U.S. DEPARTMENT OF ENERGY
FINDING OF NO SIGNIFICANT IMPACT
HEALTH PROTECTION INSTRUMENT CALIBRATION FACILITY
AT THE SAVANNAH RIVER SITE
AIKEN, SOUTH CAROLINA

AGENCY: U.S. Department of Energy

ACTION: Finding of No Significant Impact

SUMMARY: The Department of Energy (DOE) has prepared an Environmental Assessment (EA), DOE/EA-0873, for the proposed construction and operation of a Health Protection Instrument Calibration Facility at the Savannah River Site (SRS), Aiken, South Carolina. Based on the analyses in the EA, DOE has determined that the proposed action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969. Therefore, the preparation of an environmental impact statement is not required and DOE is issuing this Finding of No Significant Impact (FONSI).

PUBLIC AVAILABILITY:

Copies of the EA and FONSI are available from:

Mr. Karl E. Goodwin
U.S. Department of Energy
Office of Processing and Reactor Facilities
19901 Germantown Road
Germantown, Maryland 20874
Phone: (301) 903-5498

For further information on the DOE NEPA process, contact:

Ms. Carol Borgstrom
U.S. Department of Energy
Office of NEPA Oversight
1000 Independence Avenue, S.W.
Washington, D.C. 20585
Phone: (202) 586-4600 or (800) 472-2756

BACKGROUND: Processing of nuclear materials for the U.S. Government is a primary mission of the SRS. To accomplish this mission safely, radiation detection instruments are used to monitor radiation levels. These instruments must be accurate, reliable, and conveniently available. To maintain accuracy, access to a suitable calibration facility is essential. Such a facility was constructed in Building 736-A in 1952. This calibration facility does not meet current standards to qualify for accreditation by the National Voluntary Laboratory Accreditation Program, administered by the National Institute of Standards and Technology. The need for a new calibration facility and improved calibration practices was specifically addressed by DOE - Headquarters during a review conducted on the SRS Health Physics Program in 1988.

PROPOSED ACTION: The proposed action is to construct and operate a new state-of-the-art instrument calibration facility which would provide a central source for the calibration services, testing, maintenance and inspection of radiation monitoring instrumentation on the SRS. This project would also provide all of the laboratories, offices, and test equipment necessary for the SRS Instrument Calibration Program to comply with applicable DOE Orders and American National Standards Institute (ANSI) procedures. A number of radioactive sources would be maintained in the facility for use in the calibration of instruments.

The proposed Health Protection Instrument Calibration Facility would be constructed on a 3.0 acre site on the west side of SRS Road No. 2 in B-Area, located approximately 2.8 miles from the nearest site boundary.

The proposed facility would be a 22,000 square foot single story building, which would include laboratories, a wrapping and quality control room, a receiving and decontamination room, and offices. Facility construction would require tie-in to the B-Area domestic water system, electrical supply grid, fire suppression system, and domestic water system. The facility would have paved parking spaces to accommodate employee, facility, and visitor vehicles. Once completed, the proposed facility would operate with a staff of fewer than 35 personnel.

ALTERNATIVES: In addition to the proposed action, DOE considered the following alternatives to the proposed action of constructing and operating a new Health Protection Instrument Calibration Facility at SRS: 1) no action; 2) renovation of the existing calibration facility; 3) expansion of the existing calibration facility; 4) alternative construction sites at the SRS; and 5) the use of offsite calibration facilities.

The no-action alternative would entail the continued use of the existing facility without expansion or upgrade. This alternative would not allow SRS to comply with DOE requirements for the calibration of radiation monitoring equipment. The second alternative was not acceptable because modification to the existing facility would potentially expose workers to the asbestos in the walls, without ancillary benefits. Furthermore, existing roads, utilities and buildings adjacent to Building 736-A preclude expansion of the existing calibration facility. Other potential sites for the location of the calibration facility were

evaluated; however, the facility would be best served by locating it away from operational Radiologically Controlled Areas and in a low-background area. Offsite calibration facilities have not been identified that fully comply with ANSI N323 (Radiation Instrument Test and Calibration). Offsite calibration organizations would not be capable of providing rapid support for emergency situations where the demand for instrument services can be very high.

ENVIRONMENTAL IMPACTS: The proposed action would take place on a 3-acre undeveloped tract of planted pine plantation and would result in the harvest of approximately 3,100 board feet of timber. The loss of pine plantation as a result of the proposed project would be less than 0.003% of the planted pine habitat on the SRS. A Sanitary Sewer Construction Permit and a Sanitary Sewer Operation National Pollutant Discharge Elimination System Permit would be required for the proposed calibration facility. No environmentally sensitive areas or natural resources such as historical or archaeological sites, threatened or endangered species or their habitats, floodplains, wetlands or aquatic resources would be affected by the proposed project.

As a result of the new facility, overall worker exposure to radiation would experience a net decrease from the current facility due to increased shielding and facility compliance with existing DOE Orders. Occupational safety would also improve as the new facility would incorporate the latest DOE and Occupational Safety and Health Administration safety designs. In the event of a catastrophic event that resulted in total facility destruction, maximum radiation doses

from all sources to onsite workers at 100 meters, and the offsite populace (site boundary) would be 1.4 rem and 7×10^{-3} rem, respectively. Based on an occupational risk factor of 4×10^{-4} fatal cancers per person-rem, these exposures would not be expected to impose any harmful health effects on either workers or members of the public receiving such doses. Standard best-management practices and construction materials would be used for facility construction. An erosion control plan would be prepared, approved and implemented for the proposed project.

DETERMINATION: Based on the information and analyses in the EA, DOE has determined that the proposed construction and operation of the Health Protection Instrument Calibration Facility at SRS does not [illegible] major Federal action significantly affecting the quality of the hum[illegible] environment within the meaning of NEPA. Therefore, an environmental impact statement for the proposed action is not required.

Issued in Washington, D.C., this 27th day of August, 1993.

Peter N. Brush
Acting Assistant Secretary
Environment, Safety and Health