

# 1.0 Introduction

This revised draft *Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement* (HSW EIS) provides environmental and technical information concerning the U.S. Department of Energy's (DOE's) ongoing and proposed waste management practices at the Hanford Site in Washington state. The draft HSW EIS was initially issued in April 2002 for public comment (DOE 2002b). The HSW EIS updates previous environmental analyses prepared for waste management operations at the Hanford Site. It also addresses local decisions related to implementing decisions resulting from the Waste Management Programmatic EIS (WM PEIS, DOE 1997c). This revised draft HSW EIS has been issued to address new waste management alternatives that have been proposed since the initial draft HSW EIS was prepared. It also addresses comments received during the public review period for the first draft. As a result of those comments and other considerations, DOE decided to prepare this revised draft HSW EIS, which incorporates alternatives for disposal of immobilized low-activity waste (ILAW) from the treatment of Hanford Site tank waste in the waste treatment plant (WTP) currently under construction, an activity that was not included in the first draft (68 FR 7110).

This revised draft HSW EIS describes the environmental consequences of alternatives for constructing, modifying, and operating facilities to store, treat, and/or dispose of low-level (radioactive) waste (LLW), transuranic (TRU) waste, ILAW, and mixed low-level waste (MLLW) including WTP melters at Hanford. In addition, the potential long-term consequences of LLW, MLLW, and ILAW disposal on groundwater and surface water are evaluated for a 10,000-year period, although the DOE performance standards only require assessment for the first 1000 years after disposal (DOE 2001g). This document does not address non-radioactive waste that contains "hazardous" or "dangerous" waste, as defined under the Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC 6901) and Washington State Dangerous Waste regulations (WAC 173-303). Following a previous National Environmental Policy Act (NEPA, 42 USC 4321) review (DOE 1997d), DOE decided to dispose of TRU waste in New Mexico at the Waste Isolation Pilot Plant (WIPP), a repository that meets the requirements of 40 CFR 191 (63 FR 3623). This HSW EIS is being prepared in accordance with NEPA, the DOE implementing procedures for NEPA (10 CFR 1021), and the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508).

## 1.1 Organization of the HSW EIS

The organization and content of this revised draft HSW EIS are described briefly as follows:

- **Section 1.0 – Introduction:** Provides an introduction, organization of the EIS, a statement of the purpose and need for DOE action and description of the proposed action, an overview of Hanford Site cleanup operations including solid radioactive and mixed waste management activities, a discussion of related DOE programs and documents including Hanford's accelerated cleanup performance management plan, NEPA documents related to the HSW EIS, and the NEPA process for developing and finalizing the HSW EIS.

- 1 • **Section 2.0 – HSW EIS Waste Streams and Waste Management Facilities:** Describes Hanford  
2 waste management operations, waste types, waste streams, existing facilities, and proposed facilities  
3 related to the proposed action and alternatives.  
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- 5 • **Section 3.0 – Description and Comparison of Alternatives:** Describes alternative actions that  
6 could be taken at Hanford to manage solid radioactive and mixed waste (waste that contains both  
7 radioactive and hazardous constituents), including alternative management strategies for each waste  
8 type, and the No Action Alternative. This section also provides a comparison of environmental  
9 impacts among the alternatives.  
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- 11 • **Section 4.0 – Affected Environment:** Discusses the human and physical environment that might be  
12 affected by radioactive and mixed waste management operations at Hanford.  
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- 14 • **Section 5.0 – Environmental Consequences:** Identifies the potential impacts on the human and  
15 physical environment that might result from implementation of the alternatives for waste management  
16 at Hanford. This section also addresses environmental justice, cumulative impacts, irreversible and  
17 irretrievable commitment of resources, the relationship between short-term uses of the environment  
18 and the maintenance or enhancement of long-term productivity, and potential mitigation measures.  
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- 20 • **Section 6.0 – Regulatory Framework:** Identifies regulations and permits that apply to radioactive  
21 and mixed waste management operations at Hanford.  
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- 23 • **Section 7.0 – List of Preparers and Contributors:** Identifies key persons who contributed to the  
24 preparation of the HSW EIS.  
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- 26 • **Index** – Provides an alphabetized list of key names, terms, and subjects in this EIS and the sections in  
27 which each item is mentioned.  
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- 29 • **Vol. II Appendixes** – Provide additional information regarding specific sections of the EIS and  
30 discusses key issues identified during the scoping process for the ILAW SEIS.  
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- 32 • **Vol. III Comment-Response Document** – explains DOE’s role in the cleanup process at Hanford;  
33 discusses key issues raised during the public comment process and responses to those key issues,  
34 including changes incorporated into this revised draft HSW EIS; and presents over 3800 comments  
35 from federal agencies; State, local, and tribal governments; public and private organizations; and  
36 individuals; and DOE’s response to each comment.  
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## 38 **1.2 Purpose and Need and Proposed Action**

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40 DOE needs to provide capabilities to continue, or modify, the way it treats, stores, and/or disposes of  
41 existing and anticipated quantities of solid LLW, MLLW, TRU waste, and ILAW at the Hanford Site in  
42 order to protect human health and the environment; facilitate cleanup at Hanford and other DOE facilities;  
43 take actions consistent with decisions reached by DOE under the WM PEIS; comply with local, State, and