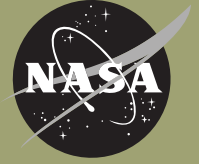


SEPTEMBER 2024

FieldNOTE

An Update on NASA's Cleanup Efforts at the Santa Susana Field Laboratory



NASA prepares for public review of Phase 1 groundwater cleanup documents



Enhanced in situ bioremediation (EISB) is one of the remedies selected in NASA's Phase 1 Groundwater CMS. NASA built a pilot EISB system (pictured above) near the spillway of Alfa 1.

In the coming months, community members will have the opportunity to comment on NASA Groundwater Cleanup documents as NASA continues to move closer to a final, comprehensive cleanup of groundwater impacted by historical operations at the Santa Susana Field Laboratory (SSFL). The Department of Toxic Substances Control (DTSC) has indicated that it will soon release and begin accepting comments on the Statement of Basis identifying the preferred cleanup remedy for NASA's Phase 1 Groundwater Cleanup. During the 45-day public comment period, community members can provide comments on DTSC's Statement of Basis, as well as NASA's Phase 1 Groundwater Corrective Measures Study (CMS). The Phase 1 CMS evaluates the corrective action alternatives and recommendations about the corrective measures proposed to clean up groundwater contamination in NASA-administered areas at SSFL.

"NASA is looking forward to the release of DTSC's Statement of Basis and the initiation of the public comment period for our Phase 1 Groundwater CMS," said Peter Zorba, NASA SSFL Project Director. "We are ready to build on the progress we have made with our pilot studies and interim measures and move into the next phase of full-scale groundwater cleanup."

As NASA awaits DTSC's release of the Statement of Basis, the groundwater team is developing the Corrective Measures Implementation (CMI) plan that details how the Phase 1 remedial actions will be implemented.

A Two-Phased Approach

Much like the demolition of obsolete structures at SSFL, NASA is taking a phased approach to groundwater cleanup in NASA areas. Phase 1 of NASA's groundwater cleanup covers the highest-risk contaminants of concern in NASA's areas. Specifically, the Phase 1 CMS focuses on high trichloroethylene (TCE) concentration source areas, such as the former NASA rocket engine test areas. Phase 2 will include all remaining NASA groundwater and bedrock vapor sources. Since it will follow the Phase 1 CMS, Phase 2 will be informed by scientific data and "lessons learned" from Phase 1. NASA anticipates beginning Phase 1 cleanup in 2025, following DTSC's completion of the public review process and the finalization of the Phase 1 CMS document.

"We are ready to build on the progress we have made with our pilot studies and interim measures and move into the next phase of full-scale groundwater cleanup."

-- Peter Zorba, NASA SSFL
Project Director

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NASA makes headway with demolition and removal of Coca Test Stands 1 and 2

NASA continues to make progress with the demolition of the more than 200-foot Coca Test Stand 1. Since they began earlier this year, the Phase 7 demolition team has completed the disassembly and removal of the Coca Test Stand 1 superstructure, as well as the upper portion of the much smaller remnant of Coca Test Stand 2, an earlier version located adjacent to Stand 1.

“I am really proud of the demolition team,” said Peter Zorba, NASA SSFL Project Director. “This was always going to be a challenging undertaking, and the technical expertise and skilled approach to this project has been extraordinary.”

Phase 7 is expected to be completed by the end of the calendar year. Meanwhile, NASA is working on the procurement process for Phase 8, the last planned

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-- Peter Zorba, NASA SSFL Project Director

phase of demolition in NASA areas prior to cleanup. Phase 8 will include the removal of the Coca Control House, as well as the remaining concrete in the spillways and throughout the Coca Test Area.



Coca Test Stand 4, April 2024



Coca Test Stand 4, August 2024

A Decade of Progress

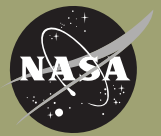
In November of 2014, NASA kicked off the demolition program at SSFL per [NASA’s 2014 Record of Decision for Proposed Demolition and Environmental Activities at SSFL](#). Since then, using a phased approach, NASA has steadily been demolishing obsolete structures and infrastructure throughout NASA-administered ar-eas at SSFL, with the complexity of demolition increasing with each phase. Continued, see **DEMOLITION**, page 3

NASA’s SSFL Demolition Timeline



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DEMOLITION (continued from page 2)

Demolition serves two critical purposes. First, it allows NASA to reduce its environmental footprint at SSFL and help restore the ecosystem. In addition, it clears the way for NASA to implement soil cleanup without hindrance once DTSC issues a decision document.

To date, NASA's ongoing demolition activities have removed more than 6,000 tons of hazardous waste and recycled over 14,000 tons of clean steel and asphalt, resulting in the restoration of more than 22 acres of property to its natural habitat.

DEMOLITION

BY THE NUMBERS

Since 2014

6,000 tons
hazardous waste
removed & disposed

14,000 tons
clean steel & asphalt
recycled

22 acres
ecosystem restored

In the SPOTLIGHT



James Dardon, NASA
Demolition Project Manager

Meet NASA's Demolition Project Manager

Managing demolition activities safely and effectively requires extensive planning and coordination. James Dardon, NASA's Demolition Project Manager, has played a critical role in that planning and coordination over the past 18 months since NASA began demolition of the Coca Test Area, the home of the largest former rocket test stand structures that remain on NASA-administered property at SSFL.

Dardon serves as liaison between Marshall Space Flight Center in Huntsville, Alabama, and SSFL and also works directly with the United States Army Corps of Engineers, NASA's demolition partner, on demolition funding, scheduling, and document review to help ensure the program is running smoothly.

A Southern California native, Dardon said he was thrilled by the opportunity to join the SSFL demolition oversight team at SSFL in early 2023.

"I was really excited to be back in my home state and be part of the Santa Susana team," he said. "I continue to take pride in the ongoing demolition work at SSFL and ultimately complete a successful site restoration that will return this part of the state to its original beauty."

Dardon brought his military experience with him when he joined NASA in 2013 at Marshall Space Flight Center as a civil and structural inspector for construction of facilities projects, while also ensuring wage compliance for contractors. He holds a Bachelor of Science in Environmental Management and a Master of Science degree in Occupational Safety & Health from Columbia Southern University.

In addition to his role managing the demolition at SSFL, Dardon is also part of the team that oversees demolition at Marshall Space Flight Center and at the Michoud Assembly Facility in Louisiana.

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NASA prepares to collect samples for backfill study

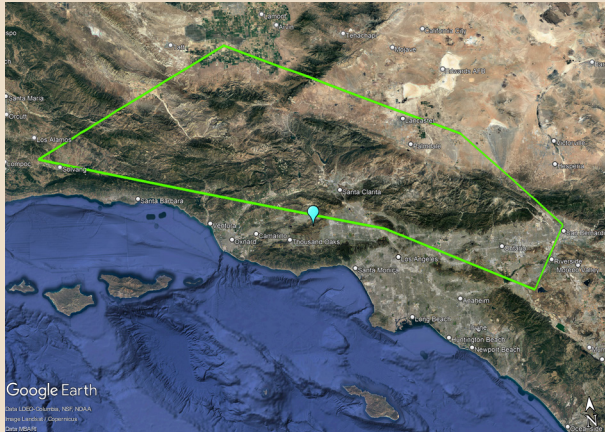
This fall, NASA will be collecting samples from multiple locations across Southern California as part of a study to identify and evaluate potential backfill sources following the soil excavation and cleanup activities at SSFL. Over the past several months, NASA has visited potential backfill sources covering over 2,000 square miles across the region to identify the locations best suited for inclusion in the study. NASA's study is part of a joint effort with the Department of Energy (DOE) and Boeing to respond to a request from DTSC to support the preparation of soil decision documents.

Backfill is critical for the stabilization, revegetation, and restoration of habitat that will be impacted by the soil excavation and cleanup activities at SSFL. To be able to meet the Look-Up Table (LUT) values required to complete an Administrative Order on Consent (AOC) cleanup, NASA would need to excavate and remove an estimated 870,000 cubic yards of soil. Additionally, NASA estimates that over 448,000 cubic yards of backfill would be required to replace excavated soil to stabilize the surface soil and support revegetation and restoration of habitat impacted by the cleanup activities.

Although multiple off-site backfill locations have been evaluated previously, no backfill has yet been identified that both meets AOC standards and is capable of supporting the restoration of the natural habitat following soil cleanup.

“Getting the backfill study results will be a fundamental step towards soil cleanup and to restoring the natural beauty of the site after remediation,” said Randy Dean, Technical Lead for NASA's Soil Cleanup Program.

NASA will collect samples starting in October through the end of the calendar year. Once NASA has the results, it will work with DOE and Boeing to develop a full report for DTSC that combines the backfill sampling results for all SSFL responsible parties.



The green outline marks the study area across Southern California where NASA has targeted potential source locations for backfill.

In the SPOTLIGHT Meet the Technical Lead for NASA's Soil Cleanup Program



Randy Dean is NASA's Technical Lead for Soil Remediation at Santa Susana. He has been working on SSFL site characterization and cleanup efforts since 2007, and is part of NASA's on-site team.

Currently, Dean serves as the technical lead for NASA's soil investigation and remediation program. In this role, he offers technical guidance and leadership for all soil-related activities, including backfill source material identification and sampling, the development of soil-related work plans, and all other soil-related activities. In addition to this role, Dean also serves as the NASA SSFL Stormwater Program Leader, where he is responsible for managing NASA's stormwater compliance program, including the design and implementation of best management practices (BMPs), stormwater controls, and implementation of stormwater sampling programs.

Dean has been with Jacobs Engineering Group, NASA's primary contractor for SSFL site remediation, for 25 years. He has a Bachelor of Science degree in Earth Science from the University of California, Santa Cruz, and a Master of Science in Geology with a focus on Hydrology from the University of Florida. In addition, he is a California-licensed Professional Geologist and is certified as a qualified Stormwater Pollution Prevention Plan (SWPPP) developer and practitioner.

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