



Fiscal Year (FY) 2023 Performance Evaluation Summary

Contractor: Consolidated Nuclear Security, LLC

Contract: DE-NA0001942

Evaluation Period: October 1, 2022 – September 30, 2023

Basis of Evaluation: FY 2023 Performance Evaluation and Measurement Plan (PEMP)

The FY 2023 PEMP for this contract is available at: <https://www.energy.gov/nnsa/articles/fy2023-strategic-performance-evaluation-and-measurement-plan-consolidated-nuclear>

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

Award Fee Scorecard

Goal	Rating		At Risk Available	Final
	Adjectival	Percent		
Goal-1: Mission Delivery: Nuclear Weapons	Excellent	93%	\$ 33,809,436	\$31,442,775
Goal-2: Mission Delivery: Global Nuclear Security	Excellent	95%	\$ 8,452,359	\$ 8,029,741
Goal-3: Mission Innovation: Advancing Science and Technology	Excellent	91%	\$ 4,226,179	\$ 3,845,823
Goal-4: Mission Enablement	Very Good	80%	\$ 21,130,897	\$16,904,718
Goal-5: Mission Leadership	Very Good	90%	\$ 16,904,718	\$15,214,246
Goal-6: Site Separation	Excellent	91%	\$ 22,539,624	\$20,511,058
Total Award Fee		90%	\$107,063,213	\$95,948,361

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

	Available	Final
Fixed Fee	\$ 0	\$ 0
SPP (Fixed Fee)	\$ 1,688,554	\$ 1,688,554
Total Fixed Fee	\$ 1,688,554	\$ 1,688,554
Total Fee (Award Fee and Fixed Fee)	\$108,751,767	\$ 97,636,915

Overall, CNS earned a Very Good (90 percent) rating for FY 2023, 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 outweighed issues.

The Pantex and Y-12 workforce delivered the nuclear deterrent for our nation and allies and worked collaboratively across the Nuclear Security Enterprise to solve key challenges. In a time of geopolitical turmoil and unprecedented workload at both sites with five different nuclear weapon modernization programs in various production and planning stages, compounded by managing multiple complex material modernization and infrastructure projects, and planning for a site separation, the Pantex and Y-12 team achieved all required deliveries to the Department of Defense and exceeded almost all of the NNSA nuclear weapon deliverables while sustaining a safe and secure work environment.

Notable accomplishments included exceeding the baseline for B61-12 Life Extension Program (LEP) assembly, B61-12 LEP Canned Subassembly, Base Surveillance at Pantex and Y-12, W88 Disassemblies, and Warhead Dismantlements. CNS met the baseline for W76-1 Rebuilds, W88 Alteration (ALT) 370 assembly, and B61 Disassembly LEP. Secondary Stage Modernization programs performed well. Uranium Modernization, Depleted Uranium Modernization, Lithium Modernization and Special Materials (SM) are

all continuing to progress well. The FY 2023 Lithium Electrolytic Cell campaign resulted in producing 125 percent of the planned product and was complete ahead of schedule. Direct Chip Melt Bottom Loading Furnace met expected milestones. Metal production and metal working milestones were met despite operational events. CNS significantly improved safety by placing the Oxide Conversion Facility into cold standby and performed exceptionally in modeling strategic material supply/demand and production processes. CNS did not meet deliverables for milestones for Technology Integration, Electrorefiner, and the Calcliner.

CNS had several significant accomplishments and exceeded deliverables in multiple areas for Global Nuclear Security. High Assay Low Enriched Uranium castings and High Assay Low Enriched Uranium (HALEU) downblending surpassed the FY 2023 deliverable, Downblend Offering for Tritium (DBOT) shipment quantities exceeded baseline goals, and CNS played a critical role in the removal of weapons-grade nuclear material from two countries, resulting in permanent threat reduction. CNS effectively responded to safety events during the year, adapting to changes, and delivering. CNS exceeded many objectives with science and technology and completed all Naval Reactors (NR) campaign shipments on schedule and exceeded the NR material forecast.

CNS safety metrics exceeded their targets in all categories this year. CNS resumed Weapons Material/Weapons Related Material and Low Level Radioactive Waste shipments, reducing the backlog of both streams. CNS continued to improve the safety basis quality, consistency and control set, and continued to support the Pantex Safety Basis Redesign initiative.

CNS mission enablement was challenged as a result of several events and also with general project performance. Cost growth across the project portfolio is concerning. CNS completed the new Emergency Operations Center, Fire Station, and Flexible Support Facility.

CNS business and legal programs continue to perform strongly and of note hiring of critical skills and retention of experienced personnel has improved, which is essential for success in separating the sites. CNS completed a number of multi-year, information technology (IT) and cybersecurity improvement efforts, which returned two of three Cybersecurity Program Topical areas to an acceptable level of performance. CNS also made progress in completing the Formal Authorization corrective actions with continued work and diligence still warranted in this area. CNS Leadership continued to follow through on the commitment to improve Y-12 Analytical Chemistry Organization performance; however, continued focus is essential to identify and resolve latent safety management program weaknesses and sufficiently reduce mission risk from infrastructure failures. In response to significant safety events at Y-12 and with NNSA feedback, CNS leadership identified conduct of operations, the Contractor Assurance System, and Nuclear Criticality Safety (NCS) infractions as its highest priority issues and provided a path forward with measures to improve the programs. The CNS briefing that communicated these priorities demonstrated an understanding of the need for substantive improvement and accountability at the highest levels of leadership. Continued leadership commitment will be required to achieve the desired end state performance. CNS met or exceeded all deliverables for site separation, to include an approved Site Separation Implementation Plan and Bridging Strategy that enables NNSA to meet the October 1, 2024, planned transition to two separate M&O contracts. CNS maintained a solid transparent relationship with NNSA on all site separation activities.

Specific observations for each Goal are provided in the following pages.

Accomplishments

Goal 1

- Recovered to the Program Control Document (PCD) for W88 Disassembly for Alteration (DisALT) and exceeded production baseline; recovered to the PCD for assembly ahead of schedule
- Exceeded the B61-12 LEP assembly baseline at Pantex
- Recovered W76-1 rebuilds at Pantex
- Completion of W88 ALT 940 First Production Unit (FPU) at Pantex ahead of schedule.
- Completed all FY 2023 B61-12 LEP Y-12 CSA deliverables
- Placed 9212 Oxide Conversion Facility into cold standby

Goal 2

- Met High Performance Research Reactor deliverables
- Exceeded HALEU production targets
- Exceeded Low Equity Discards
- Exceeded Nuclear Nonproliferation Down-Blend Offering for Tritium deliverable
- Exceeded HALEU Scrap Recovery shipment quantities
- Exceeded ES-3100 production unit procurement
- Performed two HEU removal campaigns

Goal 3

- Exceeded milestones for both the High Flux Isotope Reactor and National Institute of Standards Technology Reactor Oxide Production projects, exceeded Li-6 shipments for TPBARs production and co-authored an intelligence report published in the Presidential Daily Briefing book
- Program is meeting Manuscript transmittal requirements under the DOE's Public Access Plan.
- Program executed a Cooperative Research and Development Agreement for HALEU deconversion and received 16 patents

Goal 4

- Continued to implement key nuclear safety improvements through execution of the Pantex Safety Basis Vision, including completion of the Defense Nuclear Facility Safety Board 2019-1 implementation actions
- Significantly reduced fire protection compensatory measures and trouble signals at Pantex
- CNS received the Green Fleet Award for Demonstrating outstanding leadership, helping the Department achieve the Administrations' goal of transitioning to 100 percent zero emission vehicles by 2035
- CNS completed the Enterprise Plan for Improving IT and Cybersecurity corrective actions by fiscal year end, meeting their multi-year commitment to NNSA
- Significantly reduced Recapitalization and Maintenance and Operations carryover
- Completed key projects including Bays and Cells portfolio work, Flexible Support Facility, Fire Station, and Emergency Operations Center
- Gas Lab project achieved critical decision (CD)-1 and on track for Special Materials Facility and Calciner

Goal 5

- Responded to several significant safety events at Y-12 by taking appropriately conservative action to pause operations and address immediate risks
- Management attention to Contractor Assurance System, Disciplined Operations, and nuclear criticality safety infraction performance demonstrate an understanding of the need for substantive improvement and accountability at the highest levels of leadership

- Significant event investigation following April 14, 2023, Y-12 NCS occurrence was thorough and appropriately self-critical

Goal 6

- CNS submitted and supported all site separation deliverables predefined by the contract on or ahead of schedule
- CNS supported activities necessary to prepare Pantex and Y-12 to be managed and operated independently under separate contracts by refining separation planning approaches and developing and executing detailed plans for key work streams/functional areas
- CNS continued to ensure resources to support site separation activities were available, engaged and making strong progress to achieve site separation goals

Issues

Goal 1

- Missed Direct Chip Melt and Direct Electrolytic Reduction production modernization project milestones

Goal 3

- Poor housekeeping in a weld booth contributed to a fire event that impacted R&D tasks in support of production and project work

Goal 4

- Experienced an egregious Nuclear Criticality Safety (NCS) occurrence at Y-12, which identified issues with NCS infractions due to personnel errors and NCS control implementation. CNS responded appropriately to the severity of the event and continues to aggressively work actions to prevent recurrence
- Experienced several fire events at Y-12 that resurfaced longstanding housekeeping and combustible loading challenges
- Two Unsatisfactory Reports issued against CNS for the B-61 program
- The High Explosive Science and Engineering project will breach authorized total project cost
- Experienced issues with the West End Protected Area Reduction project, resulting in substantial cost increases and schedule delays
- The Electrorefining project missed its CD-4 documentation submittal

Goal 5

- Y-12 conduct of operations and activity-level work planning and control performance has not achieved the desired level of consistency
- Contractor Assurance System is not fully effective in identifying and arresting negative performance trends before they result in a significant event