

## Department of Energy

Washington, DC 20585

November 26, 2002

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, NW, Suite 700  
Washington, D.C. 20004-2901

Dear Mr. Chairman:

The purpose of this letter is to provide status information on two Board Recommendations as they apply to Rocky Flats.

Recommendation 94-3:

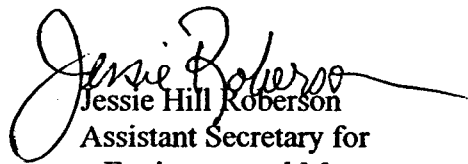
The decision has been made not to upgrade Building 371. The upgrades under consideration were for an interim nuclear material storage option based on "Go/No Go" criteria in Milestone 6-5 of the Recommendation 94-3 Integrated Program Plan. The basis for this decision is the considerable progress the site has made in packaging nuclear material and shipping to Savannah River. This closes the deferred decision delineated in our March 6, 2002, letter.

Recommendation 00-01:

The Department committed to complete stabilization and packaging Plutonium Metals and Oxides at the Rocky Flats Environmental Technology Site by May 2002. Based on expected through-put, DOE now projects that the milestone will be completed by October 2003.

If you have any questions, please call me at (202) 586-7709 or Mr. Paul Golan, Chief Operating Officer, at (202) 586-0738.

Sincerely,

  
Jessie Hill Roberson  
Assistant Secretary for  
Environmental Management

Enclosure

cc: M. Whitaker, S-3.1



## Justification

The January 2003 completion date for repackaging all plutonium material will not be met due to current Plutonium Stabilization and Packaging System (PuSPS) production rates, feed material uncertainties, and diminishing system reliability. Improvements to increase overall production rates continue to be implemented. To further reduce uncertainties in the completion date, a portion of the lower purity oxides will be blended, as required, and repackaged to be shipped to the Waste Isolation Pilot Plant (WIPP). Repackaging of these lower purity oxides is expected to be complete by July 2003. The remainder of the plutonium metals and oxides will be repackaged to the 3013 standard by October 2003.

### Plutonium Stabilization and Packaging System (PuSPS) Completion Date

Uncertainties regarding future PuSPS production indicate that the prior 100 containers-per-month output will be difficult to maintain during the remainder of the packaging campaign. The following uncertainties may have an adverse impact on future production rates.

- Pu metal packaging should be complete by the end of 2002. From that point, PuSPS packaging will be limited to oxide. Oxide-only packaging will be less efficient since packaging of metal can be performed concurrently with oxide; a reduction in packaging throughput of approximately 15 percent is expected to result.
- Starting in November 2002 packaging of oxide material will be limited to impure oxides (i.e., materials containing <80% Pu). Potential problems processing low purity oxides include: an increase in anomalous materials, the presence of impurities that could cause problems with the processing equipment (e.g., stabilization furnaces, moisture measurement equipment), and moisture measurement uncertainties caused by impurities. These problems could reduce the throughput rate of 3013-compliant containers.
- Thermal Gravimetric Analysis, with Fourier Transform Infrared detector (TGA/FTIR) will be used to measure moisture in oxide containing <80% Pu. The ability of TGA/FTIR to function satisfactorily, on a production basis with Rocky Flats' materials, has not been established. Additionally, there is no alternative method available in the event that this method does not perform in an acceptable manner.
- As the processing equipment in the PuSPS ages, the downtime for maintenance and repairs may increase.

All of these uncertainties combined indicate that PuSPS production rate may drop below the 100 cans per month experienced throughout most of 2002. However, current projections indicate that 85 cans per month should be sustainable. At this rate the PuSPS should complete packaging operations in the summer of 2003. The October 2003 completion date is recommended to provide contingency for delays affecting PuSPS such as density issues, the possibility that the Pu Composites may be packaged into 3013 containers, and unanticipated downtime.

### **Lower Purity Oxide Repackaging to WIPP Completion Date**

Approximately 970 kgs of low purity oxides containing approximately 180 kgs of plutonium are to be repackaged and shipped to WIPP. Based on crew availability and past residue production rates, it is estimated that repackaging will be complete by July 2003. Besides reducing uncertainties in 3013 repackaging, repackaging the lower purity oxides to WIPP is less costly and slightly reduces worker radiation exposure.