

# OCRWM Curriculum

## Science, Society, and America's Nuclear Waste

*Second Edition, Teachers Guides*  
*July 1995*

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### **NOTICE TO USERS**

The resource curriculum, *Science, Society, and America's Nuclear Waste*, was published in 1992, with a partially revised edition published in 1995. Although the information presented in Units 1, 2, and 3 remains accurate, descriptions of the waste management system found in Unit 4 do not reflect that system as currently envisioned. Since we are not revising the curriculum at this time, a short summary of the evolution of the Civilian Radioactive Waste Management (OCRWM) Program is provided below. The user is also referred to the *OCRWM Program Plan, Rev. 2*, issued in August 1998. This document is available on OCRWM's Home Page under "Program Overview," as is OCRWM's most recent Annual Report to Congress, which discusses Program activities and accomplishments in greater detail. Specific questions may be submitted electronically or by phone for response by the staff of OCRWM's National Information Center at 1-800-NWPA or 202-488-6720 in Washington D.C. We hope that you will find the curriculum to be a useful teaching tool and invite your comments.

### **PROGRAM UPDATE SUMMARY**

In the years following passage of the Nuclear Waste Policy Act and its amendments, the Civilian Radioactive Waste Management Program ("the Program") has faced changing legislative mandates, regulatory modifications, fluctuating funding levels, and the evolving and often conflicting needs and expectations of diverse interest groups. The real complexity of the scientific and regulatory challenge at the Yucca Mountain site began to be realized, and projected costs greatly exceeded initial expectations. It became increasingly clear that many of the expectations embodied in the Nuclear Waste Policy Act could not be met.

In 1993, the Program undertook a comprehensive assessment of its activities and stakeholder expectations for costs, schedules, and accomplishments. A new approach was developed to make measurable and significant progress toward key objectives. The new program approach refocused the work of the Yucca Mountain Site Characterization Project on (1) evaluating by 1998 the technical suitability of the Yucca Mountain site for development as a geologic repository; (2) delivering a site recommendation and environmental impact statement to the President by 2000, contingent on a positive suitability evaluation; and (3) submitting a license application to the Commission by 2001. The main objectives of the Waste Acceptance, Storage and Transportation Project were to make a new generation of spent nuclear fuel storage and transportation technology multi-purpose canisters, available by 1998, and to support timely resolution of waste acceptance and interim storage issues.

The Energy and Water Development Appropriations Act of 1996 reduced program funding by 40 percent from 1995 levels. The Program reduced its rate of expenditure

to meet the funding restrictions. The continuity of the core scientific work at Yucca Mountain was preserved. Elsewhere, activities were reduced to carrying out programmatic responsibilities for oversight of the Nuclear Waste Fund and of the contractual arrangements with nuclear utilities, limited coordination with transportation-related organizations, and only the necessary program-wide planning, management, and administrative functions. Canister development activities were terminated.

In May 1996, the Program issued a *Draft Revised Program Plan* which defined a new milestone and management tool for the Program -- the Yucca Mountain viability assessment. This interim milestone was later enacted into law by the 1997 Energy and Water Development Appropriations Act, which directed that, "no later than September 30, 1998, the Secretary shall provide to the President and to the Congress a viability assessment of the Yucca Mountain site. The viability assessment shall include: (1) the preliminary design concept for the critical elements for the repository and waste package; (2) a total system performance assessment, based upon the design concept and the scientific data and analysis available by September 30, 1998, describing the probable behavior of a repository in the Yucca Mountain geological setting relative to the overall system performance standards; (3) a plan and cost estimate for the remaining work required to complete a license application; and (4) an estimate of the costs to construct and operate the repository in accordance with the design concept." Since the 1996 Congressional redirection, the Civilian Radioactive Waste Management Program has experienced relative stability.

In August 1998, OCRWM issued Revision 2 of its Program Plan. That revision does not fundamentally alter our approach. In the near-term, we will complete the Yucca Mountain system viability assessment, and we will work to make this assessment widely understood. The viability assessment will give all parties clearer understanding of the information gained from site investigations and the remaining work required to support national decisions on geologic disposal at Yucca Mountain. It will represent the culmination of a significant effort by all Program participants.

This revision of the Program Plan also outlines our efforts to utilize the resources of the private sector to accept spent nuclear fuel at reactor sites around the country and ship it to a Federal facility. And it describes our plans to accept defense high-level radioactive waste and Naval reactor spent nuclear fuel for permanent disposal.

Given the scope of these tasks, this Plan will be updated in coming years to reflect changing realities and new approaches to them. But fundamentally, the Plan is built for the long term; it provides a solid foundation for carrying out a mission that will endure as long as society demands safe, permanent disposal of this long-lived radioactive waste.