

*Complex Cleanup: The Environmental
Legacy of Nuclear Weapons Production*

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COMPLEX CLEANUP

The Environmental Legacy of
Nuclear Weapons Production



CONGRESS OF THE UNITED STATES
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Foreword

Until recently, Federal regulations to control pollution and cleanup toxic wastes have been mainly focused on private industry. It is now clear that the Federal Government itself ranks high among the contributors to environmental contamination, from decades of inadequate attention to safe storage and management of toxic waste products. The environmental problems at the Department of Energy nuclear weapons facilities are among the most serious and costly to correct. Widespread contamination of soil and water, leaks from old waste burial grounds, and possible public health impacts from radioactive and hazardous releases have all contributed to congressional concerns about this problem and to a national search for feasible solutions.

The Senate Committee on Armed Services asked OTA to evaluate what is known about the contamination and public health problems at the Nuclear Weapons Complex and to investigate technological and other approaches to solutions. This report analyzes current and proposed methods of waste management and environmental restoration and evaluates the major DOE programs. It also discusses the prospects for improvement and describes certain initiatives that could enhance those prospects.

Because the characterization of the Weapons Complex waste and contamination problem is still in the early stages, it is not possible to identify and rank specific sites that represent the most serious or immediate risks. The data are not available, and even DOE has not been able to prepare a comprehensive and credible evaluation of the situation. The focus of this OTA report is therefore a comprehensive look at the problem as we now know it, the public concerns about the problem, and DOE's plans for addressing it. It focuses especially on the need for additional attention to those areas which DOE has neither the capability nor the credibility to handle. The environmental problems at the DOE Weapons Complex are serious and complicated. Decades will be required for cleanup of certain sites while others will never be returned to pristine condition. Some sites will require much long-term monitoring and control of contaminated soil and water.

Substantial assistance was received from many organizations and individuals during the course of this study. OTA sincerely appreciates the guidance received from our advisory panel, workshop participants, numerous reviewers, contributors, consultants, and contractors. We also received help in a variety of ways from the Department of Energy and its contractors during site visits and other meetings. They responded to numerous requests for data and reviewed draft documents. We also received data, comments, and other help from the Environmental Protection Agency. Without this cooperation and expert advice, OTA would not have been able to accomplish this study.



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NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, disapprove, or endorse this report. OTA assumes full responsibility for the report and the accuracy of its contents.

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