**Statement of**
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**Before the**
**Subcommittee on Strategic Forces**
**Committee on Armed Services**
**United States House of Representatives**

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Good afternoon, Mr. Chairman, Ranking Member Sanchez, and Members of the Subcommittee. I am pleased to be here today to answer your questions on the President's fiscal year (FY) 2013 budget request for the Department of Energy's (DOE) Office of Environmental Management (EM). The EM FY 2013 budget request of $5.65 billion enables EM to continue the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development and government-sponsored nuclear energy research.

Environmental Management Program Strategies: A National Responsibility

The DOE Strategic Plan highlights EM's objective to complete the environmental remediation of our legacy and active sites by disposing of radioactive wastes, remediating contaminated soil and groundwater, and deactivating and decommissioning (D&D) radioactively contaminated facilities. EM is committed to sound technology development and deployment. EM develops and implements first-of-a-kind technologies to further enhance its ability and efficiency in cleaning up radioactive waste. Through these innovations, EM and the companies that perform its cleanup work have remained world leaders in this arena. Our work in EM enables other crucial DOE missions to continue across the United States. By reducing our cleanup footprint, EM is lowering the cost of security, surveillance, infrastructure, and overhead costs that would otherwise continue for years to come.

Overview of Program Priorities

To best address our cleanup objectives, EM's cleanup prioritization is based on achieving the greatest risk reduction benefit per radioactive content (wastes that contain the highest concentrations of radionuclides) while continuing to meet regulatory compliance commitments and promote best business practices. EM's priorities to support this approach include:

- Radioactive tank waste stabilization, treatment, and disposal;
- Spent (used) nuclear fuel storage, receipt, and disposition;
- Special nuclear materials consolidation, processing, and disposition;

- Transuranic waste and mixed low-level/low-level waste disposition;
- Soil and groundwater remediation; and
- Excess facilities D&D.

Creating Synergies that Last

In an effort to maximize the accomplishments of mission-critical projects and organize needs more closely with DOE's resources, EM was aligned under the Office of the Under Secretary for Nuclear Security in August 2011. This alignment allows DOE to capitalize on the expertise that exists among the National Nuclear Security Administration (NNSA), EM, the Office of Legacy Management, and the DOE Chief Nuclear Safety Officer on areas related to project management, nuclear materials and waste handling, and nuclear safety and security.

There are natural synergies between EM and NNSA. At Savannah River Site, EM and NNSA are working closely together to utilize the H-Canyon facility and support multiple missions including: converting about 3.7 metric tons of plutonium into suitable feed for NNSA's Mixed Oxide Fuel (MOX) Fabrication Facility; removing contaminants in the plutonium to make it amenable for use as MOX feed; and reducing the amount of plutonium that EM needs to package and send to the Waste Isolation Pilot Plant for disposal. These activities will occur in addition to EM's utilization of H-Canyon for activities such as the commencement of the process for the disposition of spent (used) nuclear fuel that is not suitable for extended storage in L-Basin.

At Oak Ridge National Laboratory, EM and NNSA are working together to accelerate the transfer of certain components of the Uranium-233 inventory that are valuable for national security applications. This cooperative effort will support NNSA's missions related to safety, nuclear emergency response, and special nuclear material measurement and detection. This initiative will result in cost savings for the EM program and enable EM to move forward on cleanup of nuclear facilities which will allow other DOE missions to continue. In addition, EM has established a partnership with NNSA to build upon the success of the Supply Chain Management Center, leveraging buying power across the combined EM and NNSA complexes for commonly used goods and services with the objective of realizing cost savings for the EM program similar to those NNSA has achieved.

Safety Culture

The safety of EM workers is a core value that is incorporated into every aspect of the EM program. To best protect our workers, EM has a goal of zero accidents or incidents in the work place and to date, has maintained a strong safety record. EM continues to utilize the Integrated Safety Management System to ensure that all work activities are appropriately scoped, analyzed for hazards, comprehensively planned to eliminate or mitigate those hazards, and effectively performed by trained employees. In addition, EM follows DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy* which instills the philosophy that line management is responsible for ensuring the safety

when work is being performed. EM seeks to continue improvements in the area of safety by instituting corrective actions, promoting lessons learned, and developing new or improved processes.

EM strives to promote and maintain a healthy safety culture at all of its sites. DOE defines safety culture as "an organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect the workers, public, and the environment." As part of this effort, EM is working with DOE's Office of Health Safety and Security (HSS) and utilizing DOE's Implementation Plan for the Defense Nuclear Facilities Safety Board Recommendations 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant* to guide its actions and decision-making. As part of this effort, HSS has provided guidance and recommendations including how to better promote the raising of safety concerns on projects such as the Waste Treatment and Immobilization Plant. HSS will also conduct independent "extent of condition reviews" of major EM capital projects this year including the Sodium Bearing Waste Treatment Facility at Idaho and the Salt Waste Processing Facility at the Savannah River Site. In accordance with the *Consolidated Appropriations Act Conference Report, FY 2012*, DOE, including EM and HSS, will conduct reviews of nuclear facility construction projects with a total project cost greater than $1 billion, to determine if those projects are being managed in a way that could pressure contractors or Department managers to lessen nuclear safety in order to demonstrate acceptable project performance.

To further instill a healthy safety culture in EM, within the next year, EM will conduct 'town hall' style meetings at its sites with defense nuclear facilities. At these meetings, EM senior leadership will emphasize the importance of maintaining a strong safety culture and soliciting employee input regarding safety. EM will continue to keep its employees, the public, and the states where cleanup sites are located, safe from radioactive and hazardous materials contamination. EM will also further instill core values and principles that will allow for improved communication and team building in order to accomplish its mission goals.

Compliance

Over the last 22 years, EM has maintained a working relationship with regulators and developed agreements and compliance milestones that provide the framework and schedule for cleaning up the Cold War legacy at DOE sites. There are approximately 40 such agreements. In FY 2011, EM met 97 percent of its enforceable agreement milestones. In light of the potential need to renegotiate some of the compliance milestones, EM's goal in FY 2013 is to meet 100 percent of its compliance agreement milestones.

The FY 2013 EM budget request funds the closure of high level waste tanks 18 and 19 in the Savannah River Site F-Tank Farm. At Los Alamos National Laboratory, FY 2013 funds expedite the disposal of much of the above-ground transuranic waste that is currently stored on the mesa at the Laboratory. In addition, all remedial actions related to

soil cleanup will be completed in the northwest section of Oak Ridge National Laboratory.

Reducing Lifecycle Cost

EM will continue to identify opportunities to make strategic investments that reduce the overall cost of the cleanup program while shortening project and program schedules. The current life-cycle cost estimate for EM is $274 to $309 billion. This includes $100 billion in actual costs from 1997 through 2011, and an additional estimate of $174 to $209 billion to complete EM's remaining mission in the timeframe of 2050 to 2062. EM will continue to identify opportunities, including technology development, to reduce the life-cycle cost of its program. In FY 2013, EM will continue efforts to develop technologies that allow for the segregation and stabilization of mercury contaminated debris; develop attenuation-based remedies for groundwater; and utilize technologies that enable the safe extended storage of spent (used) nuclear fuel at DOE sites. To enhance its technology program, EM has established the position of Chief Scientist to provide recommendations to the Senior Advisor for Environmental Management on complex technical and design issues.

Contract and Project Management

To ensure that EM delivers the best value for the American taxpayers, the FY 2013 budget request reflects its continued improvement in acquisition, contract, and project management. EM will require more rigorous front-end planning ensuring contract statements of work and deliverables are based on clear project requirements and assessment of risks; nuclear safety requirements are addressed early; and changes to the contract and the project baseline are managed through strict and timely change control processes. EM will further improve acquisition processes by obtaining early involvement and approvals on various acquisition approaches from DOE senior management, including the Office of Engineering and Construction Management, the Office of Procurement and Assistance Management, the Office of the General Counsel, and the Office of Small and Disadvantaged Business Utilization.

In terms of project management, since August 2009, EM has been utilizing the Office of Science model for construction project review/project peer review process that relies on the expert knowledge and experience of certified engineers, scientists, DOE contractors, engineering laboratories, and the academic community. These reviews determine whether the scope of projects and the underlying assumptions regarding technology, management, cost, scope, and schedule baselines are valid and within budget. These reviews are scheduled to occur approximately every six months and assist EM with actively addressing problems and monitoring the effectiveness of the resulting corrective actions.

Over the last two years, EM has established separate operations activities and capital asset projects within its Project Baseline Summaries. Capital asset projects are managed in accordance with DOE Order 413.3B, *Program and Project Management for the*

*Acquisition of Capital Assets*. EM is currently finalizing the operations activities policy and the protocol to manage operations activities, which are not governed by DOE Order 413.3B.

EM's continued progress in contract and project management has resulted in EM meeting three of the five criteria needed in order to be removed from the Government Accountability Office's (GAO) High Risk List. GAO has noted that: EM has demonstrated strong commitment and leadership; demonstrated progress in implementing corrective measures; and developed a corrective action plan that identifies root causes, effective solutions, and a near-term plan for implementing those solutions.

One of GAO's remaining concerns is that EM must provide the capacity (people and resources) to address problems. To address GAO's first concern, EM's reorganization establishes project sponsor positions at Headquarters for all capital asset projects. EM is also continuing to enhance its partnership with the U.S. Army Corps of Engineers by supplementing selected project peer review teams with U.S. Army Corps of Engineers personnel who have demonstrated expertise in project and contract management.

GAO's second remaining concern is that EM must monitor and independently validate the many corrective measures that it has taken are both effective and sustainable over the long term. To address this concern, EM's Annual Performance Plans have been established as a vehicle for measuring, tracking, and validating progress. In addition, EM has developed an annual Continuous Improvement Plan for Contract and Project Management to guide and monitor improvements. EM will continue to share improvements in project and contract management with GAO and other stakeholders. EM is committed to continued improvements in contract and project management and is focused on being removed from GAO's High Risk List.

## Highlights of the FY 2013 Budget Request

The FY 2013 budget request for EM is $5.65 billion, after offsets of $485.1 million. The offsets reflect the proposed reauthorization of the D&D Fund deposit ($463 million), and the use of prior year uncosted ($12.1 million) and unobligated ($10 million) balances to offset ongoing mission work in the EM program. The FY 2013 budget request for EM is made up of $5.49 billion for defense environmental cleanup activities. Examples of planned activities and milestones for FY 2013 by site-specific categories are:

### Idaho National Laboratory, Idaho

**(Dollars in Thousands)**

| FY 2012 Current Appropriation | FY 2013 Request |
|---|---|
| **$389,800** | **$405,397** |

- *Complete operations of the Sodium Bearing Waste Treatment Facility.*

The Sodium Bearing Waste Treatment Facility supports the cleanup mission at Idaho National Laboratory by treating the remaining approximately 900,000 gallons of sodium bearing waste stored in tanks that are 35 to 45 years old. The treatment of this waste will enable EM to close the final four tanks, complete treatment of all tank waste at Idaho, and meet the Notice of Noncompliance Consent Order Modification to cease use of the Tank Farm Facility by December 31, 2012. Testing and readiness verification on the Sodium Bearing Waste Treatment Facility will be completed in preparation for startup in the third quarter of FY 2012.

- *Ship contact-handled transuranic waste to the Waste Isolation Pilot Plant, as well as retrieve buried waste.*

During FY 2013, approximately 4,500 cubic meters or more of contact-handled transuranic waste will be shipped to the Waste Isolation Pilot Plant for disposal. In addition, small quantities of buried waste will be retrieved and shipped to the Waste Isolation Pilot Plant for disposal.

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

| FY 2012 Current Appropriation | FY 2013 Request |
|---|---|
| **$188,561** | **$239,143** |

- *Disposition of transuranic waste and low-level/mixed low-level waste.*

The Solid Waste Stabilization and Disposition Project is comprised of the treatment, storage, and disposal of legacy transuranic waste and low-level/mixed low-level waste generated between 1970 and 1999 at Los Alamos National Laboratory. The end-state of this project is the safe disposal of legacy waste. In FY 2013, to support the requirements in the 2005 Compliance Order on Consent, Los Alamos National Laboratory will disposition 1,603 cubic meters of transuranic waste and continue low-level/mixed low-level waste disposal activities.

- *Maintain soil and water remediation.*

The Soil and Water Remediation Project scope at Los Alamos National Laboratory includes identification, investigation, and remediation of chemical and/or radiological contamination attributable to past Laboratory operations and practices. The remaining scope of the project includes characterization, monitoring, and protection of the surface and groundwater at the Laboratory and approximately 860 Potential Release Sites left to be investigated, remediated or

closed after evaluation and assessment of human health and ecological risks. In FY 2013, activities include: investigation and characterization of two Technical Areas under the Canon de Valle Capital Asset Project and completion of the investigation and corrective measures evaluation of Material Disposal Area T to obtain final regulatory remedy selection.

**Oak Ridge Reservation, Tennessee**
**(Dollars in Thousands)**
**(Includes Safeguards & Security Funding)**

| FY 2012 Current Appropriation | FY 2013 Request |
|---|---|
| **$419,758** | **$421,250** |

- *Maintain operation of the Transuranic Waste Processing Center.*

The continued operation of the Transuranic Waste Processing Center enables EM to meet various regulatory milestones. By the end of FY 2013, Oak Ridge will process a cumulative total of 236 cubic meters of contact-handled transuranic waste and a cumulative total of 70 cubic meters of remote-handled transuranic waste at the Transuranic Waste Processing Center in preparation for eventual disposition. FY 2013 activities include the: continued transfers of transuranic waste bound for the Transuranic Waste Processing Facility; and the continued processing and disposition of contact-handled transuranic and remote-handled transuranic waste.

- *Mitigate mercury contamination at the Y-12 National Security Complex.*

Mercury cleanup activities within the Y-12 National Security Complex are necessary to reduce the potential contamination of the Upper East Fork Poplar Creek that flows through the City of Oak Ridge. In FY 2013, with the utilization of American Recovery and Reinvestment Act funds, EM will complete characterization activities at the Y-12 National Security Complex land area formerly housing the Building 81-10 Mercury Recovery Facility.

**Richland Site, Washington**
**(Dollars in Thousands)**
**(Includes Safeguards & Security Funding)**

| FY 2012 Current Appropriation | FY 2013 Request |
|---|---|
| **$1,021,824** | **$1,037,773** |

- *Continue facility D&D and remedial actions within the River Corridor.*

The River Corridor Closure Project includes the D&D of contaminated facilities and various remedial actions along the Columbia River Corridor as part of EM's continued pursuit of the Hanford 2015 Vision. In an effort to reduce Hanford's cleanup footprint, FY 2013 activities include: operating the Environmental Restoration Disposal Facility in support of Hanford Site demolition and remediation activities; completing the interim response actions for the 100 N Area; completing the interim remedial actions for the 300-FF-2 Waste Sites; completing the selected removal and/or remedial actions for 13 high risk facilities in the 300 Area; and continuing the remediation of the 618-10 and 618-11 burial grounds.

- *Conduct groundwater remediation efforts.*

To protect the groundwater resources within the Hanford site, remediation activities that address groundwater contamination, including carbon tetrachloride, chromium, technetium, and strontium, must be conducted. In FY 2013, EM will: continue site-wide groundwater and vadose zone cleanup activities; groundwater contamination monitoring, operations, and necessary modifications of existing remediation systems; and deploy chemical and biological treatment to select areas in support of final remedies.

**Office of River Protection, Washington**

**(Dollars in Thousands)**

| FY 2012 Current Appropriation | FY 2013 Request |
|---|---|
| **$1,181,800** | **$1,172,113** |

- *Manage the tank farms in a safe and compliant manner until closure.*

The radioactive waste stored in the Hanford tanks was produced as part of the nation's defense program and has been accumulating since 1944. To ensure protection of the Columbia River, over 50 million gallons of radioactive waste must be removed and processed to a form suitable for disposal, and the 177 underground storage tanks to be stabilized. In FY 2013, activities include: complete bulk retrieval of one C Farm single shell tank; completing hard heel removal of two C Farm single shell tanks; operating the 222-S laboratory and 242-A evaporator; and continuing activities for tank waste mixing.

- *Continue construction of the Waste Treatment and Immobilization Plant complex.*

The Waste Treatment and Immobilization Plant is pivotal to EM's tank waste cleanup mission at Hanford. The Waste Treatment and Immobilization Plant provides the primary treatment capability to immobilize (vitrify) the radioactive

tank waste at the Hanford Site. The Waste Treatment and Immobilization Plant complex includes five major facilities: Pretreatment Facility, High-Level Waste Facility, Low-Activity Waste Facility, Analytical Laboratory, and the Balance of Facilities. As of December 2011, the Waste Treatment and Immobilization Plant construction is approximately 59 percent complete and design is 84 percent complete. In FY 2013, activities include the following:

- At the Pretreatment Facility, continue engineering, design and large scale integrated testing to confirm the design of critical Pretreatment process vessels.
- At the High-Level Waste Facility, continue forming, rebar, and placement of concrete for High-Level Waste Facility walls and slabs on the third to fourth stories.
- At the Low-Activity Waste Facility, continue planning activities for construction startup and turnover of multiple Low-Activity Waste Facility systems to operations.
- At the Analytical Laboratory, complete mechanical systems procurement and complete electrical terminations.
- At the Balance of Facilities, complete Balance of Facilities Plant design engineering and complete construction of nine facilities that make up the Balance of Facilities including the Chiller Compressor Plant and Steam Plant.

**Savannah River Site, South Carolina**
**(Dollars in Thousands)**
**(Includes Safeguards & Security Funding)**

| FY 2012 Current Appropriation | FY 2013 Request |
|---|---|
| **$1,316,922** | **$1,303,493** |

- *Reduce radioactive liquid waste.*

The mission of the Liquid Tank Waste Management Program at Savannah River Site is to safely and efficiently treat, stabilize, and dispose of approximately 37 million gallons of legacy radioactive waste currently stored in 49 underground storage tanks. In FY 2013, activities include: continue construction of Salt Waste Processing Facility; continued operation of F and H Tank Farms; continued to operation the Defense Waste Processing Facility and the production of 312 canisters of high-level waste packaged for final disposition; continued operation of the Actinide Removal Process and Modular Caustic Side Solvent Extraction at planned rates; continued operation of the Saltstone Facility at planned rates; and continue construction of Saltstone Disposal Units 3-5.

- *Consolidation of special nuclear materials.*

In FY 2013, activities include: initiation of the processing of non-pit plutonium to produce plutonium oxide suitable for use in the MOX Fabrication Facility; packaging the non-MOX plutonium for disposition to the Waste Isolation Pilot Plant; reducing the residual plutonium-238 contamination in the F Area Materials Storage Facility; and initiating the disposition of any vulnerable spent (used) nuclear fuel in H Canyon that is not suitable for extended storage in L-Basin.

**Waste Isolation Pilot Plant, New Mexico**

**(Dollars in Thousands)**

**(Includes Safeguards & Security Funding)**

| FY 2012 Current Appropriation | FY 2013 Request |
|---|---|
| **$218,179** | **$202,987** |

- *Operate the Waste Isolation Pilot Plant in a safe and compliant manner and dispose of contact-handled and remote-handled transuranic waste from DOE sites.*

The Waste Isolation Pilot Plant in Carlsbad, New Mexico, is the nation's only mined geologic repository for the permanent disposal of defense-generated transuranic waste. In FY 2013, the EM budget request supports maintaining an average shipping capability of 21 contact-handled transuranic waste and 5 remote-handled transuranic waste shipments per week from major shipping sites such as Idaho, Savannah River Site, and Los Alamos National Laboratory.

**Conclusion**

Mr. Chairman, Ranking Member Sanchez, and Members of the Subcommittee, I am honored to be here today representing the Office of Environmental Management. EM is committed to achieving its 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. I am pleased to answer any questions you may have.