

**Issues of Long-Term Stewardship:
State Regulators' Perspectives**

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**Prepared by
The Interstate Technology & Regulatory Council
Radionuclides Team**

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EXECUTIVE SUMMARY

For the purpose of this document, long-term stewardship (LTS) is the federally implemented institutions, controls, information, and mechanisms necessary to protect the public and environment from legacy waste deemed impractical, unsafe, or too costly to remediate to free-release standards. According to the U.S. Department of Energy's (DOE) definition, LTS includes land use controls, monitoring, maintenance, and information management.

To investigate the LTS challenges facing state regulators, the Interstate Technology & Regulatory Council's Radionuclides Team conducted a targeted survey of state regulators in the fall of 2002. The survey was developed with the intention of assessing opinions of individual state regulators involved in work with DOE sites and familiar with LTS issues. Thirty-one regulators from seven states with large DOE facilities (Colorado, Missouri, New Mexico, Ohio, South Carolina, Tennessee, and Washington) completed the survey.

The goal of the survey was to identify the areas of LTS that present challenges that would benefit from development and application of additional science (social, biological, chemical, engineering, etc.) and technology. This document presents the results of the survey of state regulator perspectives on LTS. It highlights issues and concerns identified by state regulators pertaining to LTS to assist decision makers and technology developers.

To put the results of the survey into context with other LTS efforts, three additional documents were reviewed and compared with the findings of the survey: DOE's *Long-Term Stewardship Science and Technology Roadmap (Draft)* (DOE 2002); *Environmental Cleanup at Navy Facilities: Adaptive Site Management*, developed by National Research Council (NRC 2003); and DOE's *Draft Implementation Guide for Use with DOE O.1B, Real Property Asset Management: Guidance for Transition of Long-Term Surveillance and Maintenance Function* (DOE 2004). These documents were selected because they represented federal initiatives responsible for moving the sites from cleanup to long-term management and meeting the implementation challenges of LTS. In general, the results of the survey were consistent with the perspectives of the three documents reviewed for comparison. All of the documents recognize the need for a multidimensional approach to LTS.

In the survey, state regulators indicated that they are knowledgeable about LTS technologies and challenges. They identified several areas (information management, monitoring, decision making, etc.) where they would like to improve their skills and knowledge to be better prepared for the significant challenges LTS will present. A broad collection of activities was identified as important to closing sites and conducting LTS. State regulators, as well as DOE's LTS Roadmap, recognize the need for new technologies to support better and more cost-effective cleanup and LTS efforts. Long-term treatment will require land use controls or limitations. Monitoring and data analysis systems are needed to ensure early problem detection of system failure. Human surveillance of sites during LTS is seen as mandatory. Successful information management will require the ability to access, update, store, and disseminate data across multiple generations. Land use controls require monitoring to ensure their continued effectiveness. Decision making requires early and continued public outreach and dialog to be successful. The respondents had had some experience with social science tools, such as risk perception studies,

and indicated that further development of these tools could be useful for LTS. Multifaceted communication is widely recognized as both a challenge and essential for successful LTS.

The importance of LTS is broadly recognized in the regulatory, public, technical, and federal communities. The survey and the three documents reviewed were each developed by different groups of people (state regulators, National Research Council, contractor personnel in the DOE complex, and DOE personnel) for different reasons, yet there is as much consensus as difference among the perspectives they present. All of the documents view LTS as collection of integrated activities including: communication, information management, institutional controls, and monitoring. The differences among the perspectives lie in the timing and amount of involvement of the public, the expectation for change over time, the level of confidence in intergenerational information transfer, the degree of confidence in current monitoring strategies, and the relative level of current technical and institutional readiness for LTS. This LTS survey report is intended to provide a useful basis for continuing dialog, education, and development efforts to bring the perspectives closer, facilitate the transition of sites into LTS, improve the tools available for conducting LTS, and improve the effectiveness and efficiency of LTS operations.