



FY 2022 Performance Evaluation Summary

Contractor: Consolidated Nuclear Security, LLC

Contract: DE-NA0001942

Evaluation Period: October 1, 2021 – September 30, 2022

Basis of Evaluation: Fiscal Year (FY) 2022 Performance Evaluation and Measurement Plan (PEMP)

The FY 2022 PEMP for this contract is available at: <https://www.energy.gov/nnsa/fy22-cns-pemp-final>

The Contract is available at: <https://www.energy.gov/nnsa/nnsa-production-office-contract>

Award Fee Scorecard

<u>Goal</u>	<u>Rating</u>		<u>At Risk Available</u>	<u>Final</u>
	<u>Adjectival</u>	<u>Percent</u>		
Goal-1: Mission Execution: Nuclear Weapons	Very Good	87%	\$24,919,125	\$21,679,639
Goal-2: Mission Execution: Global Nuclear Security	Very Good	90%	\$10,679,625	\$9,611,662
Goal-3: DOE & Strategic Partnership Projects Mission Objectives	Excellent	95%	\$0	\$0
Goal-4: Science, Technology & Engineering (ST&E)	Excellent	95%	\$0	\$0
Goal-5: Mission Enablement	Very Good	83%	\$14,239,500	\$11,818,785
Goal-6: Mission Leadership	Very Good	80%	\$7,119,750	\$5,695,800
Total Award Fee		85.7%	\$56,958,000	\$48,805,886

In addition, the fixed fee and total fee summaries are provided below:

	<u>Available</u>	<u>Final</u>
Fixed Fee	\$11,114,000	\$11,114,000
SPP (Fixed Fee)	\$1,001,000	\$1,001,000
Total Fixed Fee	\$12,115,000	\$12,115,000
Total Fee (Award Fee and Fixed Fee)	\$69,073,000	\$60,920,886

Overall, CNS earned a Very Good (86 percent) rating for FY 2022, exceeding many of the objectives and key outcomes under the PEMP goals, generally meeting overall cost, schedule, and technical performance requirements with accomplishments that greatly outweigh issues.

The Pantex and Y-12 workforce delivered the nuclear deterrent for our nation and allies and demonstrated a strong ability to deliver while working collaboratively across the Nuclear Security Enterprise (NSE) to solve key challenges. In a time of unprecedented workload at both sites with multiple different nuclear weapon modernization programs in various production/planning stages, compounded by managing multiple, complex material modernization and infrastructure projects, the Pantex and Y-12 team achieved deliveries to the Department of Defense and achieved many NNSA nuclear security deliverables while sustaining a safe and secure work environment.

Notable accomplishments include exceeding the baselines for the B61-12 Life Extension Program (LEP) and Canned Subassemblies (CSA) Dismantlements and meeting the baselines for B61-12 CSAs, B61 Disassembly LEP, CSA Dismantlement, and the Y-12 Base Surveillance deliverables. CNS delivered the W88 Alteration (Alt) 370 Initial Operational Capability on time to the U.S. Navy and met all shipments as scheduled. Pantex worked tirelessly through a Pantex Production Optimization (PPO) effort and a successful Issues Resolution Group (IRG) to address planning issues impacting resources, facilities, and tooling required to support a prominent program. Pantex and Y-12 were not successful in meeting the NNSA production requirements for this program and did not fully recover to the re-planned IRG schedule but demonstrated strong fortitude in all areas and produced an impressive number of units each month of the last quarter, reducing the delta to the baseline. Secondary Stage Modernization programs performed well overall. Depleted Uranium Modernization (DUM) advanced new technologies with the Electron Beam Cold Hearth Melter progressing ahead of schedule and Direct Cast continuing to advance on pace. Pantex and Y-12 restarted and completed the first Lithium metal production campaign since 2013 and achieved process qualification. All Lithium Modernization milestones were successfully completed. Pantex and Y-12 performed well with respect to Special Materials, made significant progress with technology maturation, and executed activities to complete Fulmer work to support mission needs.

Pantex and Y-12 executed well as a key stakeholder in support of Material Management and Minimization's international effort to convert the Kyoto University Critical Assembly and to remove all remaining Kyoto University Critical Assembly Highly Enriched Uranium to the United States. Pantex and Y-12 provided operational support to the Nuclear Emergency Support Team's response to Russia's War on Ukraine for radiological monitoring. Pantex and Y-12 shipped material subsamples and submitted nominations in support of the Nuclear Forensics National Nuclear Materials Archive program and met all key performance indicators and supported the execution of the first, full-scale international deployment of the Mobile Uranium Facility. The High Flux Isotope Reactor project milestones and all deliverables and shipments to Naval Reactors were met. Pantex and Y-12 shipped uranium-molybdenum (U-Mo) material yet it did not complete the target number of U-Mo alloy castings and shipments of ingots in support of the U.S. High Performance Research Reactor project.

Safety metrics continue to indicate Pantex's and Y-12's commitment to world class safety. NNSA saw positive performance with Pantex's and Y-12's External Dosimetry Program achieving Department of Energy (DOE) accreditation and reducing internal doses at Y-12 by 19 percent, noteworthy Pantex Safety Basis improvement efforts, significant accomplishments with the Nuclear Criticality Safety (NCS) program completing the NCS Roadmap, and strong performance in protecting sensitive materials and programs. Performance continued to be mixed across infrastructure and line item projects. Challenges associated with project work must be considered in light of the sheer volume and complexity of the Pantex and Y-12 project portfolio. Pantex and Y-12 exceeded expectations specific to cost for the Lithium Processing Facility (LPF) and performed well with the High Explosives Synthesis, Formulation, and Production project meeting CD-3A deliverables. Construction of the Emergency Operations Center and Fire Station met expectations. Three additional projects were either behind schedule or over budget.

Pantex and Y-12 continued to make substantive improvements in Cyber Security and Information Technology (IT) performance, significantly improving the risk posture and demonstrating self-governance across all aspects of the program. Pantex and Y-12 continued to make improvements in disciplined operations through implementation of the FY 2022 Disciplined Operations Council Continuous Improvement Plan. During a time of turnover, Pantex and Y-12 acting leadership performed strongly. Leadership challenges were noted and evidenced by the following: W88 Alt 370 planning issue

and the need for NNSA to establish an IRG to guide improved performance, lack of management attention to degradation of Analytical Chemistry infrastructure, issues with responsiveness to Office of Security Transportation vehicle maintenance activities, and broader planning challenges, resulting in Pantex and Y-12 falling behind schedule for other deliverables. Continuing corporate parent support for providing sufficient leaders and key resources to improve project execution and manage the stockpile modernization programs is required. Specific observations for each Goal are provided in the following pages.

Accomplishments:**Goal 1**

- Achieved the B61-12 System Alt 374 First Production Unit
- Completed ahead of schedule the yearly processing requirements of off-specification materials
- Successfully completed the first lithium metal campaign this period since 2013
- Effectively collaborated with national laboratories and production agencies for secondary stage technology maturation and risk reduction
- Exceeded with its materials modeling effort, which supports decisions on inventory and capacity investments

Goal 2

- Provided excellent support to convert Kyoto University Critical Assembly (KUCA) and remove remaining KUCA Highly Enriched Uranium
- Provided operational support to the Nuclear Emergency Support Team's response to Russia's War on Ukraine for radiological monitoring
- Maintained readiness for personnel, training, and maintenance in support of nuclear forensics operations and participated in related exercises
- Met all Mobile Uranium Facility key performance indicators and supported the execution of the full-scale international deployment
- Provided technical and contractual support for the Uranium Lease and Takeback
- Provided expertise for Response, Performance Evaluation, Insider Threat Mitigation, and Regulations and Inspections for developing and providing numerous training courses and workshops with global partners
- Strengthened U.S. proliferation and nuclear security capabilities by supporting signature collection against high explosive sanitization shots and completing a draft design for the Nuclear Detection and Sensor Testing Center facility at Y-12

Goal 3

- The New Brunswick Laboratory Center completed certified reference material shipments as scheduled, and revised the modeling of a new container, to include multiple scenarios for shipping.
- Met the external milestone of delivery and packaging material support for Naval Reactors.
- Provided significant training expertise in Chemical, Biological, Radiological, Nuclear, and Explosive areas for U.S. Military

Goal 4

- Targeted \$37.6 million and utilized \$36.5 million in funding across Plant Directed Research and Development Projects
- Plant Directed Research and Development Program is meeting all NNSA Expectations (e.g., relevant and transformative research)
- Continued to expand strategic partnerships, university outreach, and technology transfer activities
- Executed government use license for Electronic Derivative Classifier/Reviewing Official software and for the Modulated Tool-Path Chip-Breaking System
- Meeting Manuscript transmittal requirements under the DOE's Public Access Plan

Goal 5

- Received authorization to begin shipping weapons materials/weapons related materials
- Implemented key nuclear safety improvements through execution of the Pantex Safety Basis Vision, including the DNFSB 2019-1 implementation actions
- Completed the Roadmap for Improving the Y-12 Nuclear Criticality Safety Program
- Achieved core IT and Cybersecurity improvement objectives, including resolution of several historical findings
- Safely executed major electrical distribution system outages, many of which required advanced levels of planning and coordination
- Completed more than 60 realty actions, including high-profile properties
- Successfully negotiated two union agreements simultaneously
- Staff recognized for excellence (e.g., Security Manager and NMC&A Security Team of the Year)
- Implemented the new Alternate Emergency Operations Center in downtown Amarillo, Texas
- Executing Lithium Processing Facility project under budget and High Explosives Synthesis, Formulation and Production project met CD-3A deliverables
- Completed critical infrastructure work: flame detection systems, sectionalizing switches, and power distribution

Goal 6

- Demonstrated a proactive approach to enhancing formality and rigor of operations through the FY 2022 Disciplined Operations Council Continuous Improvement Plan
- Senior Leadership continued to focus on IT and Cybersecurity performance
- Tableau Contractor Assurance System Health dashboard provides critical Contractor Assurance System(CAS) data on issues management and assessment performance
- Completed 63 Value Stream Element Teams improvements impacting mission work
- The enterprise risk management process was benchmarked by Sandia National Laboratories and Lawrence Livermore National Laboratory

Issues:Goal 1

- Did not meet W88 Alt 370 Program Control Document production requirements
- Did not meet Warhead Dismantlement deliverables at Pantex

Goal 2

- U.S. High Performance Research Reactor project milestones missed due to delays in machine specifications due to staffing shortages and Analytical Chemistry Organization's capacity issuesDid not fully meet the Y-12 shipping requirements specified in a DOE Interagency Agreement

Goal 5

- Significant cost and schedule growth and execution performance on Line Items and Major Items of Equipment
- Significant cost and schedule growth and execution performance on Infrastructure and Security projects

Goal 6

- Due to insufficient facility, staffing and tooling resources, multiple program areas were impacted,
- Lack of Management attention to degradation of the Y-12 Analytical Chemistry Infrastructure
- Continued focus on corporate parent support for providing sufficient leadership staffing for volume of work
- Responsiveness to the Office of Secure Transportation vehicle maintenance