
National Nuclear Security Administration

Consolidated Nuclear Security, LLC

Performance Evaluation Report

Contract No. DE-NA0001942

Pantex Field Office and Y-12 Field Office

Evaluation Period: October 1, 2023

through September 30, 2024

December 13, 2024

Controlled by: National Nuclear Security Administration,
Pantex Field Office and Y-12 Field Office, (b)(6)
(b)(6) @yfo.doe.gov

# Executive Summary

## Contract Structure Background

Contract number DE-NA0001942, between the National Nuclear Security Administration (NNSA) and Consolidated Nuclear Security, LLC (CNS), is a Cost-Plus-Award-Fee incentive type contract with separate Contract Line Item Numbers (CLINs) to distinguish contract requirements for the management and operation of the Y-12 National Security Complex (Y-12) and the Pantex Plant (Pantex) (CLIN 0001K) and certain Capital Construction Projects (CLIN 0002). This Performance Evaluation Report (PER) documents NNSA's evaluation of CNS' performance against performance criteria established in the CLIN 0001K – Performance Evaluation and Measurement Plan (PEMP) for the period of October 1, 2023 through September 30, 2024, and CLIN 0002 – Uranium Processing Facility (UPF) Project Award Fee Plan (AFP)/Annex for the period of January 1, 2024, through September 30, 2024. The PEMP and AFP are incorporated in this report as Attachments 1 and 2.

Pursuant to the terms and conditions of the Contract, the PEMP and AFP/Annex set forth the criteria by which NNSA evaluates CNS' performance, as required by Federal Acquisition Regulation (FAR) Part 16.4, Incentive Contracts, which outlines expectations for administering award-fee type incentive contracts. A key requirement of FAR Part 16, Types of Contracts, 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."

## CLIN 0001K – Management and Operation of Y-12/Pantex

In accordance with the regulation, the PER assesses CNS performance against the PEMP and provides the basis for determining the amount of award fee earned by CNS. NNSA took into consideration performance information obtained from NNSA program and functional offices, both at headquarters and in the field, and from the Contractor Assurance System (CAS). This report provides performance feedback, highlighting key accomplishments and issues that need attention for CLIN 0001K. Specific observations for each goal are discussed below.

In support of our nuclear deterrence, the CNS workforce delivered for our Nation, working collaboratively across the enterprise to overcome technical and facility-related challenges at both sites. While navigating an unprecedented workload of concurrent nuclear weapon, material, and infrastructure modernization program activities and executing site separation, CNS met or exceeded all stockpile production baseline deliverables and met all scheduled shipments to the Department of Defense (DoD). Of note, CNS demonstrated exceptional adaptability, responding to emergent programmatic direction on the B61-13 by partnering with Los Alamos National Laboratory (LANL) to exceed program objectives and place the program in a strong position for fiscal year (FY) 2025. Enriched Uranium Modernization (EUM), Depleted Uranium Modernization (DUM), Lithium Modernization, Special Materials, and High Explosives programs performed well, meeting nearly all milestones to include the restart of the vacuum arc remelt (VAR) furnace. Notable accomplishments include exceeding milestones for Material Recycle and Recovery deliverables prior to placing the Building 9212 Reduction process in cold standby, and maturing several EUM and DUM technologies critical to future production needs. Production research, development and integration scope support were successful.

Global nuclear security support continued in securing nuclear and radioactive materials worldwide, advancing the U.S. nuclear nonproliferation and nuclear security capabilities by managing and minimizing excess weapons-useable nuclear materials; providing nuclear material for peaceful uses; and providing

technical support for numerous programs. CNS exceeded Highly Enriched Uranium (HEU) downblending to High Assay Low Enriched Uranium (HALEU) targets and completed all castings and shipments for Naval Reactors on time. The Advanced Science and Technology nuclear security mission capabilities were furthered by Plant-Directed Research and Development (PDRD) projects; expanded partnerships, university outreach, and technology transfer activities; and strategically pursued integrated high impact work.

Environment, safety, health, and quality (ESH&Q) program activities effectively enabled the mission. CNS earned a DOE Voluntary Protection Program (VPP) Star at Y-12, successfully addressed an environmental contamination issue with the Ogallala Aquifer, led NNSA efforts to obtain DOE authorization to apply the Occupational Safety and Health Administration+ (OSHA+) model for construction worker safety and significantly reduced the backlog of waste at Y-12. CNS responded effectively to an unfavorable trend in Unsatisfactory Reports at Pantex, but work remains to address hazard identification issues at Y-12. CNS advanced key nuclear safety initiatives, improving the quality of the Pantex safety basis through the Vision Plan and at Y-12 making sufficient progress to support closure of a longstanding NNSA issue with nuclear criticality safety infractions due to personnel error. The maintenance and utilities workforce effectively enabled mission success in demanding environments. Attention is needed to address issues with maintenance scheduling, coordination, and effective use of resources, which threaten future year mission performance. Safeguards and security operations were executed consistent with policy and operational basis documents; however, concerns were noted with an event at the Central Training Facility as well as a budget issue toward the end of the FY. Efficient, effective, responsible and transparent financial management operations and systems were delivered, and legal matters were effectively managed. Information technology (IT) supported production requirements and demonstrated cybersecurity self- governance with continued focus needed to implement the corrective action plan for cyber system authorizations. The CNS emergency management program remains mature, as evidenced by the outstanding response to a wildfire event that threatened Pantex. Compliant business operations were effectively delivered. NNSA still has concerns with project execution performance; while CNS has taken steps to improve project management, CNS has not effectively managed cost and schedule on line-item projects with most requiring or trending toward rebaselining. Of note, CNS did not meet milestone deliverables for the Electrorefining and Calciner projects.

CNS leadership engagement was crucial to promoting enterprise collaboration, advancing safety improvement initiatives, and enabling mission success. Leadership successfully hosted the FY 2026-2030 Budget Planning Summit, planned a Lithium Processing Facility (LPF) tabletop exercise, and hosted an NNSA Council meeting. CNS participated in numerous collaborations efforts across the Nuclear Security Enterprise (NSE). Key successes include the Radiation Case Steering Committee and Direct Cast technology maturation. In addition, CNS leveraged support from its corporate parent in several critical improvement areas, including the CAS and project performance. CNS took extensive measures to address CAS weaknesses, to include steps to improve line management enforcement of disciplined operations standards. These measures were sufficient to close a longstanding NNSA issue with disciplined operations at Pantex and positioned Y-12 for similar success in FY 2025. CNS continued to address critical labor categories while achieving 103 percent of the annual hiring target.

CNS successfully executed activities necessary to prepare Pantex and Y-12 to be managed and operated under separate contracts, completing over 1,700 actions to achieve key objectives; most notably, the Step 0 implementation plan milestone. CNS was collaborative and transparent, routinely sharing data related to its efforts to achieve independent operations. CNS successfully filled over 300 positions to facilitate independent operations with no impact to mission success.

CNS earned an overall rating of Excellent and 92 percent of the award fee during the FY 2024 performance period. CNS earned Excellent ratings for Goals 1, 2, 3, 5 and 6 and a Very Good rating for Goal 4. Specific observations for each Goal are provided in the CLIN 0001K – Management and Operation of Y-12 and Pantex Performance Evaluation section of this report.

**CLIN 0002 – UPF Project Management**

This PER also provides NNSA's evaluation of CNS' performance against the criteria outlined in the FY 2024 UPF Project AFP/Annex. Pursuant to the terms and conditions of the contract, the AFP/Annex set forth the criteria by which NNSA evaluates CNS' performance and upon which NNSA determines the amount of award fee earned. The UPF fee plan contained two components: (1) the FY 2024 AFP and (2) the Schedule Objective Fee Annex. The total available fee for FY 2024 was $9,500,000, of which $3,000,000 was Award Fee (Subjective Fee) as defined in the AFP, and $6,500,000 was Schedule Objective Fee, as defined in the Annex.

The AFP contained four subjective evaluation factors (SEFs): (1) Effective Interactions and Timely Responses, (2) Effective Integrated Project Management, (3) Execution within Cost Parameters and (4) Execution within Schedule Parameters. NNSA oversaw performance throughout the performance evaluation period and provided routine feedback to CNS highlighting accomplishments and issues observed. NNSA considered these feedback reports along with interactions from the Contractor to determine the performance ratings. The end of year performance ratings were determined in accordance with FAR Subpart 16.4. The overall rating and percentage of Subject Fee earned was based on the aggregate scoring of the SEFs.

For the AFP portion, CNS received one Excellent rating, two Very Good ratings, and one Good rating for an overall rating of Very Good. CNS met all five of the Schedule Objective Fee criteria set forth in the Annex. Specific observations for each SEF and a table of Schedule Objective Fee milestones are provided in the CLIN 0002 – UPF Project Management Performance Evaluation section of this report.

**CLIN 0001K – Management and Operation of Y-12 and Pantex Performance Evaluation**

**Goal 1: Mission Delivery: Nuclear Weapons**
CNS Amount of At-Risk Fee Allocation: $37,774,007

## Goal 1 Summary

CNS earned a rating of Excellent, and 95 percent of the award fee allocated to this Goal. CNS 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 1.1

CNS overcame significant technical and facility-related challenges at both sites to meet or exceed all stockpile production baseline deliverables in FY 2024. Additionally, all deliverables to DoD were met on or ahead of schedule.

**Specific Performance through September 30, 2024**

| | |
|---|---|
| B61-12 Canned Subassembly | 101% |
| Base Surveillance - Pantex | 107% |
| Base Surveillance - Y-12 | 101% |
| W88 DisALT | 104% |
| W88 ALT 370 | 102% |
| CSA Dismantlement | 100% |
| B61 DisLEP | 101% |
| B61-12 LEP | 102% |
| Warhead Dismantlement | 108% |
| W80 DisLEP | 100% |

The B61-12 Life Extension Program (LEP) FY 2024 production baseline deliverables were exceeded at Pantex. In FY 2024, CNS successfully recovered lost margin resulting from the unplanned schedule implementation of B61-12 Alteration (ALT) 375 at Pantex and completed the life of program build for two critical high explosive components. For the B61-13, Pantex completed three test hardware builds, including one from FY 2025. CNS aided in the successful acceptance of Multi-Application Transportation Attachment Device Mark Quality hardware into production stores at Pantex. CNS continues to work with NNSA for issue resolution, as the authorization schedule moved into FY 2025. Y-

12 exceeded the B61-12 LEP canned subassembly (CSA) baseline despite technical and equipment issues experienced early in the year. All case part reacceptance was completed as required. The pace and success with the new B61-13 program is a notable accomplishment for Y-12, having partnered heavily with LANL to manufacture all CSA test hardware within six months of program start. This exceeded programmatic objectives and places NNSA in a strong position to deliver the B61-13.

CNS exceeded Pantex W88 ALT 370 deliverables and completed the first W88 ALT 940 shipment to DoD. Y-12 also completed important W88 ALT 370 scope including producing the last of one component and fully establishing and exercising the capability to fabricate another component for the program.

For the W80-4 LEP, Pantex met all Disassembly in Support of LEP (DisLEP) requirements and successfully stood up a core team of Production Technicians. CNS supported the pit component Product Realization Team in achieving the reacceptance First Production Unit three months ahead of schedule. Y-12 completed all scheduled W80-4 Process Prove-In units. CNS communicated well with stakeholders about material and Y-12 equipment availability, addressing risks to the program. Construction of the 9990-03 Building was substantially completed by the end of the FY. The Major Items of Equipment (MIE) scope is behind schedule.

In support of the W87-1 Modification Program, CNS completed the analysis of legacy production lot LX-17 main charge material and received the Lot 12 Qualification Evaluation Release from Lawrence Livermore National Laboratory (LLNL). Y-12 experienced difficulty with W87-1 scope including generating materials and fabricating test hardware for CSAs and radiation case parts. CNS was responsive with risk mitigation actions including manufacturing alternate hardware and working with LLNL to generate needed materials. Additionally, Y-12 was successful with respect to Conceptual Design Gates and capital equipment projects.

For the W93 program, CNS continued development activities at Pantex and Y-12, to include the submission of the Weapon Design and Cost Report Execution Plan.

### Objective 1.2

Eight EUM Level 2 Milestones and one Assembly/Disassembly Capability Modernization Level 2 Milestone were met or exceeded (see Goal 4 for two failed milestones). CNS achieved the Technology Integration Level 2 Milestone by completing Microwave Casting, Direct Electrolytic Reduction (DER), and Chip Melting milestones; however, DER and Modulated Tool Path development was limited due to factors within CNS' control, including unplanned work, operational pauses, and difficulty in obtaining approved work packages and key resources. Material Recycle and Recovery exceeded metal production, waste processing, consolidation castings, and briquette inventory milestones, and the Building 9212 Reduction process was placed in cold standby, significantly improving worker safety. Building 9212 transition activities overcame disruptions to complete ten out-of-service system isolations and completed actions in Building 9206 to support facility downgrade in FY 2025. UPF Integration project planning is ahead of schedule and the project passed the new System Requirements Review as part of CNS' Enhanced Management Process. One EUM project met milestones and two projects, Services Hood and 9212 Head House Basement Retrofit, did not but will meet overall mission need. CNS excelled at material supply/demand and operation modeling and completed many special scenario requests.

Mission Delivery Modernization, Analytical Chemistry Capability Modernization (ACCM) and Quality Modernization completed all Level 2 Milestones. ACCM installed nine new instruments, quadrupled

Enriched Uranium test capacity, and increased Inductively Coupled Plasma testing capacity by 150 percent.

The DUM program completed all Level 2 Milestones. CNS matured future production technologies by achieving Technology Readiness Level (TRL) 7 with the Direct Cast (DC) furnace, accelerating the schedule for the Electron Beam Cold Hearth Melt furnace, and achieving TRL 6 for Powder Bed Additive Manufacturing. For DC specifically, Y-12 accelerated alloying in the crucible testing. These advances were achieved with Y-12 equipment located at offsite vendor facilities. CNS submitted an Environmental Assessment for DUM scope to facilitate future production work beyond technology maturation activities in these offsite facilities. On-site modernization included a new bridge crane to support press operations and installation of equipment. DUM secured multiple contracts for the production DC furnace and actively participated in NNSA initiatives like the Radiation Case Steering Committee and the Construction Acquisition Task Force that could reshape the enterprise moving forward. CNS' work to restart the VAR furnace was a significant achievement.

Lithium modernization completed all five of its Level 2 Milestones. CNS executed the LPF tabletop exercise and delivered the Near Net Shape Technology Readiness Plan.

CNS exceeded all Downblend Offering for Tritium and Tritium-Producing Burnable Absorber Rod shipment deliverables.

CNS met all High Explosives and Energetics milestones and expectations. CNS has shown highly effective leadership in support of Insensitive High Explosive (IHE) and Binder Issue Resolution Group activities to address product and schedule uncertainty associated with outside vendors.

In support of Warhead Assembly Modernization, CNS finalized the business case analysis for the Material Staging Capability project to remove it from "on-hold" status in order to advance it through the Critical Decision (CD) process.

### Objective 1.3

CNS met or exceeded all FY 2024 Pantex stockpile management production baseline deliverables. This was accomplished with planning and consistently working ahead of the baseline in preparation for the planned April electrical maintenance outage. Although there were minor equipment and weather-related challenges following the outage, CNS was able to recover. The W84 Known State Project team at Pantex successfully supported all FY 2024 project milestones.

At Y-12, CNS completed all stockpile services, surveillance and dismantlement deliverables. Additionally, Y-12 assisted the B61-12 LEP through DisLEP execution in excess of requirements. CNS demonstrated flexibility and responsiveness at both sites and was able to act on multiple surveillance requirement adjustments throughout the FY. Y-12 completed all FY 2024 baseline scope for B83 CSA dismantlements despite significant issues with critical equipment, deemed outside CNS' control. Y-12 repaired the equipment and recovered all commitments for the FY despite the long delay. Additionally, CNS established the same dismantlement capability in another location for risk mitigation and throughput enhancement. Some Capabilities Based Investment projects have experienced increased cost and delays due to design issues, supply chain, and prioritization. Despite these issues, CNS continued to manage impacts.

### Objective 1.4

CNS was successful in its production research, development, and integration program scope. CNS proactively worked to incorporate the latest technology within Aging and Lifetimes into their surveillance processes to improve the enterprise's ability to non-destructively evaluate assets. Additionally, CNS began

to digitize analog data in the area of Archiving and Support and completed the Agile Processes and Technologies final product demonstration and prototype.

**Goal 2: Mission Delivery: Global Nuclear Security**
CNS Amount of At-Risk Fee Allocation: $9,443,502

### Goal 2 Summary

CNS earned a rating of Excellent, and 95 percent of the award fee allocated to this Goal. CNS exceeded almost all of the 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

CNS supported multiple efforts to secure nuclear and radioactive materials worldwide. CNS provided support on counter-nuclear smuggling engagements, multiple trainings, performance evaluations, regulations, inspections, and insider threat mitigation activities and provided technical expertise in several international engagements on capacity building, insider threat mitigation, nuclear security culture, cybersecurity, and nuclear material accounting and control. CNS took prompt action during a firearm event at the Oak Ridge Enhanced Training Center and quickly instituted appropriate controls to enhance mitigation.

### Objective 2.2

CNS provided support to advance the U.S. nuclear nonproliferation and nuclear security capabilities. CNS supported and/or led multiple venture-level projects and continued to advance their capabilities through the expansion of the Nuclear Detection and Sensor Testing Center Library of Test Objects and the development of the Uranium Production and Weaponization Testbed.

### Objective 2.3

CNS continued to manage and minimize excess weapons-useable nuclear materials and provide nuclear materials for peaceful uses. CNS exceeded requirements by casting 125 percent of the required items for the U.S. High Performance Research Reactor program, discarding 245 percent of the required items for Low Equity Discards, and shipping 132 percent of the required materials for the HALEU Scrap Recovery effort. CNS provided technical fabrication support to U.S. companies for the production of the medical isotope, molybdenum-99, without the use of HEU; supported ongoing efforts to convert the Kyoto University Critical Assembly from HEU to HALEU in Japan; executed removals of HEU from the Japan Materials Testing Reactor Critical Assembly and the Delft University of Technology; and provided technical support for the future removal of unirradiated HALEU from Japan's Fast Critical Assembly.

### Objective 2.4

CNS provided technical support to multiple programs within Nonproliferation and Arms Control. They provided leadership of and active membership in the Nuclear Materials Verification Uranium Verification Team, Logistics and Readiness program, and Containment and Surveillance program; participated in multiple international collaborations such as the International Partnership for Nuclear Disarmament Verification and Quad Nuclear Verification Partnership; provided expertise for the Warhead Development Verification project's development of planning approaches; supported the Next Generation Verification Equipment – HM-5 Plus project; submitted the final report for the FY 2023 Pantex Portal Monitoring

Concept demonstration; supported planning and implementation of Next Generation Arms Control Experts programs; completed a series of measurements using the Neutron Ratio Meter and New Start Radiation Detection Equipment at Pantex; and identified and began design of the Pantex Monitoring and Verification Test Facility.

### Objective 2.5

CNS maintained critical operational readiness of the Nuclear Emergency Support Team (NEST). CNS provided operational support to multiple NEST Special Events; supported the Nuclear Forensics Material Analysis Program and National Nuclear Material Archive; supported Pre-Detonation Device Program / Disposition and Forensic Evidence Analysis Team (DFEAT) through the execution of one Training Event and two DFEAT Diamond Thunder Exercises; responded to a real world nuclear incident; provided Preventative Radiological/Nuclear Detection support to three events; responded to a complex scenario exercise with no advanced notice; provided support to numerous planning and training venues for the Accident Response Group; provided Road Radiological Assistance Program Training for Emergency Response for four civil support teams; and participated in multiple tabletop exercises and support events with NNSA mission partners.

### Key Outcome 2.1

CNS exceeded the HEU downblending to HALEU production target in the Office of Material Management and Minimization Implementation Plan. CNS sustained a quantity of HALEU on-hand that equals or exceeds the demand for the FY.

### Key Outcome 2.2

CNS completed 3rd Generation Trusted Radiation Identification System (3G-TRIS) measurements at Pantex ahead of schedule and within the budget detailed in the 3G-TRIS Pantex Measurement Campaign Project Work Plan (PWP).

### Key Outcome 2.3

CNS is working ahead of the authorization activity schedule detailed in the FY 2024 Additional Approach Exercise PWP, exceeding Key Outcome expectations.

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

CNS Amount of At-Risk Fee Allocation: $4,721,751

### Goal 3 Summary

CNS earned a rating of Excellent, and 95 percent of the award fee allocated to this Goal. CNS 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 3.1

CNS met all PDRD guidance and expectations for funding and candidate project selection with 27 new and 21 ongoing projects at Pantex (approximately $13.8 million (M)) and 53 new and 37 ongoing projects at Y-12 (approximately $37.6M). CNS executed 22 Critical Hires (10 at Pantex and 12 at Y-12).

### Objective 3.2

CNS installed the drop weight impact test system redesign for initial prove-in. CNS completed extended and cyclical (heat-cool-heat) heating cycles and laboratory analysis on High Explosives, showing the material remained acceptable for pressing after being heated for up to 48 hours. CNS worked with LANL to complete analysis of binary wire from a Vacuum Arc Remelt melt section, and all major chemistry components were in specification.

### Objective 3.3

CNS demonstrated, with West Texas A&M, baseline behavior of the pureLiFi light fidelity technology with laptops and a camera-enabled robot.

### Objective 3.4

CNS completed all resumptive and corrective actions pertaining to Y-12 Development Conduct of Operations concerns. CNS completed installation of the LPKF Model S4 Printed Circuit Board builder at Pantex and a TA Instruments 413 rotational viscometer at Y-12.

### Objective 3.5

CNS expanded partnerships, university outreach, and technology transfer activities. CNS managed Technology Accelerator Programs at several universities to build collaborations and identify candidates for employment. CNS established a subcontract with Pacific Northwest National Laboratory to fabricate (three-dimensional print) selective particulate capture membranes. CNS executed a Cooperative Research and Development Agreement (CRADA) with Novae Metals to mature low-temperature lithium processing technology. CNS reported all published Scientific and Technical Information and met full compliance for current Public Access guidelines.

### Objective 3.6

CNS met Strategic Partnership Projects guidance and expectations, including readiness activities to implement G-Invoicing. CNS completed the year with 23 Pantex and 58 Y-12 Federal Packages (approximately $40.8M) and 5 Pantex and 18 Y-12 Non-Federal Packages (approximately $22.6M).

CNS completed all castings and shipments for Naval Reactors on time, exceeded High Flux Isotope Reactor oxide production deliverables and completed all computed tomography scans of inner and outer fuel elements on schedule. CNS provided premier training to the Federal Bureau of Investigation and various DoD organizations.

CNS completed all FY 2024 deliverables for the Army White Sands Missile Range Fast Burst Reactor Upgrade project. CNS supported the Mutual Defense Agreement, including Procurement for Ministry of Defense execution and implementation of the U.S./U.K. Assignment Program.

## Goal 4: Mission Enablement
CNS Amount of At-Risk Fee Allocation: $23,608,754

### Goal 4 Summary

CNS earned a rating of Very Good, and 85 percent of the award fee allocated to this Goal. CNS exceeded many of the 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 4.1

CNS generally performed well executing ESH&Q program activities. Y-12 earned DOE VPP Star status. CNS incorporated new directive requirements into the Quality Assurance (QA) Program and migrated their software QA configuration management system to a new platform properly controlling imbedded software. Safety Performance Measures indicate very good overall performance. CNS led the effort obtaining DOE Environment, Health, Safety, and Security acceptance for use of OSHA+ model for construction worker safety. External regulator environmental compliance reviews reflected outstanding CNS performance, and CNS continues to successfully work Ogallala Aquifer challenges and made progress on sanitary sewer rehabilitation work, reducing permit exceedances. CNS continues to effectively handle waste including Weapons Material/Weapons Related Material and Y-12 shipped approximately 40 percent more waste than was generated. CNS decontaminated around 49,500 square feet of Y-12 facility space greatly reducing the source term. There were eight chargeable Unsatisfactory Reports resulting in a Pantex Emerging Item of Interest (EII), which has now been closed. Y-12 experienced a notable rise in personnel contamination events early and responded well to return rates to historical levels. Y-12 continues to work resolution of some key performance issues such as a Priority 1 Finding for non-compliant radioactive waste shipments of 9979 packages, industrial hygiene program, and hazard identification problems. Y-12 fire protection compensatory measures regressed to a higher number after having taken action to bring them to an acceptable level in FY 2022, indicating corrective actions were not sustained.

CNS continues to improve the Pantex Safety Basis quality, consistency and control set through implementation of the Vision Plan and continues to support the Pantex Safety Basis Redesign Teams. CNS piloted new technology, received safety basis approval, and installed new tile Electrostatic Discharge Flooring, which will significantly increase operational flexibility, reduce down time, and reduce cost for production activities. CNS successfully submitted the Alternate Methodology, which will reduce complexities associated with the Pantex Safety Basis, simplify development and maintenance, and improve execution efficiencies. At Y-12, CNS leadership effectively addressed an EII specific to Potential Inadequacy of the Documented Safety Analysis timeliness and communication. Additionally, CNS' performance in relation to Nuclear Criticality Safety (NCS) led to closure of a long-term Management Concern on NCS infractions due to personnel error. Overall, NCS program performance is adequate, but CNS must continue to leverage ongoing disciplined operations initiatives, to include technology solutions, to achieve sustained success.

### Objective 4.2

CNS' Infrastructure workforce demonstrated the ability to effectively execute work in highly complex and challenging environments, enabling Pantex and Y-12 to meet or exceed all baseline stockpile deliverables. This was highlighted by the response to several unusual events, including a January 2024 severe weather event at Y-12. CNS' response demonstrated effective incorporation of seasonal facility preservation-related lessons learned from a prior year event, which resulted in a significant overall reduction in freeze-related equipment damage. At Pantex, a Freeze Protection Strike Team was developed in preparation for a deep freeze event, which allowed for decreased response time to freezing conditions. Additionally, CNS' Infrastructure organization responded well to sewer system failures in the Protected Area of Y-12.

Changes to Y-12 maintenance work control processes have noticeably strengthened the integration of nuclear criticality safety requirements in maintenance work packages, particularly with respect to the clear incorporation of nuclear criticality hazard controls within work packages.

Although maintenance support allowed CNS to meet production goals for the year, NNSA identified that both sites have issues with maintenance scheduling, coordination, and effective use of resources, and that Y-12 experienced a continued rise in deferred maintenance backlog.

At Y-12, the NNSA issued an EII which identified weaknesses in the management of utility systems and infrastructure. Currently, CNS is operating site utilities and infrastructure without the aid of computer monitoring systems, relying instead on manual status boards, employee rounds, and manual calculations. Additionally, NNSA is concerned that balance of plant fire system maintenance is not being performed as scheduled.

CNS achieved some project successes such as significantly increasing the spending for indirect funded projects at Pantex and far exceeding planned installations for the PX High Performance Fire Loop and Flame Detection System. However, CNS continued to be challenged in improving the project performance trajectory of line-item and MIE projects greater than $50M. All line-item and MIE projects required or trended toward rebaselining schedule milestones and total project cost (TPC). Project improvement plan actions continued to be completed on schedule; however, the positive impact of those actions has not been realized. The High Explosive Science and Engineering blast walls completion milestone was impacted by design issues. While the critical path for main facility construction was maintained, continued improvement of subcontract management, including fabrication vendors, is needed. CNS completed several process designs for Direct Chip Melt Bottom Loading Furnace subprojects that supported a Technical Independent Project Review that led to approval of CD-1R, *Reaffirmation of Alternative Selection and Cost Range*, and CD-3A, *Approve Long-Lead Procurement*. The reaffirmation was required due to cost forecasts exceeding 50 percent of the approved baseline. CNS submitted the CD-2/3, *Approve Performance Baseline/Start of Construction or Execution,* package for Subproject 1 three months late. CNS improved Installation Change Request cycle times and was proactive in addressing safety and security concerns on the West End Protected Area Reduction (WEPAR) project. However, CNS is at risk of exceeding the WEPAR TPC based on higher than planned Management Reserve and Contingency use. While it is behind schedule when compared to the Over Target Baseline, there is schedule margin to cover it at this time. The Special Materials Facility Utility Upgrade subproject missed a level 2 headquarters milestone and its construction award milestone to address an exceedance of the TPC based on higher-than-estimated vendor bids, the addition of critical scope to meet mission requirements, and the inclusion of missing waste management scope.

CNS provided facility availability above 95 percent, exceeding the goal of 85 percent within the Operations of Facilities and Maintenance and Repairs programs. Recapitalization performance improved; however, CNS underperformed with the execution and delays on the Material Access Area Lightning Protection System Upgrade, Building 9204-2E Criticality Accident Alarm System Replacement, and Buildings 9995 198/222 Feeders Electrical Panel & Motor Control Center replacement projects.

### Objective 4.3

CNS planned and executed operations for the protection of security interests consistent with DOE Threat Policy and approved analytical/operational basis documents. CNS successfully completed Special Nuclear Material inventories at both sites and efforts continue to further reduce classified matter holdings. CNS provided technical support for training at LLNL in Material Control and Accountability and both sites successfully completed Office of Enterprise Assessments limited-notice performance tests, demonstrating operational readiness in the evaluated areas. CNS experienced an issue at the Y-12 Central Training Facility (CTF) that involved finding a magazine that contained both blank and live ammunition in an area that had been previously sanitized of live ammunition. Although the Engagement Simulations Systems weapons being used for training contained engineering controls that would have prevented them from

firing live ammunition, the CTF was shut down for all training activities until a comprehensive corrective action plan was developed and deliberately implemented. CNS base security operations costs are higher than current program execution funding targets. CNS struggled with implementation of program execution guidance, requiring additional financial support from NNSA, and over-target spending trends, leading to a variance climate throughout the fiscal year that caused disruption to the Defense Nuclear Security funding profile. In partnership with NNSA, CNS proposed a path forward to improve financial management in FY 2025. CNS experienced project coordination and execution issues related to the Security Infrastructure Revitalization Program, which contributed to overall program cost and schedule increases resulting in reduction of scope and inability to complete the project within available funding.

### Objective 4.4

CNS delivered efficient, effective, responsible, and transparent financial management operations and systems. CNS provided comprehensive cost estimate submissions for several ongoing projects. CNS responded timely to numerous Continuing Resolution data calls to identify critical funding needs required to continue safe operations during the fiscal year transition and multiple continuing resolutions. However, NNSA noted a lack of quality and timeliness in responding to the Potential Lapses of Funding Exercise and internal coordination addressing reallocation of Site Splits. CNS provided timely data to the Office of Inspector General in support of their General Audit of Statement of Cost Incurred and Claimed for FY 2016-2018.

### Objective 4.5

CNS negotiated and implemented a complex settlement to resolve Fair Labor Standards Act claims filed by more than 700 Y-12 bargaining unit employees, obtained summary judgment in a discrimination lawsuit, assisted in negotiating and executing a funds-in CRADA for uranium deconversion efforts, settled franchise tax litigation with the State of Tennessee, returning more than $4M to the Federal Government, and eliminated the Pantex Privacy Act request backlog from 276 open requests to 0.

### Objective 4.6

CNS Information Solutions and Services met core production support. IT delivered a new Pantex Learning Management System reducing security risks. CNS upgraded several applications, deployed collaboration tools on the classified network, and further implemented controlled unclassified information requirements through enhancements to the electronic derivative classifier/reviewing official and email marking systems. CNS maintained several IT systems effectively but the risk from a Y-12 datacenter failure has not been submitted for federal acceptance and was realized in FY 2024, impacting site operations. Additionally, CNS required formal government direction to resolve a significant email blocking issue. CNS successfully migrated more than 10,000 email accounts to Microsoft Office 365 and provided users with access to Teams, although there is additional work necessary to complete Microsoft Office Teams full federation with other sites. CNS cybersecurity has made progress and implemented improvements for known issues and supported new projects and initiatives. Although progress has been made, the formal authorization/risk management process and documentation remain a concern as it does not meet contractual requirements, and substantial work remains to achieve minimum compliance. This also results in NNSA having to accept risks associated with incomplete, deferred IT and cybersecurity work in a number of deliverables, for example, as documented in Microsoft O365, SuccessFactors Enterprise Unclassified Network, and Y-12 counter uncrewed aerial systems authorizations to operate. In November 2023, CNS identified that only a portion of the FY 2024 IT and Cybersecurity Program Execution Guidance Implementation Factors (IFs) could be completed in FY 2024. CNS completed most of those IFs; however, that subset only represented a portion of the overall FY 2024 IFs. There is concern that some of those missed affect vulnerability management, cyber operations, and information assurance.

### Objective 4.7

The CNS Emergency Management Program continues to be a mature and learning organization. Accomplishments for the year include effectively leading a unified response between county, city, and site subcontractors fighting a wildfire event and a joint active assailant workshop at Pantex. Additionally, Y-12's installation of a new meteorological tower to improve emergency actions and deployment of portable and remote speaker systems improved the Emergency Notification System throughout the site.

### Objective 4.8

CNS delivered efficient, effective, and compliant business operations in human resources and property systems. The Collective Bargaining Agreement with the Metal Trades Council at Pantex was successfully negotiated. NNSA is concerned with the efficiency and compliance of CNS' procurement operations due to the quality of subcontract consent packages and its ability to follow approved Procurement Process Description, which places the government at risk. CNS pursued opportunities to increase its small business and socioeconomic spend through outreach activities. CNS exceeded 5 of the 6 category goals and nearly met the Historically Under-Utilized Business Zone goal with 4.6 percent of the 5.0 percent goal. Pantex Supply Chain Management (SCM) Operations achieved 100 percent on time shipping and a 100 percent wall to wall inventory. Y-12 SCM Operations reduced their delivery cycle time by 16.5 percent.

### Key Outcome 4.1

CNS met this Key Outcome. CNS submitted its project deliverables and supported approval of the LPF CD-3B in July 2024. CNS remained on budget and schedule to support achieving the CD-2/3 milestone while supporting the program office's LPF project alternatives tabletop exercise, supporting the CD-1R efforts, and developing a thorough construction phasing analysis. CNS remained within the approved CD-1 cost and schedule, but consumed most of their available margin, with key milestones slipping an average of five months.

### Key Outcome 4.2

CNS did not meet this Key Outcome. CNS did not complete the Electrorefining Project within the previously authorized spending limit of $111.6M and required a third baseline change approval primarily due to pre-operational testing and affirmations taking longer than planned, and unforeseen glovebox maintenance needed before the readiness assessment.

### Key Outcome 4.3

CNS did not meet this Key Outcome. The Calciner Project did not perform project turnover by end of FY 2024 due to inadequate planning (e.g., unplanned instrument calibrations and incorrectly baselined schedule logic for electrical equipment tie-in and energization, energized component testing, and pre-operational testing), and other planning and design performance issues identified during the Annual Peer Review.

### Key Outcome 4.4

CNS met this Key Outcome and expectations associated with producing a Level 1 Digital Twin of selected Uranium Processing Facility Non-Controlled Unclassified Information systems (i.e., three-dimensional interface/experience and casting sim-trainer application development are complete and demonstrated).

**Goal 5: Mission Leadership**
CNS Amount of At-Risk Fee Allocation: $18,887,003

### Goal 5 Summary

CNS earned a rating of Excellent, and 92 percent of the award fee allocated to this Goal. CNS exceeded almost all of the 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 5.1

CNS hosted the August NNSA Council Meeting, planned the Office of Stockpile Management FY 2026-2030 Budget Planning Summit, and planned and hosted the LPF table-top exercise, bringing NNSA, Design Agency, and Plant staff together to find solutions. CNS completed all requested tasks from the Enhanced Mission Delivery Initiative-18 Integrated Project Team, supported updating the Stockpile Stewardship and Management Plan and participated in the NNSA Pilot Prioritization Methodology Project and the Integrated Infrastructure Planning initiative related to line-item portfolios. CNS also facilitated multiple teams supporting new and future construction activities at Y-12. CNS was successful in supporting contract transition at Pantex.

### Objective 5.2

CNS promotes a culture of critical self-assessment and accountability. CNS revamped key elements of its CAS by establishing and maturing new trending and event analysis tools. Ten Parent Oversight Functional Management Reviews were conducted to evaluate performance in Advanced Manufacturing, Welding, Line-Item Risk Management, Explosives Manufacturing and Testing Capabilities, and the Effectiveness of CAS Improvement Actions. CNS developed its Trend Analysis Problem Prevention (TAPP) Maturation Strategy, leveraged an expert in Human Factor Engineering to develop and automate 84 causal codes. Although in a formative stage, the TAPP and other improvement measures have started to result in actions to address negative performance trends. Continued focus is needed to address information stream stovepipes and improve the ability to analyze and act on proactive information streams.

### Objective 5.3

CNS leadership aggressively and effectively supported IHE Issue Resolution Group by developing mitigations for Holston production and developed new tooling for the W80-4. CNS participated through PRIDE in support of Digital Engineering focus areas including leadership activities necessary to deliver the eRMS Execution Plan. The plan will help drive direction for Digital Transformation across the enterprise. CNS integrated the Quality Evaluation Requirements Tracking System application with the Logistics, Accountability, Planning, and Scheduling system in support of the entire NSE-wide stockpile surveillance program. CNS completed the Nuclear Enterprise Assurance roadmap and provided training to NNSA personnel. CNS facilitated multiple cross-organizational gatherings including the risk workshop for the NNSA Office of Secondary Stage Production Modernization, the Production Integration Summit and the Design Agency/Production Agency collaboration on future technology and infrastructure supporting weapons activities. CNS also partnered with LANL to define requirements and test hardware in support of the B61-13.

### Objective 5.4

CNS' Continuous Improvement culture shifted from individual projects to increased collaborative team projects (an approximately 65 percent increase). CNS conducted 51 Performance Documentation Checklists to train and prepare production employees on Electro-Refining operations and completed

eleven readiness affirmations to support Electro-Refining Readiness. Pantex Organizational Development and Training developed and conducted Reader, Worker, Checker Enhancement training for over 500 Operations Personnel. The overall risk position for Pantex and Y-12 was reduced by $417M (expected monetary value) in FY 2024 and supported the Brazilian Relocation of Disused Sources, which resulted in a body of 101 risks and a risk exposure of $159.9M. The risk was burned down to $0.5M in five months, an acceptable risk position for the work scope.

### Objective 5.5

CNS Senior Leadership took extensive measures to enhance line management's enforcement of disciplined operations standards. These actions were sufficient to support closure of the NNSA management concern on disciplined operations at Pantex. At Y-12, CNS identified the need for additional focus areas to better enable first line supervisors to effectively enforce disciplined operations standards and place disciplined operations performance improvement on a self-sustaining trajectory. The focus areas will also better position CNS leadership to proactively resolve workforce concerns with facility conditions, such as the habitability issues caused by failing sanitary sewer systems. As new disciplined operations and CAS processes mature, they must begin to translate to improved performance on a larger scale with greater consistency.

CNS demonstrated sufficient performance improvement to support closure of NNSA-identified issues with training for Y-12 Production personnel, event management and maintenance work package clarity. CNS leadership's decision to include these and other significant issues on the agenda for the monthly organizational health meetings was critical in establishing the attention and accountability needed to drive to closure these longstanding issues and demonstrate transparency with progress on issues related to nuclear criticality safety and disciplined operations.

### Objective 5.6

CNS accomplished 103 percent of its annual hiring target, which included attention on critical labor categories needed to ensure mission deliverables are met. CNS also continued efforts in attracting and retaining the workforce. For instance, in anticipation of future Y-12 analytical chemistry workload demands, a promotion pathway was created that added supervisor positions and increased salaries to improve retention rates. CNS developed a Workforce Culture Continuum Plan and implemented in-house Leadership Development Programs for aspiring, front-line, mid-level, and senior leaders.

### Key Outcome 5.1

CNS met this Key Outcome by installing network drops at Y-12 enhancing connectivity in key production areas, enabling mobile work solutions and piloting Property Accountability Tracking System/Maintenance and Test Equipment inventory scanning with Android and Windows hardware. In addition, CNS deployed an upgraded Graphical Facility Information Center tamper-indicating application on handheld devices, reducing personnel errors and improving operational efficiency.

CNS met this Key Outcome by installing sensors at Pantex with necessary infrastructure and integrated software, improving reliability through real-time monitoring and enhancing predictive maintenance by detecting issues early. These key milestone accomplishments in digital transformation are aimed at facilitating smart, real-time, and data-driven operations.

**Goal 6: Site Separation**
CNS Amount of At-Risk Fee Allocation: $25,182,671

### Goal 6 Summary

CNS earned a rating of Excellent, and 93 percent of the award fee allocated to this Goal. CNS exceeded almost all of the 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 6.1

CNS accomplished a significant amount of work this year to ensure site separation activities were completed on time to support the NNSA requirement date. CNS leveraged its Governance Board and brought in its Corporate Parent to provide independent feedback and to also conduct a review of the cyber plan to support Step 0. CNS completed over 1,700 action items in FY 2024. Through effective risk management, CNS overcame significant challenges to enable Y-12 and Pantex to be managed independently under separate contracts. This included the timely disentanglement of key business-related information technology systems, revising a substantial number of procedures, and meeting all hiring objectives. CNS successfully implemented the Step 0 Bridging Strategy on schedule and successfully negotiated a Transition Service Agreement with the incoming Pantex contractor to enable the new Pantex contractor to manage and operate the Pantex Plant on November 1, 2024. CNS was collaborative with NNSA and transparently shared data for all work streams associated with Site Separation.

### Key Outcome 6.1

CNS met this Key Outcome. The Site Separation Implementation Plan (SSIP) was revised on schedule to incorporate the Step 0 Bridging Strategy without any negative impacts to the overall Site Separation costs and schedule. Timely completion of this Key Outcome was critical in positioning CNS to overcome the challenges presented by the FY 2024 site separation workload.

### Key Outcome 6.2

CNS met this Key Outcome. CNS successfully completed all activities to facilitate the incoming contractor's management and operation of Pantex. All systems and applications were ready for PanTeXas Deterrence, LLC (PXD) to operate the seven business functions. The Transition Service Agreement was executed on September 27, 2024. The Bridging Service Agreement (BSA) was prepared and shared with PXD reflecting the November 1, 2024, start date. CNS does not foresee any barriers to reach agreement on the BSA. CNS performed simulated payrolls and cutover testing supporting SAP integration and executed third-party readiness validation. CNS hired the necessary FY 2024 IT and cybersecurity positions for site separation with some use of temporary subcontractors, due to difficulty in hiring these highly technical positions. Several enterprise applications were also duplicated across the sites for independent operations.

**CLIN 0002 – UPF Project Management Performance Evaluation**

**Subjective Evaluation Factor 1: Effective Interactions and Timely Responses**
CNS Amount of At-Risk Fee Allocation: $500,000

### Evaluation Summary

CNS earned a rating of Very Good, and 90 percent of the award fee allocated to this SEF. CNS exceeded many of the award fee criteria in this area. During the year, accomplishments greatly outweighed issues, and no significant issues in performance existed.

CNS exceeded expectations with regards to inclusion of NNSA in discussions and decision-making and did so earlier in the process than in past evolutions, including for the Contractor's Estimate at Completion (CEAC) and Integrated Baseline Review (IBR) production. This resulted in more transparency and better Federal understanding of Contractor decision-making, as well as expedited Federal reviews, where required.

CNS continued to address corrective actions with the average age of open Condition Reports (CRs) considered acceptable throughout the year based on established metrics.

CNS' UPF Nonconformance Reports (NCRs) and Field Change Documents (FCDs) met expectations for this stage of project construction based on established metrics. NNSA closely monitored nonconformance growth over the period (representing lesser quality of work and added required rework) with the monthly number processed growing from 61 in April to 133 in September 2024.

CNS provided information and analysis to support the budget cycle, meeting reporting demands as well as recurring "drills" associated with continuing resolution and potential project budget changes.

While CNS' overall responsiveness to NNSA requests was acceptable, one issue encountered was a lack of early communication resulting in a one-month delay in establishing acceptable corrective action plans to resolve the four management concerns from the federal review of the FY 2024 CEAC. Given the prioritization of work to develop and deliver the baseline for NNSA consideration, this delay was especially critical because it diminished the time CNS had to incorporate changes into the final deliverable.

**Subjective Evaluation Factor 2: Effective Integrated Project Management**
CNS Amount of At-Risk Fee Allocation: $250,000

### Evaluation Summary

CNS earned a rating of Good, and 55 percent of the award fee allocated to this SEF. CNS exceeded some of the award fee criteria in this area. During the year, accomplishments slightly outweighed issues, and no significant issues in performance existed.

CNS implemented a change in management structure to better align with the project priorities and this resulted in improved performance, with examples including the establishment of the Glovebox Integrated Team and the integration of Main Process Building (MPB)/Salvage and Accountability Building (SAB) subproject teams to streamline reporting and management oversight.

CNS' Project Assessment and Report System (PARS) input met Federal demands in terms of quality and timeliness and project cost and schedule trend performance was very good to excellent using established metrics.

CNS matured a variety of recurring reports, including the Monthly Dashboard and the Biweekly Meeting deliverable, to ensure provisions for early warning of cost and/or schedule performance were in place on the project.

CNS ensured NNSA staff integration in development of their IBR package, openly identifying changes from the previously submitted CEAC and communicating responses to questions with clarity and transparency.

The variance analysis criterion within this SEF could not be evaluated during this performance period as the Baseline was not established until the end of the period, and therefore insufficient Earned Value Management System (EVMS) data was available to evaluate performance.

CNS did not ensure proper notifications and permissions were received from the Contracting Officer and the Real Estate Contracting Officer prior to purchase and the erection of the semi-permanent tent structure on the UPF construction site. Change Notice for the General Services Contract for this procurement was originally issued on August 5, 2024, with a Not-to-Exceed value of $690,000. The final cost was not definitized during the performance period, unnecessarily presenting risk of a significantly higher final value. This issue (construction without federal approval) resulted in an unauthorized commitment in FY 2024, which required initiation of the ratification process.

Delays and untimely responsiveness to the DOE Office of Project Management (DOE-PM) Discrepancy Reports, risked revocation of CNS' required EVMS certification. CNS developed a Corrective Action Management Plan that was acceptable to DOE-PM; however, the process required recurring NNSA involvement and eventual CNS leadership intervention to define an acceptable set of actions.

Although CNS' management of Corrective Action Requests (CARs) was generally acceptable, resolution of CARs associated with Federal Management Concerns did not meet expectations in terms of timeliness, with 1-7 month delays in forecasted closure for open requests. While acceptable, NNSA expects improved prioritization of actions associated with Management Concerns with the 4 current active related CRs open for an average of 145 days.

**Subjective Evaluation Factor 3: Execution within Cost Parameters**
CNS Amount of At-Risk Fee Allocation: $750,000

### Evaluation Summary

CNS earned a rating of Very Good, and 90 percent of the award fee allocated to this SEF. CNS exceeded many of the award fee criteria in this area and met the overall cost requirements in the aggregate for the evaluation period. During the year, accomplishments greatly outweighed issues, and no significant issues in performance existed.

Because the project baseline was not established until the fourth quarter, CNS was limited in its ability to realize achievements in baseline execution during FY 2024 as was NNSA's ability to measure performance in this regard.

Although an established baseline was absent for most of this performance period, NNSA observed the following accomplishments under this SEF:

- CNS executed slightly above the submitted, but within government consideration baseline values and no management reserve was required.
- CNS delivered the Level 0 Baseline Change Proposal (BCP) and supporting cost documentation on time and with sufficient quality.

- CNS' trend program, representing early cost and schedule impact recognition and accounting, was assessed by NNSA and found to be compliant with Contracting Officer (CO) direction.
- CNS' IBR support in September 2024 was prioritized and transparent.
- Outside the need to re-establish EVMS reporting related to cost performance, CNS' other cost management processes were well established and consistently applied.
- For the limited timeframe available, CNS performed well against the FY 2024 CEAC with a favorable Cost Performance Index.

**Subjective Evaluation Factor 4: Execution within Schedule Parameters**
CNS Amount of At-Risk Fee Allocation: $1,500,000

### Evaluation Summary

CNS earned a rating of Excellent, and 91 percent of the award fee allocated to this SEF. CNS exceeded almost all of the award fee criteria in this area and met the overall schedule requirements in the aggregate for the evaluation period. During the year, accomplishments significantly outweighed issues, and no significant issues in performance existed.

CNS performed positively against the project critical path. CNS performed in line with the December 2023 CEAC deterministic schedule over the course of the year, which is a significant accomplishment. Additionally, CNS achieved a positive Schedule Performance Index (SPI) against the deterministic performance measurement baseline (PMB) over the last two months of the rating period and addressed the FY 2024 CEAC Management Concern for long duration, low resource critical path items, which are in process of final approval and closure.

It is important to note, however, performance against the FY24 CEAC schedule prior to July 2024 was determined based on ancillary metrics such as commodity curves, staffing, and unit rates with EVMS derived SPI only available for the months of July, August, and September. In addition, assessment of planned finishes showing missed finishes for the months of July (4 percent), August (8 percent) and September (33 percent) in increasing number demonstrates erosion of free float and less than acceptable performance for non-critical path activities, which is a key aspect this factor measures.

**Schedule Incentive Fee**
CNS Amount of At-Risk Fee Allocation: $6,500,000

| Milestone | Incentive Fee Available | Incentive Fee Earned |
|---|---|---|
| UPF .01: Low Voltage Power (LVP) Main Process Building (MPB) Switchgear Systems Construction Complete | $975,000 | $975,000 |
| UPF .02: SAB Building HVAC Duct and Support Installations (Group 6) | $975,000 | $975,000 |
| UPF .03: Complete Electrical Activities on Main Casting Knockout Line | $975,000 | $975,000 |
| UPF .04: Complete Installation of 50% of Conduit in MPB | $975,000 | $975,000 |
| UPF .05: Level II Baseline Change Package Submitted for Approval | $2,600,000 | $2,600,000 |
| **Total** | **$6,500,000** | **$6,500,000** |

# ATTACHMENT 1 – FY 2024 Performance Evaluation and Measurement Plan (PEMP)

## 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 Enterprise on stockpile program scope to 1) achieve and maintain program delivery schedules; 2) lower risk to achieving First Production Unit (FPU), Initial Operational Capability (IOC), and Final Operational Capability (FOC); 3) improve manufacturability and supply chain execution; and 4) control costs.

## Objective 1.2

Execute production modernization processes and activities per expectations defined in Implementation Plans to sustain and improve production capabilities, equipment, and infrastructure for 1) War Reserve production; 2) component modernization and production; 3) strategic materials capabilities and production; and 4) improve safety margins, technology maturation strategies, and qualification, and logistics plans collaboratively across the NSE, and 5) improve modeling and analysis capabilities to accurately measure production.

## Objective 1.3

Execute stockpile system maintenance, production, limited-life component exchanges, weapon containers, surveillance, assessment, development studies/capability improvements, weapon program planning/support and dismantlement and disposition activities to meet DoD commitments and deliver the annual stockpile assessment.

## Objective 1.4

Provide the knowledge and expertise to maintain confidence in the nuclear stockpile without additional nuclear explosive testing by developing, maturing, and applying innovative strategies and technologies to sustain a robust stockpile and improve science and engineering capabilities, facilities, and essential skills to support existing and future nuclear security enterprise requirements.

## 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 secure, account for, and interdict the illicit movement of nuclear weapons, weapons-useable nuclear materials, 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.

### K.O. 2.1

Produce High Assay Low Enriched Uranium (HALEU) in accordance with the latest approved Material Management and Minimization (M3) FY 2024 Implementation Plan (Statement of Work) to support NA-23 HALEU customers while sustaining at all times a quantity of HALEU on hand that equals or exceeds the expected demand for the Fiscal Year.

### K.O. 2.2

Complete 3rd Generation Trusted Radiation Identification System (3G-TRIS) measurements at Pantex per the latest approved FY 2024 3G-TRIS Pantex Measurement Campaign project work plan.

### K.O. 2.3

Authorize Additional Approach Exercise (AAE) operations at Pantex, per the latest approved FY 2024 AAE project work plan, by the end of Fourth Quarter FY 2024.

### 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 (including SPP) and technology transfer endeavors. Effectively manage high-impact DOE Work and Plant Directed Research and Development (PORO) 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., PDRD) with Plant strategy and supports DOE/NNSA priorities particularly to improve manufacturing and production technology.

### 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).

### 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 Pantex and Y -12 sites 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 assure mission commitments are met with high-quality products and services while partnering to improve the site infrastructure. Performance will be measured by the contractor's assurance system, NNSA metrics, cost control, business and financial operations, project baselines, implementation plans, assessment, and audit results, etc., with a focus on mission enablement.

### Objective 4.1

Deliver effective, efficient, and responsive Environment, Safety, Health (ES&H), Quality (including weapon quality), and radioactive waste management. Advance DOE/NNSA's climate resiliency and sustainability goals with a focus on maximizing energy efficiency and supporting Carbon Pollution-Free Electricity (CFE) objectives.

### Objective 4.2

Deliver mission capabilities through the planning, design, acquisition, operation, maintenance, recapitalization, and disposition of facilities and infrastructure. Execute design and construction projects to achieve the scope on schedule and on budget.

### Objective 4.3

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

### Objective 4.4

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

### Objective 4.5

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 4.6

Deliver effective, efficient, and responsive information technology systems and cybersecurity that provides for a comprehensive mission and functional area delivery through the execution of the implementation factors established in the NA-IM IT and Cybersecurity Program Execution Guidance, and adaptive day-to-day IT and cybersecurity operations to support, protect, and defend mission/business systems and networks.

### Objective 4.7

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

### Objective 4.8

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 achievement of small business and socioeconomic goals; timely and high-quality subcontract actions; support provided to the NSE Workforce Recruitment Strategy; and strategic management of integrated recruiting, retention, and diversity programs.

### K.O. 4.1

Timely submittal of the CD-3B deliverables by the end of Second Quarter, FY 2024 to support achievement of CD-3B for the Lithium Processing Facility Project.

### K.O. 4.2

Complete the Electrorefining project within the currently authorized spending limit of $111.6M.

### K.O. 4.3

Complete Calciner project Turnover to Operations (CHPT61001) by the end of FY 2024, to support commissioning and readiness.

### K.O. 4.4

Produce a Level 1 Digital Twin of the Uranium Processing Facility for non-Controlled Unclassified Information systems, with a Level 2 Digital Twin of a UPF manufacturing process to aid in future augmented reality training by the end of FY 2024.

## Goal 5

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 CNS 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 Pantex, Y-12 and the Enterprise.

### Objective 5.1

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

### Objective 5.2

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 5.3

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

### Objective 5.4

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. Pursue innovations to increase agility and resilience while controlling costs. Advance the operational capabilities of the NSE by identifying and employing latent capacity existing in the NSE.

### Objective 5.5

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 5.6

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.

### K.O. 5.1

To enable an increasingly mobile workforce and optimize mission efficiency, improve execution and disciplined operations, reduce human error and improve automation of operations through smart electronic procedures and implementation of innovative mobility solutions, and conduct two technology pilots per project plans:(1) Improved connectivity in Production Areas at Y-12 in Alpha 1 and Alpha 5 North to enable mobility through docking stations in high impact areas by September 30, 2024.(2) Improved Reliability and Predictive Maintenance Capabilities at Pantex through installation of Enterprise

Operational Monitoring System (EOMS) software and CompactRIO sensors at the High Explosives Pressing Facility at Pantex by September 30, 2024.

### Goal 6

Successfully execute the cost, schedule, and scope of the separation of Y-12 and Pantex in accordance with the DOE/NNSA priorities and the Bridging Strategy Option B (Step 0) approved September 29, 2023.

### Objective 6.1

Execute activities necessary to prepare Pantex and Y-12 to be managed and operated independently under separate contracts by: i) positioning each site to function autonomously, ii) implementing the Bridging Strategy Option B (Step 0), approved September 29, 2023, and iii) complete the Step 0 activities and requisite work service agreements (e.g., transition service agreements) to enable an incoming contractor to manage and operate the Pantex Plant by September 30, 2024.

### K.O. 6.1

Update and resubmit the SSIP to incorporate Step 0 and reflect any resulting impacts to the Steps 1 and 2 schedule and overall execution costs by November 17, 2023.

### K.O. 6.2

Complete all activities to facilitate an incoming contractor's management and operation of the Pantex Plant by September 30, 2024 including enablement of the incoming contractor to independently:

1. Hire and successfully employ personnel;
2. Execute payroll;
3. Administer benefits, except administration of pension payroll;
4. Procure goods and services via Enterprise Contract Management system;
5. Operate financial accounting systems including complete segregation of data from CNS' records on a go-forward basis;
6. File taxes; and
7. Manage draw-downs and accept funds.

# ATTACHMENT 2 – CLIN 0002 FY 2024 UPF Award Fee Plan (AFP)

**Subjective Performance Evaluation Factors:**

## 1. Effective Interactions and Timely Responses

The Contractor shall ensure project issues identified by NNSA and/or Contractor(s), particularly those affecting safety, security, quality, and project performance, are promptly, effectively, and transparently addressed. The Contractor shall respond to issues identified by NNSA, including but not limited to assessment issues, reviews, and awareness activities within requested timeframes. The Contractor shall notify the appropriate NNSA functional counterpart of Contractor identified issues and take appropriate project or contract actions to adequately address. The Contractor shall support NNSA in project related areas such as budget exercises, quarterly reviews, tours, etc.

The Contractor's Primary Evidence for this Factor:

- Contractor Assurance System (CAS) Resolutions.
- UPF Nonconformance Reports (NCRs)/Field Change Documents (FCDs).
- Responsiveness to requests and meeting Contractor commitments.
- Contractor's Estimate at Completion (CEAC) and Spend Plans (obligations and expenditures) efforts that support budget cycle.

## 2. Effective Integrated Project Management

The Contractor shall sustain a fully integrated project organization focused on executing the UPF Capital Line-Item Project in accordance with the approved project performance baselines, work authorizations, and Contract. The Contractor shall perform and manage in a transparent and quality manner that applies effective cost controls and decisions to stay on schedule. This includes a rightsized integrated organization with personnel empowered to lead change within a disciplined conduct of project management utilizing project management systems, processes and procedures aligned with Department of Energy Order 413.3B, DOE/NNSA guides and industry standards. The Contractor's project management system, personnel and organization are competent, appropriately rigorous, integrated, and agile for large, complex and long duration projects.

Primary evidence for this Factor shall be demonstrated performance that meets and/or exceeds planned productivity and production rates while actively integrating functional inputs into the design, procurement, and construction outputs. The Contractor shall strive to minimize rework, idle time, unit rate changes, and put in controls to eliminate inaccurate earning.
The Contractor's Project Management Control System shall at a minimum:

- Maintain a compliant Earned Value Management System (EVMS) that timely resolves any Corrective Action Requests (CARs) and Discrepancy Reports (DRs).
- Variances and resulting impacts to the projects shall be analyzed at least monthly and appropriate, timely actions shall be taken to mitigate future variances/impacts.
- The trend program shall identify, document, approve and implement working performance baseline changes in a timely and cost-effective manner considering both cost and schedule impacts of each trend.
- Maintain an Integrated Master Schedule that accurately status design, procurement, technology development and integration fabrication, construction, assembly, test activities, commissioning and

- turnover of operations, including critical path schedules, monthly status reports, and PARS uploads on a regular and timely basis.
- Provide timely and thorough analysis and basis to support development of impact based decisions (i.e., date at which decisions need to be made to avoid impact, and recommend prioritization, actions/options, with sufficient time for Government to act.

### 3. Execution within Cost Parameters

The Contractor shall execute Cost Performance efficiently and effectively within the Contractor's 2024 CEAC or until such time NNSA approves the Target Cost and PMB to ensure NNSA mission commitments and Contractor commitments are met with timely, high-quality deliverables, in accordance with DOE Order 413.3B and ANSI/EIA-748, as defined on Contract. For the avoidance of doubt, the ability to earn fee under this Subjective Fee Criterion in no way modifies any provision of the Settlement Agreement or any provision under the Contract as it relates to the method in which fee is earned for the Cost Objective. Thus, this Subjective Performance Evaluation Factor is allocated from $3,000,000 Schedule Objective fee, and not associated with Cost Objective fee. See Settlement Agreement, Section (b)(vii).

Primary evidence for this Factor shall be demonstrated effective cost performance against the 2024 CEAC or the PMB when approved.

The Contractor’s Cost Parameters shall at a minimum:

- Complete authorized scope in accordance with the 2024 CEAC or PMB when approved; provide timely and accurate project cost reporting.
- Manage and maintain a deliverable-based resource-loaded Work Breakdown Structure (WBS) baseline; cost control accounts, work packages and planning packages consistent with industry best practices and standards and compliant with the Contractor’s Earned Value Management System Description (EVM-SD).
- Implement improved change control management of scope, cost, and schedule in accordance with the applicable threshold tables contained in the approved Project Execution Plans and in accordance with DOE orders and the EVM-SD.
- Update Earned Value Management System (EVMS) tools with PMB data in accordance with Contracting Officer (CO) direction.
- Provide early warning accurate cost forecasting and analyze cost performance during each monthly period.
- Accurately measure earnings, e.g., work accomplished; implement controls to identify, report, and correct problems within the next reporting period after problems identified.
- Expend funds and resources that optimally provide maximum benefit to tax payer;
- Generate cost savings opportunities and ways to reduce project costs.
- Demonstrate cost effective procurement and subcontract management.
- Actively mitigate cost growth and performance impacts and only approve Trends after all mitigation steps have been exhausted.

- Execute the Trend program in accordance with April 5, 2023 CO direction, "*UPF Project Usage of Management Reserve*."
- Identify, quantify and mitigate technical, programmatic, schedule, and cost risks.
- Ensure active participation in the Integrated Baseline Review (IBR) and prompt resolution of IBR identified issues to gain NNSA PMB approval.

### 4. Execution within Schedule Parameters

The Contractor shall execute Schedule Performance effectively and efficiently within the approved Contractor's 2024 CEAC or until such time NNSA approves the Integrated Master Schedule (IMS) and PMB to ensure NNSA mission commitments and Contractor commitments are met with timely, high-quality deliverables, in accordance with DOE Order 413.3B and ANSI/EIA-748, as defined on Contract.

Primary evidence for this Factor shall be demonstrated effective schedule performance against the 2024 CEAC or the IMS and PMB when approved.

The Contractor's Schedule Parameters shall at a minimum:

- Complete authorized scope in accordance with the 2024 CEAC or PMB when approved; provide timely and accurate project cost reporting.
- Manage and maintain an IMS to support project management, execution and control; include the total scope of baselined work and identify WBS elements for all activities and milestones; identify interdependencies between project activities/milestones to reflect a credible, logical project sequence; activity durations which are reasonable, measurable, and appropriately detailed for effective management; appropriate activity and resource calendars are employed.
- Update EVMS tools with PMB data in accordance with CO Direction.
- Implement improved change control management of scope, cost, and schedule in accordance with the applicable threshold tables contained in the approved Project Execution Plans and in accordance with DOE orders and the EVM-SD.
- Maintain current project status and credible start/finish forecasts for all to-go tasks and milestones; include project and management controls milestones.
- Ensure there are no changes to NNSA activities without direction from CO.
- Manage a credible critical path and near critical paths as determined by the calculated IMS logic network. This includes prioritization of near-term critical paths and mitigation of delays prior to finalization of critical path reporting.
- Ensure adequate schedule margin has been included and clearly defined;
- Ensure the number of lags/leads and activity constraints is limited and reasonable and within limits established by DOE.
- Schedule should include subcontracted scope detail into schedule/critical path to ensure successful integration. This includes identification of prerequisite work to ensure timely completion of subcontracted scope at a sufficient level of detail to manage required interfaces.
- Hold subcontractors accountable and avoid/mitigate impacting subcontract performance.

- Minimize construction down times; delays to construction activities are minimal, and all delays are proactively identified, tracked, analyzed for patterns, evaluated for quick resolution, and reported expeditiously to NNSA.
- Actively mitigate schedule growth and performance impacts and only approve Trends after all mitigation steps have been exhausted.
- Identify, quantify and mitigate project schedule risks; perform schedule risk analysis to accurately predict the probability of completing on time.
- Ensure active participation in the IBR and prompt resolution of IBR identified schedule issue.