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**Fiscal Year 2022**  
**DOE/NNSA Strategic Performance Evaluation and Measurement Plan (PEMP)**

**Lawrence Livermore National Security, LLC**

**MANAGEMENT AND OPERATION OF THE**

**Lawrence Livermore National Laboratory**

**Contract Number: DE-AC52-07NA27344**

**Performance Evaluation Period: October 01, 2021 through September 30, 2022**

  
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Date 7/22/21  
Kimberly S. Budil  
President  
Lawrence Livermore National  
Security, LLC

  
\_\_\_\_\_  
Date 7/22/21  
Peter D. Rodrik  
Field Office Manager  
Livermore Field Office  
National Nuclear Security Administration

  
\_\_\_\_\_  
Date 07/21/2021  
Linda R. Bauer  
Vice President  
Lawrence Livermore National  
Security, LLC

  
\_\_\_\_\_  
Date 7/23/21  
Michael V. Armatis  
Contracting Officer  
Livermore Field Office  
National Nuclear Security Administration

# **FY 2022 PERFORMANCE EVALUATION AND MEASUREMENT PLAN**

## **DOCUMENT REVISION HISTORY**

<b>Revision</b>	<b>Date</b>	<b>Change Description</b>
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## INTRODUCTION

Lawrence Livermore National Laboratory is a Federally Funded Research and Development Center owned by the United States Government, under the custody of the Department of Energy (DOE), herein referenced as "Laboratory" and is managed and operated by Lawrence Livermore National Security, LLC (LLNS). Pursuant to the terms and conditions of the Contract, this NNSA Performance Evaluation and Measurement Plan (PEMP) sets forth the criteria by which NNSA will evaluate LLNS' performance and upon which NNSA shall determine the amount of award fee earned. The available award fee amounts for FY 2022 are specified in Section B, *Supplies or Services and Prices/Costs*, of the Contract. This PEMP promotes a strategic Governance and Management Framework in support of the NNSA's Strategic Vision. The significant challenges of this Vision require LLNS performance in meeting mission milestones of key mission objectives and support in addressing significant management challenges identified by NNSA.

## PERFORMANCE BASED APPROACH

The performance-based approach evaluates LLNS' performance through a set of Goals. Each Goal, and its associated Objectives and Key Outcomes (KOs), will be measured against authorized work in terms of cost, schedule, and technical performance, and the respective outcomes, demonstrated performance, and impact to the DOE/NNSA mission.

## MISSION

LLNS shall manage, operate, protect, sustain and enhance the Laboratory's ability to function as a NNSA Multi-Program Laboratory, while assuring accomplishment of the Laboratory's primary mission - strengthening the United States' security through development and application of world-class science and technology to enhance the nation's defense and to reduce the global threat from terrorism and weapons of mass destruction. LLNS shall, with the highest degree of vision, quality, integrity and technical excellence, maintain a strong, multi-disciplinary scientific and engineering base responsive to scientific issues of national importance in addition to national security responsibilities, including broadly based programs in such areas as the environment, national infrastructure, health, energy, economic and industrial competitiveness, and science education.

## MISSION PERFORMANCE

LLNS is accountable for and will be evaluated on successfully executing program work in accordance with applicable DOE/NNSA safety and security requirements consistent with the terms and conditions of the Contract. Protection of worker and public safety, the environment, and security are essential and implicit elements of successful mission performance. Accordingly, LLNS shall plan safety and security improvements and accomplishments as an integral component of mission performance contributing to meeting the affected programmatic Goals. The model for this PEMP is to rely on LLNS leadership to use appropriate DOE contractual requirements and recognized industrial standards based on consideration of assurance systems, and the related measures, metrics, and evidence. **LLNS is expected to manage in a safe, secure, efficient, effective, results-driven manner, with appropriate risk management and transparency to the government, while taking appropriate measures to minimize costs that do not compromise core objectives and mission performance.** Products and services are expected to be delivered on-schedule and within budget.

## INNOVATIVE SOLUTIONS

LLNS will recommend innovative, technology/science-based, systems-engineering solutions to the most challenging problems that face the nation and the globe. LLNS will also provide evidence to support programmatic needs and operational goals tempered by risk. DOE/NNSA will take into consideration all major functions including safety and security contributing to mission success. In addition, DOE/NNSA expects LLNS to recommend and implement innovative business and management improvement solutions that enhance efficiencies.

## CONSIDERATION OF CONTEXT IN PERFORMANCE EVALUATION

The evaluation of performance will consider “context” such as unanticipated barriers (e.g., budget restrictions, rule changes, circumstances outside LLNS’ control), degree of difficulty, significant accomplishments, and other events that may occur during the performance period. A significant safety or security event may result in an overall limitation to adjectival ratings. Such impacts may be balanced by the response to the incident, and by other initiatives to improve overall safety or security performance. LLNS is encouraged to note significant safety and security continuous improvements.

## PERFORMANCE RATING PROCESS

DOE/NNSA will review performance throughout the performance evaluation period and provide tri-annual feedback to LLNS highlighting accomplishments and/or issues. At the end of the performance evaluation period, an evaluation of LLNS’ performance will be completed based on contractor oversight against the criteria in the PEMP. Sources of oversight data include, but are not limited to, DOE/NNSA formal assessments, contractor self-assessments, internal and external audits, inspections, program and project reviews, operational awareness activities, contractor assurance system, etc.

This evaluation will be documented in a Performance Evaluation Report (PER) and will include the performance ratings and award fee earned for the subject performance evaluation period. Objectives and KOs (if any) will be assessed in the aggregate to determine an adjectival performance rating for each Goal. DOE/NNSA will consider LLNS’ end of year self-assessment report in the performance evaluation. The performance ratings will be determined in accordance with FAR 16.401(e) (3) yielding ratings of Excellent, Very Good, Good, Satisfactory, or Unsatisfactory. The Goals will then be considered in the aggregate to provide an overall rating and percentage of award fee earned for the contract. Notwithstanding the overall strategic framework, any significant failure in any goal may impact the overall rating and award fee earned. **Dollar values contained in the PEMP are provided as guidelines for developing a recommendation of fee allocation to the Fee Determining Official (FDO). The final determination as to the amount of fee earned is a unilateral determination made by the FDO.**

LLNS may request a face-to-face meeting with the FDO to highlight its strategic performance at the end of the performance evaluation period. This meeting should occur within the first two weeks after the end of the period.

## PEMP CHANGE CONTROL

It is essential that a baseline of performance expectations be established at the beginning of the performance period to equitably measure performance, and that changes to that baseline are carefully managed. Any change to the PEMP requires concurrence by the appropriate program office and the NNSA Senior Procurement Executive prior to the Field Office Manager and Contracting Officer signatures. While

recognizing the unilateral rights of DOE/NNSA as expressed in the contract terms and conditions, bilateral changes are the preferred method of change whenever possible.

**FEE ALIGNMENT AND “AT-RISK” AWARD FEE ALLOCATION**

**This table is provided for information only and does not change the terms and conditions of the contract.** “At-Risk” Award Fee (AF) is applied to goals 1, 2, 4, 5, and 6 and Fixed Fee (FF) is applied to goals 3 and 4. Goal 3 displays total estimated fee attributable to DOE work. The sum of dollars available for goals 1, 2, 4 (AF), 5, and 6 equals total AF for both DOE and NNSA work. The dollars available for goal 4 is the total FF for both DOE and NNSA work. All goals, including those with FF, will receive an adjectival assessment as a part of the Corporate Performance Evaluation Process (CPEP).

**Fixed Fee (FF), Award Fee (AF), SPP Fixed Fee (SPP FF)**

<b>Goal</b>	<b>Fee Amount</b>	<b>Fee Type</b>
<b>Goal-1:</b> Mission Execution: Nuclear Weapons	\$15M	Award Fee (At-Risk)
<b>Goal-2:</b> Mission Execution: Global Nuclear Security	\$2.1M	Award Fee (At-Risk)
<b>Goal-3:</b> DOE and Strategic Partnership Projects (SPP)	*DOE-\$8.28M SPP - \$8.80M	*DOE - (\$2.48M FF + \$5.80M AF) SPP - Fixed Fee
<b>Goal-4:</b> Mission Execution: Science, Technology, and Engineering (ST&E)	\$22.7M	\$18.4M FF + 4.3M AF
<b>Goal-5:</b> Mission Enablement	\$12.9M	Award Fee (At-Risk)
<b>Goal-6:</b> Mission Leadership	\$8.6M	Award Fee (At-Risk)

*\*Display of total estimated fee attributable to DOE work.*

**UNEARNED FEE**

DOE/NNSA reserves the right to withdraw and redistribute DOE/NNSA unearned fees.

**AWARD TERM INCENTIVE (If applicable)**

To be eligible to earn available award term LLNS must earn an adjectival score of Very Good or better in four of the six Goals and receive no adjectival score of Satisfactory or lower in any Goal, and further, meet any additional requirements as specified in LLNS’ contract.

## **Goal-1: Mission Execution: Nuclear Weapons**

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.

### **Objectives:**

- Objective-1.1: Complete program work requirements and activities that 1) comply with an effective and established site-wide quality assurance program that integrates weapon quality requirements; 2) maintain a resilient supplier base; 3) improve modeling and analysis capabilities to accurately measure production; 4) improve production capability, material accountability, quality, and cost per unit work performance; 5) implement measures for improving responsiveness and resilience of required production capabilities; 6) meet transportation requirements; and; 7) execute design, development, production and delivery in a safe, secure, reliable, and cost effective environment.
- Objective-1.2: Execute production modernization processes and activities to sustain and improve production capabilities, equipment, and infrastructure for 1) War Reserve (WR) production site-to-site interface controls; 2) components (primary, secondary, non-nuclear) modernization and production; 3) strategic materials capabilities and productions; and 4) improve safety margins, technology maturation strategies, and qualification, logistics, and security plans collaboratively across the NSE.
- Objective-1.3: 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.
- Objective-1.4: 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-1.5: Work as a team on stockpile modernization 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.

### **Key Outcome(s):**

- KO 1.1: TRIAD, LLNS, NTESS, and MSTs will collaborate to execute subcritical experiments to provide data relevant to improving our predictive capability and for certification of the current and future stockpile, and will collaborate to execute the Enhanced Capabilities for Subcritical Experiments sub-program, including the U1a Complex Enhancements Project, in accordance with negotiated outcomes.

- KO 1.2: LLNS will provide weapon code capabilities to the Complex to support annual assessments, Significant Finding Investigations (SFIs), LEP qualification and certification, and the Stewardship Capability Delivery Schedule (SCDS).
- KO 1.3: LLNS will manage the El Capitan Non-Recurring Engineering and Build contracts and provide support to Triad and NTESS on their Crossroad and Vanguard 2 contracts.
- KO 1.4: TRIAD, LLNS, NTESS, and MSTs will collaborate to execute complimentary aging/production science experiments to provide data relevant to assessing the longevity of the current stockpile and planning for the future stockpile (e.g. requirements definitions, production efficiencies).

## **Goal-2: Mission Execution: Global Nuclear Security**

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.

### Objectives:

- Objective-2.1: Support efforts to secure, account for, and interdict the illicit movement of nuclear weapons, weapons-useable nuclear materials, and radiological materials.
- Objective-2.2: Support U.S. national and nuclear security objectives in reducing global nuclear security threats through the innovation of unilateral and multi-lateral 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 in order to strengthen the nonproliferation and arms control regimes.
- Objective-2.5: Sustain and improve nuclear counterterrorism and counterproliferation science, technology, and expertise; execute unique emergency response missions, implement policy in support of incident response and nuclear forensics missions, and assist international partners/organizations.

### Key Outcome(s):

- KO 2.1: Develop and implement plans to support the Stabilization program. Support the National Nuclear Material Archive and Bulk Special Nuclear Material Analysis Program in accordance with task plans. Support nuclear forensics operations, including providing subject matter expertise in the development of methods, techniques, and policy. Support Nuclear Threat Science program efforts for increased experimental activities.

KO 2.2: Maintain technical capabilities and certification requirements to support U.S. compliance with the Chemical Weapons Convention (CWC) and to support international investigations of alleged use of chemical weapons as a designated laboratory for the Organization for the Prohibition of Chemical Weapons.

### **Goal-3: DOE and Strategic Partnership Projects Mission Objectives**

Successfully execute high-impact work for DOE and Strategic Partnership Project Mission Objectives safely and securely. Demonstrate the value of the work in addressing the strategic national security needs of the U.S. Government.

#### Objectives:

- Objective-3.1: 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.
- Objective-3.2: Pursue and perform high-impact Strategic Partnership Projects that strategically integrates with the DOE/NNSA mission, and leverages, sustains and strengthens unique science and engineering capabilities, facilities, and essential skills in support of national security mission requirements.

#### Key Outcome(s):

### **Goal-4: Mission Execution: Science, Technology, and Engineering (ST&E)**

Successfully advance national security missions and advance the frontiers of ST&E. Effectively manage Site Directed Research and Development (SDRD) and Technology Transfer, etc. in a safe and secure manner in accordance with DOE/NNSA priorities, Work Authorizations, and Execution/Implementation Plans.

#### Objectives:

- Objective-4.1: Execute a research strategy that is clear and aligns discretionary investments (e.g., SDRD with Laboratory strategy and supports DOE/NNSA priorities.)
- Objective-4.2: Ensure that research is relevant, enables the national security missions, and benefits DOE/NNSA and the nation.
- Objective-4.3: Ensure that research is transformative, innovative, leading edge, high quality, and advances the frontiers of science and engineering.
- Objective-4.4: Maintain a healthy and vibrant research environment that enhances technical workforce competencies and research capabilities.
- Objective-4.5: 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).

Key Outcome(s):

### **Goal 5: Mission Enablement**

Effectively and efficiently manage the safe and secure operations of the Laboratory in accordance with cost, scope and schedule while maintaining an NNSA enterprise-wide focus; demonstrating accountability for mission performance and management controls; successfully executing cyber, technical, informational, and physical security requirements, and 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.

Objectives:

- Objective-5.1: Deliver effective, efficient, and responsive Environment, Safety, Health and Quality (ESH&Q) and radioactive waste management.
- Objective-5.2: Execute design and construction projects to achieve the scope on schedule and on budget with no significant quality or safety issues while partnering with NNSA to achieve balanced cost and schedule risk through effective acquisition approaches and processes.
- Objective-5.3: Deliver effective, efficient, and responsive safeguards and security.
- Objective-5.4: Manage NNSA infrastructure to maintain, operate and modernize DOE/NNSA facilities, infrastructure, and equipment in an effective, energy efficient, resilient manner that minimizes operational, security, and safety risks. Improve site conditions via: 1) disposition of material and infrastructure in accordance with established priorities 2) increasing the viable use of facilities and equipment, 3) delivering cost efficient improvements, and 4) focus on the amount of predictive/preventive maintenance work to reduce risks of disruption to mission operations. Demonstrate progress to advance the Department of Energy's crosscut initiative to halt the growth of deferred maintenance and support arresting the declining state of infrastructure while working collaboratively with NNSA to implement management improvements (e.g., G2, MDI, BUILDER, Site and Area Planning, and AMPs). Improve performance in meeting NNSA's sustainability goals with a focus on maximizing energy efficiency for enduring infrastructure and supporting the use of Energy Savings Performance Contracts, Utility Energy Service Contracts, and Power Purchase Agreements.
- Objective-5.5: Deliver efficient, effective, responsible, and transparent financial management operations and systems including financial integration reporting; budget formulation and execution; and internal controls.
- Objective-5.6: Deliver efficient and effective management of legal risk and incorporation of best legal practices.

Objective-5.7: Deliver effective, efficient, and responsive information technology systems and cybersecurity that provides for a comprehensive mission and functional area delivery through the completion of the implementation factors established in the NA-IM IT and Cybersecurity Program Execution Guidance.

Objective-5.8: Deliver effective, efficient, and responsive site emergency management programs in support of the DOE/NNSA Emergency Management Enterprise.

Objective-5.9: 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: major acquisitions; subcontractor evaluation, selection, and management; achievement of small business and socioeconomic goals; support provided to the NSE Workforce Recruitment Strategy; strategic management of integrated recruiting, retention, and diversity programs; and cost effective compensation and benefits programs.

#### Key Outcome(s):

KO 5.1: Execute the Exascale Computing Facility Modernization (ECFM) line item capital asset project in accordance with Critical Decision (CD)-2/3/3A scope, cost, and schedule baselines. Execute Emergency Operations Center (EOC) line item capital asset Pilot project in accordance with the EOC Charter and EOC Project Execution Plan, respectively. Achieve CD-2/3 for the B256 Digital Infrastructure Capability Expansion (DICE) line item capital asset project.

KO 5.2: Continue to maintain the Argus system, providing: (1) 24/7 support to the NNSA M&O Partners where Argus is currently installed and/or is in the process of being installed, (2) all required system upgrades in a timely manner, (3) necessary components/equipment in a timely manner; ensuring all tasks are executed in accordance with their approved Annual Operating Plan. Ensure the LLNL Argus S&P actively participate in the Caerus development effort, including team meetings and deliverables.

KO 5.3: Better align compensation system with industry and the NNSA enterprise to include job descriptions, benchmarking practices, and performance management in accordance with agreed upon schedules.

KO 5.4: Plan and execute the Enhanced Capabilities for Subcritical Experiments portfolio projects, in accordance with scope, cost, and schedule baselines. Emphasis will be placed on risk management, resource utilization, cost estimation, cross-functional communication, effective procurement, cost control, quality, and integration of safety and security practices into all project aspects.

KO 5.5: Prepare a robust and aggressive multi-year plan for the disposition of excess assets that supports site-wide long-term planning.

KO 5.6: Initiate efforts to determine a baseline inventory of material that is in process hold-up. Develop a plan for hold-up measurements at the time of inventory and perform periodic

validation of hold-up in inactive areas by June 2022.

### **Goal-6: Mission Leadership**

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 LLNS' leadership team to issues and opportunities for continuous improvement internally and across the Enterprise, and parent company involvement/commitment to the overall success of the Laboratory and the Enterprise.

#### **Objectives:**

- Objective-6.1: Define and implement a realistic strategic vision for the Laboratory in alignment with the NNSA Strategic Vision, which demonstrates enterprise leadership and effective collaborations across the NNSA enterprise to ensure DOE/NNSA success.
- Objective-6.2: Demonstrate performance results through the institutional utilization of a Contractor Assurance System and promoting a culture of critical self-assessment, transparency, and accountability through the entire organization, while also leveraging parent company resources and expertise.
- Objective-6.3: Demonstrate collaborative activities/deliverables to other partners that provide tangible benefits to reducing the risk meeting Goal 1 requirements. This includes—1) Develop, integrate, communicate and implement enterprise-wide plans; 2) provide solutions and actions that improve Design Agency and Production Agency teaming; 3) drive cultural changes with measurable and sustainable improvements; 4) optimize make/buy decisions and processes to qualify in-house and COTS components; 5) plan, manage, and execute small projects critical to mission success; and 6) achieve life cycle efficiencies throughout the DOE/NNSA complex.
- Objective-6.4: Exhibit professional excellence in performing roles/responsibilities while pursuing opportunities for continuous learning and demonstrated improvements.
- Objective-6.5: Demonstrate leadership in driving enhanced and sustainable formality and rigor of operations through proactive implementation of effective and efficient measures to minimize operational upsets that have potential to impact mission.

#### **Key Outcome(s):**

**FAR 16.401 (e) (3) AWARD FEE ADJECTIVAL RATINGS AND SUPPLEMENTAL DEFINITIONS**

Excellent	91%-100%	<p>Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.</p> <p><i>This performance level is evidenced by at least one significant accomplishment, or a combination of accomplishments that significantly outweigh very minor issues, if any. No significant issues in performance exist.</i></p>
Very Good	76% - 90%	<p>Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.</p> <p><i>This performance level is evidenced by accomplishments that greatly outweigh issues. No significant issues in performance exist.</i></p>
Good	51% - 75%	<p>Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.</p> <p><i>This performance level is evidenced by accomplishments that slightly outweigh issues. No significant issues in performance exist.</i></p>

Satisfactory	No greater than 50%	Contractor has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.  <i>This performance level is evidenced by issues that slightly outweigh accomplishments.</i>
Unsatisfactory	0%	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.  <i>This performance level is evidenced by issues that significantly outweigh accomplishments, if any.</i>

**Definitions:**

An **Accomplishment** is an achievement or success in the performance of contract requirements that exceeds standards or expectations. Examples might be performing full contract requirements under budget while meeting or beating schedule baselines or performing additional scope within the initial cost targets with no negative effect on requirements or other programs, indicating continued performance improvement.

An **Issue** is a point in question or a matter that raises concerns regarding successful performance of contract requirements within scope, cost (budget), and schedule baselines or concern of negative effect on requirements or other programs, indicating a decline in performance that needs attention and improvement.