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Naval Nuclear Propulsion Program

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FINAL ENVIRONMENTAL IMPACT STATEMENT FOR
A CONTAINER SYSTEM FOR THE
MANAGEMENT OF NAVAL SPENT NUCLEAR FUEL

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Abstract:

This Final Environmental Impact Statement (EIS) addresses six general alternative systems for the loading, storage, transport, and possible disposal of naval spent nuclear fuel following examination. It supersedes the Draft Environmental Impact Statement for a Container System for the Management of Naval Spent Nuclear Fuel dated May 1996.

This EIS describes environmental impacts of 1) producing and implementing the container systems (including those impacts resulting from the addition of the capability to load the containers covered in this EIS in dry fuel handling facilities at Idaho National Engineering Laboratory (INEL)), 2) loading of naval spent nuclear fuel at the Expanded Core Facility or at the Idaho Chemical Processing Plant with subsequent storage at INEL, 3) construction of a storage facility (such as a paved area) at alternative locations at INEL, and 4) loading of containers and their shipment to a geologic repository or to a centralized interim storage site outside the State of Idaho once one becomes available. As indicated in the EIS, the systems and facilities might also be used for handling low-level radiological waste categorized as special case waste.

As identified in the Draft EIS, the following factors were considered in selecting a preferred alternative in this Final EIS: public comments, protection of human health and the environment, cost, technical feasibility, operational efficiency, regulatory impacts, and storage or disposal criteria which may be established for a repository or centralized interim storage site outside the State of Idaho. Based on evaluation of these factors, the Navy's preferred alternative for a container system for the management of naval spent fuel is a dual-purpose canister system. The primary benefits of a dual-purpose canister system are efficiencies in container manufacturing and fuel reloading operations, and potential reductions in radiation exposure.

This EIS evaluates options for a dry storage facility for naval spent nuclear fuel, including existing facilities at INEL and currently undeveloped locations potentially not above the Snake River Aquifer. The Navy's preferred alternative for a dry storage location for naval spent nuclear fuel is to utilize either a site adjacent to the Expanded Core Facility at the Naval Reactors Facility or a site at the Idaho Chemical Processing Plant at INEL. These locations offer several important advantages, including already existing fuel handling facilities and trained personnel. In addition, use of these INEL facilities would protect previously undisturbed areas; development of these undisturbed sites would incur increased environmental impacts while offering no environmental advantage.

This Final EIS includes public comments received on the Draft EIS and responses to those comments. Throughout the document, text revisions and modifications that have occurred since publication of the Draft EIS are indicated by a small vertical line (sidebar) appearing in the margin. The exception is Chapter 11, Comments and Responses, which is an entirely new section. Although sidebars do not appear in Chapter 11, no part of that chapter appeared in the Draft EIS.

Prepared by:

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