

Written Statement of Mark Whitney
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United States Department of Energy
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Subcommittee on Environment and Economy
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Good morning Chairman Shimkus, Ranking Member Tonko, and Members of the Subcommittee. I am pleased to be here today to represent the Department of Energy's (DOE) Office of Environmental Management (EM) to discuss the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Overview of the Environmental Management Mission

The federal government's nuclear weapons production programs made significant contributions to our Nation's defense for decades – helping end World War II and the Cold War. A byproduct of these programs is millions of gallons of liquid radioactive waste, thousands of tons of spent nuclear fuel and special nuclear material, large volumes of transuranic and mixed and low level waste, huge quantities of contaminated soil and water, and thousands of excess facilities that must be cleaned up by the federal government.

The Environmental Management (EM) program was established in 1989 with the mission to clean up the largest and most complex nuclear waste sites in the world as safely, effectively and quickly as possible. This involves some of the most dangerous materials known to humankind – it is no simple task. The Department is leveraging past experiences, applying best practices and lessons learned; identifying, developing, and deploying practical technological solutions derived from scientific research; and looking for innovative and sustainable practices that make cleanup safer and more efficient.

The federal government's investment in EM is resulting in safe and secure nuclear waste and reduced risks to the American people and the environment. EM has completed cleanup activities at 91 sites across 30 states – leaving remaining cleanup work at 16 sites across 11 states. Sites like Fernald in Ohio and Rocky Flats in Colorado, have been cleaned up and are now wildlife preserves. At the Idaho National Laboratory, EM has decommissioned and demolished more than two million square feet of excess facilities, and removed all EM special nuclear material (e.g., enriched uranium) from the state. At Savannah River Site in South Carolina, EM has produced

almost 4,000 canisters of vitrified high-level waste transforming it into safe, stable glass and closed six of the site's underground storage tanks.

EM Complex Cleanup History

The first few years of the EM program were focused on defining the scope and the magnitude of the cleanup challenges and corrective actions to bring facilities into safety and regulatory compliance. Due to the nature of the work during the Manhattan Project, where the priority for our Nation was ending the war as quickly as possible, there was a lack of organized documentation regarding inventories, past practices, waste discharges and contaminated areas. Many legacy facilities dating back to the Manhattan Project contain radioactive and hazardous materials, and/or have residual contamination. EM was therefore responsible for a massive and uncharacterized risk and needed to first define the scope, depth and breadth of its challenging work before it could tackle cleanup.

Since the Openness Initiative launched in 1993, which opened many files to the public for the first time, the Department shifted from self-regulation to a process by which stakeholders have been invited to participate in the regulatory process of establishing frameworks for cleanup and closure activities.

The Department has a balanced approach using the regulatory frameworks of the applicable environmental laws, including CERCLA, Resource Conservation and Recovery Act (RCRA), Atomic Energy Act (AEA), and National Environmental Policy Act, to guide and direct cleanup actions.

How Cleanup Gets Done

EM continues to pursue its cleanup objectives safely within a framework of regulatory compliance. The Department has 19 sites currently listed on EPA's National Priorities List (NPL). EM is responsible for the cleanup of 11 DOE NPL sites, which are located across 7 states. Those sites are:

- Brookhaven National Laboratory
- Hanford (4 NPL sites)
- Idaho National Laboratory
- Lawrence Livermore National Laboratory (2 NPL sites)
- Oak Ridge
- Paducah
- Savannah River

Seven of the DOE NPL sites, including Rocky Flats, Fernald, Weldon Spring, Monticello and Mound, have been transferred to the Department's Office of Legacy Management, which provides long-term surveillance and maintenance and beneficial reuse of these sites. One DOE NPL site, Pantex, is in the National Nuclear Security Administration's jurisdiction.

Cleanup at EM sites typically takes place under the Department's AEA, CERCLA and RCRA authorities. These regulatory frameworks are similar and work performed under one is often considered to satisfy the requirements of the other when both statutes apply to a specific cleanup activity. Under CERCLA, EPA oversees the Department's cleanup actions at National Priorities List (NPL) sites. Although states are not a delegated authority for oversight of DOE's NPL site cleanup under CERCLA, state regulators are active participants in the CERCLA process. EM works with EPA and the states to determine site priorities, evaluate cleanup approaches, develop a schedule for cleanup activities, and specify the requirements that site cleanup actions and activities must meet. These jointly arrived decisions are typically memorialized as binding commitments in a Federal Facility Agreement (FFA). Accordingly, the FFA details the cleanup tasks that have been agreed to and will be undertaken at the site. These regulatory frameworks inform our processes and cleanup standards, including defining "how clean is clean" and driving EM's end-term goals. Generally, established cleanup levels will be directly tied to the expected future land uses of our sites. Both CERCLA and RCRA rely on the site-specific balancing of evaluation criteria (effectiveness, implementability, and costs) to select among the particular remedial alternatives being considered at a given site.

Compliance agreements are developed individually at each of the sites; some include requirements for restoration and protection of natural resources, such as groundwater and endangered species, and may include additional requirements beyond protection of human health. Management of the 40 compliance agreements across the EM complex can be challenging.

Generally, EM has had success working with state and Federal regulators when it comes to negotiating, updating and improving compliance agreements. The staff at our sites have weekly, sometimes daily contact, with the state and Federal regulators to keep them up to date. We also have a great working relationship with the public. EM currently has one Federal Advisory Committee Act chartered Site Specific Advisory Board with eight local advisory boards organized under its umbrella charter. Members of these advisory boards include people who are directly affected by site cleanup activities such as stakeholders from local governments, Tribal Nations, environmental and civic groups, labor organizations, universities, industry, and other interested citizens. EM believes it is imperative to maintain a collaborative relationship with state regulators and the public to successfully complete cleanups at the remaining sites. Maximizing every cleanup dollar requires focusing on the projects that are most likely to cause harm to people and the environment if left untreated, as well as developing workable solutions with regulators and stakeholders on all remaining cleanup deadlines to ensure accountability.

Reducing the EM Complex Footprint

Across the EM complex, the program has succeeded in reducing the active cleanup footprint by approximately 90 percent, with less than 250 square miles remaining. One of the greatest success stories of the EM program is the cleanup of the Rocky Flats Site, which is listed on the NPL and cleanup was guided by a tri-party interagency agreement. In October 2005, EM completed cleanup significantly under estimated cost and schedule. A number of factors were important contributors to the Rocky Flats success, including: a collaborative working relationship with the state regulators and EPA; an incentivized and motivated management and operations contractor; consistent and reliable budget appropriations; a closure managed as a finite project; involved stakeholders; and engaged workers. It was through unparalleled cooperation among the interested parties that a conservative and compliant cleanup and closure of Rocky Flats was enabled, ahead of schedule, under cost, and without a fatality or serious injury. Rocky Flats closure was successful because the stakeholders (in the broadest sense of the word) were engaged in the process, and supportive of the ultimate goal. The interests of key figures, including members of Congress, senior DOE management, state and local elected officials, and state and federal regulators, were also essential to the success.

Environmental Cleanup Challenges

There are technical challenges when it comes to cleaning up EM legacy sites, as many of these cleanup projects are first-of-a-kind. At times, schedules can slip when technical challenges occur during cleanup. For example, prior to the scheduled demolition of the 324 Building within the river corridor at the Hanford Site, high levels of contamination was discovered underneath the building which has caused DOE to delay demolition for safety reasons until completion of a design and mock-up for the cleanup of the contaminated site under the building can be accomplished.

Technology Development

As the EM program continues cleanup, we continue to invest in research and development to strengthen the scientific basis for decision-making with regard to environmental impacts, improve the effectiveness of cleanup technologies, and develop new technologies that address the difficult and one-of-a-kind challenges. We deployed a new chemical solvent to more effectively remove radioactive cesium from the highly radioactive liquid waste. The new technology is called the Next Generation Solvent and is in use at the Savannah River Site. It is a chemical additive that improves the effectiveness of cesium removal (decontamination) from a factor of 12 to 40,000. The new solvent will enable SRS to process a much wider range of wastes as well as

extend the operational life of its radioactive waste processing facilities. With investment in technology development, EM hopes that the costs and project timelines are reduced.

Conclusion

Mr. Chairman, Ranking Member Tonko, and Members of the Subcommittee, I am honored to be here today representing the Office of Environmental Management. I appreciate your interest in our work and I appreciate the funding provided by Congress for EM each year. We are committed to achieving our mission within a framework of regulatory compliance commitments and best business practices, and will continue to apply innovative environmental cleanup strategies to complete work safely and efficiently, thereby demonstrating value to the American taxpayers.