



**Department of Energy
National Nuclear Security Administration
Production Office**



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December 7, 2020

Ms. Michelle Reichert
President and Chief Executive Officer
Consolidated Nuclear Security, LLC
Post Office Box 2009
Oak Ridge, Tennessee 37831-8001

Dear Ms. Reichert:

CONTRACT DE-NA0001942, CONSOLIDATED NUCLEAR SECURITY, LLC, FISCAL YEAR 2020 PERFORMANCE FEE

The National Nuclear Security Administration (NNSA) has completed its assessment of Consolidated Nuclear Security, LLC's (CNS) effectiveness in meeting the performance expectations established in the Fiscal Year (FY) 2020 Performance Evaluation Measurement Plan.

Enclosed is a memorandum from David Huizenga, Associate Principal Deputy Administrator, NNSA, along with the FY 2020 Performance Evaluation Report. The memorandum contains the fee determination for FY 2020. CNS is hereby authorized to draw down funds in accordance with the attached figures, less any fee that has already been received through provisional fee payments during the year.

If you need additional information, please contact Laura G. Gideon at laura.gideon@npo.doe.gov.

Sincerely,

**Laura G
Gideon**

Digitally signed by
Laura G Gideon
Date: 2020.12.07
13:48:41 -05'00'

Laura G. Gideon
Contracting Officer

Enclosures:
As stated

cc w/enclosures:
Geoffrey Beausoleil, NPO-01
Teresa Robbins, NPO-01
Gabriel Pugh, NPO-01
Janice Brashears, NPO-50
Steven Bigham, NPO-50

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Department of Energy
National Nuclear Security Administration
 Washington, DC 20585



OFFICE OF THE ADMINISTRATOR

December 3, 2020

MEMORANDUM FOR GEOFFREY L. BEAUSOLEIL
 MANAGER
 NNSA PRODUCTION OFFICE

FROM: DAVID HUIZENGA *David Huizenga*
 ASSOCIATE PRINCIPAL DEPUTY ADMINISTRATOR

SUBJECT: Consolidated Nuclear Security (CNS) LLC, DE-NA0001942
 Fiscal Year 2020 Award Fee Determination

The Department of Energy's National Nuclear Security Administration (DOE/NNSA) has completed its assessment of CNS' performance of the contract requirements for the period of October 1, 2019, through September 30, 2020, as evaluated against the Goals defined in the Performance Evaluation and Measurement Plan (PEMP). Based on assessments provided in the NNSA Performance Evaluation Report, award fee amounts are as follows:

	Rating		At Risk Available	Final
	Adjectival	Percent		
Goal-1: Mission Execution: Nuclear Weapons	Very Good	90%	\$13,976,550	\$12,578,895
Goal-2: Mission Execution: Global Nuclear Security	Excellent	95%	\$5,989,950	\$5,690,453
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	80%	\$11,979,900	\$9,583,920
Goal-6: Mission Leadership	Excellent	91%	\$7,986,600	\$7,267,806
Total Award Fee	Very Good	88%	\$39,933,000	\$35,121,074

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

Fixed Fee	\$0	\$0
SPP (Fixed Fee)	\$1,522,795	\$1,522,795
Total Fixed Fee	\$1,522,795	\$1,522,795
Total Fee (Award Fee and Fixed Fee)	\$41,455,795	\$36,643,869



National Nuclear Security
Administration

Consolidated Nuclear
Security, LLC

Performance Evaluation
Report (PER)

NNSA Production Office

Evaluation Period:
October 1, 2019-September 30,
2020

December 3, 2020

<p>OFFICIAL USE ONLY</p> <p>May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552), exemption number and category: <u>5- Privileged Information</u></p> <p>Department of Energy review required before public release.</p> <p>Name/Org: Scott Hawks, NPO Classification Officer Date: 10/15/2020 Guidance: N/A</p>
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Executive Summary

This Performance Evaluation Report (PER) provides the National Nuclear Security Administration (NNSA) assessment of Consolidated Nuclear Security, LLC (CNS), performance of the contract requirements for the period of October 1, 2019-September 30, 2020, as evaluated against the Goals defined in the Performance Evaluation and Measurement Plan (PEMP). The NNSA took into consideration all input provided (e.g. CAS, Program Reviews, etc.) by NNSA Program and Functional Offices both at Headquarters and in the field.

Performance against the Goals summarized below, resulted in an overall rating of Very Good for CNS. Specific observations for each Goal are provided in the following pages.

CNS performed very well executing mission activities under Goal 1, specifically in meeting/exceeding deliverables while effectively managing COVID-19 response and protection of employees at both Pantex and Y-12. First Production Capability Units were completed for both the B61-12 and W88 Alt 370 programs to reduce risk to First Production Unit schedules. Progress in re-establishing binary capability at Y-12 is also commendable. CNS worked collaboratively across the Nuclear Security Enterprise to accommodate and manage product deliverables and production challenges. CNS provided excellent support for both the planning and execution of multiple nuclear material removal campaigns from several countries and providing enriched uranium in support of High Performance Research Reactor project, Down Blend Offering for Tritium Project, and highly enriched uranium for high assay low enriched uranium demonstrating excellent performance in Goal 2. CNS supported both DOE and other government entities through computed tomography of High Flux Isotope Reactor fuel elements, achievement of major milestones for the White Sands Missile Range/Fast Burst Reactor Upgrade project, and management of the NBL Center including shipment of Certified Reference Material. Strategic Partnership Programs were also successfully executed. Substantive progress was made in maturing uranium and lithium technologies. Of note is the first production size uranium button using electrorefining technology and lithium chloride production. CNS improved and sustained safety and security performance and made significant improvements in the Pantex Safety Basis. CNS COVID-19 response and performance is particularly notable in quickly standing up contract tracing, testing capability, and COVID protections to support continuation of NNSA missions. With new leadership in Cyber Security and Information Technology, CNS has sustained improvement through the latter half of the year. Project performance has noted opportunities for improvement in planning, cost management, and vendor management. CNS demonstrated excellent leadership throughout the COVID-19 response and worked collaboratively across the NSE with establishing and managing the uranium, depleted uranium, and lithium models and special materials integrated schedule and facilitating mission achievement across the NSE. In response to a trend of lapses in disciplined operations, CNS established the Disciplined Operations Council. Leadership focus must continue to ensure effectiveness of improvement actions.

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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.

Consolidated Nuclear Security, LLC At-Risk Fee: \$13,976,550

Under this goal, CNS earned a rating of Very Good at 90% of the award fee. CNS exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate. Accomplishments greatly outweigh issues. No significant issues in performance exist. CNS met performance expectations within expected cost towards the completion of Defense Programs' high priority items listed in the Getting the Job Done list. Cost impacts of the COVID-19 pandemic and other variance issues were realized by all programs in 2020.

CNS completed 99% of Fiscal Year 20 (FY) weapon deliverables through September 30, 2020. CNS was slightly behind baseline schedule for some Pantex activities that included dismantlements and W76 rebuilds due to resource availability. NNSA approved Universal Change Forms that adjusted the FY20 Production Baselines for Coronavirus Disease 19 (COVID-19) impacts, technical issues, and Shipped Material Reports.

Specific Performance through September 30, 2020

System	Total FY20 Baseline Percent Completion
W76-2 Warhead Deliverables	100%
B61-12 CSA	102%
Base Surveillance – PX	99%
Base Surveillance Y-12	100%
W87 LLCE	104%
W80 ALT 369	104%
Warhead Dismantlement	93%
CSA Dismantlement	102%
B61 DisLEPS	105%
W88 DisALTs	150%

CNS performed B83 component surveillance without parent-unit-parts to support the high explosive (HE) surveillance program. CNS implemented Integrated Surety Architecture operations by developing safety basis documents and options for Multi-Application Transportation Attachment Device operations. CNS met production expectations for HE, pit surveillance and Nuclear Material Life Extension Program work scope. In addition, CNS executed production support activities that included the implementation of the A/B Key Management System and maintaining equipment uptime. CNS completed two major quality initiatives by developing and implementing product control processes for an Interim Quality Release Process and Circle T Processes. CNS continues to struggle with production modernization on small projects.

CNS exceeded deliverables for Canned Subassemblies (CSAs). During the fourth quarter, CNS identified that B61-12 CSAs in Drum Type 23 (DT-23) shipping containers had been

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incorrectly packaged. This affected multiple DT-23 packages that had already shipped from Y-12, and resulted in a violation of the Safety Analysis Report for Packaging which was a reportable Occurrence. CNS revised the associated packaging procedures and secured approval from the NNSA Office of Packaging and Transportation to resume packaging and shipping operations.

CNS completed the B61 Nuclear Explosive Safety (NES) Study validations, W78 Operational Safety Review, and B61-12 NES Change Evaluations despite COVID-19 restrictions by coordinating all reviews and continuing to reduce the number of open findings and actionable deliberation topics. CNS exceeded the B61-12 CSA production at Y-12 and completed nuclear primary qualification activities at Pantex. CNS Project Readiness Teams and production technicians completed the First Production Capability Unit for the B61-12 that successfully demonstrated assembly activities and supporting weapon system laboratory test qualification.

CNS implemented effective strategies under COVID-19 restrictions that minimized W88 Alteration (ALT) 370 production impacts, and supported the program with the necessary engineering resources and management oversight. CNS managed the W88 ALT 370 Pit and CSA reacceptance by completing all necessary activities in preparation for the System First Production Unit.

CNS met the W80-4 Phase 6.3 overall cost, schedule, and technical performance requirements and has continued to demonstrate notable teaming and cooperation with all W80-4 and W87-1 Integrated Project Teams and Product Realization Teams.

For Uranium Modernization, successes include restarting the binary rolling operations for the first time in over 15 years, deactivating systems in Building 9206 ahead of schedule, and reducing the number of enriched uranium items in inventory for filters, graphite, and organic bottles. The binary weld box was not returned to service on time due to contamination issues. By re-ordering maintenance activities, the production Vacuum Arc Remelt restart remains on schedule.

For Secondary Stage Production Modernization, CNS developed and baselined an integrated schedule for enriched uranium, lithium, and portions of the Depleted Uranium program and is making significant progress on completing integrated schedules for special materials and the remainder of the depleted uranium program. CNS developed an Integrated Strategic Materials Model to model enriched uranium, lithium, and depleted uranium manufacturing processes, identify key bottlenecks, and provide program management decision-making tools to NNSA. CNS was slow to prepare for risks and challenges associated with Secondary Modernization work and its impact on capability to meet mission deliverables in out years.

CNS removed material-at-risk from Area 5 and isolated out-of-service systems in Building 9212. Important technologies, including binary direct casting and cold hearth melting, for meeting future missions progressed in FY20. While avoidable delays resulted in completing a high priority microwave casting milestone late, 21 castings were produced in support of mitigating risks associated with eventually beginning operations in the Uranium Processing Facility (UPF). CNS continues to experience problems with project execution, including cost

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increases for the Calcliner project, glovebox vendor delays affecting Electrorefining, Direct Chip Melt furnace delays, and realized risks in the field for the Material Conversion Equipment Refurbishment project.

CNS successfully achieved Technology Readiness Level 6 for both the Thermal Decomposition and Distillation and Homogenization technologies. Working with the Design Agency, CNS was able to complete the reactor material qualification before the end of the FY, despite COVID-19 delays, supporting the FY20 Must Do Item List.

For Material Recycle and Recovery (MRR), CNS met annual production goals including a full sized, within-spec metal button using the development Electrorefiner cell and producing the third highest amount of in-spec metal since before 1992. CNS met goals for the year in salvage and discards processing as well as consolidation casting. CNS experienced avoidable delays, including from a lack of critical spare inventory management, in wet chemistry operation of MRR. CNS met all storage milestones for FY20 except for one low-level milestone. CNS exceeded High Enriched Uranium (HEU) shipping requirements for down-blending, ensuring the successful provision of Low Enriched Uranium (LEU) for tritium production.

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.

Consolidated Nuclear Security, LLC At-Risk Fee: \$5,989,950

Under this goal, CNS earned a rating of Excellent at 95% of the award fee. CNS 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. Accomplishments significantly outweigh very minor issues. No significant issues in performance exist. CNS met performance expectations within expected cost.

CNS successfully supported the of NNSA's Office of Radiological Security, quickly adapting training deliverables into virtual formats during the COVID-19 pandemic. CNS provided key subject matter expertise to NNSA's Office of International Nuclear Security (INS), including the lead for INS engagement in Africa and in the development of a new insider threat engagement tool.

CNS successfully led a Congressionally-mandated effort focused on novel enrichment technology and a multi-laboratory team to investigate light element characteristics of interest to the forensics community.

CNS provided technical support for the development of domestic Mo-99 production capabilities and assisted an industry partner with development of its LEU target technology. Some work was delayed due to facility closures associated with COVID-19. CNS successfully

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supported the U.S. High Performance Research Reactor Project. Due to early challenges followed by COVID-19 impacts, the initial FY target for Uranium-Molybdenum castings was reduced from 40 to 19; CNS completed 25 castings. CNS processed, packaged, and shipped 3 castings worth of material to the commercial processor, an essential deliverable to prevent downstream schedule delays.

CNS provided excellent support for both the planning and execution of multiple nuclear material removal campaigns from several countries. CNS provided excellent support for maintaining the readiness of the Mobile Uranium Facility. CNS shipped 154 kg surplus HEU in support of the HEU Dispose Program and Down-Blend Offering for Tritium (DBOT) project. Shipment quantities were directly affected by COVID-19 and the milestone was updated from 180 kg-U to 150 kg-U accordingly. CNS submitted the HEU Material Summary and delivery schedule to add ~1.7 MT excess or surplus HEU to the DBOT contract. CNS awarded a procurement contract for the purchase of new ES-3100 containers. CNS completed 25 consolidation castings, used as an HEU feed source for high-assay LEU. CNS completed 54 LEU castings, allowing for sufficient quantity on hand to meet all FY20 customer needs. CNS discarded 130 items, exceeding the revised FY20 goal despite impacts from suspension of shipments to Nevada National Security Site. CNS completed the licensing renewal activities for the Model MD-2 package, and the Offsite Transportation Certificate for the MD-2 was issued on schedule.

CNS provided exceptional support to the Warhead Verification Program, including preparing and hosting the Special Presidential Envoy for Arms Control and work toward a new arms control agreement with Russia.

CNS effectively managed the NNSA Office of Nuclear Incident Response's Radiological Assistance Program according to national policy, supported special requests for information and assistance when requested, successfully provided 100% manning of responders to the watch bill requirements and scheduled events, met deliverables on time, maintained readiness for personnel, training, and maintenance, and successfully demonstrated a continuity of operations through the COVID-19 pandemic.

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.

Consolidated Nuclear Security, LLC Estimated Fixed Fee: \$1,270,000

Under this goal, CNS earned a rating of Excellent at 95%. CNS 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. Accomplishments significantly outweigh very minor issues. No significant issues in performance exist. CNS met performance expectations within expected cost.

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CNS made excellent progress pursuing and performing high-impact work in support of DOE missions. All deliveries to Naval Reactors were packaged and shipped on schedule.

CNS used computed tomography to scan the High Flux Isotope Reactor (HFIR) fuel elements, including conducting scans during reduced mission critical operations to assure continued HFIR operations and critical COVID-19 research. CNS exceeded both the oxide production goal for HFIR and the Li6 carbonate production goal for Office of Science. Advanced Test Reactor castings were completed ahead of schedule. CNS produced lithium hydroxide solution for the Tritium-Producing Burnable Absorber Rod Program.

CNS completed the successful execution of 45 shipments of certified reference materials (CRMs) from the NBL Center at Y-12 to domestic and international customers. CNS received the final shipment of CRMs from the former NBL located at Argonne National Laboratory, completing the transfer of more than 10,000 CRMs since 2018.

CNS successfully executed all significant SPP deliverables. CNS processed and shipped LEU metal to fuel fabricators for international research reactors (Korea, Netherlands, Australia, and Indonesia) under NNSA supply contracts. CNS processed and shipped material to BWXT to support an NNSA supply contract with Belgium. CNS completed shipment of remaining Slowpoke LEU fuel pins and zircaloy-4 tubing to Canada.

CNS completed major milestones for the White Sands Missile Range/Fast Burst Reactor Upgrade project, including construction of the Physical Vapor Deposition (PVD) Facility, turnover of the PVD Facility to Operations, and delivery of the #1 and #2 Enriched Uranium (EU) Safety Blocks. Although the PVD Facility and #1 EU Safety Block were completed behind schedule and over cost. CNS has made significant progress with no further schedule impacts. The coating provided is superior to the original fuel and exceeded the Army's expectations. Two Depleted Uranium ring castings were completed ahead of schedule.

CNS completed two PT3854 Testers for the Air Force and completed Navy Separation Tests. CNS conducted training classes for the Defense Intelligence Agency and an Operational Test Readiness exercise at the Fort Hood Military Base. CNS exceeded expectations in the areas of technical support and training for Other Government Agencies.

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.

Consolidated Nuclear Security, LLC Fee: \$0

Under this goal, CNS earned a rating of Excellent at 95%. CNS 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. Accomplishments significantly outweigh very minor issues. No significant issues in performance exist. CNS met performance

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expectations within expected cost.

Utilizing \$36.7M in PDRD and Strategic Partnership Projects funding, CNS advanced uranium and lithium technologies toward deployment; increased the efficiency of high explosives machining; remediated existing and planned new facilities; and patented innovative ST&E. CNS fabricated a uranium button from material harvested from the Development Generation IV electrorefiner that meets production size requirements and is expected to have the necessary purity. CNS met the FY20 lithium chloride target in the small-scale wet chemistry system, and demonstrated operations of the Calciner. CNS completed the vacuum induction melt portion of pencil electrode preparation for synthesis of nuclear material ahead of schedule. The VAR process will produce nuclear fuels from alloys like uranium-molybdenum and uranium-zirconium.

CNS created a General Plant Project joint facility layout for Pantex Development and Tooling and Tester Design, and CNS developed a precise description of uranium oxide film growth for the Aging and Lifetimes program. CNS received approval to increase high explosives machining limits to enable faster lathing and drilling operations at substantial cost savings. CNS constructed a Faraday cage to determine if indirect effects of lightning could be sufficiently reduced to conduct operations during lightning warnings. CNS attained TRL 3 for electron beam additive manufacturing of depleted uranium. CNS also installed a standoff, gamma imaging camera to aid in the localization of radiological material in laundry or trash, and a second camera to measure buildup of radioactive material after casting operations.

CNS overcame a number of challenges related to facilities, equipment, and delays due to the COVID-19 pandemic response. For example, CNS demonstrated production capability on the UPF microwave prototype at the Test and Demonstration Facility to support test hardware at Lawrence Livermore National Laboratory. Due to a design flaw, the new Uranium Consolidation Furnace, used to consolidate uranium crystals in the electrorefining process, suffered damage to its insulation during its final test run, delaying production of the first button. The furnace was repaired, re-installed, and then used to generate the first Production-sized button from Development's electrorefining equipment, with a 98% consolidation yield.

CNS signed the following Government Use Licenses: U.S. Air Force for System Tester software; Kansas City National Security Campus for firmware for resistive measurements on nuclear weapons and components; Oak Ridge National Laboratory for Y-12's "Your Area Mapping System" software for emergency management; and Los Alamos National Laboratory, Hanford Waste Treatment Plant, and Nevada National Security Site for the Readiness Certification Assurance Process Tracking System. CNS asserted copyright for 3 software packages; completed 41 invention disclosures/Idea-EZ submissions, 36 new technology/nondisclosure agreements, and 10 patent applications; and received 5 patents.

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Goal 5: Mission Enablement

Effectively and efficiently manage the safe and secure operations while maintaining an NNSA enterprise-wide focus; demonstrating accountability for mission performance and management controls; successfully executing cyber 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.

Consolidated Nuclear Security, LLC At-Risk Fee: \$11,979,900

Under this goal, CNS earned a rating of Very Good at 80% of the award fee. CNS exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate. Accomplishments greatly outweigh issues. No significant issues in performance exist. Very late in FY 2020, significant unforecasted variances in cost were realized by all programs, creating challenges that required NNSA intercession to avoid work stoppage.

Overall, Environment, Safety, and Health and Quality programs performed well. Injury rates reflected a favorable trend with Total Recordable Cases compared to previous FY but reflected an unfavorable trend for Days Away, Restricted or Transferred and Lost Time Injuries from prior FY. COVID-19 support has been highly effective including prompt tracing/quarantine, significant hazard assessments for identifying controls, and high quality medical support for case management. The fifty-year sprinkler head replacements have been completed at Y-12. In response to the July 2019 Nevada National Security Site waste issue, CNS has developed and implemented thorough corrective actions that have resulted in significant improvements to the overall waste management program as well as an enhanced waste/transportation compliance posture for the Y-12 site. CNS executed processes to enable efficient processing of nonconforming material and conditionally accepted parts from other NNSA sites. CNS has not restored the Pantex dosimetry program to full functionality and has experienced multiple load securement issues affecting safety compliance. The increase in quality issues (e.g., nonconformance management, Class 17) was significant enough that CNS initiated quality pauses at both plants. Metrics for Commercial Grade Dedication show an improving program, but remains an area of concern.

NNSA recognizes criticality safety program improvements, specifically the Pantex improvement plan, legacy out-of-service equipment, and meeting criticality safety program goals. Continued criticality safety management attention is needed to address process drift and training, and the negative infraction trend. Pantex safety basis improvements continue with significant completion of Implementation Plan actions, and execution of the 2025 Safety Basis Vision. The nuclear explosive safety program is compliant with issues being managed, including reduction of the legacy backlog. NNSA notes the improved communication CNS has fostered with the Defense Nuclear Facility Safety Board staff.

Despite COVID-19, approximately 75% of small projects remain on track and CNS was able to achieve significant accomplishments including completing dispositions and Bay & Cell HPFL

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Lead-in commitments. While several initiatives to improve project management and vendor-related issues were successfully implemented and executed, Recapitalization projects underperformed causing cost and schedule variances. Inadequate planning challenged projects at Y-12 and Total Project Cost and schedule increased significantly, as evidenced in poor Criticality Accident Alarm System project performance. CNS had issues with enterprise-wide coordination related to special material maturation. The water lateral portfolio has not costed any funds since inception and CNS reported very little progress on new FY20 funded projects. While execution of Bay & Cell Safety System Modernization Projects improved, Radiation Alarm Monitoring System and other issues continued to impact project performance. Counter Unmanned Aerial Systems (cUAS) projects have realized risks resulting in schedule impacts. Completion of cUAS projects remains a priority. Poor interaction with the Roof Asset Management Program subcontractor regarding the waste shipment issue resulted in work stoppage. The FY20 Waste Implementation Plan was not submitted. Four of nine line item projects were below expectations. The Calcliner Project obtained CD-2/3 approval, but has subcontractor scope delays. The Electrorefiner Project has ongoing vendor issues (forecasted 50 week delay on critical path). The West End Protected Area Reduction project is on budget but behind in producing required CD-2/3 deliverables. The High Explosive Science and Engineering Project is over budget and behind schedule for CD-3A deliverables. CNS had challenges fully integrating the Earned Value Management System into early planning of projects but met year-end expectations. CNS met expectations in several sustainability goals, receiving six Energy and Sustainability awards. CNS removed beryllium contamination from 78,532 ft² at Y-12 and transferred 25,000 Renewable Energy Credits from Pantex to Y-12. The Recycle Program at Y-12 shipped over 3.2M pounds through August 2020 (8% more than last year). The Pantex public drinking water supply system maintained a Superior rating. However, Pantex continued to struggle with metering. Several meters need to be repaired and more meters are needed to achieve the High Performance Sustainable Buildings (HPSB) goal. Three existing Y-12 buildings became rated as HPSB.

CNS demonstrated effective protection of Special Nuclear Material and classified matter while successfully exercising COVID-19 protocols. CNS successfully executed Force-on-Force and tabletop exercises using innovative methods under COVID-19 protocols. CNS demonstrated its commitment to the NNSA mission, assisting other NNSA facilities with Material Control and Accountability program improvements. The DOE Office of Classification and the NNSA Program Classification Office completed the 2020 Biennial Review of the Classification Program resulting in positive feedback and no findings identified. While CNS has made progress in improving its Information Security program, management attention is needed in Technical Security and ensuring the site populations adhere to the Lock and Key Control program requirements and facilities are appropriately secured. CNS did not provide timely or complete data to explain and address the budget variance/shortfall of approximately \$40M, which included over \$16M of unapproved mission growth costs. The Emergency Management program continued to demonstrate improvements and conducted successful full-scale emergency exercises at both sites, the first in DOE executed with COVID-19 protocols.

CNS maintained plant infrastructure, safely executed major utility outages, and responded well to key equipment failures. Electrical distribution system asset and operational improvements reduced system downtime and costs. CNS struggled to develop proper cyber plans for critical Energy Savings and Performance Contract software delaying its use. CNS performed very well

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maintaining the sites during Mission Critical operations. New enterprise computerized maintenance management system and Pantex work scheduling improvements are behind schedule. Proactive maintenance performance continued below standard and struggled to recover from COVID-19 impacts. Resource conservation and energy savings efforts progressed.

CNS effectively collaborated with NNSA and other M&Os to develop consistent COVID-19 accounting and reporting processes and continued outstanding support for the Nuclear Security Enterprise (NSE) Recruitment Strategy Group. CNS responded to pandemic impacts by sourcing hard-to-find personal protective equipment; redistributing supplies to other federal organizations and NSE sites; acquiring a 30-day supply of PPE to ensure critical missions support; reporting short-notice financial data; and expediting IT hardware, virtual private network slots, and software to assist in the transition to telework. CNS far exceeded overall Small Business (SB) annual goal. CNS did not meet one socioeconomic SB goal, require forward pricing suspenses, or manage expectations for disclosed accounting practices and program budget variances. The Government Accountability Office confirmed the soundness of the CNS Cost Savings Program that created and sustained \$515M in savings through FY18. FY21 deliverables did not contemplate contract transition. CNS completed collective bargaining with several unions, ensuring seamless operations. NNSA provided CNS multiple years to decrease their Benefit Cost Study Value, and CNS continues to be reluctant to make the necessary changes to align their benefits with industry. To mitigate storage issues, CNS installed a vertical pan carousel system at Pantex and completed transfer to NNSA of the remaining K-1065 warehouses. CNS installed Kronos time clocks as a time-keeping internal control. Full implementation will be in January 2021. Legal prevailed in a long-running, putative class action lawsuit regarding changes in the Paid Time Off policy, winning summary judgment at the trial court level, and the Tennessee Court of Appeals affirmed that decision.

Despite the challenges of maintaining a safe work posture due to the pandemic, CNS achieved many of the implementation factors (IFs) of the Cybersecurity Program Execution Guidance. CNS demonstrated, as part of their weekly Information Systems and Cybersecurity Performance Assurance Council Meetings with NNSA, they are working to complete improvement efforts by end of CY20 and will address 2019 concerns of cybersecurity program sustainability. Under new IT and cybersecurity leadership, CNS demonstrated sustained improvement in the last half of FY20. Improvements include Risk Management Phase II completion, enterprise sensor restoration, Cybersecurity Program Performance Action Plan progress, and increased governance and risk management and oversight. CNS matured IT systems and infrastructure by delivering several major projects including enhanced telework, continued data center modernization, and network circuit upgrades from 1 GB to 10 GB to provide increased bandwidth for interconnection between sites and the NNSA. CNS will need to ensure improvement efforts continue into 2021.

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 CNS leadership team to issues and opportunities for continuous improvement internally and across the Enterprise, and parent company involvement/commitment to the overall success of Pantex and Y12 and the Enterprise.

Consolidated Nuclear Security, LLC At-Risk Fee: \$7,986,600

Under this goal, CNS earned a rating of Excellent at 91% of the award fee. CNS 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. Accomplishments significantly outweigh minor issues. No significant issues in performance exist. CNS met performance expectations within expected cost.

The CNS response to COVID-19 demonstrated exceptional innovation and resiliency. CNS developed recovery plans, tracked employee statistics, developed training, communicated and implemented Coronavirus Aid, Relief, and Economic Security Act policies, deployed enduring IT capabilities to support nearly 3,400 remote users, and collaborated across the NSE.

CNS completed 99% of Tier 1 weapon deliverables by partnering with the NSE to realign scope and schedule and successfully apply personnel to maximize production. In relation to associated costs, CNS needs to clarify COVID-19 impacts for programs to make proper funding adjustments. For start-up activities, CNS demonstrated effective leadership in accelerating the development and production of systems and components for stockpile modernization. CNS completed the uranium, depleted uranium, and lithium model integration and verification and validation, including submittal of the test report.

The Pantex/Y-12 Strategic Plan briefing was well executed and demonstrated integration across the NSE. The briefing and the final Strategic Plan transparently identified opportunities and threats to mission delivery as well as current COVID-19 lessons learned. CNS supported multiple DOE and NNSA initiatives. The CEO spoke at the Waste Symposium, served as co-vice chair of the NNSA Enterprise Operations and Efficiency Board, served as vice-chair elect of the Energy Facility Contractor Group Board of Directors; the new CEO co-chairs the NSE cross-cutting workforce development initiative; participated in Safety Culture Virtual Summit, and led or participated in multiple NNSA Peer Reviews. CNS provided substantial support to Safety, Analytics, Forecasting, Evaluation, and Reporting activities.

CNS deployed a multi-disciplinary approach to facility and program-centered assessments that evaluates all disciplines with a comprehensive team of subject matter experts. Facility Center Assessments were staffed and well managed but lacked self-critical analysis for two of four facilities assessed. Office of Enterprise Assessments noted four “Best Practices” in a recent Safety Culture assessment of CNS. CNS provided outstanding training support that included proactive knowledge transfer, augmented and virtual reality expansion, and

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modified delivery in response to COVID-19. Continued progress on implementing integrated learning management systems is needed.

Focused improvement efforts in disciplined operations are needed. CNS leadership must continue focus in this area to ensure actions are effective in minimizing the frequency and significance of events. A joint CNS/NPO Disciplined Operations Council (DOC) was formed to address these issues. A four-pronged approach to improve performance is being tracked, managed, and enabled by the DOC.

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~~Source Selection Information—See Federal Acquisition Regulation (FAR) 2.101, 3.104 and 42.1503-12~~