

**Fiscal Year 2019  
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, 2018 through September 30, 2019**

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**FY 2019 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 the "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 of the amount of award fee earned. The available award fee amounts for FY 2019 are specified in Section B, *Supplies or Services and Prices/Costs*, of the Contract. This PEMP promotes a strategic Governance and Oversight framework based on prudent management of risk, accountability, transparency, and renewed trust. It implements the collective governance and oversight reform principles as expressed by the DOE/National Nuclear Security Administration (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 integral components 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.

## 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 successes and/or needed improvement. At the end of the performance evaluation period, an evaluation of LLNS performance will be completed. 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 includes 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)

Goal	Fee Amount	Fee Type
<b>Goal-1:</b> Mission Execution: Nuclear Weapons	\$10.58M	Award Fee (At-Risk)
<b>Goal-2:</b> Mission Execution: Global Nuclear Security	\$1.51M	Award Fee (At-Risk)
<b>Goal-3:</b> DOE and Strategic Partnership Projects (SPP)	*DOE - \$1.50M SPP - \$7.50M	DOE - (\$0.45 FF + \$1.05M AF) SPP - Fixed Fee
<b>Goal-4:</b> Mission Execution: Science, Technology, and Engineering (ST&E)	\$15.97M	\$12.95M FF + \$3.02M AF
<b>Goal-5:</b> Mission Enablement	\$9.07M	Award Fee (At-Risk)
<b>Goal-6:</b> Mission Leadership	\$6.04M	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

To be eligible to earn available award term, LLNS must earn an adjectival score of Very Good or better in four of 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.

### 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.

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

Successfully execute 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 Accomplish work as negotiated with program sponsors and partners integrating quality requirements into an effective quality assurance program at their sites and through their suppliers that results in the design, production, and delivery of safe, secure, and reliable weapon products meeting performance, transportation, and cost effective operations.
- Objective-1.2 Execute stockpile system maintenance, production, limited-life component exchanges, weapon containers, surveillance, and dismantlement programs and maintain knowledge of the state of the stockpile through successful execution of the stockpile surveillance program and a robust scientific and engineering understanding for the delivery of the annual stockpile assessment.
- Objective-1.3 Apply innovative strategies and technologies to sustain strategic materials and improve science and engineering capabilities, facilities and essential skills to support existing and future nuclear security enterprise requirements.
- Objective-1.4 Execute Phase 6.X, product realization processes, and activities in support of nuclear weapon life extension programs, modifications, and alterations in accordance with NNSA requirements, Nuclear Weapons Council guidance, and NNSA project control processes to 1) integrate schedules; 2) lower risks; 3) control costs; and 4) control change.

### Key Outcome(s):

- KO 1.1 Operate the National Ignition Facility (NIF) in accordance with the annual Facility Use Plan and continue to focus on operational efficiency and conducting shots in support of the Stockpile Stewardship Program.
- KO-1.2 Execute stockpile-relevant special nuclear material experiments and integrated experiments including, for example, material property experiments on JASPER and HED facilities and hydro tests on CFF and DARHT, subcritical experiment at U1a complex, strengthen the technical foundation for LEP options with a focus on the W80-4., and support the W78 replacement restart as appropriate.
- KO-1.3 Further develop new computer models, techniques, and algorithms to increase the fidelity of the scientific predictions and take advantage of new advanced computer technologies.

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

Successfully execute authorized global nuclear security mission work in a safe and secure manner to include the Defense Nuclear Nonproliferation, Nuclear Counterterrorism, and Counter Proliferation 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 counter proliferation 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 Support tool development and characterization for nuclear incident response activities, provide guidance and direction to the materials and explosives characterization research and development portfolio, and maintain robust nuclear incident response and nuclear forensics capabilities.
- 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 (OPCW).

### **Goal-3: 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.



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

Successfully advance national security missions and advance the frontiers of ST&E. Effectively manage Laboratory Directed Research and Development (LDRD), 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., LDRD 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; ensure that reporting and publishing (via DOE's Public Access Plan) requirements for broad availability of federally funded scientific research are implemented.

## Goal 5: Mission Enablement

Effectively and efficiently manage the safe and secure operations of the Laboratory while maintaining an NNSA enterprise-wide focus; demonstrating accountability for mission performance and management controls; successfully executing cyber and physical security requirements, and assuring 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) management and processes.
- Objective-5.2 Accomplish capital projects in accordance with scope, cost, and schedule baselines.
- Objective-5.3 Deliver effective, efficient, and responsive safeguards and security. Deliver effective site emergency management programs in support of the DOE/NNSA Emergency Management Enterprise.
- Objective-5.4 Manage NNSA infrastructure to maintain, operate and modernize DOE/NNSA facilities, infrastructure, and equipment in an effective, energy efficient manner that minimizes operational, security, and safety risks. Improve site conditions via: 1) disposition of unneeded infrastructure and excess hazardous materials, 2) increasing the viable use of facilities and equipment, and 3) delivering cost efficient improvements. 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, and AMPs). Support NNSA's corporate sustainability and energy conservation goals including use of ESPCs and UESCs.
- Objective-5.5 Deliver efficient, effective, and responsible business operations, systems and financial management, including financial transparency; 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 cyber security.

### Key Outcome(s):

- KO-5.1 Continue to modernize and upgrade LLNL's Physical Security Infrastructure by upgrading systems and facilities and reducing the Security Area footprint at Site 200 by at least 15%, without degrading the site's security posture.
- KO-5.2 Execute the Expand Electrical Distribution System (EEDS) line item capital asset project in accordance with Critical Decision (CD)-2/3 baseline scope, cost, and schedule. Execute the Exascale Computing Facility Modernization (ECFM) line item capital asset project in accordance with scope, cost and schedule baselines, or plans approved at CD-

1 for projects that are not baselined. Prepare the Emergency Operations Center (EOC) CD-1 package for NNSA approval. Prepare the Mission Need Statement and Program Requirements Document for the B-256 Network Communication Systems project by December 31, 2018.

- KO-5.3 Develop and implement an improved and expanded monthly facility Balanced Scorecard report that includes Key Performance Indicators (KPI) benchmarked from the DOE Maintenance Managers Working Group.
- KO-5.4 Complete Phase 3 of the next generation computer maintenance management system, "Enterprise Asset Management System," for work orders that replaces in-house disparate systems and incorporates business improvements in the Master Equipment List and the documentation of maintenance histories for tracking and trending.
- KO-5.5 Accomplish the effective and timely waste characterization, certification and possible removal, as negotiated in the site's execution plan, of temporarily stored NNSA generated TRU waste for offsite shipment

## **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 Work selflessly within the DOE/NNSA complex to develop, integrate, and implement enterprise solutions that maximize program outputs at best value to the government; identify innovative business and management solutions that greatly improve enterprise-wide efficiencies.
- Objective-6.4 Exhibit professional excellence in performing roles/responsibilities while pursuing opportunities for continuous learning.

**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%	<p>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.</p> <p><i>This performance level is evidenced by issues that slightly outweigh accomplishments.</i></p>

Unsatisfactory	0%	<p>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.</p> <p><i>This performance level is evidenced by issues that significantly outweigh accomplishments, if any.</i></p>
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**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.