



National Nuclear Security Administration

Triad National Security, LLC

Performance Evaluation Report

Contract No. 89233218CNA000001

Los Alamos Field Office

Evaluation Period:

October 1, 2024, through September 30,
2025

December 12, 2025

Executive Summary

This Performance Evaluation Report (PER) provides the National Nuclear Security Administration's (NNSA) assessment of the performing entity, Triad National Security, LLC's (Triad), performance of the Los Alamos National Laboratory (LANL) 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 Triad's 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."

The NNSA took into consideration all input (e.g., contractor assurance system (CAS), program reviews) obtained from NNSA Program and Functional Offices both at headquarters and in the field. This report provides performance feedback, highlighting key accomplishments and issues that need attention.

Triad earned an overall rating of Very Good and 89 percent of the award fee, including Excellent ratings for Goals 2, 3 and 6; Very Good for Goals 1 and 4; and Good for Goal 5.

Triad exceeded performance expectations for most of its assigned work to maintain and enhance the safety, security, reliability, and performance of the U.S. nuclear weapon stockpile. Triad also exceeded performance expectations for much of its assigned work on stockpile modernization, which includes scope on achieving delivery schedules, reducing production risks, improving supply chain, and managing cost, as demonstrated by their notable support for the first production unit for the W80-4 pellet can assembly and the first diamond-stamped plutonium pit and continued production of plutonium pits for the W87-1.

Triad completed production of the Space and Atmospheric Burst Reporting System (SABRS) payload and conducted a successful Consent-to-Store review with NNSA in December to confirm the payload meets its design requirements.

Triad made significant progress on several efforts to address the transuranic (TRU) waste processing, certification efficiencies, and inventory shipping backlogs at LANL.

While there were several long-awaited start-ups completed this period, the startup of operations that required readiness activities in accordance with Department of Energy (DOE) Order 425.1 were not always timely.

Triad construction projects experienced cost and schedule overruns, some requiring additional funding for completion. Challenges remain in streamlining operations across various disciplines and organizations including with the 30-60-90 design and constructability reviews.

Triad continued to pursue and accomplish operational improvements, but still encountered some issues with conduct of operations, and work planning and execution.

Triad leadership initiated several efforts to address isolated decision making and management across the site to improve integration. Results were evident in focused areas, while overall improvement will take more time to materialize. Triad struggled to implement sustainable, technically defensible, and robust solutions to multi-disciplinary weaknesses. However, Triad successfully developed a contract assurance system for 30-Diamonds that employs criteria and metrics to drive performance and senior management strategic decisions, generating efficiencies and improvements.

Goal 1: Mission Delivery: Nuclear Weapons

Amount of At-Risk Fee Allocation: \$9,960,423

Goal 1 Summary

Triad earned a rating of Very Good, and 90 percent of the award fee allocated to this Goal. Triad exceeded many 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 greatly outweighed issues and no significant issues in performance existed.

Objective 1.1

Triad effectively collaborated with the nuclear security enterprise (NSE) to execute numerous cutting-edge experiments to advance mission science, including plutonium (Pu), hydrodynamic, high-energy density, and sub-critical experiments to inform weapon design, production, certification, assessments, and stewardship. Triad developed and matured many new technologies for mission work in areas such as explosives, binders, foams, metals, component designs, surety, artificial intelligence (AI), and computational capabilities. Triad funded multiple efforts with university partners to develop a pipeline of innovative, technical staff for future institutional needs.

Triad executed only five of ten planned hydrodynamic integrated weapon experiments at the Dual-Axis Radiographic Hydrodynamic Test (DAHRT) facility, (b) (7)(E), (b) (7)(F)

being pushed into FY 2026 but was deemed to be lower in priority than the five DAHRT experiments that were performed.

Objective 1.2

Triad was highly responsive and collaborative in executing production sustainment and integration, nuclear explosive safety, nuclear enterprise assurance (NEA), and weapon quality activities. Triad fully supported nuclear explosive safety evaluations during fiscal year (FY) 2025. The Triad Mark Quality Manufacturing Center successfully completed vital products. Triad Production Agency Quality continued to mature product acceptance and nuclear enterprise assurance. Triad met NEA expectations by conducting Operational Technology Assessments, developing metrics, and prioritizing NEA records management activities.

Triad collaborated with stakeholders across the NSE to develop a programmatic baseline schedule supporting the pit production mission through FY 2050. This baseline aligns with congressional language in the *National Defense Authorization Act for Fiscal Year 2024* and represents a significant advancement in the planning for the pit mission at LANL and the national security needs of the United States.

Objective 1.3

Triad exceeded performance expectations for most of its assigned work to maintain and enhance the safety, security, reliability, and performance of the U.S. nuclear weapon stockpile. This stockpile sustainment work included planning, production, product acceptance, maintenance, surveillance, testing, modeling, issue resolution, annual assessment, and stockpile system capability improvements.

Objective 1.4

Triad effectively collaborated and delivered most of its assigned work on stockpile modernization, which included scope on achieving delivery schedules, reducing production risks, improving supply chain, and managing cost. Triad provided prompt expert support and collaborated effectively with the

NSE to maintain and improve production of the B61-12 through completion of the final production unit. Moreover, Triad provided outstanding support to accelerate the schedule for production of the B61-13 and achieve the first production unit a year ahead of schedule. Triad supplied exceptional support to maintain and improve production of the W88 Alt 370. Triad furnished solid support for the W80-4 and W87-1, including the first production unit for the W80-4 pellet can assembly, and the first diamond-stamped plutonium pit and continued production of Pu pits for the W87-1, and the production of other materials and components. Triad displayed exceptional leadership and coordination with the

(b) (7)(E), (b) (7)(F)

Triad mitigated supply chain risks by actively engaging in the Critical Supplier Program. This partnership helped to stand up (b) (7)(E), (b) (7)(F), meeting a critical need for the pit production mission. The Triad Production Agency performed pit production activities in support of the NNSA's Production and Planning Directive for the program of record. Challenges in production were overcome and LANL met production milestones for FY 2025. In support of the Lawrence Livermore National Laboratory (LLNL) Design Agency, LANL, and Sandia National Laboratories (SNL) assembled, executed, characterized, and analyzed data for multiple full-scale tests on Pu pits, which were foundational to the certification basis of the W87-1.

Triad detonator production

(b) (7)(E), (b) (7)(F)

(b) (7)(E), (b) (7)(F)

Objective 1.5

Triad demonstrated expert support and coordination with the NSE across various areas, including (b) (7)(E), (b) (7)(F). Triad delivered the War Reserve (WR) First Production Unit pit almost three months early and did meet FY 2025 WR pit production goals, consistently executing Transition to Production and WR phases of infrastructure expansion ahead of schedule. A significant achievement was the successful restoration of the aqueous nitrate process at Plutonium Facility (PF)-4, a capability lost in 2013, which enhanced plutonium recycling for pit production feedstock. Triad also effectively reduced vault fullness, making progress toward supporting full-rate production through initiatives like the Vault Health Integrated Project Team, a PF-4 Nuclear Material Storage Project Execution Plan, and campaigns to optimize storage and redistribute items within the NSE.

Triad implemented several process initiatives to improve work execution, including person-in-charge and decontamination and decommissioning (D&D) technician qualification programs, an independent hazard review board, non-special nuclear material door openings, a unified pre-job briefing checklist, and advancing operational excellence at Technical Area (TA)-55. Triad also improved plutonium equipment construction performance for the Los Alamos Pu Pit Production Project and Pu Modernization MIE portfolios by prioritizing construction, enhancing coordination, and implementing a phased 24/7 operations approach, leading to improved milestone completion in FY 2025.

Triad faced increasing challenges at the PF-4 nuclear facility regarding work front access, planning, and execution. These issues included conduct of operations violations, equipment malfunctions, unplanned facility events, and resource limitations. Triad implemented tracking and mitigation initiatives to address these recurring challenges.

Objective 1.6

Triad continued to aggressively pursue and implement digital engineering, particularly in production operations and the W-93 program. These efforts laid the foundation for scalable model-based systems engineering, standardized workflows, and resilient, future-ready operations across the enterprise.

Key Outcome 1.1

Key Outcome 1.1 was achieved. Triad implemented 24/4 shift operations in late FY 2024, then subsequently transitioned to a phased approach to 24/7 shift operations in April 2025. Although, there is work remaining to attain full staffing across all shifts.

Goal 2: Mission Delivery: Global Nuclear Security

Amount of At-Risk Fee Allocation: \$2,845,836

Goal 2 Summary

Triad earned a rating of Excellent, and 93 percent of the award fee allocated to this Goal. Triad 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

Triad Off-Site Recovery Program recovered high-activity beta-gamma devices including those in support of the Cesium Irradiator Replacement Project, and TRU sources exceeded NNSA's FY 2025 recovery metrics. Triad also made measurable progress in high-profile international removals, making progress on a major recovery effort (b) (7)(E), (b) (7)(F)

In support of NNSA's Nuclear Smuggling Detection and Deterrence mission, Triad subject matter experts (SME) supported international engagements ranging from implementing and sustaining counter nuclear smuggling systems to working with partner countries on technical projects, and building detection and nuclear forensics capacity, including the successful continued engagement in (b) (7)(E), (b) (7)(F)

Objective 2.2

Triad successfully completed renovation and commissioning of the Plutonium Science (PluS) Lab ahead of schedule and under budget. PluS Lab provides workforce opportunities to develop and sustain foundational Pu science competencies required for nonproliferation missions. Triad completed production of the SABRS payload and conducted a successful Consent-to-Store review with NNSA to confirm the payload met design parameters.

Triad successfully executed strategic partnership projects with interagency partners to modernize U.S. Nuclear Detonation Detection System (USNDS) ground data/control systems over the next several years, completing numerous interim deliveries for event analysis and simulation software to SNL for integration and testing with the future USNDS ground system. Triad also continued to develop the next technology demonstration/ validation mission supporting future USNDS experiments in partnership with the Department of Defense Space Test Program.

Objective 2.3

Triad successfully provided non-destructive assay (NDA) instrumentation equipment support and expertise to the Mobile Plutonium Facility (MPF) at the international and national levels. Both exercises received high praise from NNSA customers and foreign partners. Some of Triad's Advanced Recovery and Integrated Extraction System (ARIES) equipment installation activities in support of future year oxide production goals were impacted by the July NNSA pause based on administrative priorities. Triad certified 73.38 kilograms (kg) of plutonium oxide as end of year total toward the annual production target of 100 kg. Triad met one of the three small equipment FY 2025 milestones prior to the pause.

Objective 2.4

Triad technical teams conducted training courses for International Atomic Energy Agency (IAEA) member states including, the Advanced Plutonium Verification Techniques course for IAEA and hosted the NDA training in October 2024. Triad trained IAEA staff on the neutron aspects of the Unattended Cylinder Verification System at IAEA Headquarters and hosted a visit of the 2025 cohort of IAEA Safeguards Trainees as part of the joint LANL and SNL effort. The trainees learned and applied the fundamentals of neutron and gamma measurements in the LANL Safeguards Science Technology and Training Program facility, toured the LANL technical sites, and performed a mock Design Information Verification (DIV), as well as learned about LANL-IAEA collaborations. Triad successfully conducted a demonstration of this system for the IAEA, received the uranium oxide reference materials for Fieldable Atomic Beam Isotopic Analyzer (FABIA); completing all measurements planned for FY 2025. Triad also continued activities under the Project Carousel, a superlative and unique multilateral capability that allow the IAEA to test and validate technologies and train safeguards inspectors for the benefit of the international non-proliferation system.

Objective 2.5

The Triad device modeling team successfully completed numerous critical risk evaluations, including (b) (7)(E), (b) (7)(F)

Triad designed, built, characterized, and maintained the high-fidelity radiological training device (RTD) used for a recent exercise and coordinated the real-world movement and storage of this RTD during the exercise. Triad successfully supported other full scale annual exercises. Triad successfully demonstrated the (b) (7)(E), (b) (7)(F)

. Triad successfully completed the materials analysis program exercise marking a notable collaboration on nuclear forensics analysis of plutonium and demonstrated the new exercise objectives of continuous reporting. Triad supported the Radiological Assistance Program (RAP) in four events, including the Presidential Inauguration, and supported three real world incidents, notably including the mitigation of challenging irradiator source at Kirtland Air Force Base.

Key Outcome 2.1

Key Outcome 2.1 was achieved. NNSA consent-to-ship authorization of Global Burst Detector (GBD) IIIF was successfully achieved for Follow-On Units 3, 4, and 5 per the lifecycle plan, and production of GBD-IIIF units 6, 7, and 8 are on track to meet their future delivery milestones.

Goal 3: Mission Innovation: Advancing Science and Technology

Amount of At-Risk Fee Allocation: \$2,845,836

Goal 3 Summary

Triad earned a rating of Excellent, and 98 percent of the award fee allocated to this Goal. Triad 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

Triad successfully executed a research strategy focused on DOE/NNSA priorities and provided noteworthy Lab Directed Research and Development (LDRD) programmatic improvements to achieve efficiencies for current mission. Triad received a record number of Exploratory Research Seedling proposals and achieved exceptional mission impact by successful building underlying Science, Technology and Engineering (ST&E).

Objective 3.2

Triad effectively utilized the Laboratory's modeling, AI, and machine learning capabilities for national security research. (b) (7)(E), (b) (7)(F)

Objective 3.3

Triad scientists and engineers leveraged advanced computational capabilities for high-quality research, achieving breakthroughs in colloidal quantum dot technology and long-distance quantum remote sensing. They developed the first multimodal deep-learning model for DNA-disease understanding and demonstrated a method to reduce the energy consumption of AI algorithms.

Objective 3.4

Triad fostered a strong research environment, offering exceptional learning opportunities through colloquia focused on current and future missions, including AI. They maintained outstanding student and postdoc programs, joint appointments, and collaborations with universities, with their workforce receiving numerous national and international awards.

Objective 3.5

Triad established and advanced strategic partnerships with universities (Michigan, Purdue) and industry (NVIDIA) to enhance the Laboratory's AI science capabilities, supporting DOE/NNSA priorities. These partnerships addressed diverse areas, including innovative material design, radiation detection system enhancement, and software improvements for gamma-ray spectrometry.

Objective 3.6

Triad successfully executed a diverse portfolio of DOE work supporting national security. A key achievement was the "Deimos" experiment at NCERC, the first critical experiment on High-Assay Low-Enriched Uranium (HALEU) TRISO (Tri-structural Isotropic) in over 40 years. Triad also made significant contributions in quantum materials science, theoretical physics, nanotechnology, and quantum computing hardware design, and held national leadership positions in natural gas modeling (NAERM) and programs like Nuclear Energy Advanced Modeling and Simulation (NEAMS) and Materials Protection Accounting and Control (MPACT).

Goal 4: Mission Enablement

Amount of At-Risk Fee Allocation: \$4,268,754

Goal 4 Summary

Triad earned a rating of Very Good, and 85 percent of the award fee allocated to this Goal. Triad exceeded many 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

The weapon quality management system continued to support mission deliverables in weapon products (e.g., W87-1 Pit, the W80-4 Pellet Can Assembly and its associated Mass Mock).

Triad excelled in its collaboration and coordination of Safety Basis submittals with the Field Office by developing and/or sustaining technically sound and timely safety basis documents for its nuclear facilities. While collaboration on the comment review for the TA-55 Documented Safety Analysis (DSA) upgrade submittal was strong, the comments themselves reflected technical and quality issues. The unreviewed safety question procedure was updated to improve efficiency in operations and maintenance of the safety bases; however, an assessment showed improvements needed in the pre-screening of proposed changes to the facilities.

Nuclear Criticality Safety (NCS) strengthened its organizational capacity to support pit production by balancing priorities across current operations (including Nevada), construction and D&D at PF-4, and resolution of longstanding technical and safety basis issues (e.g., hydrogenous items, 100 kW ESS). Overall progress trended positively as the division continued to mature, even with occasional resource limitations. NCS implemented the Potential Issue for NCS (PINS) process to improve decision-making and reduced unnecessary work stoppages. NCS led a collaborative MET team effort to modernize the CSED development process for pit production.

Triad progressed on efforts to address TRU waste processing, certification efficiencies, and inventory shipping backlogs of TRU waste. Triad initiated a multi-faceted effort to increase storage capacity by evaluating new onsite locations, adjusting the DSA and new containers such as Critical Control Overpack (CCO), working with the Centralized Characterization Project (CCP) to improve characterization and certification efficiency, diversifying pathways for material management to improve waste storage, and progressing toward transferring large waste items to the INL.

Triad shipped Weapons Engineering Tritium Facility flanged tritium waste containers offsite, shipped Pu-ICE to the Waste Isolation Pilot Plant and cleaned out the 9979 Type A containers from Chemistry and Metallurgy Research.

Triad effectively implemented regulatory programs to enable and support the NNSA mission. Triad progressed in their efforts to address regulatory compliance requirements in emergency management operations but lagged in effective implementation of issues management to trend environmental issues.

Triad successfully implemented changes to regulations within 30 days of promulgation, including adapting National Environmental Policy Act (NEPA) strategy for the 2025 LANL Site Wide Environmental Impact Statement (SWEIS), enabling timely publication of final analyses.

Inadequate consideration of Floodplains-Wetlands activities in project planning caused delays and urgent publication needs for the TA-48/55 waterline replacement and Electrical Power Capacity Upgrade (EPCU) EA projects. NEPA decisions for the EPCU EA project were delayed due to evolving scope and sequencing of 10 Code of Federal Regulations (CFR) 1021 (NEPA) and 10 CFR 1022 (Wetlands-Floodplains) requirements. Similarly, the TA-48/55 waterline project scope did not

recognize the need for updated 1022 requirements after implementation changes, nor were they captured in the CAS.

Program integration issues during readiness reviews of the Aqueous Nitrate Processes showed that environmental waste personnel were not integrated into the planning process early on. Process staff likewise incorporated 12-year-old standards for waste processing. Recent discharges and potential discharges to RLWTF indicate a negative trend for effectively regulatory integration in project planning to ensure compliance with environmental requirements.

Triad improved work execution to meet PF-4's production mission; however, failing to follow established Conduct of Operations processes continued to challenge the facility.

Triad's Nuclear Maintenance Program performed consistently with requirements to support operations.

Robust processes and programs are in place to help ensure Worker Safety and Health (WSH) of employees; however, implementation down to the worker level remained inconsistent. WSH programs (e.g., radiation protection, OSH, ES, LO/TO) lacked effective operational implementation in many areas where field implementation during work execution was less than adequate resulting in a high number of both reportable and non-reportable incidents across the site. Triad continues to struggle with work planning and control (WP&C), energy isolation and motor vehicle incidents.

The environmental radiation protection program (RPP) maintained compliance through strong sampling, monitoring, research, and reporting. The occupational RPP was robust across LANL. The RPP provided timely laboratory radiological sample analyses, dosimetry services, radiological control technician training, radiological engineering, field services, health physics research, and calibrated/repairs radiation detection equipment. Triad proactively responded to a TA-55 PF-4 wound contamination event and performed an institutional investigation on the event, taking into consideration near term versus long term concerns in a sound approach to restore operations. Triad improved occupational radiation protection by conducting voluntary self-evaluation activities (e.g., Continuous Commission Review at TA-55), and training. While operations continued to struggle with glovebox glove breaches, radiological contamination, and radiation protection procedure violation issues especially at TA-55 PF-4, the program is actively working across disciplines and programmatic organizations to address the issues.

An electrical incident resulted in a LANL "Electrical Safety Officer (ESO) Call to Action" where over 60 organizations conducted 100s of walkdowns. This action resulted in 534 identified issues corrected to ensure the proper installation, modification and inspection of electrical cords. The Lockout/Tagout (LOTO) program continued to have ongoing deficiencies in compliance. This resulted in electrical shocks, inadequate oversight of subject matter experts and ESOs in the field, extensions for six-year-corrective actions and a lack of timely updates to P101.13, "Electrical Safety" policy.

The LANL Fire Protection Program (FPP) was responsive to prior performance feedback by performing FPP self-assessment on the Code of Record process and implementation which demonstrated improved management of deficiencies. The FPP continued to have challenges that impeded effective and efficient implementation. Concerns included longstanding fire system impairments without a clear path to resolution or plan to gain NNSA approval; unwanted alarms causing unnecessary response by the Los Alamos Fire Department; untimely implementation of First Due software; long-term planning for obsolescence, aging, and degradation of fire systems; and untimely updating of the FPP. Triad managed code issue risks through communication and transparency of issues and took firm stances on requiring quality inspections and documentation from construction projects. Project management overrode common construction practices by accepting risks on projects regardless of the LBO feedback who help provide assurance that new construction meets applicable codes and standards to ensure safe and operational facilities.

Triad actively supported the Cognizant System Engineering Program by identifying staffing and training needs, tracking Vital Safety System (VSS) Assessments and System Health Reports and

collaboration across organizations ensured VSS performance of safety functions, demonstrating stable trends and supported facility availability. Triad delivered technical expertise on key programs and projects, including support for Area G Flanged Tritium Waste Containers mitigation, CODA efforts, Plutonium Coupon Study experiments, System Mods, Tritium loading experiments, and Documented Safety Analysis/Technical Safety Requirement re-writes. Triad demonstrated quick response to address performance and reliability of structures, systems and components, provide essential project support, and promote continuous improvement with a focus on safety issues. There was inconsistent implementation for operability determinations; inconsistent management of aging, degradation, and technical obsolescence of systems; inconsistent configuration management practices; untimely updates to engineering procedures; a failure to provide meaningful engineering measures and metrics.

Triad developed a structured, phased approach to the Nuclear Training Program rooted in assessment findings and causal analysis to address significant organizational challenges utilizing integration and improved collaboration.

Triad safely delivered production beam through deliberate and resilient operations at Los Alamos Neutron Science Center of Excellence (LANSCE), despite the aging infrastructure of the LANSCE beamline presenting ongoing issues, with unanticipated failures of historically reliable components throughout the facility delaying beam delivery to the user facilities.

Objective 4.2

Triad continued to execute a robust and effective Safeguards and Security (S&S) Program across the Laboratory, including all LANL satellite locations and sub-contractor facilities. To achieve this success, Triad embraced and implemented a Risk-Based Security Operations (RBSO) approach whereby risk-informed decisions drove increased flexibility, allowing Triad to better manage the overall protection strategy. Triad prioritized efficiency and effectiveness, identifying 179 opportunities (34 completed) with projected savings in the multi-millions and improved effectiveness. Triad made steady improvements across the entire security portfolio, with a strong emphasis on their Nuclear Material Control & Accountability (NMC&A), Personnel Security (PS), and Protective Force (PF) programs. For NMC&A, work continued with the development of a cutting-edge Process Monitoring Framework, which improved efficiencies in Pu Production. Triad also successfully processed and transferred 18 interim and full security “Q” clearances in support of the 2025 NNSA MC&A Academy in a professional and expedited manner. Triad’s efforts allowed the NNSA MC&A Academy interns to participate fully in both their training and on-site internships due to their clearances. In Personnel Security, Triad realized improvements within their Human Reliability Program (HRP). Through a collaborative effort with the Field Office, Triad reduced participation in HRP by 20 percent, with an achievable goal of 50 percent planned, thereby making better use of limited resources and focused more on critical positions. (b) (7)(E), (b) (7)(F)

[Redacted]

(b) (7)(E), (b) (7)(F)

[Redacted]

Objective 4.3

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

Triad met expectations by providing consistently accurate cost plans that improve the confidence in NNSA's ability to precisely project costs and to realistically defend uncosted balances. Additionally, building accurate cost plans increases the credibility of the M&O contractor and Federal Program Offices when defending Future-Years Nuclear Security Program budget requests.

Objective 4.4

Triad's legal management demonstrated exceptional achievement in technology management and notable progress in strategic planning and project/process management. Triad's employment of a widely accepted legal practice model to benchmark progress in material facets of legal operations demonstrated a commitment to continuous improvement.

Objective 4.5

Triad exceeded expectations on four of four Focus Areas in the Cybersecurity Program Execution Guidance (PEG) and most Implementation Factors (IFs) in the Information Technology PEG. Triad successfully installed the dual-band microwave project, providing a redundant communications path in the event primary service is disrupted. Triad advanced Artificial Intelligence (AI) capabilities across the laboratory through strategic partnerships with industry and received an authorization to operate (ATO) on NNSA's supercomputing environment. Triad also received a full ATO wireless in production environments. In addition, Triad made significant progress on several initiatives which address Information Security Continuous Monitoring and Ongoing Authorization, working closely with NNSA for full implementation.

Triad experienced challenges with quality submissions of Information Technology (IT) and Cybersecurity related budget plans, operating plans, and meeting implementation plans and project schedules. A primary contributing factor is excessive priorities causing delays in the authorization and reauthorization of system security plans. While Triad received a passing score for the recent Command Cyber Readiness Inspection (CCRI), Triad continued to evaluate internal procedures for sustainable processes, to ensure future success for CCRI assessments.

Triad's current IT Roadmap, while developed with input from mission organizations, was institutionally focused and did not adequately capture the operational requirements needed to support future mission needs, including an (b) (7)(E), (b) (7)(F)

Objective 4.6

Triad maintained a compliant Emergency Management Program, with the Emergency Response group distinguishing itself by proactively training workers and offsite responders on new hazards at the recently operational Emerging Threats Laboratory and by planning for the use of a robotic platform when responding to a criticality accident. Their preventive outreach and use of non-human intervention in high-risk situations enhances safety and reduces site-wide risk.

Objective 4.7

Overall, Triad delivered efficient, effective, and compliant business operations. Triad Acquisition Services Management (ASM) was an exceptional partner and successfully implemented Enhanced Mission Delivery Initiative (EMDI) 9 resulting in increased efficiencies and reduced cycle times saving days and weeks to deliver NNSA's mission faster and improved on-time delivery with suppliers. ASM was recognized for substantial contributions for their active roles in the DOE strategic sourcing initiative saving millions of taxpayer dollars. Also enhanced small business engagement, increasing small business set asides and awarding new mentor protégé agreements. While subcontract consent packages and responses to comments were timely, some subcontract consent packages required rework to address NNSA comments.

Triad exceeded all FY 2025 Small Business Goals. Triad's achievements were considered excellent as they accomplished all requirements of the small business subcontracting plan.

Triad delivered an efficient and effective personal property system, reducing risk to the government. The property management system was reviewed and approved for an additional 3 years.

Triad continued to reduce manual and inefficient Contractor Human Resource's processes focused on improved user/employee experiences through ServiceNow.

Triad generally demonstrated effective business practices for recruiting and retention; however, internal audits identified inefficient manual entry of labor and misuse of the extended workweek policy, which could lead to employee overpayments. Additionally, the previously identified issue of named subcontractors exceeding maximum per diem rates for long-term travel remained unresolved.

Goal 5: Construction Projects and Infrastructure

Amount of At-Risk Fee Allocation: \$4,268,754

Goal 5 Summary

Triad earned a rating of Good, and 75 percent of the award fee allocated to this Goal. Triad exceeded some 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 slightly outweighed issues and no significant issues in performance existed.

Objective 5.1

Triad demonstrated strong capabilities in infrastructure planning, producing 11 Executive Master Asset Plans and a novel GIS-based real-time planning dashboard. Despite this, Triad faced challenges in maintaining a consistent institutional approach to planning, as some organizations developed independent plans that required subsequent de-confliction.

Triad also experienced a series of reportable environmental releases from operational, maintenance, and construction activities. While Triad's responses and handling of these incidents were effective, procedural, and included excellent on-site training (as exemplified by the TA-35 firewater facility incident), these events highlighted the need for improved coordination and foresight in work planning to prevent unintended overlaps between maintenance activities leading to compliance issues.

Objective 5.2

Triad made some progress in project management, communicated on cost and schedule challenges and demonstrated cost-saving initiatives such as the demolition of the 52-0001 reactor building and (b) (7)(E), (b) (7)(F)

However, significant challenges persisted highlighting a lack of urgency and an insufficient institutional response in several cases. Continuous management engagement was lacking to ensure follow-through on project management, work completion, and schedule recovery. Many high priority construction projects experienced cost and schedule overruns, including sustained delays and cost increases at projects such as Fire Station Five and TRP III. Several projects remain over budget and behind schedule due to design, fabrication, quality, construction planning, field execution, and coordination issues. Project effort levels were not consistently aligned with budget constraints, and the (b) (7)(E), (b) (7)(F)

Quality control was a concern for the TA-52-01 D&D Backfill & Compaction project; subcontractor performance issues led to poor concrete placement in the Graphite Storage Facility building walls. Poor integration among project teams across various functional areas led to delays and rework. Real estate actions were not

managed institutionally, with independent organizational actions causing non-compliance with NNSA procedures, resulting in delays and a directive to formalize processes and training.

Objective 5.3

Overall, Triad effectively managed operations and maintenance budgetary risks, preventing significant impacts on facility availability. However, the restart of the WCRRF nuclear facility was delayed due to multiple revisions of design changes related to pre-startup maintenance. Challenges in facility work execution were exacerbated by unclear management and funding delineation between construction and maintenance projects, particularly for WCRRF where significant modification/construction work was inappropriately managed as maintenance. Additionally, Triad did not adequately resource the maintenance and operations of facilities critical for hydrodynamic experiment test article production, leading to a 50 percent execution rate.

Objective 5.4

Triad advanced the 30D execution strategy by implementing initiatives including the Plutonium Infrastructure Management Schedule (PIMS) 2.0, Accelerated Delivery Scorecards, and a phased 24/7 operations model. Triad also streamlined processes for engineering changes, construction readiness, restricted area access, resource management, and oversized item disposition resulting in considerable progress, including multiple D&D equipment shipments and removals, ongoing installations, and numerous complete equipment transitions and deliveries. However, Triad concurrently faced recurring challenges impacting the 30D equipment installation schedule, some of which could have been avoided. These included Conduct of Operations violations, inadequate work execution discipline, lacking integrated work document (IWD) preparation and utilization, resource challenges, and poor inter-organizational communication. Triad instituted measures to track, monitor, and address these recurring delays.

Goal 6: Mission Leadership

Amount of At-Risk Fee Allocation: \$4,268,754

Goal 6 Summary

Triad earned a rating of Excellent, and 93 percent of the award fee allocated to this Goal. Triad 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 6.1

Triad defined and implemented a realistic strategic vision that aligned with the NNSA Strategic Vision and demonstrated enterprise leadership and effective collaboration across the NNSA Enterprise.

Objective 6.2

Triad successfully developed CAS system for 30-D that employs criteria and metrics to drive performance and senior management strategic decisions, generating efficiencies and improvements.

Efforts to mature the CAS did not consistently result in transparent management systems that NNSA could rely on as a more systems-based governance model. Examples included several issues addressing the results of independent assessments in multiple areas, including Corrective Action Plans (CAP), associated Causal Analyses, and closure of issues.

Objective 6.3

Triad senior management implemented a knowledge transfer and mutual support program with the Savannah River Site to transfer pit production knowledge which resulted in a pool of cross-trained, technical personnel in multiple, mission critical areas. Coordination with other production and design agencies was successful in solving problems across the enterprise.

Triad did not properly address a potential Safeguards and Security budget issue in a timely manner to ensure execution within the approved FY 2025 Program Execution Guidance.

Objective 6.4

Triad leadership initiated several efforts to address isolated decision making and management across the site to improve integration. Results were evident in focused areas, while overall improvement will take more time to materialize.

Triad effectively integrated the Venado Supercomputing System and Artificial Intelligence (AI) capabilities across all laboratory organizations, including rapid and cross-functional teaming to take the system to the red in support of the national need.

Infrastructure management struggled to identify and implement cost savings to ensure effective management of systems and equipment across the site resulting in rework. Better integration would have made reviews of engineering designs and requirements reviews more efficient if they had occurred earlier, ensured the right meeting attendance, and ensured rudimentary cost avoidance measures.

Lack of integration with environmental compliance programs negatively impacted project planning. TA-48/55 waterline replacement, Electric Power Capacity Upgrade (EPCU) Project, and Aqueous Nitrate Processes, and a proposed joint exercise with the Office of Secure Transportation did not adequately incorporate regulatory requirements resulting in schedule impacts.

Objective 6.5

Triad's lack of continuous management engagement resulted in difficulty in implementing sustainable, technically defensible, and robust solutions to multi-disciplinary weaknesses. There was a lack of integration across the laboratory to proactively plan and solve cross-cutting issues in functional areas like criticality safety and training which impacted schedules across focused operations like readiness. Notable examples included: WCRR facility readiness, the Nuclear Training Program, Ground Fault Circuit Interrupters, LANMAS management as safety significant software, and several project related delays including concrete issues at Sigma and Fire Station 5.

Communication was delayed with the local NNSA oversight personnel on important topics such as gaps in limited clear understanding and information sharing on-site, leading to delayed notifications, such as for drone incursions, an impaired Security Protection Officer, and details regarding unplanned releases reportable to the New Mexico Environmental Department.

Objective 6.6

Triad continued to successfully attract and retain the workforce needed to achieve the nuclear security enterprise missions, with particular emphasis on filling key personnel leadership positions.

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.

Key Outcome 1.1

Achieve full capability 24/4 operations at the Plutonium Facility by end of FY2025.

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, including the execution of production and planning activities necessary to support current and future year oxide production in accordance with the Production Study.

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 FY2025).

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 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 Laboratory 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 Laboratory’s 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 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 Laboratory 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, 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 to 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.

Objective 5.4

Execute the 30 Diamonds (30D) infrastructure expansion strategy.

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 Triad's 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 Laboratory and the Enterprise.

Objective 6.1

Define and implement a realistic strategic vision for the Laboratory, 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 enhance 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.