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Chairman Reed, Ranking Member Inhofe, and members of the committee, it is an honor to appear before you on behalf of the Department of Energy (DOE).

It is a privilege to serve as the 16th Secretary of Energy and have the responsibility of leading the Department in enhancing America's nuclear security through defense, nonproliferation, and environmental efforts. As long as nuclear weapons exist, the United States must maintain the safety, security, and effectiveness of the nuclear weapons stockpile through the application of unparalleled science, technology, engineering, and manufacturing. The Department also works to prevent nuclear weapon proliferation and reduce the threat of nuclear and radiological terrorism by leveraging the unique expertise of our federal and nuclear security enterprise workforce. In addition, the Department provides the U.S. Navy with militarily effective nuclear propulsion plants and ensures their safe, reliable, and long-lived operation. Finally, we must complete the safe cleanup of the environmental legacy brought about from decades of nuclear weapons development and government-sponsored nuclear energy research. The Department stands ready to support the President in meeting all these missions. To meet these challenges, DOE must uphold our values, revitalize our nuclear security enterprise, and ensure the environmentally sound and safe cleanup of legacy nuclear sites, particularly in disadvantaged communities. I am committed to investing in the kinds of science and technology that will help us today, tomorrow, and well into the future so the United States will always have a qualitative edge over its adversaries. I am proud to lead the more than 100,000 dedicated federal and DOE contractor employees working every day to find solutions to our most pressing national security, scientific, energy, cybersecurity, and climate change challenges.

As I noted in my confirmation hearing, I am focused on three missions as the Secretary of Energy – first, the security of the United States through the National Nuclear Security Administration (NNSA) nuclear stockpile, nuclear nonproliferation, and naval nuclear propulsion missions, and the Environmental Management (EM) program's clean-up of our Cold War legacy sites. Second, supporting the amazing scientific work being done at the DOE's 17 National Labs and other facilities across the country, including on climate change and emissions reductions. And third, taking that research to scale and deploying it to create jobs for Americans. As Secretary, I am responsible for what happens at NNSA, and that includes making sure NNSA is properly resourced to execute its mission. Since I have been in the position, the Department

and NNSA have reinforced a strong and collaborative working relationship that protects NNSA's semi-autonomous status while also ensuring that we are able to best leverage the different skills sets and expertise across the Department.

NNSA Fiscal Year 2022 Budget Overview

DOE's NNSA is committed to supporting the President's Interim National Security Strategic Guidance. The President's Fiscal Year (FY) 2022 Budget Request reflects the U.S. commitment to maintain a safe, secure, and effective nuclear weapons stockpile, reduce global nuclear threats, and provide the U.S. Navy's submarines and aircraft carriers with militarily effective nuclear propulsion. NNSA is on track to modernize the nuclear stockpile with our life extension and alteration programs; make substantial progress on maintaining, repairing, and recapitalizing NNSA's deteriorating infrastructure; provide policy and technical leadership to address all aspects of the nuclear threat reduction mission; and deliver nuclear propulsion that meets the U.S. Navy's operational requirements.

The President's FY 2022 budget request of $19.7 billion for NNSA, an increase of $10.8 million, or 0.1 percent over the FY 2021 enacted level.[1] This request would enable NNSA to execute its long-standing nuclear modernization efforts, begun under the Obama-Biden Administration, while this Administration undertakes its formal review of efforts to modernize our nuclear deterrent, to include Department of Defense delivery platforms, the nuclear weapons required for those platforms, and the NNSA infrastructure needed to produce and maintain those weapons. This will preserve space for future policy decisions related to nuclear modernization, and nuclear nonproliferation and counterterrorism, as the Administration adjusts to the changing international threats facing America. Russia, China, and our adversaries should make no mistake – America will do whatever is necessary to deter our enemies and provide security in our strategic relationships with allies and partners.

The U.S. nuclear weapons stockpile is currently safe, secure, and militarily effective. However, the legacy stockpile systems are aging, and NNSA's production infrastructure has atrophied considerably. America must invest in the weapons and infrastructure modernization programs to provide the capabilities needed to ensure the deterrent's viability into the future. Future American political leaders will not have the weapons and infrastructure in place to support the nuclear arsenal unless we reestablish that capability now.

As we advance the important work of modernizing our Nation's nuclear deterrent and the infrastructure that supports that mission, it is also important that the Department continues to collaborate with the Defense Nuclear Facilities Safety Board (DNFSB) as it has successfully done for decades. I am happy to report that DOE and DNFSB are developing a bilateral memorandum of understanding (MOU) to serve as a foundation for mutual communication, transparency, and information sharing. The completion of this MOU, which we expect to occur this year, will be an important tool for our continued collaboration.

[1] The FY 2021 Enacted level does not include the mandated transfer of $91 million from Naval Reactors to Nuclear Energy for the operation of the Advanced Test Reactor.

Weapons Activities

The FY 2022 budget request for the Department's Weapons Activities account is $15.5 billion, an increase of $139.3 million, or 0.9 percent, over FY 2021 enacted levels. This budget request supports the Administration's goals to modernize the Nation's nuclear weapons stockpile and infrastructure to meet DoD deterrent requirements. Included in this request is funding for activities of NNSA's Office of Defense Programs which, in coordination with the Department of Defense (DoD), has maintained the effectiveness of the nuclear deterrent for almost 30 years without the need for additional nuclear explosive testing. In FY 2021, the science-based Stockpile Stewardship Program allowed the Secretaries of Energy and Defense to certify to the President for the 25th consecutive year the nuclear weapons stockpile remains safe, secure, and militarily effective. This remarkable scientific achievement is made possible through the expertise of NNSA's world-class scientists, engineers, and technicians, and prior investments made in the necessary infrastructure and tools.

Stockpile Management

For Stockpile Management, the FY 2022 budget request is $4.6 billion, an increase of $342.4 million, or 8.0 percent, over the FY 2021 enacted level.

NNSA is requesting $771.7 million in FY 2022 for the B61-12 Life Extension Program (LEP), which consolidates four variants of the B61 gravity bomb and improves the safety and security of a weapon that entered service in 1966. The B61-12 LEP is currently in Phase 6.5 and has achieved first production on most of its components and will achieve the system's first production unit (FPU) in the first quarter of FY 2022.

NNSA is requesting $207.2 million in FY 2022 for the W88 Alteration (Alt) 370, which supports the sea-based leg of the nuclear triad. The W88 Alt 370 is currently in Phase 6.5 and currently on track with a system FPU date in the fourth quarter of FY 2021. Nearly all major components have completed their respective FPUs.

NNSA is requesting $1.1 billion in FY 2022 for the W80-4 LEP, which is currently in Phase 6.3, Development Engineering. The W80-4 LEP supports the U.S. Air Force Long Range Standoff (LRSO) program. FY 2022 will see a planned ramp-up of production development and design activities as the program transitions to Phase 6.4, Production Engineering.

NNSA is requesting $691.0 million in FY 2022 for the W87-1 Modification Program, which will replace the aging W78-0 warhead. NNSA has planned first production in FY 2030 to support fielding on the Ground-Based Strategic Deterrent ballistic missile system in the Mk21A reentry vehicle. The program will deploy new technologies that improve safety, security, and manufacturability. Efforts in FY 2022 will focus on completion of the Weapon Design and Cost Report, an independent cost estimate, and entry into Phase 6.3.

The W93/Mk7 is a new program of record authorized by Congress in FY 2021 to meet DoD requirements. Starting the W93 program in FY 2021 ensured the development of the warhead

coordinated with the Navy's Mk7 aeroshell program. The W93 will incorporate modern technologies to improve safety, security, and flexibility to address future threats, and will be designed for ease of manufacturing, maintenance, and certification. All the key nuclear components will be based on previously tested nuclear designs and will not require underground nuclear explosive testing to certify. NNSA is requesting $72.0 million in FY 2022 for the program, an increase of $19.0 million, or 35.8 percent above the FY 2021 enacted level. FY 2022 will focus on completion of Phase 1 activities and entry into Phase 2, Feasibility Study and Design Options.

Production Modernization

The Production Modernization program focuses on the production capabilities of nuclear weapons components critical to weapon performance, including primaries, secondaries, radiation cases, and non-nuclear components. For Production Modernization, the FY 2022 budget request is $2.9 billion, an increase of $363.1 million, or 14.3 percent over the FY 2021 enacted level. Included in this request is funding for activities that support the Primary Capability Modernization, Secondary Capability Modernization, and Non-Nuclear Component Modernization programs.

Primary Capability Modernization includes the plutonium program and the high explosives and energetics programs. NNSA urgently needs to recapitalize our plutonium pit production fabrication capabilities to support our weapons modernization programs. High explosive and energetic materials are required for every weapon system in the stockpile and are also under increasing demand.

NNSA's priority infrastructure need is re-establishing a modestly sized production capacity for plutonium pits. The FY 2022 budget request of $1.7 billion includes funding for plutonium operations and the plutonium pit production projects at Los Alamos National Laboratory (LANL) and Savannah River Site (SRS). At LANL, the Los Alamos Plutonium Pit Production Project advanced in the Critical Decision (CD) process from Critical Decision (CD)-0 to CD-1 (Alternative Selection and Cost Range), in April 2021. At Savannah River, the Department is working toward CD-1 by this summer. This two-site approach is necessary to re-establish the nation's ability to produce plutonium pits in support of defense requirements, and to provide needed resilience against unplanned outages.

Secondary Capability Modernization includes our Uranium, Depleted Uranium, Lithium, Tritium, and Domestic Uranium Enrichment programs. The FY 2022 budget request of $488.1 million for Secondary Capability Modernization is a $31.1 million, or 6.8 percent, increase over the FY 2021 enacted budget. All these programs support the nuclear stockpile and face infrastructure and lapsed capability concerns. Major construction investments to address these infrastructure concerns are funded within the Infrastructure and Operations program. For example, NNSA is continuing its progress on the Uranium Processing Facility (UPF), which, when completed, will be one of the largest investments in Tennessee and one of the largest construction projects across the nuclear security enterprise since the Manhattan Project. UPF construction will support 2,500 good-paying jobs in 2022 and 1,100 jobs in 2023. NNSA is also working with its partners to increase production of tritium and is in the early phases of designing

the Tritium Finishing Facility (TFF), to replace a 1950s-era facility. The United States no longer maintains a lithium purification capability and relies on material recycling as its main source, which will be exhausted soon. These operations currently take place in a World War II-era building well beyond its design life, putting both operators and processing at risk. NNSA plans to modernize lithium purification and processing operations in a new Lithium Processing Facility (LPF) built to modern standards.

Non-Nuclear Capability Modernization includes programs to modernize production of non-nuclear components for multiple weapon systems. Non-nuclear components are a significant portion of the costs for the warhead modernization programs due to the number of parts, their complexity, and the testing required to ensure they will continue to function over their required 20-to-30-year lifetimes.

This ongoing modernization of NNSA's production infrastructure is advancing at a critical time. As the Commander of U.S. Strategic Command, Admiral Charles Richard, has testified, ***"We simply cannot continue to indefinitely life extend Cold War leftover systems...and successfully carryout our national strategy. A particular concern is the aging nuclear weapons stockpile and supporting infrastructure and we can reach a point where no amount of money will adequately mitigate the operational risks the Nation will face due to infrastructure and human talent capability losses."*** Put another way: time is money. Continued recapitalization is imperative, otherwise there will be a point at which no amount of money will be able to mitigate the operational risks and losses to infrastructure capabilities that accrued over time.

Stockpile Research, Technology, and Engineering

The FY 2022 budget request for Stockpile Research, Technology, and Engineering (SRT&E) is $2.7 billion, a decrease of $123.1 million, or 4.4 percent below the FY 2021 enacted levels. The decrease reflects a rebalancing of efforts within NNSA to focus on near-term priorities to support the stockpile. SRT&E will continue to focus on the implementation of the Enhanced Capabilities for Subcritical Experiments (ECSE) and various activities in preparation to accept and operate NNSA's first Exascale high performance computing system in 2023. Both capabilities provide data in support of the W80-4 LEP requirements and the W87-1 modification. SRT&E provides the data and tools that underpin science-based stockpile decisions, including the knowledge and expertise needed to maintain confidence in the nuclear stockpile without the need for additional underground nuclear explosive testing.

ECSE will produce experimental data to enable the assessment of the current stockpile and the certification of the future stockpile without the need to return to explosive nuclear testing. This capability is needed to help underpin confidence in the W80-4 LEP, W87-1 Modification, and future warhead acquisition programs. NNSA is requesting $215.6 million in FY 2022 for the program, the same as the FY 2021 enacted level.

The Exascale Computing Initiative (ECI) will provide NNSA with next-generation simulation capabilities to support weapons design, warhead assessment and certification, and continued development of the science needed to support the nuclear stockpile over the long-term. NNSA

remains on track to accept and operate NNSA's first Exascale high performance computing system for program use in 2023.

The Inertial Confinement Fusion (ICF) program provides high energy density (HED) science capabilities and expertise to provide the data needed to advance warhead performance and production science, and to inform design choices for warhead acquisition programs. In addition, activities like the pursuit of ignition provide not only important scientific understanding, but a unique training environment for the workforce. NNSA is requesting $529.0 million in FY 2022 for the program, a decrease of $46.0 million or 8.0 percent, from the FY 2021 enacted level. The decrease reflects a decision to rebalance priorities within the SRT&E portfolio.
These programs, along with our advanced computing and simulation, technology maturation, academic programs, and other SRT&E missions are essential to maintaining our confidence in the stockpile.

Every year, NNSA provides grants and cooperative agreements with top universities across the country. Programs such as the Stewardship Science Academic Alliances Program and the Minority Serving Institution Partnership Program (MSIPP) facilitate in recruiting the next generation of scientists and engineers for our nuclear security enterprise, and conducting cutting-edge science in national security and nonproliferation. In support of the President's effort to eliminate inequities in Science, Technology, Engineering, and Math (STEM), MSIPP's mission is to create and foster a sustainable STEM-pipeline that prepares a diverse workforce of world class talent through strategic partnerships between Historically Black Colleges and Universities, Tribal Colleges and Universities, and other Minority Serving Institutions and the nuclear security enterprise.

Infrastructure and Operations

Infrastructure is the foundation that supports all NNSA missions. Modern, efficient, sustainable, and resilient infrastructure is needed for the nuclear deterrent, nonproliferation, counterterrorism, emergency response, leading-edge research, and solving the climate crisis. The deterioration of facilities built during the Manhattan Project and Cold War eras threatens NNSA's ability to execute its mission. Today, the average age of NNSA's facilities is 47 years old and of the agency's $116 billion worth of real property infrastructure, nearly 60 percent is beyond its design life and half of all facilities are in poor condition. NNSA's infrastructure includes, among other things, office buildings, light laboratories, emergency operations centers, fire houses, roads, utilities, and the specialized equipment used to support our missions.

The FY 2022 budget request for Infrastructure and Operations is $3.6 billion, a decrease of $497 million, or 12.2 percent below the FY 2021 enacted level. The decrease largely results from the completion of construction projects in FY 2021, the prioritization of funding for programmatic plutonium construction funded within Production Modernization, the beginning of the ramp down of funding for the Uranium Processing Facility project, and the use of carryover balances to fund work within the Chemistry and Metallurgy Research Replacement project.

NNSA infrastructure must be resilient and provide the capabilities and capacities for executing its vital national security missions. This requires an array of complementary strategies, including

minor and major construction projects, short-term leasing, purchases, and timely disposition of excess facilities. In partnership with the EM program, DOE is strategically demolishing high-risk excess facilities such as the former Biology Complex at Y-12. Its removal enhances safety and clears land for NNSA missions at the site. We must modernize and upgrade antiquated infrastructure and address safety and programmatic risks through strategic, risk-informed investments that directly support our nuclear weapons and nonproliferation programs.

NNSA is continuing its progress on the Uranium Processing Facility (UPF), which, when completed, will be one of the largest investments in Tennessee and one of the largest construction projects across the nuclear security enterprise since the Manhattan Project. UPF construction will support 2,500 good-paying jobs in 2022 and 1,100 jobs in 2023. NNSA is also in the early phases of designing the Tritium Finishing Facility (TFF). The United States no longer maintains a lithium purification capability and relies on material recycling as its main source. The current Program of Record provides sufficient lithium supply through 2035. These operations currently take place in a World War II-era building well beyond its design life, putting both operators and processing at risk. NNSA plans to modernize lithium purification and processing operations in a new Lithium Processing Facility (LPF) built to modern standards.

Also, key are the personnel needed to safely and securely operate and maintain NNSA facilities. As NNSA mission scope increases, so does the demand for personnel to support new facilities and capabilities being brought on-line. Many of these sites across the complex will require additional staff to support moving to 24/7 operations. These individuals are essential to minimizing unplanned outages and to supporting safe and secure operations, particularly in high hazard operations.

Defense Nuclear Security Efforts

The Office of Defense Nuclear Security's (DNS) primary mission is protecting the facilities, people, and assets that are critical to achieving NNSA's important national security missions. DNS's FY 2022 budget request is $847.6 million, an increase of $58.6 million, or 7.4 percent, over the FY 2021 enacted amount. NNSA is making key investments to recapitalize aging physical security infrastructure through the Security Infrastructure Revitalization Program. Growth across the nuclear security enterprise, including plutonium pit production efforts, has led to increased security requirements. To mitigate the threat from unmanned aircraft systems (UAS), DNS is installing counter UAS systems at Y-12, the Pantex Plant, and the Nevada National Security Site.

Defense Nuclear Nonproliferation

NNSA's Office of Defense Nuclear Nonproliferation (DNN) is critical to implementing the President's call to "lock down fissile and radiological materials around the world." The FY 2022 budget request for the DNN account is $2.3 billion, an increase of $4.0 million, or 0.2 percent, over the FY 2021 enacted level.[2] DNN works worldwide with our international partners to prevent state and non-state actors from developing nuclear weapons or acquiring weapons-usable

[2] The FY 2022 amount does not include the proposed cancellation of $330 million of prior year balances from the Mixed Oxide Fuel Fabrication Facility project.

nuclear or radiological materials, equipment, technology, and expertise. Around the globe, DNN has eliminated the need for weapons-usable material at over 100 civilian sites and removed over 7,200 kilograms of highly enriched uranium (HEU) and plutonium from almost 50 countries, achieving a permanent reduction in these threats from these materials. DNN's unique capabilities are critical to America's national security and welfare: from promoting and supporting International Atomic Energy Agency (IAEA) safeguards agreements internationally; to supporting diplomatic arms control efforts such as the successfully extended New START treaty with Russia; to partnering with U.S. industry to support non-HEU based production of the vital medical isotope molybdenum-99, which is used in 40,000 procedures every day in the United States.

Nuclear Terrorism and Incident Response

The FY 2022 request for the Nuclear Counterterrorism and Incident Response (NCTIR) Program is $370.8 million, a decrease of $6.7 million, or 1.8 percent below, the FY 2021 enacted level. The FY 2022 request is lower due to the transfer of management responsibility and authority for IT and Cyber services and solutions for the Emergency Communications Network from NCTIR to NNSA's Office for Information Management.

NCTIR includes two subprograms: *Emergency Operations* (EO) and *Counterterrorism and Counterproliferation* (CTCP).

EO provides the structure and processes the Department uses to prevent, prepare for, respond to, recover from, and mitigate all-hazards emergencies that threaten life and property. In addition, EO provides the framework for building, assessing, and improving organizational resilience to ensure uninterrupted performance and delivery of the Department's Essential Functions under the Presidential Policy Directive 40, Executive Order 13961, the National Nuclear Security Act, and the National Response and Planning Frameworks.

CTCP provides capabilities to counter and respond to nuclear incidents and accidents worldwide. The foundation of NNSA's diverse missions is an unparalleled command of nuclear science, which is harnessed to understand and contend with global nuclear threats. CTCP's expertise influences a wide range of policies to keep nuclear material beyond the reach of non-state actors, including security standards for the storage and transport of such material. The office shares knowledge of nuclear and radiological threats with federal, state, local, tribal governments, and international partners by conducting training, exercises, and information exchanges to strengthen emergency preparedness and response. CTCP also develops tools to impede the efforts of proliferant states to obtain nuclear capabilities.

CTCP manages the Nuclear Emergency Support Team (NEST), a cadre of on-call technical specialists who are trained and equipped to respond to all manner of nuclear events. Notable NEST capabilities include mobile teams that can search for nuclear devices and technical personnel whose knowledge of nuclear weapons is used to characterize and defeat such threats. NEST features nuclear forensics capabilities to identify the origin of nuclear material outside of regulatory control or used in a threat device. These capabilities constitute an important element

of the U.S. deterrence strategy, by allowing the United States to credibly threaten retaliation against any state that facilitates an act of nuclear terrorism.

Naval Reactors

The Office of Naval Reactors remains at the forefront of technological developments in naval nuclear propulsion by advancing new technologies and improvements in naval reactor performance. This preeminence provides the U.S. Navy with a commanding edge in naval warfighting capabilities. Naval Reactors has given the United States unmatched reach with an unparalleled record of over 169 million miles safely steamed on nuclear power and over 7,300 reactor-years of operation.

The FY 2022 budget for Naval Reactors is $1.9 billion, an increase of $182.7 million, or 10.8 percent, over the FY 2021 enacted level.[3] The budget request supports Naval Reactors' three major projects – the COLUMBIA-Class reactor plant development, the refueling overhaul of a research and training reactor in New York, and the construction of the Naval Spent Fuel Handling Facility in Idaho. Naval Reactors is committed to supporting the operational nuclear fleet, continuing research and development efforts for future generations of nuclear-powered warships, and making progress on both the recapitalization of laboratory facilities and the environmental remediation of legacy responsibilities.

New Era of Progress for Environmental Management Mission

As important as the missions of today and tomorrow are, the Cold War left an indelible mark on America. It is the mission of the Office of Environmental Management (EM) is to address the legacy of nuclear weapons development and government-sponsored nuclear energy research that has played a significant role in domestic security and prosperity.

As the largest environmental cleanup program in the world, EM plays a key role in the Department's overarching mission to protect the planet. The Department's FY 2022 budget request of $7.6 billion will help EM continue to make progress in fulfilling the government's responsibility to clean up the environment in communities that supported nuclear weapons programs and government-sponsored nuclear energy research.

Building on past success, the EM program is entering a new era of cleanup accomplishments. The FY 2022 request supports a ramp up in EM's ability to tackle tank waste --- one of the Department's largest environmental challenges and financial liabilities. The request will also enable continued progress in infrastructure improvements at the Waste Isolation Pilot Plant and support an increased rate of waste shipments from across the EM program. In addition, EM will continue to advance facility demolition and risk reduction projects across the program.

The FY 2022 request includes $6.8 billion for defense environmental cleanup activities, which covers most major EM sites. The request of $1.5 billion for the Office of River Protection will

[3] The FY 2021 Enacted level does not include the mandated transfer of $91 million from Naval Reactors to Nuclear Energy for the operation of the Advanced Test Reactor. The FY 2022 amount does not include the proposed cancellation of $6 million of prior year balances.

enable EM to remain on track to initiate tank waste treatment at the Hanford site by the end of 2023 through the Direct Feed Low Activity Waste (DFLAW) approach. In FY 2022, EM expects to achieve a significant milestone in the start of tank waste treatment through the initiation of operations at the Tank-Side Cesium Removal (TSCR) unit, which is necessary to prepare waste for DFLAW treatment. Also at Hanford, the request of $1.0 billion for the Richland Operations Office will support continued risk reduction activities at Hanford's Central Plateau and along the Columbia River corridor, including remediation activities at Building 324 and the transfer of cesium and strontium capsules to dry storage.

At the Savannah River Site, the request of $1.7 billion will help EM accelerate tank waste treatment through operation of the Salt Waste Processing Facility and the Defense Waste Processing Facility. The request will also continue operations and maintain a high state of readiness for H Canyon, the only chemical separations facility remaining in operation in the United States. At the Idaho Cleanup Project, the request of $381 million will continue advancing the Integrated Waste Treatment Unit (IWTU) toward hot operations. This facility is necessary to address the last remaining tank waste at the Idaho National Laboratory. In addition, exhumation of buried waste and treatment of transuranic waste sludge will complete, allowing the site to proceed with closure of the Radioactive Waste Management Complex.

The request also supports key modernization and infrastructure recapitalization priorities at the Waste Isolation Pilot Plant (WIPP). Specifically, the request of $437 million will help ensure WIPP is equipped to meet the needs of the national transuranic waste disposal mission by enabling transportation activities from multiple locations required for sustained operations of up to 14 shipments per week.

EM's FY 2022 budget also facilitates the Department's broader national security and scientific research missions. The request includes $436 million in defense environmental cleanup funding for Oak Ridge, which will enable EM to continue cleanup operations at the Oak Ridge National Laboratory (ORNL) and Y-12 National Security Complex excess facilities. The request enables EM to advance progress on several near-term priorities at Oak Ridge including the disposition of the remaining uranium-233 inventory at ORNL, addressing transuranic debris and sludges, and continuing design of the On Site Waste Disposal Facility.

At the Los Alamos National Laboratory, the request of $333.5 million will support EM initiating deactivation and decommissioning (D&D) work at the Ion Beam Facility, along with remediation activities at the DP-Road site, groundwater treatment and transuranic waste shipments to the Waste Isolation Pilot Plant. The request also includes $35 million to support continued D&D efforts for excess facilities at the Lawrence Livermore National Laboratory.

As the Department enters this new era of cleanup progress, EM is working to build a workforce for the future that promotes diversity and inclusion. That includes high-quality jobs in environmental cleanup where workers from all backgrounds can make a living and make a difference. The budget request includes a significant boost in funding to expand the Minority Serving Institutions partnership program to a new EM STEM Manufacturing and Cybersecurity Consortium. This program will be primarily focused on Historically Black Colleges and

Universities and other Minority Serving Institutions with research specialties needed to advance the EM mission.

EM's FY 2022 request reflects a planning approach that will boost the Department's ability to complete its clean up mission. EM is prepared to put these resources to work to enhance environmental protections and remediate sites so they can be transitioned to future uses in local communities that helped the nation win the Cold War and maintain peace for decades. As we do, the Department will work hand-in-hand with workers, unions, Tribal Nations, local communities, and Congress to plan for this next era of cleanup.

Enhancing Cybersecurity

As you all are aware, a ransomware attack happened on May 7th that led to the shutdown of the Colonial Pipeline Company's largest fuel pipeline on the East Coast. The White House asked the Department of Energy to coordinate a whole-of-government effort to ensure that the company had the resources necessary to resume operations as quickly and safely as possible, while moving fuel supplies to impacted areas by other means. This incident was a stark reminder of the imperative to harden the nation's critical infrastructure against these serious and growing cyber threats.

As the Sector Risk Management Agency for cybersecurity in the Energy Sector, the Office of Cybersecurity, Energy Security, and Emergency Response, or CESER, leads the Department's efforts to safeguard the nation's critical energy infrastructure against growing and evolving cyber threats and attacks. CESER works closely with the Cybersecurity and Infrastructure Security Agency (CISA), and public and private sector partners to strengthen the energy sector's risk management capabilities and enhance sector-wide situational awareness and threat analysis. The Office is advancing policies, technologies, and risk management tools that will increase the visibility of physical and cyber threats in the operational technology environment, mature the cybersecurity supply chain, and support exercises and partnerships with states and other organizations. Earlier this year, DOE and CISA announced a partnership with the electricity sector to develop the 100-day Industrial Control Systems Cyber Initiative. The initiative will strengthen the security of electricity critical systems and increase the visibility of the systems that control the nation's utility operations. Ultimately, the initiative will help pave the way for efforts to secure critical infrastructure in other sectors.

In the current threat environment, the Department cannot afford to neglect its cybersecurity capabilities, which serve as frontline assets that protect the information, systems, and networks necessary to execute its mission. Information Technology and Cybersecurity enable every element of DOE/NNSA's missions. To meet future requirements, the Department must modernize its outdated and legacy technology.

The Office of the Chief Information Officer leads the Department's efforts to modernize and improve cybersecurity defenses to protect federal systems and information at our national laboratories, power marketing administrations, plants, sites and headquarters. Additionally, we remain focused on strengthening our ability to respond and recover from cybersecurity incidents when they occur.

The Department is targeting cybersecurity investments on lessons learned from recent cybersecurity attacks and implementing the Executive Order to Improve the Nation's Cybersecurity, including:

- Accelerating the movement to a zero-trust security model and secure cloud services;
- Securing the software supply chain; and
- Improving cybersecurity threat hunting and response in both information technology and operational technology.

I can assure you that cybersecurity will remain a top priority for the Department, and these investments will posture DOE to defend against an ever-evolving landscape of cyber threats.

Conclusion

DOE is charged with the truly unique and awesome responsibilities of advancing national security through the application of science. NNSA's weapons activities, nonproliferation, and naval reactors programs are essential to promoting America's national security and keeping our people safe. By applying the highest environmental standards and the best that new technology has to offer, DOE can ensure that science is harnessed to bolster America's national security, keep our edge in research and technology, and build an economy that reflects what we value most—our people. We are mindful of the resources entrusted for these vital missions and greatly appreciate the ongoing support of this Committee and Congress.