DOE Community Meeting 06-22-05 Questions & Answers

1. The 1996 UCLA worker health study detected triple the cancer rates in workers. How do you explain that?
The UCLA worker health study (funded by DOE) reported that a small number of workers exposed to the highest level of radiation had a statistically significant increase in certain types of cancer. However, UCLA researchers also concluded that the results required confirmation through further follow-up. In 2005, the follow-up study was conducted by the independent International Epidemiology Institute. IEI was selected and overseen by the Rocketdyne Worker Health Science Committee comprised of six outside experts from the University of Southern California, the University of Washington, Harvard University, George Washington University, Montreal University and Duke University. The results from this expanded study (funded by Boeing), which included more workers observed over a longer period of time, concluded that radiation exposure has not caused a detectable increase in cancer deaths among Rocketdyne workers.

2. The 1990 DHS cancer incidence study detected elevated bladder cancer rates in the community surrounding SSFL. How do you explain that?
The 1990 study concluded that "findings are consistent with random variation in cancer incidence rates." In other words, bladder cancer rates near SSFL are not statistically different from rates observed throughout Los Angeles County. In 1992, a larger follow-up study by the California Department of Health Services (DHS) concluded that "follow-up analyses suggest that people living near SSFL are not at increased risk for developing cancers associated with radiation exposure." Hal Morgenstern of the University of Michigan recently completed a cancer incidence study of the community surrounding SSFL, however only a summary presentation has been published to date. The results suggested that a few slightly higher cancer rates closer to SSFL are not due to exposure to contaminants or proximity to SSFL, but possibly to differences in ethnicity. We are waiting for the full report before drawing any conclusions about the results.

3. What does a water purveyor do with water that exceeds their limits? Do they test for tritium?
Water purveyors are required by the federal Safe Drinking Water Act to supply only water that meets drinking water standards. Local water purveyors are required to test for tritium, strontium-90, gross alpha/beta, radium-226/228 and total uranium. All municipal water purveyors are also required to provide their customers with an annual report on the quality of their drinking water.

4. What are the exposure pathways for the average person for antimony and molybdenum?
Antimony and molybdenum are naturally occurring in water and soil in the environment. The average person may be exposed to these chemicals by breathing air, drinking water, contacting soil and by eating certain foods. Molybdenum is an essential element and is present in some vitamins. Antimony and molybdenum are also present in consumer products. Antimony is present in ammunition, fire-retardant cloth, glass and plastics. Molybdenum is present in hardened steel and automobile lubricants. Exposure to these chemicals could occur through the use of these products.

5. Has all the testing been disclosed?
Soil, groundwater, surface water and air results are published in a variety of regular and/or one-time reports. Radiological data are provided in the Annual Site Environmental Reports that are sent to numerous agencies and public and legislative stakeholders. Radiological data specifically related to final status surveys are provided to the Department of Health Services Radiological Health Branch. Our testing data are provided to regulatory agencies and are available in local information repositories at the Simi Valley Public Library, University Library at Cal State Northridge, and the Platt Branch of the LA public library in Woodland Hills. Groundwater testing results are reported quarterly to the Department of Toxic Substances Control (DTSC). Surface water results are also reported quarterly to the Regional Water Quality Control Board. Chemical soil testing results are summarized

quarterly to DTSC and have been reported in two comprehensive reports in 1999 and 2004. Chemical soil sampling and other characterization work are ongoing at the site, and a series of reports that provide results of these data are being or will be prepared in the future.

6. Was the groundwater testing in the 1950s and 1960s done by Rocketdyne and was it provided to the DWP?
Groundwater testing in Area IV began in the mid-1950s and was performed by Atomics International. Until 1989, the analysis was only for gross alpha and gross beta. All of these test results complied with current drinking water limits. These results are reported in the biannual and subsequent annual reports that are distributed to customers, regulatory agencies and other interested stakeholders. The distribution did not include the Los Angeles DWP since groundwater at SSFL is not a drinking water source.

7. With all the contamination concerns, why is new housing development considered in the surrounding area?
Planning and land use decisions are made by county and city agencies. We are confident that the widespread sampling and monitoring in and around SSFL have not detected any contaminant at levels which would pose a risk to our neighbors. We would be happy to talk to you about the results of this testing. These results are also available at the local information repositories.

8. Please sample the land at 24303 Woolsey Canyon.
No surface water drainage from operational areas at the SSFL flows to Woolsey Canyon. Also, independent radiological samples taken by Oak Ridge Associate Universities (ORAU) in 1986 and Oak Ridge Institute of Science and Education (ORISE) in 1995 did not detect any contamination along Woolsey Canyon. Soil and groundwater sampling in the Chatsworth Reservoir (immediately downstream of Woolsey Canyon) by the Los Angeles Department of Water & Power in 2004 did not detect any contamination. This sampling was conducted to verify the suitability of Chatsworth Reservoir soil for use in other LADWP projects. Based on these data, there is no reason to believe that a specific address on Woolsey has been impacted by SSFL operations. However, if you still would like testing of your property, you can make a request to either the County Department of Health Services or the Department of Toxic Substances Control.

9. If disputes exist, what entity or groups can be brought in who are unbiased?
Boeing and DOE have invited several independent organizations to judge whether radiological cleanup and sampling/surveys have been conducted appropriately. Also, the USEPA and the California Department of Health Services have performed confirmatory surveys of prior radiological facilities. The Oak Ridge Institute of Science and Education (ORISE), its predecessor the Oak Ridge Associated Universities (ORAU) and Argonne National Laboratory (ANL) have all performed confirmatory surveys. Various state and federal agencies frequently take split samples to confirm Boeing data. Independent verification is designed to provide quality control for the remediation and monitoring process and to provide the community and other interested stakeholders with assurance that data is valid.

10. I would like a tour of the site.
Boeing conducted eight Saturday morning bus tours at SSFL for local residents between 1996 and 2002. Each tour accommodated approximately 150 visitors. In addition, periodic student/teacher tours have been hosted at teacher request. These tours were discontinued due to waning interest and enrollment. We are considering hosting additional site tours again in the near future.

11. What are the future plans for the site?
In the short term, rocket testing will conclude this year. Laser operations will continue through 2008. Soil and groundwater remediation activities will continue until the work has been completed. Future plans for SSFL have not yet been determined.