

September 1996



# AREA IV RADIOLOGICAL CHARACTERIZATION *Study*

**A**t Rocketdyne, we are firmly committed to safety, respect for the environment and, in particular, the well-being of our employees and neighbors. As part of that commitment we want to continue to provide you with information about our environmental activities at the Santa Susana Field Laboratory. Last year we informed you about our efforts to investigate areas for radioactive contamination in the August 1995 issue of *Speaking of The Santa Susana Field Laboratory*. The purpose of this *Environmental Update* is to provide you with the results of the Area IV Survey.

## *Background*

***At one time, nuclear research facilities and small nuclear reactors were operated at the Santa Susana Field Laboratory.***

The 2668-acre Santa Susana Field Laboratory is divided into four areas as shown in Figure 1 (next page). Areas I, II, and III, which make up the majority of the developed portion of the field lab, have been used to test rocket engines since the 1950s. We did nuclear energy research at 25 facilities located in Area IV (270 acres at the northwest portion of the site). All nuclear work ended in 1988, at which time final cleanup efforts began. Of the 25 facilities used, 20 have been cleaned up. Work is progressing to clean up the remaining facilities.

## *Area IV Survey*

***We responded to our neighbors' concerns and checked all areas for radioactive contamination.***

We put together a plan to look at all of Area IV—even those areas where nuclear work never occurred—to ensure they are free of radioactive contamination. This plan, entitled the "Radiological Characterization Plan, Santa Susana Field Laboratory, Area IV," included a review of all previous studies and described methods and procedures for surveying Area IV. We performed the survey under the oversight of the U.S. Department of Energy and the California Department of Health Services. All of Area IV was covered in the survey except those locations previously surveyed or undergoing cleanup and inaccessible terrain (see Figure 2). Radiation measurements and soil samples were taken through the use of grids and study blocks. The survey began in March 1994 and was completed by October 1995.

*At the Santa Susana Field Laboratory, all nuclear work ended in 1988, at which time final cleanup efforts began. Of the 25 facilities used, 20 have been cleaned up. Work is progressing to clean up the remaining facilities.*

## Background Radioactivity

*Certain amounts of radioactivity occur naturally in the environment (e.g., uranium from soil and rocks) or are the result of fallout from worldwide weapons testing activities in the 1960's. This type of radioactivity is generally referred to as "background."*

## Area IV Survey Results

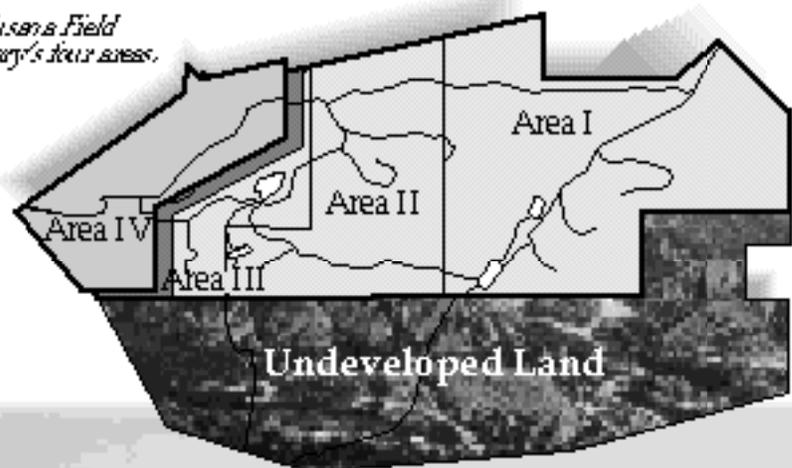
**Results show the need for additional cleanup in three locations.**

The final report of the Area IV Survey was reviewed and approved for release by the U.S. Department of Energy. It describes the results of over 10,000 radiation measurements, surface radiation scans taken over approximately 220 acres and 149 soil samples taken at Area IV.

All radiation measurements taken at 10,479 grid locations at Area IV were in the same range as local background (measurements taken 3 to 12 miles from the Santa Susana Field Laboratory). One-minute radiation measurements were taken using radiation detection equipment held one meter above the ground at each location. These measurements were taken at equally spaced grid points 25 feet apart.

To supplement the grid measurements, we also performed surface radiation scans of every square foot of land between each grid location where the radiation measurements were taken. Radiation detection equipment was held low to the ground (approximately six inches above the surface) and moved slowly across a path about five feet wide as the surveyor moved slowly across the grid blocks. This is similar to metal detection used at beaches. During this surface scan we identified three spots with elevated radiation readings that require cleanup (confirmed by soil samples taken at each of these locations).

*Figure 1.  
Santa Susana Field  
Laboratory's four areas.*



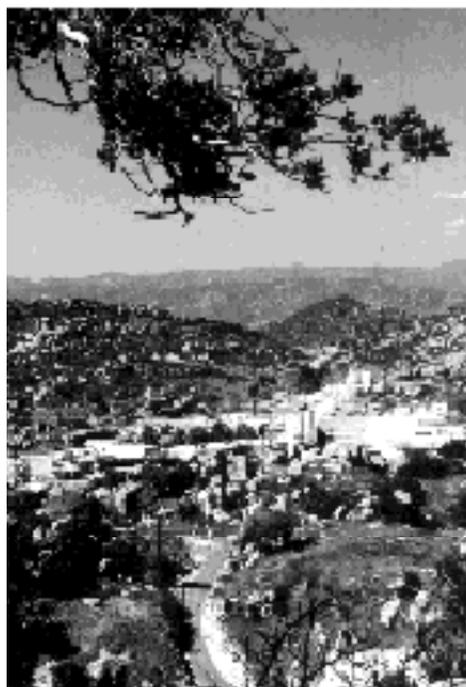




## Contact Us for More Information

If you did not receive this in the mail and would like to be added to our mailing list, or if you would like additional information, please write or call:

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## Information Resources

We are committed to sharing information that we hope will be useful to you. Copies of the plan and final report described in this Update and other documents related to environmental activities at the Santa Susana Field Laboratory are available for public review at:

California State University, Northridge  
Urban Archives Center  
Oviatt Library, Room 4  
18111 Nordhoff Street  
Northridge  
818/885-2832

Platt Branch Library  
23600 Victory Boulevard  
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818/340-9386

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