

FOREWORD

The purpose of this environmental impact statement (EIS) is to assess the environmental impacts of the proposed modification of waste management activities for hazardous, low-level radioactive, and mixed wastes for the protection of groundwater, human health, and the environment at the Savannah River Plant (SRP) in Aiken, South Carolina. The Savannah River Plant is a major U.S. Department of Energy (DOE) installation engaged in the production of defense nuclear materials. The production of these materials and the operation of fabrication, separation, and support facilities result in the generation of hazardous, low-level radioactive, and mixed wastes (radioactive and hazardous).

DOE has prepared this EIS, which is both programmatic and project-specific, to support broad decisions on future actions on SRP waste management activities and to provide project-related environmental input and support for project-specific decisions on proceeding with cleanup activities at existing waste sites in the F- and R-Areas at SRP, establishing new waste storage and disposal facilities, and discharging disassembly-basin purge water. The disassembly basins receive irradiated reactor fuel and targets at the reactors for disassembly prior to transfer to reprocessing facilities. The deionized water in the basins is purified continuously by filtration and demineralization, but must be purged periodically to maintain tritium oxide concentrations and consequent worker exposures at as low a level as reasonably achievable. These purges are discharged to seepage basins at each reactor site and to the containment basin in K-Area. TE

The purpose of the proposed action and the alternative modifications considered in the EIS is to identify and select a waste management strategy for the treatment, storage, and disposal of SRP hazardous, low-level radioactive, and mixed wastes that can be implemented to comply with groundwater-protection and other requirements. These waste management activities have the greatest potential for causing effects on groundwater resources. This EIS assesses modifications for each waste management activity, which represents broadly defined strategies that DOE could select to implement specific future hazardous, low-level radioactive, and mixed waste management activities, following interaction with regulatory agencies. TE

This dual-purpose EIS considers four waste management alternative strategies, including "No Action," as required by the Council on Environmental Quality (CEQ) regulations for implementing the procedural aspects of the National Environmental Policy Act (NEPA; 40 CFR 1502). These strategies differ in the concepts proposed for existing waste sites, new disposal facilities, and discharge of disassembly-basin purge water, and in the degree to which they require dedication of land areas, long-term monitoring, and oversight to ensure adequate protection of groundwater resources, human health, and the environment. They are based on combinations of closure and remedial actions at existing waste sites, the construction of new storage and disposal facilities, and the discharge of disassembly-basin purge water. Modification of a single waste management activity (e.g., closure and remedial actions at existing waste sites) might require the modification of another activity (e.g., the number, size, and design of new disposal facilities).

This EIS uses the terms "hazardous," "low-level radioactive," and "mixed" (i.e., hazardous and low-level radioactive) in their common sense, without regard to specific regulatory definitions, except as indicated. The EIS is not intended to be a permit application for existing SRP facilities or a vehicle to resolve the applicability of requirements of the Resource Conservation and Recovery Act (RCRA), as amended, to existing SRP facilities or waste sites. Ongoing regulatory activities and the expanded SRP groundwater monitoring and characterization program will provide the bases for the application of requirements to specific existing facilities and waste sites.

The scope of this EIS does not include high-level radioactive wastes (for which DOE prepared five previous NEPA documents), domestic and sanitary waste facilities or transuranic wastes (for which DOE is preparing a separate NEPA document).

TE | Following the public comment period on the draft EIS and the publication of the final EIS, DOE will identify its waste management activities' modification strategy and related project-level decisions in a Record of Decision. The strategy decision will precede any project-specific decision. Research activities to reduce waste generation, reduce waste toxicity, and increase its isolation from the biosphere are continuing, as are interactions with regulatory agencies. As a result, decisions on implementing portions of the overall strategy or some specific actions discussed in the EIS might be delayed. If necessary, DOE will prepare additional NEPA documents to support the implementation of project activities that are not specifically addressed in this EIS.

TE | Regulatory requirements for waste management necessitated changes to SRP waste management activities. In response to these requirements and the Fiscal Year 1984 Supplemental Appropriations Act (Public Law 98-181, enacted in November 1983), DOE developed and submitted to Congress (June 13, 1984) the Groundwater Protection Plan for the Savannah River Plant. This plan and its supporting appendixes provide strategies, funding requirements, and schedules for remedial and closure actions at hazardous, low-level radioactive, and mixed waste sites to ensure the continued protection of groundwater, human health, and the environment.

TE | DOE published a Notice of Intent to prepare a draft EIS in the Federal Register on April 26, 1985 (50 FR 16534), to solicit comments and suggestions for consideration in the preparation of the statement.

TE | In response to the Notice of Intent, 16 individuals, organizations, and representatives of Government agencies provided comments. Appendix K presents the issues raised in the comment letters and in testimony received at two public scoping meetings held on May 14 and May 16, 1985; this appendix also includes DOE responses to the comments and cross-references to appropriate EIS sections.

TC | DOE published a Notice of Availability (NOA) for the draft EIS on May 4, 1987, in the Federal Register (52 FR 16302); on May 8, 1987, the U.S. Environmental Protection Agency published a corresponding NOA (52 FR 17462), which officially started the public comment period on the draft EIS. The public comment period ended on June 30, 1987.

In response to the comments received in letters and during two public hearings (June 2 and June 4, 1987) from individuals, organizations, and Federal and state agencies, DOE has revised the draft EIS. These revisions are indicated in the final EIS by vertical change bars in the margin. Most of these change bars are marked either TC (technical change) or TE (editorial change). The remaining change bars are cross-referenced to specific public comments, which are presented in Appendix L, along with DOE's responses to the comments and cross-references to appropriate sections of the EIS.

TC

DOE and its contractors (under the direction of DOE) have prepared this EIS in accordance with the CEQ's NEPA regulations (40 CFR 1500-1508) and DOE's NEPA guidelines (45 FR 20694, March 28, 1980). The EIS explicitly identifies the methodologies that were used and the scientific and other sources of information that were consulted. In addition, it incorporates available results of ongoing studies.

Extensive reference material, including Environmental Information Documents (EIDs), used to prepare this EIS is available for review in the U.S. Department of Energy's Public Reading Room, University of South Carolina, Aiken Campus, University Library, 2nd Floor, University Parkway, Aiken, South Carolina, and the Department's Freedom of Information Reading Room, Room 1E-190, Forrestal Building, 1000 Independence Avenue, S.W., Washington, DC.

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