what might typically be invisible or measure how many particulates might be in the air where you live.

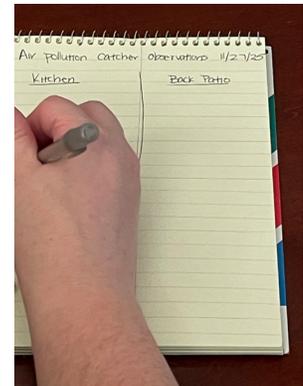


MATERIALS:

- White cardstock or paper plates
- Scissors
- Petroleum jelly (e.g., Vaseline)
- String or yarn
- Magnifying glass to see finer particles (optional)
- Ballpoint pen or a hole punch
- Journal or notebook for observations

DIRECTIONS:

1. Identify at least two places to hang the air pollution catchers, for example, inside your home or outside in the yard.
2. Cut 12 to 18 inches of string for each catcher (adults will need to help younger children use scissors). Use the pen or hole punch to create a hole in the paper plate or cardstock and pull the string through, tying the ends together.
3. Write the date and location of the catcher on each plate, then spread a thin layer of petroleum jelly to one side of each plate.
4. Hang the plates in the chosen locations and record the date and areas in your observation journal. Make sure the catchers are hung securely and out of reach of younger children and pets. *Optional: Track the daily Air Quality Index in your area using [AirNow](#)⁸ or [Air Quality Aware](#)⁹ during the experiment to provide context when analyzing results.*
5. After 3 to 7 days, take the catchers down and record your observations:
 - a. What did you see? Describe the particles.
 - b. A deeper look: Compare what you saw with just your eyes vs. using a magnifying glass or microscope. What differences do you notice?
 - c. Which catcher had more particles on it? Why do you think that was?
 - d. How do you think the location of the catchers affected the results?
 - e. If you observed the daily Air Quality Index, were there days when the air was unhealthy? How did that impact your results?



WHY IT MATTERS:

Studying particulates in the air you breathe can be vital to your health,

especially when it comes to learning just what those foreign particles might be.

At SSFL, DOE has an air monitoring program to do just that. Four perimeter air monitors and two site-specific radiological air monitors operate continuously to collect data related to particulate matter in the air. The data is then used to help inform decisions for a safe cleanup.

Data collected by the air monitors can be influenced by environmental factors like wildfires or weather conditions — think wind speed or direction, humidity or rain levels. Paying attention to these changes and comparing them to the data collected from the monitors can help provide valuable context when evaluating air quality in your area.

To learn more about DOE's air monitoring program at SSFL, read the story on page 3.

Activity courtesy of the Los Angeles Public Library.



<https://www.energy.gov/etec/energy-technology-engineering-center>





Banded Garden Spider

California is home to more than 1,000 species of spiders. At the Santa Susana Field Laboratory (SSFL), it's unknown how many species call the site home, but the variety of ecosystems provides suitable conditions for a high number of species. Among those known to biologists is the banded garden spider (*Argiope trifasciata*), also known as the banded orb weaving spider.

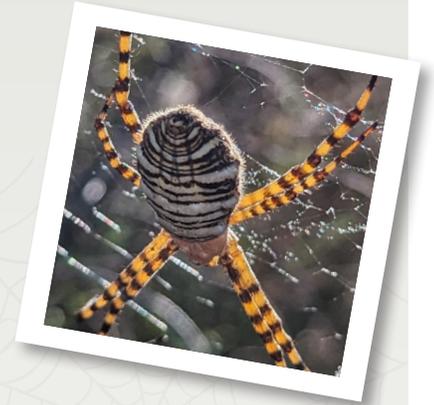
Did You Know?

Why it's special: The large, colorful orb-weavers build strong orb webs that often have a distinctive zigzag pattern of thicker silk called stabilimentum, which could serve as possible camouflage or to attract prey. The orb-shaped webs can be up to a foot in diameter.

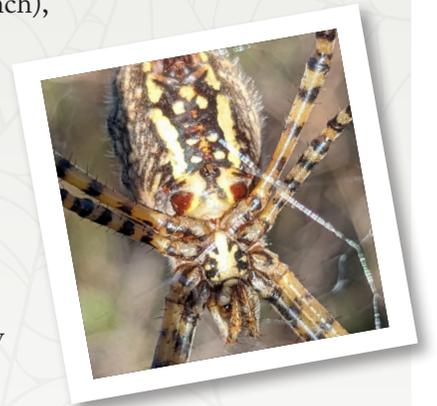
Typical habitat: Spiders are highly adaptable and thrive in diverse habitats. For the banded garden spider, it thrives in many of the habitats present at SSFL, including coastal sage scrub, grasslands and open fields. Webs are placed low in shrubby vegetation.

Fun facts:

- Female banded garden spiders can reach up to 25 millimeters (about an inch), have an abdomen that is striped with silver, white and yellow, and mature in late summer or early fall. Males are only about 6 millimeters (about 1/4 inch).
- Short life: Banded garden spiders live less than a year, with the females dying after making an egg sac. The egg sac is brown, papery and sphere-like in appearance, and can contain between 400 and 1,000 eggs. Very young spiders spend winter in the sac and emerge in April or May.
- Banded garden spiders are not aggressive and will only bite if handled.
- These web artisans orient their webs in relation to the sun's position, likely to regulate their body temperature. Females tend to hang upside down in the center of the web.
- Critical contributors: Spiders are remarkable creatures that provide silk-like materials, produce venom that can be used in medicines and natural insecticides and even serve as a source of food in some countries.
- Pest Control: Spiders also suppress pests in agricultural areas, cycle nutrients through the breakdown of organic matter, act as food sources for some predators and create habitats for other organisms.
- Globally, spiders hold a significant cultural and spiritual heritage, are integral to many traditional medicine practices and are commonly employed for monitoring biodiversity and ecosystem health.



Photos courtesy of Alex Walters.



Information provided by Tara Schoenwetter, biologist at SSFL since 2011.

Air monitoring... *(continued from p.3)*

“Every location in the world has a different background of what is normal levels of radioactive materials for that area, and we’ve established that normal background by running the air monitors for so long,” Ray said.

“We’ve never had anything remotely close to our threshold, but when we send samples offsite, the laboratory has a way more sensitive piece of equipment that can see very, very small amounts. Sometimes we do see data above minimum detectable concentrations.”

Weather conditions can also cause data to go above the minimum concentrations, Williford said.

“A lot of the time when we see elevated amounts of a particulate in the air, you can review the data and see that there were high winds or smoke from regional wildfires that correlate with that timing,” he said.

Williford added that there’s a meteorological tower stationed next to one of the perimeter monitors that captures data on wind direction and speed, relative humidity, barometric pressure and rain levels.

Data from the air monitors is compiled in DOE’s [Annual Site Environmental Reports](#)¹⁰ (ASER) that summarize environmental protection activities conducted yearly at ETEC.

Last year, 407 radiological samples were collected from the perimeter air monitors to determine if any events required further investigation and none was needed, according to the 2024 ASER. The filters from all six radiological air monitors are also sent to an offsite laboratory quarterly for radioactive isotopic analysis.

Read more about DOE’s [environmental monitoring activities](#)¹¹.



One of two site-specific radiological air monitors used by DOE in Area IV that have been in place for at least 15 years. *Photo courtesy of Melissa Simon.*



One of the machines used to collect samples on fiber glass filters that will be tested for any radiological activity in the air. *Photo courtesy of Melissa Simon.*



One of the air monitoring stations features a meteorological tower that captures data on wind direction and speed, relative humidity, barometric pressure and rain levels. This information is important because weather conditions can impact air quality. *Photo courtesy of Stewart Williford.*





Looking ahead



Mule deer near milk vetch hill
Photo courtesy of Alex Walters.

We want to hear from you! What questions do you have about the Santa Susana Field Lab? Tell us what you'd like to learn about the wildlife, plants or other cleanup-related questions.

Email questions and comments to etec@emcbc.doe.gov.

Scan the QR code to read the *CleanUpdate* online.



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