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Good afternoon, Madam Chairman, Congressman Turner, and Members of the Subcommittee. I am pleased to be here today to answer your questions on the President's Fiscal Year (FY) 2010 budget request for the Department of Energy's (DOE) Office of Environmental Management (EM).

EM's overall goal is to complete the cleanup of the legacy of the Cold War in a safe, secure, and compliant manner, while on schedule and within budget. EM will pursue its cleanup objectives and regulatory compliance commitments to achieve the greatest environmental benefit and the largest risk reduction. EM will also maintain best business practices to maximize cleanup progress. To support this approach EM has prioritized its cleanup activities:

- Essential activities to maintain a safe and secure posture in the EM complex
- Radioactive tank waste stabilization, treatment, and disposal
- Spent nuclear fuel (SNF) storage, receipt, and disposition
- Special nuclear material (SNM) consolidation, processing, and disposition
- High priority groundwater remediation
- Transuranic (TRU) and mixed/low-level waste disposition
- Soil and groundwater remediation
- Excess facilities decontamination & decommissioning

The EM FY 2010 budget request will continue to focus on the highest risks associated with the cleanup program: the management and disposition of tank waste, surplus SNM, and SNF. The EM program has made substantial progress in stabilizing tank waste and consolidating surplus SNM. Progress also includes the near completion of transferring SNF from wet to dry storage and disposition of large quantities of TRU waste, low-level waste (LLW), and mixed-low level waste (MLLW). Specifically:

- Stabilizing and consolidating SNM (plutonium and uranium) resulting in significant reduction of environmental, safety, and security risks. EM has eliminated all but two out of 13 highly secure nuclear material storage locations and the associated costly security requirements;
- Transferring nearly all of EM's SNF inventory from wet to dry storage, a safer configuration for storage. Previously, much of the SNF was stored in aging water pools. At Idaho National Laboratory, these pools were located over an important groundwater aquifer and at Hanford, pools were located within a quarter-mile of the Columbia River;

- Stabilizing radioactive wastes stored in large, aging and leaking underground tanks. This was accomplished by transferring the pumpable radioactive liquid tank waste from single-shell tanks to more durable double-shelled tanks at Hanford and pursuing tank cleanout and closures at Hanford, Savannah River Site, and Idaho; and
- Disposing of both remote-handled (RH) and contact-handled (CH) TRU waste, LLW and MLLW – using safe and compliant processes, large volumes of waste have been disposed of successfully.

A major portion of EM's FY 2010 budget request remains devoted to building the capability for tank waste treatment and disposition which is one of the primary risk and largest cost driver in the program. EM continues to move forward with the design, construction, and ultimate operation of three large tank waste processing plants to treat approximately 88 million gallons of radioactive tank waste for ultimate disposal. The total cost estimate for constructing these three plants is $14.3 billion. EM's FY 2010 budget request also enables the program to move forward with determining disposition options needed to prepare certain types of SNM and SNF for ultimate disposal.

Based on the technical challenges and enormous life-cycle cost associated with these activities, funding for the Technology Development and Demonstration program has been increased from $32 million in FY 2009 to $105 million in FY 2010. Within the request, $50 million in Technology Development and Deployment funds will be invested specifically at the Office of River Protection to support investments in tank waste technologies. In FY 2010, investments will be highly focused and concentrated on higher-risk activities such as radioactive tank waste and high priority groundwater remediation. Technology Development and Deployment are integral to reducing the technical uncertainty associated with building and operating the unique facilities and processes needed for EM cleanup. This will result in improved cost and schedule performance.

While maintaining the momentum to develop and build these capabilities, EM will continue to seek ways to maximize reduction of environmental, safety, and health risks in a safe, secure, compliant, and cost-effective manner. The current EM life-cycle cost estimate range, which covers the period of 1997 through completion, is $274 to $330 billion. This includes $69 billion in actual costs from 1997 through 2007, and an additional estimate of $205 to $260 billion to complete EM's remaining mission.

A significant portion of that life-cycle cost is associated with solid waste disposition, soil and groundwater remediation, and facility decontamination and decommissioning (D&D), all areas where EM has been very successful because of the utilization of proven technologies and a well established regulatory framework. In FY 2010, many of these activities will be accelerated with the $6 billion of American Recovery and Reinvestment Act (Recovery Act) funding, which supports footprint reduction and near-term completion cleanup activities. In addition, since much of the Recovery Act cleanup work is associated with compliance milestones, EM will be better positioned to meet its compliance commitments going forward.

It is vital that EM maintains transparency between Recovery Act funding and its FY 2010 request. EM will segregate cleanup scope funded within the normal appropriation process from work funded from the Recovery Act for both budget execution and project performance tracking and reporting. EM will be able to clearly differentiate between existing programmatic performance (base program) and the additional cleanup progress that is achieved as a result of the Recovery Act resources invested in the program. This will provide a basis to optimize planning scenarios that can support future funding allocation decisions.

Strategies and Means

In addition to the priorities described above, there are other equally important strategies that are integrated into our cleanup activities that are crucial not only to the achievement of EM cleanup progress, but also to our state and federal regulators, Congress, tribal nations, and stakeholders. Most importantly, EM will continue to maintain a "Safety First" culture. The safety of our workers, the public, the environment, and our site communities and stakeholders will remain our number one priority. Safe operations and cleanup is our ever-present and ultimate goal – we want our workers to go home as fit and healthy as when they came to work.

The performance of the EM program is measured against the scope, schedule and cost of each of the projects in the program. EM contractors are utilizing earned value management systems certified by the American National Standards Institute (ANSI), ANSI/EIA-748, Standard for *Earned Value Management Systems* to track project performance. In addition, sixteen corporate performance metrics are also used to assess and communicate the annual and life-cycle progress of the EM cleanup. Each metric is tracked against the projected life-cycle quantities necessary to complete cleanup at each site. Together, the project scope, cost, schedule and performance metrics clearly establish agreed-upon performance expectations.

As the Committee is aware, EM has come under considerable criticism over the years in the execution of its projects. EM must strengthen its project management capability and improve the skill set of our project management teams. Efforts are underway within EM, in partnership with the U.S. Army Corps of Engineers, to identify and implement the necessary enhancements in personnel capabilities and systems to transform EM into a "best-in-class" project management organization. Specifically, this budget supports 1,674 full-time equivalent employees to enhance these capabilities. In previous years, EM has added to our team 360 critical mission hires.

With these planned improvements in project management, EM will be able to clearly identify and manage the programmatic risks associated with start of construction during the early stages of the design phase. In addition, EM is incorporating technology readiness assessment and maturity planning into construction and cleanup projects at all stages, along with DOE Standard 1189, *Integration of Safety into the Design Process*, which requires safety to be integrated early in the design phases of projects.

EM is also instituting construction project reviews modeled after the DOE Office of Science's reviews. The Office of Science has an excellent record completing their capital projects on time and within cost. These independent reviews will examine in detail all aspects of a construction project, including project management; technology, design, and engineering; safety; environment; security; and quality assurance. The process will rely on expert knowledge and experience of world-class engineers, scientists, and managers sourced from federal staff, DOE contractors, engineering firms, national laboratories, and the academic community.

Another project management enhancement EM is pursuing is "bundling" cleanup work scope into more discrete scope elements and developing standardized cost information at this level. This should lead to increased ownership of project work scope which can be a key determinant of project success. In addition, the collection of standardized cost information will provide the analytical tools to compare and evaluate project performance across the legacy cleanup complex. As a result EM will be able to better manage, evaluate, and communicate project progress and understand the performance impacts on cleanup work scope, schedule, and cost.

FY 2010 Budget Request

The Department's FY 2010 budget request for EM is $5.83 billion, of which $5.50 billion is for defense EM activities. Funding will be used in part to reimburse the costs of DOE contractor contributions to defined-benefit (DB) pension plans as required by the Employee Retirement Income Security Act, as amended by the Pension Protection Act of 2006, and consistent with Departmental direction. Whether additional funding will be needed in future years will depend on the funded status of the plans based on plan investment portfolios managed by the contractors as sponsors of the DB pension plans.

Examples of planned activities and milestones for FY 2010 by site-specific categories are:

Idaho

- *Continue construction of the sodium-bearing waste treatment facility to support tank waste retrievals.*

  The primary objectives of this project are to treat and dispose of sodium-bearing tank wastes, close the tank farm tanks, and perform initial tank soil remediation work. In FY 2010, the grouting of tank farm off-gas piping will be completed and facility closure activities under the Resource Conservation and Recovery Act (RCRA) will be performed to support closure of the remaining four 300,000-gallon tanks. Additionally, construction work in FY 2010 will ready the sodium-bearing waste treatment facility for hot startup in FY 2011. The construction and operation of the sodium-bearing waste treatment facility will prevent potential migration of contamination into the

Snake River Plain Aquifer, which is a sole-source aquifer for the people of Idaho.

- *Complete the transfer of all EM-managed SNF to dry storage.*

  Specific accomplishments for FY 2010 include the shipment and receipt of 31 fuel shipments from the Advanced Test Reactor, as well as the receipt and unloading of domestic and foreign research reactor SNF. By accomplishing this work, EM will continue to promote the safe and secure receipt and dry storage of SNF to protect the Snake River Plain Aquifer.

- *Ship contact-handled transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP), and disposition LLW and MLLW, as required in the Idaho Settlement Agreement*

  During FY 2010, 5,700 cubic meters of contact-handled TRU waste will be shipped to WIPP for disposal. In addition, more than 3,700 cubic meters of LLW and MLLW, comprised of waste currently stored on-site and waste generated from soil remediation activities, will be shipped for disposal.

Los Alamos National Laboratory

- *Continue TRU waste shipments to WIPP.*

  The Solid Waste Stabilization and Disposition Project is comprised of the treatment, storage, and disposal of legacy transuranic and mixed low-level waste generated between 1970 and 1999 at the Los Alamos National Laboratory (LANL). The end-state of this project is the safe disposal of legacy waste from LANL. In FY 2010, LANL plans to increase transuranic drum remediation capacity to support three shipments a week to the WIPP.

- *Maintain soil and water remediation.*

  The Los Alamos National Laboratory Soil and Water Remediation Project scope includes identification, investigation and remediation of chemical and or radiological contamination attributable to past Laboratory operations and/or practices.

Oak Ridge

- *Support the Integrated Facility Disposition Program.*

  The Integrated Facility Disposition Program (IFDP) supports the Oak Ridge mission to clean up the Oak Ridge site as well as reduces the environmental footprint allowing for improvement in the scientific research and national security missions that are essential to the Department. In FY 2010, EM will

complete acquisition planning and establish a performance baseline for the first phase of the IFDP.

- *Continue design of the Uranium-233 (U-233) down-blending project and Building 3019 modifications.*

  The U-233 inventory in Building 3019 will be down-blended as expeditiously as possible to reduce the substantial annual costs associated with safeguard and security requirements and to address nuclear criticality concerns raised by the Defense Nuclear Facilities Safety Board. In FY 2010, EM plans to continue design of the Uranium down-blending process system.

Richland

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

  In FY 2010, cleanup activities in the River Corridor include completion of selected removal/remediation of 6 of 19 high priority surplus facilities in the 300 Area, operation of the Environmental Restoration Disposal Facility to support field remediation and demolition activities (1.04 million tons of waste), complete disposition of 13 surplus facilities, initiate interim safe storage of the 109-N Reactor, and continue field remediation of 16 ancillary facilities and 59 waste sites in the 100-K Area.

- *Maintain the Plutonium Finishing Plant in a secure manner.*

  The Plutonium Finishing Plant (PFP) complex consists of several buildings that were used for defense production of plutonium nitrates, oxides and metal from 1950 through early 1989. In FY 2010 EM will support safe and essential services for over forty radiological and nuclear PFP facilities and systems, and surveillance of residual radioactive and chemical contamination to ensure safe and compliant conditions.

- *Continue soil, groundwater, and vadose zone remediation.*

  In FY 2010, in accordance with the Record of Decision for the Hanford Site, EM will perform remedial investigations and feasibility studies and continue operation of the soil vapor extraction system to remove contaminants from the vadose zone. In addition, EM will complete regulatory milestones related to soil desiccation and reactive gas technology testing in compliance with the Deep Vadose Zone Treatability Test Plan.

- *Continue spent nuclear fuel stabilization and disposition.*

  In FY 2010, EM will continue the K-Basin sludge treatment design as well as characterization sampling and testing of K-Basin equipment. EM also plans

to operate and maintain the K- West Basin and associated structures in a safe and compliant manner, while supporting the required surveillance and maintenance activities.

River Protection

- *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. In order to protect the Columbia River, the waste must be removed and processed to a form suitable for disposal, and the tanks stabilized. To accomplish these goals, in FY 2010, EM plans to enhance the Single-Shell Tank Integrity Program, and conduct scientific applied research and technology development activities for the treatment of radioactive waste including pre-treatment processes, tank structural integrity, and advanced retrieval technologies. Additional activities include removal of hose-in-hose transfer lines, complete waste retrieval in two C-Farm single shell tanks, complete two evaporator campaigns, conduct double shell tank space evaluations, complete installation of the TY Farm Interim Barrier, and continue operation and maintenance of the laboratory and evaporator systems.

Savannah River Site

- *Continue consolidation and disposition of special nuclear materials.*

  The receipt, storage, and disposition of materials at the Savannah River Site (SRS) allows for de-inventory and shutdown of other DOE complex sites, providing substantial risk reduction and significant mortgage reduction savings to the Department. In FY 2010, EM plans to continue to receive weapons grade surplus non-pit plutonium from LANL. In addition, EM will continue processing nuclear materials, as well as purchase of cold chemicals and other materials for operations of H-Canyon and HB Line.

- *Reduce radioactive liquid waste.*

  The mission of the tank waste program at SRS 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 2010, EM plans to continue operation of the Defense Waste Processing Facility and complete 186 canisters of glass waste, continue construction of the Salt Waste Processing Facility, and continue operation of the Actinide Removal Process and Modular Caustic Side Extraction Unit.

Waste Isolation Pilot Plant

- *Continue safe shipment, receipt, and disposal of contact-handled and remote-handled TRU waste.*

  WIPP in Carlsbad, New Mexico, is the nation's only mined geologic repository for the permanent disposal of defense-generated TRU waste. In FY 2010, the budget request supports up to 21 contact-handled TRU waste and up to 5 remote-handled TRU shipments per week from across the DOE complex.

Conclusion

Madame Chairman, Congressman Turner, and Members of the Subcommittee, I am honored to be here representing the Office of EM to discuss the FY 2010 budget request for our program. I am pleased to answer any questions you have.