Written Testimony of James Owendoff

Principal Deputy Assistant Secretary for Environmental Management

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Thank you for the opportunity to appear before you 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 $6,601,366,000 Fiscal Year (FY) 2019 budget request, which includes $5,630,217,000 in Defense Environmental Cleanup. This request demonstrates the Administration's continued commitment to the vital mission of EM to address the environmental legacy of nuclear weapons production and government-sponsored nuclear energy research.

Overview of the EM Mission

The federal government's nuclear weapons production programs have made significant contributions to our nation's defense for decades – helping end World War II and the Cold War. In addition, government-sponsored nuclear energy research also made significant contributions to domestic energy growth and prosperity. The legacy of these programs is a massive amount of radioactive and chemical waste and contaminated facilities at sites across the country. It is the mission of DOE's Office of Environmental Management to clean up or remediate this legacy waste.

This legacy includes 90 million of gallons of radioactive liquid waste stored in aging underground tanks. That's enough to completely fill the Capitol Rotunda nearly 10 times.

This legacy also includes five thousand contaminated facilities, 700,000 tons of depleted uranium, millions of cubic meters of contaminated soil, billions of gallons of contaminated water, used nuclear fuel and other nuclear materials.

EM must execute its mission as safely, efficiently and cost-effectively as possible. This involves constructing new infrastructure like waste storage facilities and waste treatment plants. This mission also involves the management and retrieval of liquid tank waste as well as the decommissioning and demolition of deteriorating facilities that ultimately reduce maintenance and monitoring costs.

The nature and length of the EM mission, coupled with the sheer technological complexity of cleanup means that we will always face challenges – some anticipated and others unexpected. These obstacles certainly warrant our careful attention, but EM also has a proven ability to achieve tangible results.

When the program began in 1989, EM was responsible for a total of 107 sites covering 3,100 square miles. That's an area larger than Rhode Island and Delaware combined. During early years, work focused on characterizing waste. Since then, EM's accomplishments have included 1) cleanup and closure of major sites in Colorado, Ohio, Missouri and Florida; 2) decommissioning of a gaseous diffusion enrichment plant in Tennessee; 3) vitrification of more than 4,000 canisters of high-level waste in South Carolina; and) removal of all the plutonium metal and oxides from Washington state.

Today, EM has 16 sites remaining, with an active cleanup footprint of less than 300 square miles. These 16 sites are home to some of our toughest and most complex challenges.

The best value does not mean taking short cuts and it does not always mean choosing the cheapest option. It means getting the job done as safely, efficiently and cost-effectively as possible. It requires a sustainable, risk-informed approach centered on reducing the greatest amount of risk with the resources available, while maximizing opportunities to shorten schedules and lower lifecycle costs.

That is why we have focused on a greater sense of urgency to EM's decision-making process. This approach means more emphasis on engaging with regulators, stakeholders, and communities in making timely decisions which will enhance safety, shorten schedules, increase transparency, and reduce costs – achieving the best value for all taxpayers, while at the same time, protecting our workers, members of the public in the communities surrounding our sites, and the environment.

EM's first priority is worker safety, as well as protection of the public health and the environment. These are essential components of our cleanup objectives. EM will continue to discharge its responsibilities by conducting cleanup within a "Safe Performance of Work" culture that integrates protection of the environmental, safety, and protection of worker and public health into all work activities.

The December spread of contamination that occurred during demolition activities at the Plutonium Finishing Plant at the Hanford site demonstrate the continued need to ensure a safe working environment at all of our sites. We will continue to engage with the workforce at Hanford and our other EM sites to solicit their input and ideas to further strengthen our safety performance.

EM Cleanup Objectives and Priorities

Taking many variables into account, such as risk reduction and compliance agreements, EM has the following priorities:

- Radioactive tank waste stabilization, treatment, and disposal;

- Used nuclear fuel receipt, storage, and disposition;
- Special nuclear material consolidation, stabilization, and disposition;
- Transuranic and mixed/low-level waste treatment and disposal;
- Soil and groundwater remediation; and,
- Excess facilities deactivation and decommissioning.

In particular, the FY 2019 budget request will allow EM to:

- Ramp up efforts to address the largest environmental risk at the Savannah River Site---radioactive tank waste.
- Implement key infrastructure improvements at the Waste Isolation Pilot Plant (WIPP), integral to the cleanup activities at a number of EM sites.
- Complete design and begin site preparations for the Oak Ridge Mercury Treatment Facility, which will help address mercury contamination at the site and aid in the eventual deactivation and decommissioning (D&D) of aging facilities at the Y-12 National Security Complex.

Key Recent Accomplishments

While some cleanup projects will extend decades, stable steady progress is being made right now. In 2017, the EM workforce achieved the resumption of transuranic waste shipments to WIPP, enabling continued cleanup progress at several sites across the country.

At Savannah River, workers successfully completed construction of the latest Saltstone Disposal Unit, which is integral to the tank waste cleanup mission, ahead of schedule and under budget. We also completed cleanup activities at Hanford's 618-10 burial ground; demolition of one of the last remaining buildings at the Separations Process Research Unit in New York state; and the safe treatment of remediated nitrate salt drums at the Los Alamos National Laboratory. At the Portsmouth site, we are continuing work to deactivate the former enrichment plant's massive process buildings to prepare them for eventual demolition. And at the Paducah site, we have optimized a system to control and mitigate the migration of groundwater contamination on the east side of the site ahead of schedule and under budget.

Our successes have been recognized by the Project Management Institute (PMI). Our work to complete waste retrieval activities at the AY-102 double-shell tank at Hanford was awarded PMI's Project of the Year award. In addition, PMI also issued awards for efforts to upgrade a ventilation system at one of Hanford's tank farms and for work to close one of the underground waste tanks at the Savannah River Site. We are proud that the PMI chose to recognize the important work underway to address one of our largest environmental challenges — radioactive tank waste. These awards are a recognition of the dedicated and talented workforce we have at the Hanford and Savannah River sites, and across the entire EM program, and illustrate how the EM program is working to serve as a good steward of taxpayer resources. We are committed to building upon this cleanup momentum.

Highlights of the FY 2019 Budget Request

The FY 2019 budget request for EM is $6,601,366,000, which includes $5,630,217,000 for defense environmental cleanup activities, $218,400,000 for non-defense environmental cleanup activities, and $752,749,000 for Uranium Enrichment Decontamination and Decommissioning Fund cleanup activities. This request is the highest for the EM program in a decade, and is an increase of $93,031,000 from the FY 2018 request, which was also a record request.

EM's FY 2019 request provides resources to make progress on cleanup activities across the complex, including tackling the largest environmental challenge at the Savannah River Site — radioactive tank waste; and executing key infrastructure improvements at WIPP, integral to the cleanup activities at a number of EM sites.

At Savannah River, the request will enable DOE to significantly increase production of canisters of vitrified high-level waste at the Defense Waste Processing Facility, as well as support planned operation rates for the Salt Waste Processing Facility, and continued construction progress for Saltstone Disposal Units. As a result, Savannah River will be able to significantly build on its record of successfully emptying and closing underground waste tanks. The WIPP request will have wide-ranging benefits across the EM program, with the planned infrastructure improvements at WIPP intended to enable increased transuranic (TRU) waste shipments from other EM sites.

We will continue to advance those portions of the Hanford Waste Treatment and Immobilization Plant necessary to initiate tank waste treatment through the Direct Feed Low Activity Waste (DFLAW) approach; and complete design and launch site preparations for the Oak Ridge Mercury Treatment Facility, which will help address mercury contamination at the site and aid in the eventual D&D of deteriorating facilities at the Y-12 National Security Complex. We also will complete targeted buried waste exhumation at the Idaho site and continue with preparations to transfer cesium and strontium capsules at Hanford from wet storage to a safer dry storage configuration; and implement of an interim measure to address chromium groundwater contamination at the Los Alamos National Laboratory.

Budget Authority and Planned Accomplishments by Site

Office of River Protection, Washington (Dollars in Thousands)

FY 2018 Request	FY 2019 Request
$1,504,311	$1,438,513

Key Accomplishments Planned for FY 2019

- Continue construction, startup and commissioning activities for the Low Activity Waste (LAW) Facility, Analytical Laboratory, Effluent Management Facility, and Balance of Facilities to complete hot commissioning of the LAW Facility by December 31, 2023, per the 2016 Amended Consent Decree;
- Continue design activities for the Low Activity Waste Pretreatment System (LAWPS);
- Pursue a complementary pretreatment capability using tank-side cesium removal equipment to provide initial feed by December 2023 per the 2016 Amended Consent Decree; and
- Continue retrieval of single-shell tanks in A/AX Farm.

Richland Operations Office, Washington (Dollars in Thousands)

FY 2018 Request	FY 2019 Request
$800,422	$747,097

Key Accomplishments Planned for FY 2019

- Continue cesium and strontium capsules activities to move capsules currently stored at the Waste Storage Encapsulation Facility to dry storage;
- Continue waste site remediation and groundwater treatment; and
- Continue focus on canyon and waste site risk mitigation.

Savannah River Site, South Carolina (Dollars in Thousands)

FY 2018 Request	FY 2019 Request
$1,447,591	$1,656,180

Key Accomplishments Planned for FY 2019

- Package 135 to 175 canisters of vitrified high-level waste at the Defense Waste Processing Facility;
- Support start-up activities for the Salt Waste Processing Facility;
- Continue construction of Saltstone Disposal Unit #7, #8, #9;
- Operate Actinide Removal Process and Modular Caustic Side Solvent Extraction Unit and Tank Closure Cesium Removal system to process 200,000 gallons of salt solution;
- Complete D Area Ash Project including closure of the 488-1D Ash Basin and the Coal Pile Runoff Basin;
- Continue to receive foreign research reactor and domestic research reactor used nuclear fuel for safe storage and management; and
- Disposition used nuclear fuel in H-Canyon by processing.

Idaho National Laboratory, Idaho (Dollars in Thousands)

FY 2018 Request	FY 2019 Request
$359,226	$359,226

Key Accomplishments Planned for FY 2019

- Continue commissioning and startup of the Integrated Waste Treatment Unit;
- Characterize, repackage and certify contact-handled transuranic waste for shipment to the Waste Isolation Pilot Plant;
- Complete exhumation of targeted buried waste at the ninth and final retrieval area; and
- Transfer Experimental Breeder Reactor-II and Advanced Test Reactor used (used) nuclear fuel from wet to dry storage.

Oak Ridge Site, Tennessee (Dollars in Thousands)

FY 2018 Request	FY 2019 Request
$390,205	$408,526

Key Accomplishments Planned for FY 2019

- Complete design and begins site preparation of the Outfall 200 Mercury Treatment Facility;
- Continue demolition of remaining facilities at East Tennessee Technology Park;
- Continue modifications to Building 2026 to support processing of U-233 material; and
- Initiate design for a new On-Site Waste Disposal Facility.

Carlsbad Field Office, New Mexico (Dollars in Thousands)

FY 2018 Request	FY 2019 Request
$323,041	$403,487

Key Accomplishments Planned for FY 2019

- Continue waste emplacement activities, increasing transuranic waste shipments to ten per week ;
- Address major repair or replacement of critical infrastructure; and
- Continue work on the Safety Significant Confinement Ventilation System.

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

FY 2018 Request	FY 2019 Request
$191,629	$191,629

Key Accomplishments Planned for FY 2019

- Continue execution of New Mexico Environment Department approved ground water remedies for the high explosives (RDx) plume in Canon de Valle; and
- Continue activities for chromium plume investigation through modeling, hydrology studies, installation of extraction and injection wells, and interim measure activities progressing towards an approved corrective measure evaluation.

Nevada National Security Site, Nevada (Dollars in Thousands)

FY 2018 Request	FY 2019 Request
$60,136	$60,136

Key Accomplishments Planned for FY 2019

- Continue soil and groundwater remediation activities; and
- Continue safe disposal operations for low-level and mixed low-level radioactive waste.

Conclusion

I am honored to be here today representing the more than 20,000 men and women that carry out our Office of Environmental Management mission. Ensuring a safe work environment at all of our sites is our highest priority. We are committed to achieving our mission in a safe, effective and cost-efficient manner to serve as good stewards of taxpayer resources.

At the end of the day, EM progress means safer, cleaner sites in the communities that hosted defense nuclear activities for decades. This kind of progress is not possible without our workforce, Members of Congress, regulators, cleanup community leaders and other partners. Thank you again for the opportunity to appear before you today and I look forward to your questions.