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National Nuclear Security Administration

National Technology and Engineering  
Solutions of Sandia, LLC

Performance Evaluation Report

Contract No. DE-NA0003525

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Sandia Field Office

Evaluation Period:

October 1, 2024, through September 30,  
2025

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December 12, 2025

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## Executive Summary

This Performance Evaluation Report (PER) provides the National Nuclear Security Administration's (NNSA) assessment of the performing entity, National Technology and Engineering Solutions of Sandia, LLC's (NTESS), performance of the contract requirements for the period from October 1, 2024, through September 30, 2025, as measured against the applicable Performance Evaluation and Measurement Plan (PEMP).

Pursuant to the terms and conditions of the Contract, the PEMP sets forth the criteria by which NNSA evaluates NTESS performance, as required by Federal Acquisition Regulation (FAR) Subpart 16.4, which outlines expectations for administering award-fee type incentive contracts. This is the type of contract in place between NNSA and its management and operating (M&O) partners. A key requirement of FAR Part 16 is to establish a plan that identifies award-fee evaluation criteria and “how they are linked to acquisition objectives which shall be defined in terms of contract cost, schedule, and technical performance.”

In accordance with the regulation, the PER assesses NTESS’ performance against the PEMP and provides the basis for determining the amount of award fee earned by NTESS. NNSA took into consideration all inputs provided (e.g., Contractor Assurance System (CAS), program reviews) from NTESS and NNSA Program and Functional Offices both at Headquarters and in the field.

NTESS earned an overall rating of Excellent and 92 percent of the available award fee including an Excellent in Goals 1, 2, 3, and 6 and Very Good in Goals 4 and 5.

NTESS effectively met contract requirements and delivered strong mission performance, ensuring Sandia National Laboratories (SNL) remained a critical enabler of national security objectives. NTESS advanced major modernization and sustainment programs, with (b) (7)(F) modernization efforts transitioning to the stockpile, continued leadership of warhead design and production programs, and successful completion of Cycle 30 Annual Assessment.

NTESS demonstrated enterprise leadership through the deployment of Digital Engineering tools, enhancement of the Z-Machine’s experimental capabilities, improvements in nuclear detection and monitoring technologies, and successful collaboration across the nuclear security enterprise (NSE). NTESS also contributed to broader national security efforts, delivering the third Global Burst Detector IIF payload, (b) (7)(F)

(b) (4), (b) (7)(F). The Radiological Assistance Program’s effective response highlighted the Laboratory’s operational readiness.

NTESS effectively managed the safe and secure operation of SNL, emphasizing operational efficiency and security measures. (b) (4), (b) (7)(F)

NTESS’s leadership effectively drove and aligned its strategic vision with NNSA goals, catalyzing innovative initiatives and robust enterprise-wide collaboration, particularly in digital transformation and advanced manufacturing. This proactive leadership ensured strong performance in operational rigor and mission delivery, and emphasis on continuous improvement, and investment in workforce development and agility, resulting in increased production, cost avoidance, and enhanced capabilities across the NSE from key partnerships. Overall, NTESS’ consistent and strategic leadership was pivotal in advancing critical national security missions and fostering significant enterprise-level improvements.

## Goal 1: Mission Delivery: Nuclear Weapons

Amount of At-Risk Fee Allocation: \$4,269,236

### Goal 1 Summary

NTESS earned a rating of Excellent, and 91 percent of the award fee allocated to this Goal. NTESS exceeded almost all Objectives and Key Outcomes and generally met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year, accomplishments significantly outweighed issues and no significant issues in performance existed.

#### Objective 1.1

NTESS executed experimental science projects that yielded critical data, including plutonium experiments on the Z-Machine that required installation of sophisticated experimental platforms with advanced diagnostics, hardware, and sample recovery tools. These plutonium and other high energy density experiments contributed to the tri-lab milestone for Advanced Understanding of Primary Performance for modernization programs.

NTESS successfully executed various Inertial Confinement Fusion experiments

(b) (7)(F)

NTESS collaborated with NNSA to identify an approach to direct shipment of plutonium materials to Waste Isolation Pilot Plant (WIPP) following experiments, streamlining the Plutonium Integrated Consolidation and Evaluation (PuICE) disposition process.

#### Objective 1.2

NTESS established an Operational Technology (OT) Assurance team to support assessments across all Nuclear Deterrence (ND) missions, aligning with Nuclear Enterprise Assurance (NEA) objectives. This team collaborated with the Integrated Stockpile Evaluation Tester team to assess OT systems, including the Weapons Evaluation Test Lab, which resulted in identifying OT risks and recommending mitigation strategies. NTESS also developed and deployed a cyber vulnerability assessment tool

(b) (7)(F)

and successfully enabled a semi-automated process in discovery of cyber vulnerabilities.

NTESS exceeded Neutron Generator production builds from the original baseline while experiencing unforeseen cost overruns due to inflated material costs and increased inspections. Production quantities allowed Next Level Assemblies to meet or exceed assembly schedules.

NTESS reduced SiFab Production Cycle Time that led to early wafer deliveries without requiring additional funds. This achievement was largely driven by equipment uptime, allowing for ahead of schedule delivery for Application-Specific Integrated Circuits.

#### Objective 1.3

NTESS launched an Air-Launched Cruise Missile instrumented W80-1 Joint Test Assembly (JTA) verifying JTA functions and completed technical analysis to support development and implementation of a Function Ground Test system to gather critical test data supporting the annual assessment process.

NTESS collaborated with NSE partners to build and deliver the first-ever

(b) (7)(F)

for end-user flight testing that provided critical flight dynamic data for the warhead program lifecycle.

NTESS executed mission critical flight tests at a high operational tempo,

(b) (4), (b) (7)(F)

at the Tonopah Test Range (TTR), that ensured adequate technical basis to assess the stockpile.

## Objective 1.4

NTESS provided quality engineering support to achieve early First Production Unit (FPU) for the B61-13 and enabled successful preparation for the Design Review and Acceptance Group. NTESS also successfully delivered the W80-4 flight test hardware to the United States Air Force to gather critical flight integration test data crucial for system qualification. This accomplishment, coupled with the completion of all required system level testing, enabled entry into the System Final Design Review and kept the system FPU on schedule.

(b) (4), (b) (7)(F)

NTESS successfully delivered flight test bodies in support of the W93 program and completed a comprehensive joint test schedule update. Through effective coordination with enterprise partners, NTESS released the fiscal year (FY) 2025 System Reference Design, which matured the W93 design by leveraging the categorical re-use of several key components.

NTESS successfully executed W87-1 milestones and deliverables including a replan schedule to align (b) (7)(F). Additionally, NTESS provided exceptional support for the Operational Safety Review of the W88 Alt 370 program, earning recognition from the Nuclear Explosive Safety Study Group.

## Objective 1.5

NTESS delivered the Mk21 Fuze Mod FPU and was acknowledged by Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics, who approved the Full Rate Production phase. Completion of this acquisition milestone enabled enterprise partners to move production forward with critical support provided by NTESS.

NTESS released the Comprehensive Operational Resource Environment (CORE) system, which has demonstrated efficiencies (b) (4) in Microelectronics Science and Applications (MESA) facility operations. CORE integrates planning, manufacturing, inventory, and cost data across MESA, consolidating disparate systems and enhancing cost fidelity and consistency.

NTESS accelerated production modernization through the innovative execution of the MESA Photolithography Capability and Microelectronics Component Capability.

NTESS completed (b) (4) at the Saturn facility following the facility repairs and upgrades, ensuring the pulsed power system was fully operational and in a state of readiness for NNSA missions. Facility upgrades significantly improved X-ray reproducibility and boosts X-ray output.

## Objective 1.6

NTESS made significant contributions as an enterprise team member in the implementation of Digital Engineering (DE), driving improvements in product realization. NTESS exceeded expectations through its leadership in governance and implementation, notably co-leading the Digital Transformation Senior Steering Group. NTESS played a pivotal role in the Product Realization Integrated Digital Enterprise program, facilitating the deployment of common DE tools that enable all laboratories, plants, and sites to utilize real-time data for more efficient and accurate execution of product realization programs.

## Objective 1.7

NTESS successfully met all cost, schedule, and performance parameters for heavy repairs on the NNSA Office of Secure Transportation (OST) Safeguards Transporter. Additionally, NTESS exceeded

expectations in its progress on the OST Mobile Guardian

(b) (7)(F)

NTESS collaborated with Kansas City National Security Campus (KCNSC) to develop a MGT tester strategy that reduces tester development and production timelines by approximately two years through integrated design and development activities.

## Goal 2: Mission Delivery: Global Nuclear Security

Amount of At-Risk Fee Allocation: \$1,067,309

### Goal 2 Summary

NTESS earned a rating of Excellent, and 97 percent of the award fee allocated to this Goal. NTESS exceeded almost all Objectives and Key Outcomes and generally met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year, accomplishments significantly outweighed issues and no significant issues in performance existed.

#### Objective 2.1

(b) (4), (b) (7)(F)

In collaboration with other Department of Energy (DOE) laboratories, NTESS successfully established the Mission Equipment Radiological Decontamination Laboratory. This first-of-its-kind, cost-effective facility ensures the safe reuse of specialized scientific tools by characterizing and decontaminating equipment from domestic and international nuclear facilities. This capability enhances operational readiness and minimizes waste for Nuclear Materials Verification Program assets.

NTESS accelerated NNSA's ability to eliminate cesium-137-based blood irradiators by exceeding the number of awarded contracts for replacement devices, positioning NNSA to meet its commitment and mitigate national security risks from radioactive material misuse.

(b) (4), (b) (7)(F)

#### Objective 2.2

NTESS successfully advanced low-yield nuclear monitoring capabilities through experiments at the Large Centrifuge Complex. This methodology demonstrated an order-of-magnitude increase in scaled yield results and realized cost savings.

NTESS successfully completed the verification of its (b) (7)(F) sensor, meeting mission requirements and passing a critical gate review. NTESS also achieved (b) (7)(F) ssful gate review of another sensor. Both of these accomplishments are critical milestones for this government sponsored program.

(b) (7)(F)

NTESS led the multi-laboratory Propagation of Electromagnetic Signatures (PEmS) project, a significant effort that combined numerous internal and interagency initiatives. This project successfully developed a suite of valuable algorithms and models designed to understand and predict electromagnetic propagation behaviors, enabling future NNSA missions.

NTESS advanced the Low-Yield Nuclear Monitoring program by leading the design of Dynamic Networks Experiment, executing two centrifuge experiments, and playing a critical role in preparing for next series of experiments at the Nevada National Security Site (NNSS). This foundational work integrated results from complex experiments to improve United States capabilities in detecting and characterizing evasively low-yield nuclear events.

### Objective 2.3

NTESS developed an innovative prototype shipping bracket, in collaboration with KCNSC, to provide a common platform for Transport Remotely Monitored Sealing Array (TRMSA) devices, reducing complexity for technicians. NTESS also successfully deployed an updated TRMSA tracking software, which enhanced shipment monitoring and streamlined operations. This enhancement will enable double shipment frequency, accelerating the removal of Transuranic Radioactive Waste (TRU) to WIPP.

### Objective 2.4

NTESS successfully analyzed over (b) (4) Committee on Foreign Investment in the United States (CFIUS) cases, in coordination with NNSA, protecting NNSA supply chains and earning an Administrator's Achievement Award. (b) (7)(F)

NTESS developed new capabilities for the Gamma Detector Response and Analysis Software (GADRAS) and created tools for advanced reactor material management. Additionally, NTESS enhanced the safeguards-by-design concept within the Scribe3D modeling tool. These developments support both domestic advanced reactor vendors and the International Atomic Energy Agency (IAEA), collectively assisting the United States advanced nuclear industry by ensuring the safe and secure deployment of new advanced reactors in the international energy market.

### Objective 2.5

NTESS provided extensive logistical and technical support, including training, equipment, and specialized expertise, for various NNSA international priorities. For instance, collaborating with Los Alamos National Laboratory, NTESS designed and manufactured remote (b) (7)(F). NTESS also trained field support teams and provided technical reach-back to support nuclear risk reduction and enhance public safety (b) (7)(F). NTESS managed contracting activities for the deployment and 24/7 operational capability of this instrumentation, meeting stringent cost and schedule requirements.

NTESS also delivered stellar support to the Office of Nuclear Threat Science, accelerating validation programs, providing operational guidance to Department of Defense partners, and conducting material risk assessments.

## Key Outcome 2.1

NTESS achieved delivery of the flight units outlined in the approved NNSA baseline change for the Space Based Nuclear Detonation Detection/GBD IIIF program.

### Goal 3: Mission Innovation: Advancing Science and Technology

Amount of At-Risk Fee Allocation: \$1,600,963

#### Goal 3 Summary

NTESS earned a rating of Excellent, and 98 percent of the award fee allocated to this Goal. NTESS exceeded almost all Objectives and generally met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year, accomplishments significantly outweighed issues and no significant issues in performance existed.

#### Objective 3.1

NTESS' research strategy, directly aligned with its Laboratory Directed Research and Development (LDRD) investments, effectively supported the laboratory's strategic goals and addressed DOE/NNSA mission priorities. This strategy, inspired by current and evolving mission needs, fostered innovation that enhanced national security and drove impactful solutions, reinforcing NTESS's commitment to scientific advancement. For instance, a key project focused on technical solutions navigation in certain environments, and NTESS rapidly designed and realized highly reliable national security products for challenging operational conditions. NTESS also expanded LDRD collaborations across DOE/NNSA laboratories by issuing its third call for Interlaboratory LDRD/SDRD proposals that targeted four advanced research and development (R&D) areas, addressing emerging challenges and national security priorities. NTESS has participated in 100 percent of the inter-laboratory LDRD/SDRD proposals that began in FY 2024 and FY 2025.

#### Objective 3.2

NTESS delivered substantial scientific and technological advancements critical to national security. (b) (7)(F)

#### Objective 3.3

NTESS achieved many Science, Technology and Engineering accomplishments that were leading-edge, high-quality advances in the frontiers of science and engineering. NTESS successfully collaborated with a university partner to develop an ultra-low-power chemical sensor to detect sarin and other chemical warfare agents or gaseous industrial toxins to protect warfighters and the public. In another collaboration with a university partner, NTESS discovered that low doses of X-ray irradiation depolymerizes poly(phthalaldehyde)-based materials to monomer. This discovery provided key insights regarding the radiation response of these materials. In addition, NTESS received seven technology R&D 100 Awards in 2025, with six of those awards having their roots in LDRD projects.

#### Objective 3.4

NTESS deployed a first-in-the-world, large-scale SpiNNaker2 neuromorphic system in collaboration with a startup company. An Intel Loihi 2 system is also deployed at Sandia National Laboratories (SNL), effectively locating two of the largest neuromorphic systems in the world. The SpiNNcloud

system design combined efficient, event-driven computation with parallel processing, allowing it to perform complex simulations 18 times more efficiently than Graphics Processing Units. Such energy efficiency is crucial for applications where power consumption and cooling are limiting factors. NTESS also completed an upgrade of the Trisonic Wind Tunnel control valve actuation system, converting it from an old hydraulic system to a controllable electrical system. The new system enabled continuous and programmable inlet control, facilitating dynamic conditions. This upgraded capability was immediately used for a successful test campaign.

### Objective 3.5

NTESS successfully managed a portfolio of Technology Transfer and Strategic Partnership Projects that provided impactful results for broader national security missions. These projects have proven vital for NNSA, drove innovation and accelerated technology development. For example, NTESS demonstrated the successful research and development of high-impact technologies through its exceptional support of key hypersonic testing activities and successfully demonstrating the first commercially produced items. NTESS successfully executed the launch of a target that enabled the testing of (b) (7)(F). NTESS successfully demonstrated enhanced (b) (7)(F).

NTESS continued to deliver Technology Transfer capabilities in partnership with other national laboratories, industry, and academia. For example, NTESS executed the first ACCESS Cooperative Research and Development Agreement that allows other DOE laboratories to utilize existing umbrella terms and conditions. NTESS maintained high standards for protecting intellectual property while performing community outreach efforts to help promote Technology Transfer. This is evidenced by NTESS R&D investments in FY 2025, which produced 275 technical advances, 90 patents, 182 copyright assertions, 195 new Government Use Notices, 10 commercial licenses, and 141 noncommercial licenses.

### Objective 3.6

NTESS delivered innovative and transformative scientific and technological solutions that directly supported DOE missions for energy, science, and nuclear programs. NTESS's collaborative research determined the feasibility of using interim storage containers for permanent subsurface disposal. While NTESS did not meet all estimated FY 2025 deliverable dates and did not adequately support FY 2026 planning, NTESS developed a strategy to repackage spent nuclear fuel that could result in a significant cost avoidance. (b) (7)(F)

## Goal 4: Mission Enablement

Amount of At-Risk Fee Allocation: \$1,067,309

### Goal 4 Summary

NTESS earned a rating of Very Good, and 85 percent of the award fee allocated to this Goal. NTESS exceeded many of the Objectives and generally met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year accomplishments greatly outweighed issues and no significant issues in performance existed.

### Objective 4.1

NTESS met expectations in various aspects of Environment, Safety, and Health (ES&H), though certain areas still require attention to ensure regulatory compliance and effectiveness. NTESS made progress in wildlife conservation through ecological compliance plans and enhanced biological evaluations, and in National Environmental Policy Act (NEPA) through training and the development of umbrella Categorical Exclusions, both of which are in the process of being fully implemented.

NTESS' waste management, weapons quality, and energy security and resilience programs all met expectations. The wastewater program earned the 2025 Excellence in Environmental Achievement Award for their excellent track record in water resource management. NTESS collaborated with NNSA and regulatory agencies to transition permit and reporting responsibilities, which enhanced efficiency and resource utilization. NTESS' Safety Basis Program proactively identified issues with the Annular Core Research Reactor Safety Basis, implementing restrictions to maintain safety and maintaining transparency with NNSA while continuing to meet mission objectives, indicating a positive safety culture. NTESS strategically disposed six Degraded Core Coolability experiments, marking a decade-long achievement in hazardous material minimization.

NTESS continued to experience challenges in fully optimizing its Event Management Program, with recurring events and inconsistent or ineffective corrective actions. Despite NTESS's progress, opportunities remain to enhance consistent and timely event categorization, strengthen root cause analysis, and ensure complete implementation of appropriate corrective measures.

### Objective 4.2

NTESS demonstrated strong performance in safeguards and security through effective processes for directive implementation, a comprehensive self-assessment program, and a robust personnel development and training program. NTESS achieved (b) (4), (b) (7)(F) [REDACTED], and collaborating with federal risk acceptance authorities on Sigma 15 technical security requirements.

### Objective 4.3

NTESS delivered efficient, effective, supportable and transparent financial management operations and systems throughout FY 2025. NTESS effectively balanced strategic investments in artificial intelligence and facilities while still achieving an overall reduction from its planned FY 2025 indirect budget. NTESS met expectations by providing consistently accurate cost plans. NTESS demonstrated a strong commitment to process optimization, yielding measurable benefits through enhanced operational efficiency and significant cost avoidance. This was achieved through automation and workflow solutions. For example, robotic automation saved 60 hours per month for payroll and travel reconciliation. The Work Authorization workflow approval also streamlined a high-volume manual process, directly improving efficiency for both NTESS and NNSA by impacting more than 550 work authorizations.

### Objective 4.4

NTESS effectively managed legal risk through its approach to litigation, which reduced outside counsel costs and enhanced the quality of pleadings. NTESS expanded regular meetings with Sandia Field Office Legal, improving collaboration and transparency. NTESS navigated an investigation by the Defense Nuclear Facilities Safety Board (DNFSB), appropriately balancing legal interests and supporting transparency to the DNFSB. NTESS provided valuable support on a security issue, (b) (7)(F) [REDACTED]. NTESS also supported changes to signature authorities for water quality reports, enhancing reporting efficiency. While experiencing an approximately 50 percent increase in new Freedom of Information Act (FOIA) requests over FY 2024,

NTESS initiated a “one site” approach to responses, transitioned its response format and redactions to the tool and format used by NNSA, enhancing the efficiency of processing responses.

#### **Objective 4.5**

The NTESS Mobile Classified Pilot Project earned the NNSA Chief Information Officer (CIO) Achievement Award for enhancing NNSA’s classified capabilities. The pilot provided secure remote access to the NNSA Secret Network (NSN), enabling agile decision-making and modernizing capabilities. NTESS also developed a novel detection capability for Microsoft Office 365, protecting users from fraud and ransomware by (b) (4), (b) (7)(F). This capability was shared with the Center of Excellence and also received an NNSA CIO Achievement Award.

NTESS rapidly developed and executed an assessment and reporting process for the multi-year cybersecurity Program Execution Guidance. NNSA rated NTESS’ framework and results as exceeding expectations, sharing templates across the enterprise. These assessments allowed efficient prioritization of program improvements, enhancing security, reducing risk, and lowering costs.

The NTESS Cyber Threat Intelligence (CTI) team evolved into a world-class unit, protecting SNL, NNSA, and the nation from advanced persistent threats. NTESS’ innovative threat landscaping and automation significantly enhanced detection, leading to improved cybersecurity, protected information and infrastructure, increased productivity, and substantial cost avoidance.

#### **Objective 4.6**

NTESS's Emergency Management Program largely met expectations; (b) (7)(F)

#### **Objective 4.7**

NTESS streamlined critical weapon program acquisitions, improved coordination between procurement and program teams, and partnered with NNSA to develop procurement metrics to identify opportunities to further reduce timelines. NTESS achieved a total strategic cost saving rate of (b) (4), far exceeding the Supply Chain Management Center goal of (b) (4). NTESS accounted for 34.14 percent of the NNSA total strategic cost savings, significantly contributing to the NNSA current rate of 5.63 percent.

NTESS received the Director's Excellence Award from the DOE Office of Small and Disadvantaged Business Utilization, recognizing its leadership and commitment to advancing small business engagement.

NTESS maintained an effective personal property management system, demonstrating accountability through completed inventories, refined record systems, and a sustained low incidence of lost or stolen items.

NTESS enhanced workforce stability by redesigning promotion and advancement processes to provide a clear pathway for employee growth and development and created a process to redeploy employees in response to changing mission needs. These initiatives, combined with effective recruiting and retention programs, including the fifth consecutive Department of Labor's Platinum HIRE Vets Medallion Award, demonstrates NTESS’s efficient human resource operations.

## Goal 5: Construction Projects and Infrastructure

Amount of At-Risk Fee Allocation: \$1,067,309

### Goal 5 Summary

NTESS earned a rating of Very Good, and 85 percent of the award fee allocated to this Goal. NTESS exceeded many of the Objectives and generally met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year accomplishments greatly outweighed issues and no significant issues in performance existed.

#### Objective 5.1

NTESS integrated its highest-priority investment needs into a 10-year roadmap, establishing a framework for infrastructure strategy. This included developing a Cost Confidence Model to enhance project budget proposals and improving key analytical tools and data. NTESS also reduced VAPER-identified data discrepancies by over 70 percent, ensuring high-quality NNSA asset data. However, NTESS continues to face challenges in comprehensively implementing an integrated prioritization and planning process, as evidenced by project delays and changes in project scope. Opportunities exist to enhance overall planning and prioritization, specifically by focusing on Minimum Viable Products, improving project executability, and achieving greater accuracy in cost and schedule estimations.

#### Objective 5.2

NTESS demonstrated effective capital project planning and execution for major Line-Item Projects like Power Sources Capabilities (PSC), CREST, and Microelectronics Component Capability (MC2) / MESA Photolithography Capability (MPC). Notably, CREST achieved 100 percent Conceptual Design within budget and on schedule, and PSC secured CD-2/3 approval to initiate construction. MC2/MPC also advanced with key approvals. Beyond large-scale projects, NTESS completed over 400 minor construction projects valued at over \$245M, including recapitalization and infrastructure improvements. NTESS rolled out a Metric Suite Dashboard, presenting an opportunity to enhance information sharing and transparency as the tool expands across a larger portion of the portfolio.

#### Objective 5.3

NTESS established a team dedicated to respond to complex and time-sensitive mission requirements that accelerated programmatic equipment replacement, high-security operations, and lightning protection systems. Concurrently, NTESS expanded in-house design and construction capabilities, adding discipline-specific expertise and pursuing key certifications to enhance efficiency and cost-effectiveness. This approach demonstrated efficient resource utilization and directly contributed to critical program capabilities. NTESS met expectations in its maintenance execution, managing operations efficiently within available funding to ensure mission strategies were met. NTESS completed a comprehensive, lab-wide revision of Replacement Plant Values (RPVs), which increased its total real property RPV from \$16 billion (B) to \$31B. This strategic re-valuation demonstrates improved asset understanding and underpins effective infrastructure management.

## Goal 6: Mission Leadership

Amount of At-Risk Fee Allocation: \$1,600,964

### Goal 6 Summary

NTESS earned a rating of Excellent, and 95 percent of the award fee allocated to this Goal. NTESS exceeded almost all of the Objectives and generally met the overall cost, schedule, and technical

performance requirements of the contract under this Goal in the aggregate. During the year, accomplishments significantly outweighed issues and no significant issues in performance existed.

### Objective 6.1

NTESS implemented a realistic and strategic vision, and deployed initiatives that aligned and strengthened the NNSA's Strategic Vision and the NNSA Enterprise Blueprint. NTESS' strategy was instrumental in accelerating mission through rapid, agile innovation, artificial intelligence (AI) applications, and enterprise collaboration.

NTESS drove a pivotal initiative to integrate resources between Lawrence Livermore National Laboratory (LLNL) and SNL-CA, yielding significant efficiencies in emergency services, co-utilization of laboratories and shipping, and integrated utilities. This consolidation led to an estimated one-time cost avoidance of up to \$100M and up to \$600 thousand (K) in recurring cost avoidance through optimized resource utilization.

NTESS advanced continuous improvement through the Unleash Excellence Initiative (UEI), realizing \$145M in avoided costs and 135K labor hours saved. Targeted campaigns addressed enterprise-wide challenges, laying the foundation for continued operational improvements. Of the resourced UEI projects, most are actively progressing, yielding insights into systemic improvements, while some have been integrated into broader enterprise strategies. Building on this momentum, NTESS strengthened an innovation culture and promoted intelligent risk-taking through the Innovation Faceoff, motivating employees to pursue impactful solutions. This year's achievements provide a strong foundation for continued operational improvements and innovation in the year ahead.

### Objective 6.2

NTESS demonstrated performance of its CAS in programs and safeguards and security through continuous evaluation, comprehensive self-assessments, and tracking findings to closure. While transparency was largely maintained through regular meetings and communication within Environmental and Construction Project Planning, opportunities exist to improve consistent, proactive, identification of issues. (b) (4), (b) (7)(F)

### Objective 6.3

NTESS demonstrated exceptional leadership in enterprise-wide systems integration implementing first-of-its kind initiatives to support the nuclear deterrence. NTESS and KCNSC established the Center for Advanced Manufacturing and Innovation, a rapid-prototyping facility for agile deterrence mechanisms. This facility, which has already demonstrated its capability, will serve as an immediate enabler for the Rapid Capabilities Team (RCT). NTESS spearheaded the Nuclear Deterrence (ND) RCT, accelerating solutions for evolving ND needs and appointing an NTESS leader as its inaugural director. NTESS was also instrumental in establishing the Technology Insertion Council (TIC), driving integration, technological investments, and new technology.

### Objective 6.4

NTESS advanced enterprise learning by hosting four Criticality Safety Program classes for domestic and international partners. NTESS developed (b) (4), (b) (7)(F) new Reactor and Assembly Supervisors Academy training courses and established a Criticality Safety Program in (b) (4), (b) (7)(F). These efforts enhanced operational capabilities, improving productivity and mission ex

NTESS proactively pursued and championed collaborative opportunities to improve productivity. NTESS established a Business Technology Strategy Committee to enhance collaboration between Chief Financial Officers and Chief Information Officers of the national laboratories. NTESS also

applied artificial intelligence to critical operational areas, specifically streamlining supply chain categorization, automating reporting functions, and enhancing subcontract administration. The Unleash Excellence Initiative exemplified NTESS' commitment to improvements and productivity by empowering employees to identify and resolve workflow inefficiencies.

### **Objective 6.5**

On its own initiative, NTESS leadership significantly improved operational resiliency to overcome potential operational obstacles. This approach ensured increased weapon component production, Microsystems Engineering, Science and Application deliveries, and Z-Machine tests and experiments, through operational upsets, demonstrating robustness in the face of unexpected challenges.

NTESS established an enhanced Work Planning and Controls process to minimize operational upsets and enhance formality and rigor of operations. Early results indicate improved alignment, clearer documentation, and a defined path to improve.

### **Objective 6.6**

NTESS, in collaboration with NTESS Board of Managers, successfully managed a seamless leadership transition for the Laboratories Director, sustaining momentum on critical initiatives to support the nuclear deterrence and national security objectives and accelerate AI applications.

NTESS initiated and advanced workforce development through a partnership with a local community college, establishing an Electrical and Structural Apprenticeship Program. This initiative enhanced skills and increased the pipeline of skilled workers, successfully onboarding 15 apprentices.

NTESS enhanced organizational capabilities through strategic workforce restructuring that optimized resource allocation and ensured proactive retention of essential expertise. Concurrently, NTESS revamped employee engagement and leadership programs, and provided targeted training designed to cultivate a new generation of effective supervisors, directly improving team performance and morale.

### **Objective 6.7**

NTESS drove progress by refining Digital Thread (DT) roadmaps for both design and production agencies and establishing

(b) (7)(F)

NTESS demonstrated exceptional foresight and resilience by proactively addressing and mitigating funding delays during a year-long Continuing Resolution thereby ensuring continuity of essential missions and related projects.

## **Goal 1**

Successfully execute the cost, scope, and schedule of the Nuclear Stockpile mission work for Defense Programs work in a safe and secure manner in accordance with DOE/NNSA priorities, Work Authorizations, and Execution/Implementation Plans.

### **Objective 1.1**

Work as a team across the Nuclear Security Enterprise to provide the knowledge, personnel, and capabilities to design, build, certify and assess current and future weapon systems, processes, and components and enable development of new and innovative materials, processes, and components to achieve higher technology and manufacturing readiness levels and rate production, while driving the state-of-the-art for science and technology.

### **Objective 1.2**

Work as a team across the Nuclear Security Enterprise to plan and execute production sustainment and integration, nuclear enterprise assurance, and effective weapon quality assurance to ensure the nuclear security enterprise optimizes production operations, minimizes quality escapes, and increases the resiliency of nuclear weapons and nuclear weapon production and sustainment activities within normal, abnormal, and adversarial environments well into the future.

### **Objective 1.3**

Work as a team across the Nuclear Security Enterprise to execute assigned work to maintain and enhance the safety, security, reliability, and performance of the US nuclear weapon stockpile. Execute planning, development, certification, assessment/surveillance, production, and maintenance of the current U.S. nuclear weapon stockpile, including all associated documentation and hardware, consistent with mission and task assignments.

### **Objective 1.4**

Work as a team across the Nuclear Security Enterprise on stockpile modernization program scope to 1) achieve and maintain program delivery schedules; 2) lower risk to achieving First Production Unit (FPU), Last Production Unit (LPU), and program overbuilds; 3) improve supply chain execution; and 4) control costs.

### **Objective 1.5**

Work as a team across the Nuclear Security Enterprise to develop and execute modernization strategies to ensure NNSA's strategic materials and component manufacturing capabilities will meet future nuclear weapons production requirements. Execute work focused on sustainment of existing capabilities, re-establishment of lost capabilities, deployment of new capabilities and technologies, and strategic investments to ensure timely material and component deliveries.

### **Objective 1.6**

Work as a team across the Nuclear Security Enterprise to implement Digital Transformation principles by using Digital Engineering to improve product design, production, sustainment, and business practices.

### **Objective 1.7**

Work as a team across the Nuclear Security Enterprise to provide and execute Secure Transportation Asset (STA) design activities to achieve and maintain program deliver schedules. Work with Production Agency to improve integration of deliver plans and execute strategies for design & production activities.

## **Goal 2**

Successfully execute the cost, scope, and schedule of the authorized global nuclear security mission work in a safe and secure manner to include the Defense Nuclear Nonproliferation, Nuclear Counterterrorism and Counterproliferation, and Incident Response missions in accordance with DOE/NNSA priorities, Work Authorizations, and Execution/Implementation Plans.

### **Objective 2.1**

Support efforts to enhance global nuclear security by securing and preventing the trafficking of nuclear and radioactive materials.

### **Objective 2.2**

Support U.S. national and nuclear security objectives in reducing global nuclear security threats through the innovation of technical capabilities to detect, identify, and characterize: 1) foreign nuclear weapons programs, 2) illicit diversion of special nuclear materials, and 3) global nuclear detonations.

### **Objective 2.3**

Support efforts to achieve permanent threat reduction by managing and minimizing excess weapons-useable nuclear materials and providing nuclear materials for peaceful uses.

### **Objective 2.4**

Support efforts to prevent proliferation, ensure peaceful nuclear uses, and enable verifiable nuclear reductions to strengthen the nonproliferation and arms control regimes.

### **Objective 2.5**

Sustain and improve nuclear counterterrorism, counterproliferation, and forensic science, technology, expertise and associated Nuclear Emergency Support Team (NEST) capabilities; execute response missions, implement policies and procedures in support of response and forensics missions, and assist international partners/organizations.

### **Key Outcome 2.1**

Achieve Program Office consent-to-ship authorization of Global Burst Detector (GBD) IIIF Follow-On Units 3, 4, and 5 per the lifecycle plan (end of FY25).

## **Goal 3**

Successfully advance national security missions through innovation by expanding the frontiers of Science, Technology, and Engineering (ST&E). Execute transformative and leading-edge Research and Development (R&D) by creating a vibrant, creative, environment that leverages effective partnerships and technology transfer endeavors. Effectively manage high-impact DOE Work and Laboratory Directed Research and Development (LDRD) and Technology Transfer, etc. in a safe and secure manner consistent with DOE/NNSA priorities, Work Authorizations, and Execution/Implementation Plans.

### **Objective 3.1**

Execute a research strategy that is clear and aligns discretionary investments (e.g., LDRD) with the Laboratories' strategy and supports DOE/NNSA priorities.

### **Objective 3.2**

Ensure that research is relevant, enables the national security missions, and benefits DOE/NNSA and the nation.

### **Objective 3.3**

Ensure that research is transformative, innovative, leading edge, high quality, and advances the frontiers of science and engineering.

### **Objective 3.4**

Maintain a healthy and vibrant research environment that enhances technical workforce competencies and research capabilities.

### **Objective 3.5**

Research and develop high-impact technologies through effective partnerships and technology transfer mechanisms that support the Laboratories' strategy, DOE/NNSA priorities and impact the public good; and ensure that reporting, publishing, and information management requirements of federally funded scientific research and development are implemented (via DOE's Public Access Plan) and per DOE's Scientific and Technical Information Management directive (DOE O 241.1B or its successor).

### **Objective 3.6**

Pursue and perform high-impact work for DOE that strategically integrates with the DOE/NNSA mission, and leverages, sustains and strengthens unique science and engineering capabilities, facilities, and essential skills.

## **Goal 4**

Effectively and efficiently manage the safe and secure operations of the Laboratories in accordance with cost, scope, and schedule while maintaining an NNSA enterprise-wide focus; demonstrating accountability for mission performance and management controls; successfully executing cyber, technical, informational, and physical security requirements; and assuring mission commitments are met with high-quality products and services.

### **Objective 4.1**

Deliver effective, efficient, and responsive Environment, Safety, and Health (ES&H), Quality (including a Weapon Quality Management System and software quality) and waste management. Advance DOE/NNSA's energy security and resilience by progressing onsite generation where applicable.

### **Objective 4.2**

Deliver effective, efficient, and responsive safeguards and security, including assigned enterprise initiatives.

### **Objective 4.3**

Deliver efficient, effective, supportable, and transparent financial management operations and systems including financial integration reporting; budget formulation and execution; programmatic cost estimates; and internal controls.

### **Objective 4.4**

Deliver efficient and effective management of legal risk and incorporation of best legal practices. Deliver timely and actionable recommendations and analysis to Freedom of Information Act and Privacy Act requests.

### **Objective 4.5**

Deliver effective, efficient, secure, and responsive information technology (IT) systems that support mission and functional area delivery. Ensure execution of all implementation factors established in the NA-IM IT and Cybersecurity Program Execution Guidance to strengthen day-to-day IT and cybersecurity operations.

### **Objective 4.6**

Deliver effective, efficient, and responsive site emergency management programs in support of the DOE/NNSA Emergency Management Enterprise.

### **Objective 4.7**

Deliver efficient, effective, and compliant business operations including, but not limited to, procurement, human resources, and property systems, in support of NNSA missions. Focus areas include achieving small business and socioeconomic goals; evaluating opportunities for, and implementing, as necessary, effective subcontracting approaches to expand the small business industrial base for appropriate construction work scope; performing timely and high-quality subcontract actions; and supporting enterprise-wide recruitment events and retention efforts.

### **Goal 5**

Effectively and efficiently manage the infrastructure lifecycle process to meet current and emerging national security challenges through integrated infrastructure planning, acquisition, and prioritization. For clarity, projects with separate award-fee structures are not considered under this Goal.

### **Objective 5.1**

Implement a comprehensive and integrated infrastructure prioritization and planning process. Update planning data and mission needs in the G2 Program Management system planning module for the FYNSP to support strategic planning elements, such as the Enterprise Blueprint, Master Asset Plan, Area Plans, and Deep Dives. Provide cost and schedule estimates in accordance with established guidance to ensure mission delivery.

### **Objective 5.2**

Plan and execute Capital Asset Line-Item Construction Projects, minor construction projects, capital equipment projects (including Major Items of Equipment), real property acquisitions, and disposition projects in accordance with cost, scope, schedule baselines, technical requirements, code of record and/or execution plans. Monitor and report on project performance against baselines, provide accurate and timely deviations on performance to stakeholders, and utilize risk management processes.

### **Objective 5.3**

Develop and execute operations and maintenance strategies, consistent with available funding, that enable reliable asset performance and enduring facility capabilities that align with mission requirements and priorities.

### **Goal 6**

Successfully demonstrate leadership in supporting the direction of the overall DOE/NNSA mission, cultivating a Performance Excellence Culture that encompasses all aspects of operations and continues to emphasize safety and security, improving the responsiveness of NTESS leadership team to issues and opportunities for continuous improvement internally and across the Enterprise, and parent company involvement/commitment to the overall success of the Laboratories and the Enterprise.

### **Objective 6.1**

Define and implement a realistic strategic vision for the Laboratories, in alignment with the NNSA Strategic Vision, which demonstrates enterprise leadership and effective collaborations across the NNSA enterprise to ensure DOE/NNSA success.

### **Objective 6.2**

Demonstrate performance results through the institutional utilization of a Contractor Assurance System and promoting a culture of critical self-assessment, transparency, and accountability through the entire organization, while also leveraging parent company resources and expertise.

### **Objective 6.3**

Develop and implement a Nuclear Security Enterprise-wide partnership model that enhances collaboration, reinforces shared fate and enables mission success including transformation of the stockpile and the enterprise.

**Objective 6.4**

Exhibit professional excellence in performing roles/responsibilities while pursuing collaborative opportunities for continuous organizational and enterprise learning and demonstrated improvements that will improve productivity, grow the capacity to execute mission, and manage, rather than avoid risk when appropriate. Pursue innovations to increase agility and resilience while controlling costs. Advance the operational capabilities of the Nuclear Security Enterprise by identifying and employing latent capacity existing in the enterprise.

**Objective 6.5**

Demonstrate leadership in driving enhanced and sustainable formality and rigor of operations through proactive implementation of effective and efficient measures to minimize operational upsets that have potential to impact mission.

**Objective 6.6**

Leadership takes decisive action, as a cooperative partner of NNSA, to attract and retain the workforce needed to achieve the nuclear security enterprise missions, with particular emphasis on critical and under-resourced skill sets, reaching back to parent company resources as necessary.

**Objective 6.7**

Lead the Digital Transformation Initiative across the Nuclear Security Enterprise to improve product design, production, sustainment, and business practices.