materials at the Savannah River Site, the decisions associated with the safe management of these materials directly affect the operational status of the nuclear material processing facilities at the Site. These decisions have been made in the context of then Secretary Watkins' 1992 decision to phase out reprocessing at the Savannah River Site. The decisions in this ROD are structured to effect the earliest completion of actions necessary to stabilize or convert nuclear materials into forms suitable for safe storage and prepare the facilities for subsequent shutdown and deactivation. The actions being implemented will support the consolidation of the storage of nuclear materials at the SRS. To a great extent, the alternatives will result in stabilization of the nuclear materials and alleviation of associated vulnerabilities within the time frame recommended by the DNFSB.

The stabilization decisions utilize existing facilities and processes to the extent practical; can be implemented within expected budget constraints and minimal additional training to required personnel; rely upon proven technology; and using an integrated approach, represent the optimum use of facilities to stabilize the materials in the shortest amount of time. Although minor modifications of a few facilities will be required, only two new facilities will be needed: (a) design and construction of an Actinide Packaging and Storage Facility in F-Area, and (b) a small vitrification facility within the existing F-Canyon. The decisions in this ROD do not imply or contribute to any poential decision to change the baseline canyon operating strategy from the current two-canyon approach.

DOE expects to make decisions related to the future management of foreign research reactor fuel and on strategies for the disposition of surplus nuclear materials within the next year. Similarly, DOE is evaluating alternatives for stabilizing nuclear materials stored at other locations in the DOE complex. Several years will be required to achieve stabilization of the nuclear materials within the scope of this Record of Decision. Stabilization of the nuclear materials at SRS will entail the operation of many portions of the chemical processing facilities. Consistent with DNFSB Recommendation 94–1, this will preserve DOE's capabilities related to the management and stabilization of other nuclear materials until such decisions are made.

In summary, the Department has structured its decisions on interim actions related to management of the nuclear materials at SRS to achieve stabilization as soon as possible, consistent with earlier decisions to phase out processing activities at the Savannah River Site, while supporting U.S. nonproliferation policies in a safe and cost effective manner.

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TABLE 1.—NUCLEAR MATERIALS AT THE SAVANNAH RIVER SITE

[From DOE/EIS–0220, ''Interim Management of Nuclear Materials'']

| Description | Quantity [a] | Location(s) |
|---|---|---|
| **Stable** | | |
| Spent fuel | 3,000 items | Receiving Basin for Offsite Fuel (RBOF). |
| Unirradiated fuel, targets, reactor components, and scrap from fabrication operations. | 315,000 items | Buildings 305A, 313–M, 315–M, 320–M, 321–M, 322–M, 341–M, K- and L-Reactor Assembly Areas. |
| Unirradiated fuel, targets, and reactor components. | 6,900 items | K- and L-Reactors. |
| Unirradiated and irradiated reactor components and control rods. | 420 items | C-, K-, L- and P-Reactors. |
| Depleted uranium oxide | 36,000 drums | R-Reactor, Buildings 221–1F, 221–12F, 221–21F, 221–22F, 707–R, 714–7N, 728–F, 730–F, and 772–7B. |
| Depleted uranium solutions | 300,000 liters (78,000 gallons) | F-Canyon, F-Area Outside Facilities, and TNX. |
| Sources, standards, and samples. | 20,000 items | Sitewide. |
| Laboratory materials used in research and development. | 260 items | Savannah River Technology Center (SRTC). |
| **Programmatic** | | |
| Plutonium-242 solutions | 13,000 liters (3,500 gallons) | H-Canyon. |
| Americium and curium solutions and targets. | 14,000 liters (3,800 gallons) | F-Canyon. |
| | 65 assemblies | RBOF. |
| | 60 slugs | P-Reactor disassembly basin. |
| | 114 slugs | RBOF. |
| Neptunium solutions and targets. | 6,100 liters (1,600 gallons) | H-Canyon. |
| | 9 targets | Building 321–M. |
| **Candidates for Stabilization** | | |
| Plutonium-239 solutions | 34,000 (9,000 gallons) | H-Canyon. |
| Highly enriched uranium solutions. | 228,000 liters (60,000 gallons) | H-Canyon and H-Area Outside Facilities. |
| Plutonium vault materials | 2,800 packages | FB-Line, HB-Line, Building 772–F, Building 235–F, and SRTC. |
| Mark-31 targets | 16,000 slugs | K-Reactor, L-Reactor, F-Canyon, and RBOF. |
| Mark-16 and Mark-22 fuels | 1,900 assemblies | K-, L-, and P-Reactors and H-Canyon. |
| Other aluminum-clad targets | 1,800 slugs and assemblies | K-, L-, and P-Reactors. |