

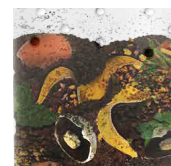


Energy Technology Engineering Center

Area IV, Santa Susana Field Laboratory

CleanUpdate

DECEMBER 2024



FOOD INTO
FERTILIZER

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A Look Back at 2024

As 2024 comes to an end, the Department of Energy (DOE) would like to highlight some activities that took place at the Energy Technology Engineering Center (ETEC) at the Santa Susana Field Laboratory (SSFL).

SSFL is a former rocket engine testing and nuclear research facility located on about 2,850 acres in the hills of Simi Valley in southeast Ventura County. DOE conducted nuclear energy and liquid metals research and development at ETEC in Area IV, a 290-acre portion of SSFL, and is charged with cleanup of residual contamination that remains at the site.

Highlights from this past year include reviving the quarterly newsletter, a graduate fellow's data collection for a study on scat, DOE's participation in a groundwater community education series, the installation of an automated pump system, spadefoot toads spotted onsite for the first time in a decade, and the extension of an agreement that covers cultural resources protections. Read about these activities below.

Changes at ETEC

This year brought several changes for DOE, including an updated website and the revitalization of the [CleanUpdate newsletter](#). Both the website and newsletter aim to keep the community informed about current site activities and provide historical information about SSFL.



Pictured from left during an October 2024 SSFL site visit: Rob Seifert, DOE's Director of Office of Infrastructure Disposition and Regulatory Policy for the Office of Environmental Management; Joshua Mengers, DOE's ETEC Director/Site Manager; Elizabeth "Thanne" Berg, DTSC's Site Mitigation and Restoration Program Deputy Director; Katherine Butler, DTSC Director; and Scott Lichtig, Cal EPA's Deputy Secretary for Environmental Policy. *Photo courtesy of DOE.*

In June, Candice Robertson became the new head of DOE's Office of Environmental Management, replacing Ike White, who was nominated to serve on the Defense Nuclear Facilities Safety Board. Robertson has more than 20 years of experience in radioactive waste management and has previously served as an elected Nye County Commissioner in Nevada prior to starting her federal service.

Another change in leadership came in September when Meredith Williams stepped down from her position as director of the California Department of Toxic Substances Control (DTSC), which oversees cleanup at SSFL. Katherine Butler stepped into the role and Elizabeth Anne "Thanne" Berg joined as the new site mitigation and restoration program deputy director.

In August, DOE, the California State Historic Preservation Office and the Santa Ynez Band of Chumash Indians signed an amendment to its Programmatic Agreement under the National Historic Preservation Act. The 10-year extension allows DOE to continue making progress toward cleanup at SSFL and provides a roadmap for making decisions that affect cultural resources at ETEC.

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An overview of Simi Valley from SSFL. *Photo courtesy of Melissa Simon.*

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- Upcoming DTSC soils workshop
- DOE at the Simi Valley Street Fair
- Extended agreement allows continued cleanup
- Learn about lilacs
- Turn food into fertilizer

Community Engagement

As part of DOE's efforts to be more engaged with the community, the ETEC team provided site visits to several local officials and their staff members.

Andrew Walker, a social media influencer, also visited the site to gather footage for a video looking at ETEC's history, take readings of radioactivity at the site, and discuss the Sodium Reactor Experiment and possible future plans for SSFL. Walker's YouTube channel, Radioactive Drew, documents decommissioned radioactive sites to help people better understand radiation.

In November, DOE participated in the Soil Smarts workshop hosted by DTSC that provided a community update on the next steps for cleanup at SSFL, including the implementation of soil remediation. The second workshop is in-person on December 10 at the DTSC office, located at 9211 Oakdale Avenue in Chatsworth.



Josh Mengers (right) talks with Andrew Walker (center) during a site tour in October 2024 for Walker's YouTube channel, Radioactive Drew. Photo courtesy of Karen Edson.

Wildlife and Research

Alex Walters, an earth scientist working for the Pacific Northwest National Laboratory and a graduate fellow for DOE, made visits to ETEC in January, June, and July to collect scat samples as part of a research study on whether the department's past operations at SSFL impacted mammals living at the site.



About 150 western spadefoot tadpoles were spotted at SSFL in April 2024, marking the first time since 2012 the toads were last seen onsite by biologists. Photo courtesy of Tara Schoenwetter.

In addition to mammals, SSFL is also home to a variety of amphibians, including the elusive western spadefoot toad, known as *Spea hammondi*. Dr. Tara Schoenwetter, a biologist who's worked at the field lab since 2011, discovered at least 150 spadefoot tadpoles near ETEC's Former Sodium Disposal Facility (FSDF) in April.

In October, ETEC collected soil samples to help lay the groundwork for soils remediation by identifying backfill sources and laboratory capabilities. This effort is in collaboration with state regulators, as well as NASA and Boeing (the other parties responsible for site cleanup).



DOE contractors conducted soil sampling at ETEC in October 2024. Photo courtesy of Pamela Hartman.

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Groundwater Progress

Community members had the opportunity to participate in Groundwater University, a series of virtual workshops to educate the public about groundwater at SSFL and prepare them to review and comment on future groundwater decision documents for the field lab. The series – hosted by the California DTSC in cooperation with DOE, Boeing, and NASA – culminated in a site tour in April.

In other groundwater news, DOE completed the installation of a solar-powered automated pump system near the FSDF in May. Since operations began, the system has pumped more than 19,000 gallons of groundwater. Between January and March, prior to the automated pump going online, just over 2,300 gallons were manually pumped from the same four wells.



Read about all these stories on the [ETEC News page](#) or scan the QR code.

– Melissa Simon (Contributor)

Josh Mengers, right, EM's federal project director for Energy Technology Engineering Center (ETEC), answers questions from community members about rock core samples excavated at SSFL during an April 6 site tour as part of Groundwater University. *Photo courtesy of Karen Edson.*



Song Chen with DOE contractor CDM Smith checks the solar skid panel and reviews data on the human-machine interface software used for the automated GWIM project in Area IV at SSFL. *Photo courtesy of Sandra Ramos Hernandez.*



Workshop Series Looks at Soil Cleanup

By Melissa Simon

About 130 people attended a virtual workshop hosted by the California Department of Toxic Substances Control (DTSC) to learn about the next steps for continued cleanup at the Santa Susana Field Laboratory (SSFL).

SSFL is a 2,850-acre former rocket engine testing and nuclear research facility comprised of four operational areas located in Simi Valley near Los Angeles County. DTSC oversees final cleanup plans for the Boeing Company, NASA and the Department of Energy (DOE), the agencies responsible for remediating contamination left behind in the soil and groundwater at the site.

DOE previously conducted nuclear energy and liquid metals research in Area IV at SSFL and is in charge of cleanup for that portion of the site, as well as the Northern Buffer Zone.

On November 20, DTSC hosted the first workshop in its Soil Smarts series. The educational series is intended to provide the public with information on the next phase of soil cleanup at SSFL, including DOE's and NASA's plans for soil remediation.

Dr. Valerie Hanely, a senior toxicologist for DTSC, provided an update on overall cleanup at SSFL, an overview of background studies previously done for each area, details on how background cleanup levels were established and discussed challenges associated with these levels.

Some of the attendees who spoke at the workshop were angered by the information provided, claiming that DTSC was going back on the previously promised background level cleanup.

Mindy Mathias, DTSC's SSFL program manager, assured the public that "regardless of specific cleanup levels, all DTSC-approved cleanup plans will result in final site conditions that are health protective of both people visiting the site and those living in the surrounding community."

The next Soil Smarts workshop will be in-person at 6 p.m. on December 10 at the DTSC office, 9211 Oakdale Avenue in Chatsworth. The open house format will provide another opportunity for the public to learn about cleanup and ask questions.

The recording from the November 20 workshop, along with information on how to register for the December 10 meeting, will be posted on the [DTSC's SSFL page](#). Contact Jamie Slaughter, DTSC's public participation manager, at jamie.slaughter@dtsc.ca.gov for more information.

DIY



TRANSFORM YOUR FOOD INTO FERTILIZER

Take Action for Earth! You can make soil healthier by fertilizing it with decomposed material, like leaves, grass, and food scraps. This material is called “compost.”

MATERIALS

- Two, 2-liter recycled plastic soda bottles
- Scissors
- Tape
- Tool for punching holes

COMPOST INGREDIENTS

- Use fruit and vegetable scraps from your kitchen. **Do not use citrus, meat, or dairy**
- Layer with dry leaves or soil
- Keep material moist

BOTTLE CONSTRUCTION

1 REMOVE LABEL AND CUT 1ST BOTTLE

Cut bottle near the bottle’s hip and remove cap. Throw away the feet, and keep **A**.

2 REMOVE LABEL AND CUT 2ND BOTTLE

Cut bottle just below the shoulder to make two parts, **B** and **C**. Keep cap screwed on tight.

3 MAKE HOLES

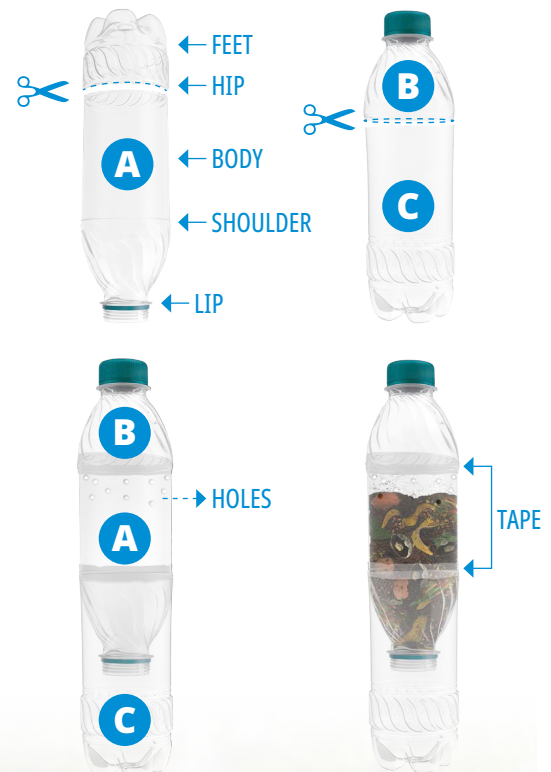
On bottle **A**, puncture a dozen or so small holes near the top of the body to allow oxygen to circulate.

4 PLACE TOGETHER

Put bottle **A** inside **C**, and place compost ingredients inside the cavity of **A**. Then place **B** on-top of **A** and tape together.

ALLOW COMPOST TO DECOMPOSE

Decomposition should begin after a few days and last several months. Store the container indoors or outdoors. *Tip: Freezing may slow the process and direct sunlight may dry it out. Keep in dry dark area and check to make sure the compost is slightly damp.*



Simi Valley Street Fair Fun!

By Melissa Simon

Thousands of community members took to the pavement at the recent Simi Valley Street Fair showcasing local artists, crafters, businesses and culinary delights.

The U.S. Department of Energy (DOE) was among the more than 380 vendors that hosted a booth at the October 26 fair.

The biannual event, sponsored by the Simi Valley Chamber of Commerce, featured a “pumpkin jubilee” theme. Children participated in a coloring contest, and they dressed in Halloween costumes for trick-or-treat at the booths. Participants of all ages competed in a pumpkin carving contest.

DOE shared information about work at the Energy Technology and Engineering Center (ETEC) at the Santa Susana Field Laboratory (SSFL), a 2,850-acre former nuclear energy research and rocket engine testing facility. DOE previously conducted nuclear energy and liquid metals research in Area IV at SSFL.

Attendees could also learn about science, technology, engineering and math (STEM) careers at DOE or pick up a copy of the August 2024 [CleanUpdate](#) newsletter, internship resources or the [EM Strategic Vision](#).

Other vendors included community leaders, civic organizations, local fire and police departments, school districts and educators, and other prominent members of the Simi Valley community.

A highlight at the booth was the seed ball activity. Guests took balls of soil, clay, water and California Poppy seeds, wrapped them with tissue paper and decorated them like pumpkins, bats and other spooky creatures to take home and plant in their yards. The project was inspired by DOE’s preservation efforts at SSFL to ensure the plants and wildlife are monitored and protected into the future.



Dr. Josh Mengers, DOE federal project director/site manager, makes seed balls with kids at the Simi Valley Street Fair on October 26, 2024. Photo courtesy of Karen Edson.



DOE talks with community members about the work at SSFL during the Simi Valley Street Fair on October 26, 2024. Photo courtesy of Karen Edson.



Back row (from left): Lucas Ray, radiological control technician for the site; Ally Boyer-Sprouse, communications; Dr. Josh Mengers, the federal project director/site manager for ETEC; and Stephanie Shewmon, site communications/public affairs. Front row (from left): Melissa Simon, community outreach manager for ETEC; and Karen Edson, public affairs. Photo courtesy of Karen Edson.

Extended Agreement Allows for Continued Partnership and Progress at ETEC

By Melissa Simon

An agreement between the U.S. Department of Energy (DOE), state officials, and local tribal governments has been extended for 10 years, allowing cleanup to continue at the [Santa Susana Field Laboratory](#) (SSFL).

DOE, California State Historic Preservation Officer (SHPO) Julianne Polanco, and the Santa Ynez Band of Chumash Indians signed an amendment to their [Programmatic Agreement](#) under the National Historic Preservation Act. The agreement provides a roadmap for making decisions that affect cultural resources at the [Energy Technology Engineering Center](#) (ETEC) in Area IV, a 290-acre portion of SSFL.

SSFL is a 2,850-acre former rocket engine testing and nuclear research facility with four operations areas located northwest of Los Angeles, California. DOE's [Office of Environmental Management](#) (EM) is charged with cleanup of residual contamination remaining in Area IV.

The amended agreement extends the agreement another 10 years and allows DOE to continue making progress toward cleaning up its portion of SSFL. The agreement, which was developed with input from many interested parties and the public, documents an agreed-upon process to avoid, minimize, or mitigate impacts on cultural resources from DOE's cleanup activities. Important cultural resources at ETEC include archaeological sites and a cultural district associated with the practices and traditions of local Native American communities.

Agreements like this ensure that DOE follows the many laws related to environmental cleanup while preserving the rich history of the local area.

"A lot of things go into a successful cleanup — safety, cultural and biological considerations, and community perspectives — and extending this agreement is just one piece of the puzzle that allows us to keep making progress," said Josh Mengers, EM's federal project director for ETEC. "We're gathering input and coordinating with the relevant state and federal agencies so we can keep everyone informed and involved with what's going on at the site."

DOE followed the agreement, which was executed in September 2019, when it completed the above-ground demolition of its [18 remaining buildings](#), disposal of all [waste offsite](#), and installation of several new wells.

More recent progress includes the May 2024 installation of a [groundwater interim measure system](#). The automated solar-powered groundwater system was installed near the Former Sodium Disposal Facility and has pumped more than 19,000 gallons of water since operations began.

"The amended Programmatic Agreement allows DOE to continue moving forward with cleanup activities following a step-by-step process that includes continued coordination with the SHPO, tribal governments, and the public," said Karen Foster, cultural resources manager at the ETEC site.



DOE contractors and a Native American monitor provide oversight of trenching activities during the installation of an automated pump system in the Former Sodium Disposal Facility in April 2024. Photo courtesy of Aps Bakouros.

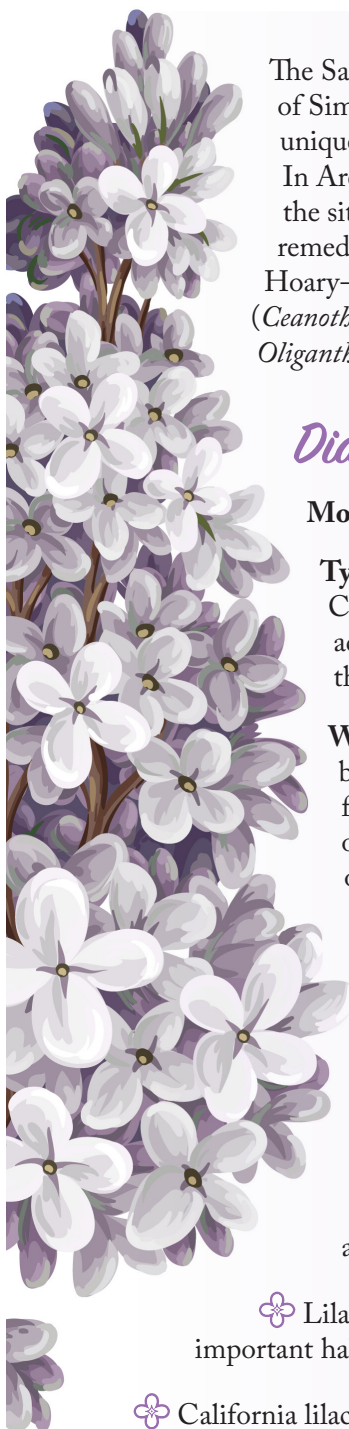
The agreement will help DOE with ongoing groundwater monitoring and interim cleanup actions like removing more than 40,000 gallons of contaminants from the groundwater at ETEC since 2017. It will also guide future actions like initiating final groundwater treatment approaches and beginning soil remediation.

Read the agreement and accompanying annual reports on the [ETEC website](#) to learn more about DOE's recent activities at SSFL.



Spotted at SSFL!

California Lilac



The Santa Susana Field Laboratory (SSFL), located in the hills of Simi Valley near Los Angeles County, is home to many unique plant and wildlife species, like various species of lilac. In Area IV and the Northern Buffer Zone, the portions of the site where the Department of Energy is responsible for remediation, there are four types of lilac that have been spotted: Hoary-leaf ceanothus (*Ceanothus crassifolius*), Buckbrush (*Ceanothus cuneatus*), Hairy ceanothus (*Ceanothus oliganthus* var. *Oliganthus*), and Greenbark ceanothus (*Ceanothus spinosus*).

Did You Know?

Most lilac species bloom from February to April.

Typical habitat: Shrublands and forested communities. California lilac generally occurs in areas that are well adapted to heat and drought with low-growing shrubs that have thick, evergreen leaves.

Why it's special: California lilac has many uses and has been used by the Santa Ynez Band of Chumash Indians for building, as digging sticks to collect roots and bulbs, or in basket making. It is also used in soaps and shampoos, or to treat inflammation, colds, fevers, and dandruff.

Fun facts:

- ✿ There are 85 species of lilac known throughout California, 25 of which have been reported in Ventura County. Of those 25 species, 24 are listed as rare.
- ✿ The Chumash call white-flowered lilac *sekh* and blue-flowered lilac *washiko*.
- ✿ Lilacs are often one of the first shrubs to bloom after winter, giving a striking appearance to the landscape.
- ✿ Lilacs are nitrogen-fixing plants, meaning they can improve soil quality and also serve as an important habitat for many animals.
- ✿ California lilacs are attractive and versatile, varying in size from low ground cover to shrubs and small trees. The drought-tolerant plants are a vibrant and valuable asset to home gardens.



Close up of California lilac spotted at SSFL in March 2024.
Photo courtesy of Pamela Hartman.



A lilac bush flowering at ETEC's Former Sodium Disposal Facility in March 2024.
Photo courtesy of Tara Schoenwetter.

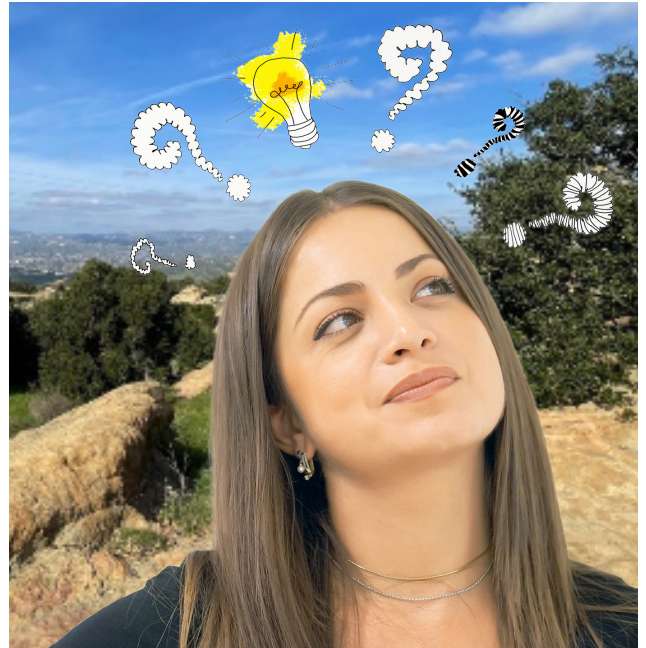
Information provided by Tara Schoenwetter, biologist at SSFL since 2011.

Looking Ahead

We want to hear from you! As we move into 2025, 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.



Background photo courtesy of ([ETEC web pic](#)) Foreground image courtesy of Getty Images.



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