



## FY2022 Performance Evaluation Summary

**Contractor:** National Technology and Engineering Solutions of Sandia, LLC

**Contract:** DE-NA0003525

**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-ntess-pemp-final>

The Contract is available at: <https://www.energy.gov/nnsa/sandia-national-laboratories-contract>

### Award Fee Scorecard

Goal	Rating		At Risk Available	Final
	Adjectival	Percent		
Goal-1: Mission Execution: Nuclear Weapons	Very Good	87%	\$3,621,304	\$3,150,534
Goal-2: Mission Execution: Global Nuclear Security	Excellent	95%	\$905,326	\$860,060
Goal-3: DOE & Strategic Partnership Projects Mission Objectives	Excellent	100%	\$0	\$0
Goal-4: Science, Technology & Engineering (ST&E)	Excellent	100%	\$0	\$0
Goal-5: Mission Enablement	Very Good	89%	\$2,715,978	\$2,417,220
Goal-6: Mission Leadership	Very Good	90%	\$1,810,652	\$1,629,587
<b>Total Award Fee</b>		<b>89%</b>	<b>\$9,053,260</b>	<b>\$8,057,401</b>

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

	Available	Final
Fixed Fee	\$22,633,150	\$22,633,150
SPP (Fixed Fee)	\$10,350,000	\$10,350,000
Total Fixed Fee	\$32,983,150	\$32,983,150
<b>Total Fee (Award Fee and Fixed Fee)</b>	<b>\$42,036,410</b>	<b>\$41,040,551</b>

NTESS earned an overall rating of Very Good (89 percent) 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. NTESS earned Excellent ratings for Goals 2, 3, and 4, and Very Good ratings for Goals 1, 5, and 6. Specific observations for each goal are provided in the following pages.

#### Accomplishments:

##### Goal 1

- Applied innovative science and engineering capabilities to increase confidence in performance and survivability of nuclear deterrence systems.
- Effectively managed the Stockpile Research, Technology, and Engineering program, producing key experimental data to support the annual NNSA certification.

- Increased production output of War Reserve components by 26 percent compared to last year's output, which supported 11 technology areas and more than 50 major components.
- Successfully achieved the W88 ALT370 Design Review and Acceptance Group, Major Assembly Release, Phase 6.6, and W88 ALT 370 JTA8 FPU.
- Successfully demonstrated a technical basis to justify realignment of the W80-4 first production unit (FPU) schedule while maintaining United States Air Force delivery requirements for the W80-4.
- Contributed to the achievement of the B61-12 FPU and Phase 6.6 authorization through technical and system integration efforts.
- Completed W93 milestones ahead of schedule, enabling the early transition to Phase 2.

#### Goal 2

- Provided outstanding support to the Office of International Nuclear Security, particularly in the areas of physical protection and countering unmanned aerial systems.
- Provided exceptional expertise in developing radiological response capabilities and implementing radiological security enhancements and integrated security design solutions.
- Strengthened U.S. nonproliferation and nuclear security capabilities by developing concepts for arms control monitoring and verification research and development (R&D).
- Continued to advance U.S. nuclear detonation detection capabilities with the integration of Global Burst Detector payloads.
- Advanced the application of the Transport Remote Monitoring Sealing Array system to provide chain of custody capability for over-the-road transportation operations.
- Exceeded expectations in supporting the Nuclear Emergency Support Team (NEST) response to Russia's War on Ukraine.

#### Goal 3

- Leveraged expertise in crude oil properties and underground storage to support the emergency drawdown of 180 million barrels of crude oil from the Strategic Petroleum Reserve.
- Significantly exceeded the expected number of Foreign Nuclear Weapons Intelligence Initiative assessments by 40 percent.
- Effectively managed NNSA resources across the laboratories to address many of the Nation's most challenging national security projects through SPP.
- Successfully delivered a hypersonic glide vehicle that was launched on schedule using a commercially developed launch vehicle.
- Completed security and command and control system refreshes to four Department of Defense (DoD) capabilities, enhancing reliability, information assurance, and physical security capabilities.
- Successfully collaborated with Honeywell Federal Manufacturing & Technology (FM&T) in manufacturing the Arming Fuzing Assembly Flight Test Unit (FTU) and the Joint Test Assembly telemetry hardware.

#### Goal 4

- Demonstrated the first high-speed computational optics spectral imager for increased imaging fidelity for experiments and tests.
- Discovered, developed, and demonstrated a new concept for transmitting energy and information.
- Earned five R&D 100 awards.
- Increased scientific understanding of energy storage device performance by demonstrating the application of pressure, vacuum, and relative humidity to accurately replicate natural aging in batteries.
- Facilitated mission relevant cooperative R&D through Partnerships and Technology Transfer programs that enhanced technical competencies across the laboratories.
- Successfully managed a new Technology Transfer for Mission program that enabled the adoption and commercialization of NTESS-developed technologies in support of high-level national security missions.

**Goal 5**

- Successfully prepared for and executed the first experiments at Annular Core Research Reactor (ACRR) requiring safety significant and safety class containment in over 20 years
- Successfully removed and transported nine expended plutonium Isentropic Compression Experiment (Pu-ICE) assemblies from Sandia National Laboratories (SNL) to Los Alamos National Laboratory (LANL)
- Recognized by DOE for its outstanding commitment to small business development and maximizing small business opportunities with the Mentor of the Year, Protégé of the Year, and Small Business Program Manager of the Year awards
- Achieved a total strategic cost saving rate of 8.22 percent, far exceeding the Supply Chain Management Center (SCMC) goal of 4 percent
- Achieved a small business rate of 66 percent, exceeding the annual small business goal by 6 percent as well as exceeding goals in all five socio-economic categories
- Took steps to stem the historically high attrition of critical skill employees by implementing new retention programs for cybersecurity and nuclear weapons work
- Completed the Final Design Review of the Scorpius Injector design ahead of schedule, enabling CD-2/3 approval and procurement of long-lead items
- Provided critical support enabling NNSA to execute an Interagency Agreement with Western Area Power Administration (WAPA) to acquire power for NNSA New Mexico sites (SNL and LANL), Los Alamos County, and Kirtland Air Force Base, achieving an SNL cost avoidance of approximately \$450M over a 30-year period

**Goal 6**

- Displayed leadership in criticality safety by supporting the DOE/NNSA enterprise and university/international partners through numerous criticality safety assessments, training courses, and experiments
- Demonstrated enterprise leadership in advancing fraud risk management and internal controls through its efforts in completing Phase III of the Department of Energy and Office of Management and Budget A-123 Site-Centric Program Pilot
- Embarked on strategically positioning the laboratories to develop and strengthen capabilities that leverage transformative science, technology, and engineering in anticipation of future nuclear and national security threats
- Initiated a novel Labs-wide Rally Cry to re-emphasize the NNSA core missions, attracting critical talent to support the nuclear deterrence modernization programs
- Avoided Pantex assembly delays by working collaboratively with FM&T to respond to emerging production issues, also accelerated the FPU for the updated Trajectory Stronglink/Fireset Control Unit (TSL/FCU) and Electronics Assembly design, supporting U.S. Air Force Initial Operational Capability (IOC)
- Achieved significant sustainable progress in enhancing formality and rigor of operations at Technical Area 5 (TA-V)

**Issues:****Goal 1**

- Did not consistently meet product delivery schedules and programmatic milestones for pre-Phase 6.6 modernization programs and the Mobile Guardian Transporter.

**Goal 2, Goal 3, and Goal 4**

- None

**Goal 5**

- Experienced multiple issues with project execution, resulting in schedule delays, cost increases, and project cancellations.

- Realized West End Protected Area Project at Y-12 project cost increases and schedule delays caused by a combination of design challenges, subcontractor default, coordination and planning issues with Consolidated Nuclear Security, LLC, and changing field conditions.

Goal 6

- Did not consistently demonstrate performance results through the institutional utilization of its performance assurance system.
- Did not proactively respond to emerging program execution issues and collaborate early with NNSA to mitigate impacts to the nuclear deterrence mission.