

Written Statement of James Owendoff
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United States Department of Energy
Before the Subcommittee on Strategic Forces
Committee on Armed Services
United States Senate

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Good afternoon, Mr. Chairman, Ranking Member Sessions, 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). I would like to provide you with an overview of the EM program, key accomplishments during the past year and what we plan to accomplish under the President's \$5.62 billion Fiscal Year 2015 budget request.

Overview of the EM Mission

EM's mission is to complete the safe cleanup of the environmental legacy resulting from five decades of nuclear weapons development and government-sponsored nuclear energy research. This year is an important milestone year for EM. Fiscal Year (FY) 2014 marks 25 years of solving the legacy environmental problems from the Manhattan Project and Cold War. This environmental legacy includes over 90 million gallons of radioactive wastes stored in aging tanks, thousands of tons of spent (used) nuclear fuel (SNF), over ten thousand containers of excess plutonium and uranium, over five thousand contaminated facilities, millions of cubic meters of contaminated soil and billions of gallons of contaminated groundwater. EM was originally charged with the responsibility of cleaning up 107 sites across the country with a total area equal to Rhode Island and Delaware combined.

In the 25 years since it was created, EM has made significant progress in this cleanup mission, completing 91 sites and significant portions of the remaining 16. Since 1989, EM has completed almost \$144 billion worth of cleanup work. Sites like Fernald in Ohio and Rocky Flats in Colorado, both of which once housed large industrial complexes, are now wildlife preserves that are also available for recreational use. At the Idaho National Laboratory, we have 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, we have produced over 3,700 canisters of vitrified high-level waste and closed six of the site's underground storage tanks.

Across the EM complex, our progress in footprint reduction is significant. Since EM began tracking this performance goal in 2009, we have achieved a footprint reduction of roughly 74 percent. We began tracking with approximately 931 square miles. Now, we are down to less than 300 square miles. And progress continues. These are just a few examples of our significant achievements over the past quarter century.

EM Cleanup Objectives and Priorities

EM continues to pursue its cleanup objectives guided by three overarching principles. Most importantly, EM will continue to discharge its responsibilities by conducting cleanup within a “Safety First” culture that integrates environmental, safety, and health requirements and controls into all work activities. We are proud of our safety record, which shows injury rates that are significantly lower than the averages in comparable industries; these rates continue to fall thanks to ongoing efforts to strengthen our organizational safety culture.

After safety, we are guided by a commitment to comply with our regulatory and other legal obligations, and to be good stewards of the financial resources entrusted to us. We manage these priorities within a framework of nuclear safety orders, legally binding cleanup agreements, and best business practices. We focus the majority of our resources on the materials that contain the highest concentrations of radionuclides and other hazardous materials and wastes. In addition to these priorities, EM is committed to investing in the development and deployment of sound technology as a way to reduce costs and fulfill our critical mission.

Before discussing key recent and planned accomplishments, I want to update you on the situation at the Waste Isolation Pilot Plant (WIPP) in New Mexico. As I am sure you know, we have had two recent safety events at WIPP. The first occurred February 5th when flammable residues on the surface of a salt truck came into contact with a heat source and ignited. The second, which occurred late on the night of February 14th, was a radioactive release event at WIPP, in which some contamination, primarily americium, became airborne underground. The facility is equipped with a continuous air monitor, which detected the contamination and triggered the underground ventilation system to begin filtering air before it left the underground facility. The filters are performing as designed.

To date, preliminary sampling results taken from on and around the site indicate the underground contamination event has not created any health risks for workers or the public. This includes those workers who tested positive for contamination, which was slightly above normal background levels. On April 2, we sent two successive teams into the WIPP underground to conduct preliminary investigations in a portion of the non-disposal area. As anticipated, the teams found no contamination in the immediate area. This was an important step toward additional entries into the mine to allow for further exploration. In the meantime, the event has the potential to affect other DOE sites that were preparing transuranic wastes for disposal at WIPP. We are working to assess potential impacts and make contingency plans to mitigate those impacts to the extent possible.

We take both events very seriously and are committed to identifying, acknowledging and fixing any underlying shortfalls in our policies and processes. I am proud of the way the DOE team is responding to these events. In the wake of the radioactive release event, everyone has been

working together to assess the situation, develop solutions and identify the lessons that can be learned.

Key Recent and Near-Term Accomplishments

I would like to take this opportunity to highlight a number of EM's most recent accomplishments, as well as those we plan to accomplish in the remainder of FY 2014.

Cleanup activities – We continue to make significant progress in our transuranic waste disposal program. For instance, in 2013 we shipped approximately 2,500 cubic meters of transuranic waste to WIPP from the Idaho National Laboratory's Advanced Mixed Waste Treatment Project, which has logged more than 15.1 million work hours since the last injury or illness resulting in time away from work. WIPP has now received more than 11,000 shipments and permanently disposed of more than 89,000 cubic meters of transuranic waste. At the Savannah River Site, we have produced over 3,700 canisters of vitrified high-level waste, converting it to a solid-glass form safe for long-term storage and permanent disposal. We have now completed over 45 percent of the site's high-level-waste mission, and recently closed two more underground storage tanks a year ahead of schedule, bringing the total number of closed tanks to six.

Contract and Project Management – Our cleanup progress depends in large part on a broad array of contractors, as well as the successful planning, construction and operation of large, often first-of-a-kind, projects and facilities. We continue to emphasize continuous improvement in our contract and project management by, for example, requiring more upfront planning, ensuring federal project directors and contracting officers are well trained, improving our cost-estimating capabilities, conducting more frequent project reviews, selecting proper contract types, and tying fees to final outcomes. Our efforts continue to generate significant, positive results. For instance, we negotiated a contract modification for the Salt Waste Processing Facility at the Savannah River Site that includes a cap on completion costs, provides incentives for cost savings, and gives DOE a share of any savings achieved. In a separate project at the Savannah River Site, we recently completed two additional low-level salt-waste disposal units seven months ahead of schedule and for \$8 million less (about 10 percent) than the anticipated total cost of \$76.5 million. We are improving our management of the Waste Treatment and Immobilization Plant (WTP) project at Hanford, including holding the contractor accountable for self-identification of issues to help ensure resolution as early as possible.

Highlights of the FY 2015 Budget Request

The FY 2015 budget request for EM is a net \$5.62 billion. The request includes the proposed reauthorization of the Uranium Enrichment Decontamination & Decommissioning Fund and the defense deposit of \$463 million. The budget request for EM is comprised of \$4.86 billion for defense environmental cleanup activities (not including the fund deposit of \$463 million), \$226

million for non-defense environmental cleanup activities, and \$531 million for Uranium Enrichment Decontamination and Decommissioning Fund cleanup activities. With the requested funding, the EM program will continue making progress in the radioactive liquid waste treatment program, approach a successful end to the legacy transuranic waste mission, and continue to make significant progress in the decontamination and demolition of the thousands of buildings and supporting infrastructure that occupy our remaining cleanup sites.

To provide just a few specific highlights, under the President’s FY 2015 budget request the EM program will complete the treatment of 900,000 gallons of liquid radioactive waste at Idaho, emptying the last four of the site’s aging waste storage tanks. The FY 2015 budget request supports the ongoing construction of the Waste Treatment and Immobilization Plant (WTP) to process and immobilize the Hanford tank waste in a solid glass form safe for permanent disposal. Consistent with the Department’s objective to immobilize waste as soon as practicable while resolution of technical issues continues, the FY 2015 budget includes support for analysis and preliminary design of a Low Activity Waste Pretreatment System.

At Hanford, we will complete cleanup of the bulk of the River Corridor’s more than 500 facilities, leaving the 324 Facility, as well as the 618-11 Burial Ground and 300-296 Waste Site, as the primary remaining cleanup projects to be addressed after FY 2015. Depending on our ability to restore full operations at WIPP quickly or institute other mitigation measures, we will also achieve significant milestones in the legacy transuranic waste program, pursuing 100 percent completion at Savannah River and reaching 90 percent completion at Idaho, 88 percent completion at Oak Ridge, and 77 percent completion at Los Alamos.

Budget Authority and Planned Accomplishments by Site

**Idaho National Laboratory, Idaho
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$391,993	\$372,103

Key Accomplishments Planned for FY 2015

- Complete the treatment of 900,000 gallons of sodium-bearing radioactive waste, the last of the radioactive liquid waste at the Idaho site
- Initiate activities to clean and close the last four of the site’s radioactive liquid waste tanks
- Complete the exhumation of transuranic waste in the seventh of nine areas in the subsurface disposal area and ship the waste to the Waste Isolation Pilot Plant, achieving a completion rate equal to about 58 percent of the project’s total land area

- Continue processing contact-handled transuranic (CH-TRU) waste at the Advanced Mixed Waste Treatment Project, bringing total CH-TRU prepared in FY 2015 for offsite disposal to 4,500 cubic meters
- Continue groundwater monitoring and subsurface investigations, analyzing contaminants and transport mechanisms to the Snake River Aquifer
- Continue retrieval and onsite transfer of Experimental Breeder Reactor II fuel and receipt of Domestic Research Reactor and Foreign Research Reactor Fuel

**Oak Ridge Site, Tennessee
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$429,541	\$384,975

Key Accomplishments Planned for FY 2015

- Continue shipments expected to begin later this fiscal year to Nevada of Consolidated Edison Uranium Solidification Project material from the uranium-233 inventory in Building 3019
- Reach approximately 90 percent completion in the site's transuranic waste disposition mission
- Complete the preliminary design for the Outfall 200 Mercury Treatment Facility, while continuing to develop the techniques and technologies needed to characterize and remediate mercury in the environment
- Continue design and prepare for construction of the Sludge Buildout project at the Transuranic Waste Processing Center

**Savannah River Site, South Carolina
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$1,255,430	\$1,282,302

Key Accomplishments Planned for FY 2015

- Immobilize and dispose of 1,000,000 gallons of liquid tank waste

- Produce 120 to 130 additional canisters of vitrified high-level waste at the site’s Defense Waste Processing Facility, bringing cumulative production to over 50 percent completion of the site’s high-level waste mission
- Continue packaging and shipping surplus plutonium offsite
- Continue processing aluminum-clad spent (used) nuclear fuel in H-Canyon and begin processing Canadian Highly-Enriched Uranium Liquid
- Continue to receive non-U.S. origin material from foreign countries in support of the Global Threat Reduction Initiative program
- Continue receipt of Foreign Research Reactor/Domestic Research Reactor spent (used) nuclear fuel

**Richland Operations Office, Washington
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$1,012,620	\$914,301

Key Accomplishments Planned for FY 2015

- Complete the cleanup of the bulk of the River Corridor’s more than 500 facilities, leaving the 324 Building, 618-11 Burial Ground and 300-296 Waste Site as the primary projects to be addressed after FY 2015
- Continue progress toward Plutonium Finishing Plant cleanout and demolition to slab-on-grade
- Continue to conduct, integrate and optimize site-wide groundwater and soil cleanup activities
- Continue operation of the Canister Storage Building and Waste Storage Encapsulation Facility
- Continue progress toward removal of contaminated sludge from the K West Fuel Storage Basin, including continued progress on the K West Basin Sludge Treatment Project line-item construction project
- Complete disposition of surplus facilities in the 300 Area (excluding 324 Building and ancillary buildings)

**Office of River Protection, Washington
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request

\$1,210,216	\$1,235,000
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Key Accomplishments Planned for FY 2015

- Continue construction of the Waste Treatment and Immobilization Plant (WTP) to immobilize waste as soon as practicable while resolution of technical issues continues
- Maintain planned construction of WTP's Low Activity Waste facility, Analytical Laboratory, and Balance of Facilities, and initiate design of the infrastructure required to feed tank waste directly to the facility
- Support analysis and preliminary design of a Low Activity Waste Pretreatment System
- Complete waste retrievals in the C Tank Farm

**Los Alamos National Laboratory, New Mexico
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$224,789	\$224,617

Key Accomplishments Planned for FY 2015

- Complete design of the hexavalent chromium pump-and-treat remedy project and begin Phase 1 operations
- Complete cleanup activities on public and Los Alamos County lands
- Obtain regulatory approval to start remedial projects in at least three on-site Material Disposal Areas (A, C and T) and complete remedial design for Material Disposal Area C
- Complete demolition of the balance of plant facilities at Technical Area 21
- Continue retrieving and processing transuranic waste from below-grade retrievable storage

**Nevada National Security Site, Nevada
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$61,897	\$64,851

Key Accomplishments Planned for FY 2015

- Complete closure activities for 21 contaminated-soil sites
- Complete characterization activities for 6 additional contaminated-soil sites
- Support cleanup at multiple sites across the DOE complex by disposing of approximately 1,200,000 cubic feet of low-level and mixed low-level radioactive waste generated at those sites

**Sandia National Laboratory, New Mexico
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$2,814	\$2,801

Key Accomplishments Planned for FY 2015

- Finalize and submit to the New Mexico Environment Department a Class III permit modification for regulatory closure of the Mixed Waste Landfill and transfer the landfill to long-term stewardship
- Submit updated Technical Area V Current Conceptual Model/Corrective Measures Evaluation Report to the New Mexico Environment Department
- Install up to eight new groundwater-monitoring wells at the Burn Site

**Lawrence Livermore National Laboratory, California
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$1,476	\$1,366

Key Accomplishments Planned for FY 2015

- Complete the site-specific, baseline human-health risk assessment
- Complete groundwater-contamination fate-and-transport modeling
- Develop risk-based uranium cleanup standards for the Building 812 Operable Unit
- Evaluate available soil-remediation treatment technologies and develop remedial alternatives

**Carlsbad Field Office, New Mexico
(Dollars in Thousands)**

FY 2014 Enacted	FY 2015 Request
\$221,170	\$220,475

Key Accomplishments Planned for FY 2015 (assuming timely restoration of normal operations)

- Support transport and disposal of remote-handled and contact-handled transuranic (TRU) waste at the Waste Isolation Pilot Plant
- Continue Central Characterization Project for TRU waste at Los Alamos National Laboratory, Idaho National Laboratory, Oak Ridge National Laboratory, and the Savannah River Site
- Maintain capability for receipt and disposal for up to 26 shipments per week of contact-handled and remote-handled TRU for 41 weeks

Conclusion

Mr. Chairman, Ranking Member Sessions, and Members of the Subcommittee, I am honored to be here today representing the Office of Environmental Management. EM is committed to achieving our mission and will continue to apply innovative environmental cleanup strategies to complete work safely, on schedule, and within cost, thereby demonstrating value to the American taxpayers. Our FY 2015 request allows us to capitalize on our past investments and successes. We will make progress in the high-level-waste treatment mission, complete the cleanout and demolition of several major facilities across the complex, approach the end of our legacy transuranic waste disposition mission, and continue the significant progress we have made in the management of nuclear materials and remediation of contaminated soil and groundwater. I am pleased to answer any questions you may have.