Department of Energy
National Nuclear Security Administration
Washington DC 20585

November 28, 2016 OFFICE OF THE ADMINISTRATOR

MEMORANDUM FOR DOUGLAS DEAROLPH
MANAGER
SAVANNAH RIVER FIELD OFFICE

FROM: MADELYN R. CREEDON
PRINCIPAL DEPUTY AD[redacted]

SUBJECT: Savannah River Nuclear Solutions, LLC, DE-AC09-SR22470
Fiscal Year 2016 Award Fee Determination

The National Nuclear Security Administration (NNSA) has completed its assessment of Savannah River Nuclear Solutions (SRNS), LLC's effectiveness in meeting the performance expectations established in the Fiscal Year 2016 Performance Evaluation and Measurement Plan for the period of October 1, 2015 through September 30, 2016. Based on assessments provided in the NNSA Performance Evaluation Report, and award fee amounts are as follows:

	At Risk	Available	Final	Percent
Goal 1: Manage the Nuclear Weapons Mission	29%	$5,262,920	$4,947,145	94%
Goal 2: Reduce Global Security Threats Mission	25%	$4,537,000	$3,720,340	82%
Goal 3: DOE Strategic Partnership Project Mission Objectives	0%	$0	$0	0%
Goal 4: Science, Technology & Engineering (ST&E)	3%	$544,440	$484,552	89%
Goal 5: Operations & Infrastructure	33%	$5,988,840	$4,491,630	75%
Goal 6: Leadership	10%	$1,814,800	$1,651,468	91%
Total		$18,148,000	$15,295,135	84%

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

Fixed Fee	$0	$0
SPP (Fixed Fee)	$0	$0
Total Fixed Fee	$0	$0
Total Summary	**$18,148,000**	**$15,295,135**

National Nuclear Security Administration

Savannah River Nuclear Solutions, LLC (SRNS)

Fiscal Year 2016 Performance Evaluation Report (PER)

NNSA Savannah River Field Office (SRFO)

Performance Period:
October 1, 2015 – September 30, 2016

November 15, 2016

Executive Summary

This Performance Evaluation Report (PER) provides the National Nuclear Security Administration (NNSA) assessment of Savannah River Nuclear Solutions, LLC (SRNS), performance of the contract requirements for the period of October 1, 2015 through September 30, 2016, 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.) from NNSA Program and Functional Offices both at Headquarters and in the field.

The work performed for NNSA programs at the Savannah River Site (SRS) is conducted by SRNS under Management and Operating (M&O) Contract #DE-AC09-08SR22470. This is a Department of Energy (DOE) Office of Environmental Management (EM) contract under which NNSA-funded and directed work is performed.

The Savannah River Field Office (SRFO) feedback process utilizes the Actuate BIRT software package to track and document contractor performance, as well as the SRFO evaluation of that performance, on a continuous basis. Monthly feedback meetings were held with SRNS throughout the performance period where SRNS was apprised of performance traits, both favorable and unfavorable, in each evaluated area. Where performance was rated as not meeting expectations, SRNS was informed of the deficiencies and the impacts to the program. Corrective actions were then planned, executed and discussed at the next monthly performance meeting and during routine senior leadership engagements. Monthly reports were transmitted to SRNS as well as NNSA-HQ program offices.

For FY16, SRNS is operating under a Strategic CPEP with 100% of "at-risk" fee being subjective. The Strategic CPEP consists of six (6) Performance Goals which are standard across the Nuclear Security Enterprise (NSE), and supplemented with Objectives and Key Outcomes (KOs) for each Goal. Fee is distributed among the six (6) Goals as specified in the PEMP. For SRNS, Goal-3 is not applicable and therefore has no fee associated with it.

Goal - 1: Manage the Nuclear Weapons Mission (29% of At-risk fee) was rated as Excellent. Overall, SRNS's performance was above expectations in management of the Nuclear Weapons Mission. SRNS exceeded expectations in demonstrated performance of the assigned work scope through completion of scheduled milestones and delivery of tritium-filled reservoirs to support nuclear weapons stockpile needs. SRNS is ahead of schedule to implement risk reduction and recapitalization activities for the Material, Recycle and Recovery (MRR). SRNS also completed the replacement of the Thermal Cycling Absorption Process beds three months ahead of schedule to ensure the Tritium program is sustained.

Goal - 2: Reduce Global Nuclear Security Threats Mission (25% of At-risk fee) was rated as Very Good. Overall, SRNS was very good in demonstrated performance of the assigned

work scope support provided throughout the fiscal year on the NNSA Mo-99 Program. The technical efforts on the Thermal Cycling Absorption Process (TCAP) system as well as initial efforts to transfer the system helped to further the Program's mission to support development of a domestic supply of Mo-99 without the use of Highly Enriched Uranium (HEU). Savannah River National Laboratory's (SRNL) facilitation of the removal of separated plutonium (Pu) from two countries in Europe helped to meet key deliverables for Material Management and Minimization (M3) ahead of the 2016 Nuclear Security Summit. Of note was the significant effort and attention towards understanding and resolving NNSA's fundamental concerns relative to planning for the Surplus Plutonium Disposition Life Cycle Cost Estimate (SPD LLCE) for the Dilute and Dispose approach. This effort could redefine the future of the Department's Pu Disposition program.

Goal - 3: DOE and Strategic Partnership Project Mission Objectives (Not Applicable; 0% of At-risk fee)

Goal - 4: Science, Technology & Engineering (ST&E) (3% of At-risk fee) was rated as Very Good. Overall, SRNS's performance exceeded expectations in its ability to manage the Science, Technology, and Engineering program for the tritium mission. SRNL and the Savannah River Tritium Enterprise (SRTE) Tritium Implementation Team focused on activities to enhance tritium research and development (R&D) capability for Los Alamos National Laboratory and Sandia National Laboratory in supporting Gas Transfer System (GTS) and process system development. SRNS also provided critical support to the design agencies for the B61-12 Life Extension Program (LEP) and W87 Alt 360 through early execution of W87-Alt 360 EC and increased scope for the W87 Alt 360 hydrogen-deuterium (HD) System Integration Testing. The Strategic Investment Process and its Strategic Roadmap is being seen as an extremely helpful tool and other program offices are requesting presentations and help in developing this concept/process for their programs.

Goal - 5: Operations and Infrastructure (33% of At-risk fee) was rated as Good. Overall, SRNS's performance exceeded some of the Objectives and Key Outcomes and has met expectations in ensuring Site Operations and Infrastructure were maintained through demonstrated performance of work activities in a safe and secure manner. No significant safety, health, or environmental issues to report for the year. SRNS had some significant accomplishments in the areas of BUILDER and integration of G2 into the SRTE business culture. SRTE completed the installation of Argus backbone in the tritium area on schedule and under budget and thus providing the first step in reducing the security risk for the outdated, failing current system. SRNS's support was critical in supporting the conceptual design team for the Tritium and in support of the Master Asset Plan Deep Dive. There were a few issue areas in work planning and controls, small project management, and management of critical spares parts that need improvement in FY17 to support and justify a higher rating in this Goal.

Goal - 6: Contractor Leadership (10% of At-risk fee) was rated as Excellent. Overall, SRNS's performance significantly exceeded expectations in meeting the DOE/NNSA mission by

ensuring leadership is effectively managing programmatic mission risk and responding to issues and opportunities for continuous improvement. This was demonstrated by SRNS's efforts in strategic management of the aging Tritium infrastructure; integrating BUILDER and G2 into its business structure; and renewed emphasis on partnering efforts with DOE/NNSA headquarters and field office management. SRNS successfully engaged with its parent companies to perform value stream mapping of several processes, developed a model to replicate HB-Line's Operational aqueous process, and developed an exchange program with Kansas City National Security Campus (KCNSC) to provide mutual understanding between engineering organizations on work scope and interdependencies.

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

Goal 1: Manage the Nuclear Weapons Mission (29% of allocated fee)

Successfully execute Nuclear Weapons mission work in a safe and secure manner in accordance with DOE/NNSA Priorities, Program Control Document and Deliverables, and Program Implementation Plans, and Weapons Quality Assurance Requirements. Integrate across the plant, while maintaining a DOE/NNSA enterprise-wide focus, to achieve greater impact on a focused set of strategic national security priorities.

Under this goal, SRNS earned a rating of Excellent and 94% of the award fee allocated to this goal. SRNS exceeded almost all of the Objectives and Key Outcomes, has met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. SRNS has continued to be successful in its performance under this contract as described below. Issues that were identified during the year have been resolved, and are no longer of concern.

Accomplishments

(Objective 1.1): During FY16, SRNS exceeded expectations for the recycle and recovery of weapons related materials in support of Directed Stockpile Work (DSW) schedules as well as the planned procurement actions in support of re-capitalization work scope. SRNS met Limited Life Component (LLC) Research and Development (R&D) requirements and remained ahead of schedule during the performance period despite a prolonged period the facility was unavailable for testing due to significant facility maintenance.

(Objective 1.1): SRNS is on track or ahead of schedule to implement risk reduction and re-capitalization activities for Material, Recycle, and Recovery (MRR) equipment based on the FY16 schedule. All these MRR activities are in direct support to ensure the Tritium program is properly sustained for current and future mission requirements.

(Objective 1.1): SRNS issued the contract to procure Lanthanum Nickel Alumina (LANA) .75 and .85 ahead of schedule. SRNS completed the replacement of the Thermal Cycling Absorption Process (TCAP) beds three months ahead of schedule. Additionally, SRNS received Weapons Engineering Tritium Facility (WETF) shipments from Los Alamos National Laboratory (LANL) in support of the WETF de-inventory efforts, nearly two months early, and made good progress on the remaining risk reduction activities.

(Objective 1.1): SRNS consistently delivered their monthly reports for all weapon systems to the associated weapon program manager early. Early delivery provides the weapon program manager improved opportunity to review and analyze the information in order to react timely to budget and technical issues.

(Objective 1.1): SRNS developed an implementation plan to execute the NNSA Nuclear Enterprise Assurance (NEA) related program activities on time. In addition, SRTE provided a briefing to NA-12 regarding the implementation status of the NEA program to include cross-cutting and weapon program specific considerations. SRNS implemented Product

Realization Integrated Digital Enterprise (PRIDE) program expectations by upgrading the Automated Reservoir Management System (ARMS), upgrading the Master Data Management, Need-to-Know Protocols, and Enterprise Data Services. SRNS completed all ten FY16 NNSA Packaging Program milestones within schedule and budget.

(Objective 1.2): SRNS exceeded expectations for scheduled surveillance activities, deliverables, and requirements in accordance with each applicable weapons system approved Integrated Weapons Evaluation Team (IWET) Plan associated directive documents while remaining within budget. SRNS exceeded all FY16 surveillance goals for function testing, metallurgical testing, and reporting to support the certification of the nuclear weapons stockpile. SRNS completed the W78 Joint Test Assembly (JTA) Serial/Number (S/N)-619 on time contributing to the successful flight test. SRNS completed the B61 scheduled D-Test and non-destructive evaluations on time to meet project milestones.

(Objective 1.3): SRNS exceeded program expectations for the LLC program for all weapon programs. SRNS filled, assembled, packaged, and shipped an additional 16 reservoirs beyond the LLC Program Control Document (PCD) requirements in support of late requests from the Department of Defense (DoD). SRNS received positive feedback from DoD for their professionalism and dedication in supporting the mission despite numerous last minute change requests to support DoD weapons maintenance activities. SRNS remained ahead of schedule in meeting LLC R&D requirements.

(Objective 1.3): SRNS consistently completed their FY16 weapon component and site disposition work early and effectively. SRNS completed and submitted early their updated Weapon Dismantlement and Disposition (WDD) project plan reflecting FY16 – FY20 WDD activities.

(Objective 1.3): SRNS completed their scheduled activities resulting in the First Production Unit (FPU) for the W88 Gas Transfer System (GTS) development, integration, and production project. SRNS successfully completed their FY16 W87 ALT 360 Program activities resulting in completion of the final design review on time. SRNS completed the B83 GTS function testing as scheduled.

(Objective 1.3): SRNS completed all legacy tritium reservoir reclamation activities supporting the deactivation of that facility and processed facility equipment that is no longer needed as Excess Property. Dispositioning this equipment, combined with the relocation of the Hydro-burst capability, will allow the initiation of deactivation activities for the Bldg 238-H Reclamation Facility in FY17, which will lead to cost avoidance and facility risk reduction.

(Objective 1.4): For the W87 Alt 360 program, at Sandia National Laboratories - California (SNL/CA) request, SRNS performed environmental conditioning activities for the first time during hydrogen/deuterium development (HD-DEV) testing. In addition, during HD-DEV, SRNS/SRNL completed testing of two System Integration (i.e. high fidelity) units in support of the W87 Alt 360 Final Design Review. This testing is normally performed by the Design

Agency. W87 Alt 360 HD-DEV units completed function testing (eight units) and environmental conditioning (four units). For Enhanced Surveillance, aging studies of reservoir structural materials and development of advanced diagnostics (X-ray computed tomography) are underway.

(Objective 1.5): SRNS completed many Component Manufacturing Development (CMD) activities. SRNS continued analysis for developing Advanced Material and conducted initial studies for year 1 and year 2 aluminum Life Storage units. SRNS initiated research activities for the Reservoir Unloading Purification System (RUPS), Optimized Advanced Storage and Isotope Separation (OASIS), Advanced Hydrogen and Tritium Thermal Cycling Absorption Process (HT-TCAP), and Tritiated Water Processing. SRNS provided the draft scope of work for the Hydrogen Processing Demonstration Station (HPDS) to Aiken County to identify planned activities. SRNS will locate the HPDS in the Aiken County owned Advanced Research Center (ARC), which is leased by SRNL. These activities are critical for future reservoir technology development and facility process intensification and modernization efforts.

(Objective 1.6): SRNS successfully delivered all W76-1 Life Exteniton Program (LEP) program deliverables and directive schedule requirements and consistently issued their monthly status reports ahead of schedule. SRNS conducted testing and manufacturing activities and shipped 2X Acorn GTSs for the W76-1 within site budget allotment, maintaining Nuclear Security Enterprise (NSE) efforts in program delivery to the Navy.

(Objective 1.6): For the B61-12 LEP, SRNS prepared and submitted basis of estimate, Performance Measurement Baseline (PMB), schedule and cost risk assessment, and other required documentation that supported NNSA Baseline Cost Report and supported additional requests by the Federal Program Office (FPO) regarding the finalization of the report. SRNS was very responsive to FPO requests for data and provided complete monthly reports with quality Earned Value Management (EVM) data enabling improved program execution.

(Objective 1.6): SRNS successfully supported the W80-4 LEP throughout FY16 by providing the required data, information, and reports requested from NNSA. SRNS assisted in multiple program plan development meetings and participated in various team efforts associated with the initial set-up of the W80-4 program. As a result, SRNS contributed to the achievement of the W80-4 approval into Phase 6.3.

(Key Outcome 1.1): SRNS effectively contributed to modernization of the nation's nuclear weapon stockpile for the B61-12, W88 ALT 370, and the W80-4 LEPs. SRNS executed required program-specific and project controls activities including implementation of a tailored earned value management process to meet schedule, comply with Phase 6.X, lower risks, control changes, and control costs. SRNS executed to an early schedule for the B61-12 GTS Subsystem/Component Development and Production. SRNS completed preload processing activities on eight (8) 3X bottles and finished weld qualification loading on the 3X and 2P bottles. SRNS completed loading on Process Prove-in (PPI) Groups 1 and 2 and

shipped a PPI lot of nitrogen cartridges to Y12 in August 2016.

Issues—None

Goal 2: Reduce Nuclear Security Threats (25% of allocated fee)

Successfully execute authorized global nuclear security mission work in a safe and secure manner to include the Non-Proliferation, Emergency Operations and Counterterrorism missions. Integrate across the SRS, while maintaining an NNSA enterprise-wide focus, to achieve greater impact on a focused set of strategic national security priorities.

Under this goal, SRNS earned a rating of Very Good and 82% of the award fee allocated to this goal. Overall, SRNS provided very good to excellent support of the Office of Material Management and Minimization (M3) Defense Nuclear Non-Proliferation, Nuclear Counterterrorism, and Counter Proliferation and Incident Response mission activities and completed most of the M3 work scope on or ahead of schedule. Of significant note was the outstanding support by SRNS/SRNL to meet critical international commitments to support the 2016 Nuclear Security Summit; the outstanding support of the Mo-99 program to support development of a domestic supply of Mo-99 without the use of highly enriched uranium (HEU); and the significant effort and management attention towards resolving NNSA's fundamental concerns relative to planning for the Department's high priority Surplus Plutonium Disposition (SPD) Life Cycle Cost Estimate (LCCE) for the Dilute and Dispose approach.

Accomplishments

(Objective 2.2): SRNS successfully delivered an update to the National Environmental Radiological Accumulators (NERA) field guide.

(Objective 2.2): SRNL performed quality nuclear forensics research that was presented at the April 2016 Defense Nuclear Nonproliferation (DNN) R&D nuclear forensics program review.

(Objective 2.2): SRNL applied reactor effluent modeling and the analysis of thermal imagery to develop novel analysis software for mission stakeholders.

(Objective 2.3): The support provided by SRNL across the fiscal year to the NNSA Mo-99 Program was consistently of high quality. Their communication to program staff and interactions with other DOE National Laboratories fostered a highly productive environment of scientific cooperation. Their technical efforts with the Thermal Cycling Absorption Process (TCAP) system and successful initial efforts to transfer that system to the Program's Cooperative Agreement partner helped to further the Program's mission to support the development of a domestic supply of Mo-99 without the use of HEU.

(Objective 2.3): SRNL provided outstanding technical and project management support to facilitate the removal of separated plutonium from Japan and two countries in Europe, thus helping M3 meet key deliverables ahead of schedule for the 2016 Nuclear Security Summit.

(Objective 2.3): Under M3's Emerging Threats (ET) Program, SRNL provided outstanding support by leading planning efforts for the Joint Exercise Corvina Loco in Panama, enabling a productive planning effort for M3, Y-12, SRNL, Oak Ridge National Laboratory, and the U.S. Army Nuclear Disablement Teams. They led efforts to finalize both the Statement of Work (SOW) with Tropical Regions Test Center and the Interagency Agreement to execute that SOW. Additionally, SRNL was a vital contributor during meetings with U.S. Forces Korea, briefing them on Mobile Plutonium Facility capabilities.

(Objective 2.3): SRNL produced a draft plutonium reconciliation report, providing critical information related to global plutonium inventories. SRNL has also been invaluable in providing technical support to develop an M3 plutonium prioritization strategy.

(Objective 2.3): SRNL supported DNN's Reactor Conversion Program's efforts for the Cross Cutting (CC) pillar of the United States High Performance Research Reactor (USHPRR) program. SRNL continued to make very positive contributions to the USHPRR program; the technical quality of their work continued to be comprehensive in support of the CC pillar.

(Objective 2.4): SRNS provided valuable Subject Matter Expert (SME) support for additional activities, including Graphite Isotope Ratio Method Steering Committee and Plutonium Verification Team and Uranium Verification Team training.

(Objective 2.4): SRNS provided leadership and excellent support as International Nonproliferation Export Control Program laboratory lead for work in Bulgaria, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Serbia, Slovakia, Slovenia, and the Southeast European Law Enforcement Center. SRNS was particularly active in export control workshops in Bulgaria, Serbia, and the Balkan region, as well as to the World Customs Organization and the International Atomic Energy Agency (IAEA) and provided additional support to other lab leads in the Middle East, Asia, and the Western Hemisphere.

(Objective 2.4): SRNL continued to conduct outstanding export control technical reviews in support of Department of Commerce (DOC) export license applications and provided outstanding technical support in support of Weapons of Mass Destruction (WMD) interdiction activities.

(Objective 2.4): SRNL provided leadership for identifying and completing priority curriculum development activities, including development and maintenance of International Nonproliferation Export Control Program's (INECP) Chemical/Biological/ Radiological/Nuclear/Explosive (CBRNE) Commodity Identification Training (CIT) course materials and WMD CIT materials.

(Objective 2.4): SRNS provided outstanding logistical support for the May 10-11, 2016 U.S. – China Peaceful Uses of Nuclear Technology (PUNT) Joint Coordinating Committee Meeting, which NNSA led on behalf of the U.S. Government.

(Objective 2.4): SRNS demonstrated outstanding performance in managing the Mk-18a activities. The project has not only been able to remain on scope and accelerated schedule, it has been able to absorb unforeseen impacts (such as temporary closure of L-Basin). The management has also been able to anticipate and recover from slipped milestones, and has shown decisiveness in dealing with progress on the project. Their leadership skills were showcased in the delivery of a non-destructive assay of the assemblies.

(Key Outcome 2.1): Overall SRNS program performance supporting Material Disposition was very good with substantial improvement during Period 3 with considerable progress in planning for the Dilute and Dispose approach for surplus plutonium disposition and completion of pre-conceptual project design for increasing the dilute and dispose capability.

(Key Outcome 2.1): SRNS provided significant effort and senior management attention during the summer towards understanding and resolving NNSA's fundamental concerns relative to planning for the Surplus Plutonium Disposition Life Cycle Cost Estimate (SPD LLCE) for the Dilute and Dispose approach. Development of the SPD LCCE is a very high priority to NNSA and could define the future of the Department's Pu disposition program. In September, SRNS completed an outstanding, high quality, comprehensive Cost Estimate Plan which defines the process for integrated scope development, risk analysis, schedule development, and estimating activities for long range inter-related project and operational scopes across multiple DOE sites. Notably, SRNS established effective communications and a collaborative approach among the multi-site dilute and dispose estimate team with representatives from SRNS, Carlsbad Field Office, LANL, and Pantex.

(Key Outcome 2.1): SRNS provided very good support of the SPD Project pre-conceptual design package and supplemental information that was critical in obtaining successful approval to proceed with conceptual design and initiate the Analysis of Alternatives process.

(Key Outcome 2.1): Also supporting LCCE development, SRNS provided NNSA very good support in developing the SPD Program Requirements Document for the Dilute and Dispose approach, preparing the comprehensive work breakdown structure necessary for scope development, conducting a Technology Readiness Assessment with LANL, Pantex and Carlsbad participation, and initiating a task with MITRE Corporation to develop a conceptual SPD material process flow model to support validation of LCCE assumptions.

(Key Outcome 2.1): SRNS continued HB-Line Pu oxide production operations (following resumption in February 2016) and demonstrated a more consistent output. Although the overall annual production is significantly lower than the FY16 target, SRNS persisted to address continued HB-Line equipment and operational challenges impacting facility operations, including implementation of initiatives such as key equipment upgrades and repairs. Oxide product is consistently meeting all chemical and isotopic specifications; however, some product is just above moisture limits, which will need to be addressed before final canning. Continued emphasis is needed to attain consistent facility production

and address the high moisture content. SRNS is working to identify corrective actions to resolve the high moisture.

(Key Outcome 2.1): SRNS self-initiated a task to reach back to Newport News Shipbuilding, M&O LLC partner, and develop a model to replicate HB-Line's operational process to produce plutonium oxide and realistically account for process delays such as ongoing equipment issues continually being experience in the aged facility. The interactive model demonstrated that HB-Line facility will not be capable of producing oxide utilizing the aqueous process at the rate assumed in the previous annual throughput targets. As a result, the SRNS executive team aggressively explored alternative approaches supportive of SRS NNSA and Office of Environmental Management (EM) missions. SRNS was flexible to integrate NNSA and EM feedback and the associated deliverables were complete, of high quality, and very responsive to the request.

(Key Outcome 2.1): SRNS provided outstanding support of proposed clarification to the classification guide dealing with the Plutonium Disposition Program.

(Key Outcome 2.2): SRNS provided outstanding technical and project management support to facilitate the removal of all plutonium from Japan's Fast Critical assembly. This large-scale removal was completed ahead of the original schedule and was a major deliverable for the 2016 Nuclear Security Summit. Many SRNL and SRNS staff contributed tirelessly to ensure project success ahead of the 2016 Nuclear Security Summit. SRNS continued to work on unloading the material now that it has arrived in the United States.

(Key Outcome 2.3): SRNS continues to support the receipt and unloading of National Research Universal/National Reactor Experimental (NRU/NRX) Spent Nuclear Fuel (SNF) from Canadian Nuclear Laboratories (CNL). SRNS dealt with several unexpected situations in a very timely fashion, allowing these SNF shipments to continue on schedule. SRNS responded quickly to a need to devise an alternate way to unload NRX fuel in caddies due to suspect bottom plate weld integrity (an issue discovered by CNL at Chalk River Laboratory). A new fuel handling tool was designed and fabricated by SRNL to engage an NRX fuel assembly and its handling caddy simultaneously to ensure neither is dropped during basket unloading. The NRX alternate unloading procedure and new fuel handling tool is on schedule to support return of Legal Weight Truck (LWT) casks for additional shipments. SRNS has continued to have regular calls and interactions with CNL on both the Target Residue Material (TRM) and NRU/NRX campaigns to maintain awareness of their progress and to assist CNL with any operational issues.

Issues—None

Goal 3: DOE and Strategic Partnership Project Mission Objective (0% of allocated fee)

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

This goal is N/A for Savannah River.

Goal 4: Science, Technology, and Engineering (ST&E) (3% of allocated fee)

Successfully advance national security missions and advance the frontiers of the ST&E in accordance with budget profile, scope, cost, schedule, and risk while achieving the expected level of quality, safety and security. Effectively manage Plant Directed Research and Development (PDRD) and Technology Transfer programs to advance the frontiers of ST&E.

Under this goal, SRNS earned a rating of Very Good and 89% of the award fee allocated to this goal. SRNS exceeded almost all of the Objectives and Key Outcomes, has met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. SRNS has continued to be successful in its performance under this contract as described below. Issues that were identified during the year have been resolved, and are no longer of concern.

Accomplishments

(Objective 4.1): Following participation in the US-UK Manufacturing/Production Steering Committee meeting conducted in the UK with AWE, UK-Ministry of Defence (MOD), and NNSA M&O Production Sites, SRTE senior engineering management staff met separately with representatives of the AWE Tritium community to discuss potential collaboration topics. Specific areas of interest include JOWOG 22-4 (Tritium Processing) and JOWOG 30 (Infrastructure and Operational support). Specific activities (e.g., high resolution mass spectrometry, isotope separation) will be evaluated, including potential collaboration as part of the Plant Directed Research and Development (PDRD) Program. Collaboration with the AWE on tritium processing activities not only enhances competencies through staff interaction, but also avoids redundancy in R&D activities and supports efficient execution of operations for NNSA and the MOD.

(Objective 4.1): SRNS provided instruction to NA-123 staff on the SRTE Strategic Investment Process (SIP) and its Strategic Roadmap as a basis for development of an NA-123 technology maturation plan. Information on the SRTE process has also been requested by Environmental Management staff as a result of laboratory governance discussions. Exporting SRNS experience with SIP development and initial implementation provides an opportunity for NNSA and EM Programs to evaluate future needs (R&D, process, infrastructure, etc.), risks, and required funding to enable concise definition and communication of present and long-term priorities via a tool such as the Strategic Roadmap.

(Objective 4.1): The SRTE Technology Management Council (TMC) provided leadership in determining appropriate discretionary spending in support of tritium R&D and facility technology activities and executed appropriate oversight to ensure that tasks (e.g. PDRD) are managed within funding and schedule constraints. The TMC maintained focus on and directed resources to support sustainment of competencies and capabilities essential for meeting mission requirements through identification of priority R&D activities.

(Objective 4.2): SRNL management and the SRTE Tritium R&D Implementation Team focused on activities to enhance tritium R&D capability for Los Alamos National Laboratory (LANL) and Sandia National Laboratories – California (SNL-CA), as well as SRNL activities supporting GTS and tritium process system development. SRNL worked proactively with SNL-CA to support tasks typically occurring later in the GTS development process, such as early environmental conditioning (EC) of W87 Alt 360 units during the HD phase of development, and work typically outside of SRTE scope such as W87 Alt 360 HD System Integration Testing. In addition to B61-12 LEP GTS development support to LANL, SRNS was receptive to changing requirements for 4U reservoir activities such as a decision to develop an unloading methodology rather than function test remaining units.

SRNS provided critical support to the design agencies for the B61-12 LEP and W87 Alt 360 through responsiveness in support of development activities, including early execution (W87 Alt 360 EC) or increased scope (W87 Alt 360 HD System Integration Testing). The Tritium R&D Implementation Team (RDIT) coordinated tritium exposure requests for R&D tasks with on-going production requirements not only for Plant Directed R&D (PDRD) but also for Laboratory Directed R&D (LDRD) projects overseen by the EM landlord at SRS. Tritium exposure studies began on aluminum samples for Thomas Jefferson National Accelerator (TJNA) in support of a physics experiment and for SNL-CA for potential GTS applications. The RDIT has proven effective in evaluating tritium exposure requests for coordination with Tritium Operations and Engineering to ensure timely scheduling and execution of R&D activities. The RDIT is involved early in the PDRD proposal process to inform SRNL of challenges and opportunities during the upcoming fiscal year.

(Objective 4.3/5): Hydrogen isotope-related LDRD tasks and Strategic Partnerships, such as the Tritium Purification System design for SHINE and support to ITER, contribute to competency maintenance and provide funding leverage. SRNS was actively engaged in applicable IMOG/JOWOG activities throughout the year.

(Objective 4.4): SRTE actively supported a healthy research environment which sustains competencies in areas supporting the tritium mission both directly and indirectly, as well as providing early engagement with high school and college students concerning science, technology, engineering, and math topics and opportunities.

- SRNS is providing support for a physics experiment at TJNA.
- SRNL partnered with the Georgia Institute of Technology and Stanford University on an ionization voltaics project for the Defense Advanced Research Projects Agency (DARPA). SRNL was requested to fabricate the device and perform performance measurements.
- Graphene films were exposed to tritium and shipped to the Princeton Plasma Physics Laboratory in support of the Princeton Tritium Observatory for Light, Early-Universe, Massive-Neutrino Yield project (PTOLEMY).
- SRTE management provided leadership for and ensured appropriate staff involvement for Tritium Focus Group activities, and provided key support for organizing and

hosting the American Nuclear Society's 11th International Conference on Tritium Science and Technology (Tritium 2016) held in Charleston, SC.

- Throughout the year SRNL staff interfaced with technical societies/publications (e.g. Fusion Science and Technology, Minerals, Metals, and Materials Society, and the Journal of Pressure Vessel Technology) through preparation or review of journal articles and general participation in society activities.
- SRNL staff supporting tritium nanotechnology research interfaced with the University of South Carolina at Aiken and Augusta University on applicable nanotechnology research opportunities.
- SRNL conducted a future careers lecture series for the Greenwood (SC) School District 51 focusing on opportunities in nanoengineering.
- SRNL Hydrogen Processing Group hosted summer interns from Augusta University, the Georgia Institute of Technology, Georgia Southern University, Clemson University, and the University of Georgia; the summaries of work were presented in a well-informed, enthusiastic manner by the interns at summer's end and focused primarily on nanoscale analysis of hydrogen processing applications.

Issues—None

Goal 5: Operations and Infrastructure (33% of allocated fee)

Effectively and efficiently manage the safe and secure operations of the plant while maintaining an NNSA enterprise-wide focus; demonstrate accountability for mission performance and management controls; assure mission commitments are met with high-quality products and services; and maintain excellence as a 21st century government-owned, contractor-operated facility.

Under this goal, SRNS earned a rating of Good and 75% of the award fee allocated to this goal. SRNS exceeded most of the Objectives and Key Outcomes, has met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. SRNS has continued to be successful in its performance under this contract as described below. Issues that were identified during the year are not considered to be significant performance issues. Specific observations follow:

Accomplishments

(Objective 5.1/5.4): The Quality Assurance Program (QAP) exceeded expectations for the FY16 reporting period. No Unsatisfactory Reports (URs) were attributed to SRNS activities and the average Product Acceptance Unit Efficiency, which measures the Quality of Product transferred to packaging, was 98.81% (goal is ≥ 98.00%). The QAP also supported the implementation of the new Nuclear Enterprise Assurance (NEA) requirements that were established in NAP-24A, Weapon Quality Policy by completing a detailed analysis of the processes associated with reservoir receipt, processing, and shipment. The effective implementation of the QAP has continued to drive process improvements and contributes to the overall success of the mission.

(Objective 5.1): The Health and Safety Program continued to function effectively in meeting all applicable requirements of 10 CFR 851. SRTE continued to demonstrate a strong commitment and awareness to worker safety and health in the execution of routine, non-routine, and project work for the period. SRTE exceeded one-million safe work hours without a days-away case.

(Objective 5.2): SRNS participated in three on-site team and sub-team visits associated with the Tritium Production Capability (TPC) Analysis of Alternatives (AoA) Team. SRNS provided exceptional support with the necessary resources and information requested supporting this initiative. SRNS also exceeded expectations by responding to multiple data calls from the TPC AoA Team. The efforts by SRNS to support the AoA activities helped efforts to remove the identified risk to the program and enhanced long-term program sustainability.

(Objective 5.2): SRNS provided exceptional support in developing design criteria documents for each of the tritium processes to enable conceptual design team success

supporting the CD-1 milestone efforts through cost estimating, meeting coordination, and resource management of subject matter experts.

(Objective 5.3): SRNS completed the installation of the Argus backbone in the tritium facilities Common Alarm Station on schedule and under budget. Completion of this phase of the Argus system provides much needed risk reduction for the failing and obsolete physical security system and helps ensure no impact to the tritium mission.

(Objective 5.3): SRNS delivered an effective, efficient, and responsive safeguards and security program during the period. SRNS rapidly responded to complex, multi-faceted issues with the current physical security system that is operating well beyond its design lifespan. Recovery from a major lightning storm that destroyed the access control components was managed well with the appropriate compensatory measures and the system was recovered expeditiously with no impact to tritium product shipments.

(Objective 5.3/Key Outcome 5.5): SRNS Emergency Management efforts are improving and SRNS met the requirements and demonstrated good effective execution of the program for the Tritium Enterprise by conducting eight facility exercises and one site exercise. Achieving a fully staffed and trained cadre of emergency response personnel, they conducted 40 emergency preparedness and conduct of operation drills, and conducted an in-depth analysis of its training program to improve the Emergency Management response posture. SRNS reassigned several personnel from other programs to form a Working Group to prioritize the improvements to the training program, which demonstrates the most significant improvement to this area to date. Finally, SRNS provided timely reporting on the number and seniority level of SRNS employees that participated in emergency preparedness exercises to the Office of Emergency Operations to support congressional reporting requirements. SRNS participated as a team member for the DOE O 151.1C revision by participating on the writing team, conference calls, and responding to questions and comments of the new order.

(Objective 5.7): The SRS cyber security and information technology programs met all applicable Critical, High, Medium and Low priority Implementation Factors (IF) of the FY16 Cyber Security and IT Programs Execution Guidance (PEG) and received an "Excellent" rating per the PEG rating criteria. Additionally, cyber security reviews of the SRS program have demonstrated that they have implemented good technical and non-technical controls to adequately protect NNSA's information. Notable accomplishments were the deployment of HSPD-12/MFA for logical access and the establishment of the OneNNSA connection.

(Key Outcome 5.2): SRTE continued proactive implementation of the Strategic Investment Process (SIP) utilizing risk-based analysis for areas such as process system health, future GTS production requirements, and technology activities led by the SRTE Strategic Leadership Council (SLC). Additionally, SRNS ensured timely and accurate input was provided in support of the FY17 Stockpile Stewardship and Management Plan (SSMP). Internal SSMP support was noted as a significant improvement to previous SSMP product development efforts, and is directly related to the improved SIP program implemented in

late FY15.

(Key Outcome 5.3): SRTE performance is demonstrating Continuous Improvement (CI) through inter-organization employee engagement opportunities through the implementation of the Tritium Operating Production System (TOPS), to include the commencement of Tier 1, 2, and 3 Visual Management boards and Accountability meetings in targeted tritium facilities. In addition, they initiated a Value Stream Analysis (VSA) on the training administration process which revealed a number of opportunities to improve efficiency and quality. Finally, they initiated a VSA on the maintenance-operations interface process, which was instrumental in realizing organizational process weaknesses. These CI initiatives have begun to make significant operational improvements with expected future program efficiencies.

(Key Outcome 5.4): SRNS has supported Core Infrastructure Risk Informed Strategic Planning (CRISP) and provided valuable input to the team. SRNS's exceptional preparations in FY16 for a Master Asset Plan (MAP) Deep Dive in early FY17 led to an extremely valuable information exchange between sponsored programs to better integrate risk-based decisions impacting the tritium mission. SRNS is leading the complex in supporting the BUILDER initiative, meeting BUILDER Phases II and IIIa milestone completion dates ahead of schedule. Additionally, they shared with other NNSA sites the internally-developed continuous improvement cycle that details how BUILDER is being integrated into existing site procedures. SRNS has met requests for data and briefings for Mission Dependency Index (MDI) and Enterprise Risk Management (ERM) and completed the conversion of Facilities Information Management System (FIMS) status codes.

(Key Outcome 5.4): SRNS provides timely updates and maintains baseline data in accordance with the NA-50 Program Management Plan (PMP) and is continuing to improve the timeliness and accuracy of G2 data. SRNS has made organizational and process changes to align with NA-50's G2 requirements outlined in its PMP. SRNS has improved communication efforts which have strengthened their credibility with program sponsors. Additionally, SRNS has worked diligently to ensure their costs are reported on time.

Issues

(Objective 5.1/5.4): SRTE performance in work planning and control (WP&C) met several significant challenges. There were a total of four hazardous energy control reportable events, including an event where a worker cut into an energized 120 volt line. SRTE incurred a serious conduct of operations event when an operator failed to use the procedure to process a run of new reservoirs. This resulted in the loss of several reservoirs and an expenditure of almost $600,000 for the cost of the procedure non-compliance and the additional studies performed to understand the extent of condition. SRTE also experienced challenges in the timely execution of work such as the failure to properly size a diesel generator supplying temporary power to a building 232-H exhaust fan in support of a planned 13.8KV outage. As a result, a significant cost and considerable amount of planning and preparedness activities were lost from this delay.

SRNS has implemented changes to address these challenges in an effort to institutionalize a culture of disciplined operations and to effectively meet future mission deliverables.

(Objective 5.4): Due to problems in the SRNS procurement program, tritium operations were placed at risk due to poor procurement and spare parts administration. For example, SRTE experienced a significant issue when critical spare parts were not available, nor was the system responsive, when the facilities experienced a significant increase in tritium air monitor booster pump flow switch failures. In June 2016, SRNS experienced another error with the site's inventory system resulting in a total depletion of oxygen monitors supporting the tritium mission in one tritium facility. Significant effort was needed to prioritize the purchasing process to meet high national security priority work.

(Objective 5.4/Key Outcome 5.1): SRNS planning and management of small construction projects requires improvement. SRNS has bifurcated the management of projects such that the total estimated cost (TEC) is estimated and managed separately from the other project costs (OPC) for small projects. SRNS is not adequately communicating and managing the associated OPCs and other project execution costs (OPEXs) work scope. This lack of a holistic total project cost (TPC) management approach created a lack of ownership, responsibility, and accountability over a project's entire work scope, and created a reporting process which did not provide an accurate representation of project status and was disconnected from reports provided to NNSA HQ. SRNS has made improvements in this area late in the reporting period, but must continue to improve their cost and schedule estimating and execution tracking.

(Objective 5.5): SRNS has not been proactive in the re-competition of an off-site laboratory facility lease, resulting in risk to significant impact to Tritium process Research and Development work. The lease negotiations were late to commence and resulted in significant delays with potentially negative impacts. Only with significant effort was an agreement on a short-term lease extension achieved just days before the expiration of the existing lease. The delay and lack of contingency plans risked an impact to the program. Despite that contract crisis, SRNL has not finalized the new laboratory lease, continuing to place the program at risk. On a positive note, the short-term lease extension has resulted in a cost savings for the program.

Goal 6: Leadership (10% of allocated fee)

Successfully demonstrate leadership in supporting the direction of the overall DOE/NNSA mission, improving safety culture, the responsiveness of the SRNS leadership team to issues and opportunities for continuous improvement internally and across the Enterprise, and parent companies involvement/ commitment to the overall success of the plant and the Enterprise. Specific observations follow:

Under this goal, SRNS earned a rating of Excellent and 91% of the award fee allocated to this goal. SRNS exceeded almost all of the Objectives and Key Outcomes, and is generally meeting the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. While minor issues were encountered they were resolved and no significant issues in performance exist. SRNS has continued to be successful in its performance under this contract as described below.

Accomplishments:

(Objective 6.1/6.3/6.4): The SRNS leadership team was proactively engaged in the development and implementation of a strategic and informative basis for responsibly managing the aging infrastructure of the Tritium Facility, and thereby mitigate the increasing risks to the nuclear deterrent through Tritium infrastructure improvements. SRNS has actively supported the governments' evaluation efforts in understanding the requirements and evaluating Analysis of Alternatives (AoA) development in supporting the infrastructure modernization requirements, and is working closely with the pre-conceptual design team to support activities towards achieving CD-1. These efforts are critical in removing the significant risk to this program and improving the operational efficiency.

(Objective 6.1/6.3): SRTE and SRNL leadership have continued to be proactively engaged and provided insightful research and recommendations to the Tritium Strategic Materials Manager to ensure all programmatic and supply chain nodes are properly risk evaluated and programmatic priorities are established to ensure long-term program sustainability.

(Objective 6.1): Partnering efforts between SRNS, SRFO, and HQ elements received renewed leadership focus during FY16. The SRNS leadership team was very effective in cultivating an improved partnering relationship with NNSA to solve significant programmatic issues. Examples include several small recapitalization projects that were on a failing trajectory early in the reporting period, but through improved communication and oversight, these project's cost and schedule were able to be restored.

(Objective 6.1): In coordination with the American Nuclear Society (ANS), SRNL took the lead for the planning and execution of the ANS 11TH International Conference on Tritium Science and Technology in Charleston, South Carolina. Effective planning was evident in the execution of this international conference which included participation by approximately three-hundred international tritium experts. In preparation for the event

SRNS ensured timely communication with ANS and DOE/NNSA stakeholders with no significant issues emerging throughout event planning and execution phases. By leading the conference and choosing a location near SRS, SRNS tritium competencies were enhanced through significantly greater participation by SRTE engineering and SRNL personnel with their international peers.

(Objective 6.2): SRNS worked aggressively to address SRTE staffing shortfalls and promote a knowledge transfer process to ensure a properly sustained workforce is maintained due to the risk of an aging workforce. SRTE increased staffing by 83 over the course of FY16; however they are still working to refine an affordable and efficient "pipeline" process. This effort is complicated by the tremendous retiring workforce bow-wave, a protracted security clearance process, and limited flexibility in the budget allocations. To this end, the SRNS-Tritium Human Resource Manager led a Rapid Improvement Event (RIE) on sourcing and recruiting, resulting in the identification of eight improvement actions which should result in a more rigorous and strategic approach to recruitment.

(Objective 6.2): SRNS has begun a number of performance improvement reviews to seek process effectiveness and efficiencies milestones. Each of these efforts resulted from identified weaknesses, and each initiative is demonstrating positive improvement to safety culture and/or operational effectiveness. These efforts include (1) value stream mapping of 2X reservoir processing; (2) strategic "A3 Process" on the Continuous Improvement (CI) program; (3) development of an Engineering and Maintenance Excellence Plan; (4) value stream mapping of the maintenance/operations interface and maintenance planning program; (5) 5S improvement programs; and (6) leadership organization and execution improvements, principally focused on First Line Manager (FLM) development.

(Objective 6.2/Key Outcome 6.1): SRNS continues to make significant progress in identifying or addressing required improvements to weak areas identified in prior year performance issues through a holistic evaluation of training, procedures, and personnel/leadership engagement through a new "A3 Improvement Process" for each area. The initial efforts focused on procedure, training, and management improvements throughout the organization. These efforts identified organizational gaps which are driving institutional behavior changes, including those procedures and efforts in EM operated facilities at SRS. NNSA continues to closely monitor SRNS's ability to make these organizational and cultural changes to impact the operating paradigm. An outcome of the A3 processes was the development of roadmaps to improve the programmatic and operational decision making and provide disciplined operations through action teams to identify critical focus areas to pursue that will remove latent organizational weaknesses and improve organization and personnel performance.

(Objective 6.2/Key Outcome 6.1): Through an improved evaluation process initially developed in FY15 and now institutionalized, SRNS has fully implemented the Strategic Investment Process (SIP) that provides SRTE leadership improved strategic oversight for the program direction and a tactical understanding of the critical nodes. Throughout FY16 SRNS institutionalized this holistic strategic management plan to improve the Tritium

program processes and provided a basis for a formal risk assessment and engineering analysis of facility systems to better schedule and manage strategic investment for the Tritium Facilities. This improved risk based process enhanced senior leadership engagement to ensure the sustainment of facility capabilities and staff competencies are addressed to meet long-term enterprise requirements. Of significance in the first four-months of FY16, SRNS identified programmatic and operational challenges that future GTS requirements will have on specific facility and personnel resources. This information is guiding a team to identify potential solutions and program priority changes that may be needed to meet future LEP delivery requirements. SRNS has now institutionalized the SIP, and the periodic roadmap updates are now part of their new business paradigm.

(Objective 6.2/6.3/6.4/Key Outcome 6.1/6.2): During the second half of this reporting period, SRTE began execution of the Tritium Operating Process (TOP) to improve the communication and engagement of the management team and workforce in the effective performance of mission execution, first within the Old Manufacturing facility, but expanded the scope to include the Extraction Facility. SRTE is receiving significant support from Honeywell FMT and the TOPs program is demonstrating significant facility operating performance improvements and workforce engagement. SRTE is moving forward in institutionalizing this tiered accountability process throughout the remaining SRTE facilities in FY17.

(Objective 6.3): Supporting a NA-50 infrastructure improvement process, SRTE continued with BUILDER implementation, completing Phases II and III ahead of schedule. They partnered with NA-50 personnel to conduct training on BUILDER usage as a sustainment tool for SRTE Engineering personnel, to include the development of a Tritium Procedure for BUILDER sustainment after full implementation of the program in FY18. SRTE hosted NA-50 personnel to develop the Mission Dependency Index (MDI) for usage as a planning and risk assessment tool within the Tritium Facilities. This initiative was amongst the first in the complex and greatly aided NA-50 personnel in conducting similar evaluations at other NNSA sites.

(Objective 6.3): While initial activities associated with the development of a multi-site Surplus Plutonium Disposition (SPD) Dilute and Dispose Program Life Cycle Cost Estimate (LCCE) did not meet program expectations, SRNS leadership engagement was extremely effective in understanding and resolving NNSA's fundamental concerns relative to planning, which culminated in the delivery of a high quality and comprehensive cost estimate plan defining the process for integrated scope development, risk analysis, schedule development, and estimating activities. SRNS Management took the initiative to assign additional key individuals resulting in significant improvement to the planning effort. This effort is very complex and requires continuous coordination and communications among multiple DOE sites. SRNS is expected to remain committed to providing the completed comprehensive cost estimate to NNSA by June 2017. Development of the estimate is a very high priority for NNSA.

(Objective 6.3): SRNS self-initiated a task to reach back to Newport News Shipbuilding and develop a model to replicate HB-Line's operational aqueous process to produce plutonium oxide. The interactive model demonstrated that HB-Line facility would not be capable of producing plutonium oxide at the rate assumed in the annual throughput targets. As a result, the SRNS executive team aggressively explored alternative approaches supportive of both NNSA and Office of Environmental Management (EM) missions. SRNS was flexible to interim NNSA and EM feedback and the associated deliverables were of high quality and very responsive to the request.

(Objective 6.3): SRNS leadership and the SRNS Board of Directors were effective in executing a settlement agreement with all subcontractors regarding the Request for Equitable Adjustment for the Waste Solidification Building (WSB) construction project. SRNS resolved all outstanding potential costing allowances issues with the government and subcontractors, to bring the WSB project to closure.

(Objective 6.3): In collaboration with Kansas City National Security Campus (KCNSC), SRNS initiated an exchange program in the third quarter between the SRTE Reservoir Engineering group and KCNSC GTS Product Engineering. Four engineers from the two sites have completed two-week rotations in an effort to increase communication and mutual understanding of each site's activities. Management from the sites have reviewed the activities and consider the effort effective and mutually beneficial. Tangible benefits include identification of a process improvement at KCNSC related to reservoir marking and procurement activities to ensure consistency in application to specific reservoir types.

(Objective 6.4/Key Outcome 6.1): SRNS has actively managed the recovery and sustainment efforts that required a site-wide operational pause, period of deliberate operations, and transition back to normal operations for the Tritium facilities and other EM facilities supporting NNSA activities. The need for the operational pause was effectively identified due to identification of site-wide operational weaknesses. SRNS developed a plan to restore the operational culture across the site, including a long-term sustainment action plan that includes EM operated facilities that support NNSA mission work. HB-Line transitioned back to normal operations in February 2016.

Issues:

While SRNS provided excellent leadership this year, two areas for improvement are noted:

(Objective 6.1): SRNS must actively manage SRNL governance transformation to ensure the Tritium program sustainability and operations are not compromised through any diverted focus from national security missions. To date, SRNS/SRNL have been slow to include Tritium leadership in governance discussion to ensure plant and R&D requirements are sustained. The absence of dedicated SRNL support of the Tritium mission would place the entire Tritium supply chain at risk.

(Key Objective 6.2): SRNS leadership must improve the business focus in removing all program and process impediments which are limiting the effectiveness of the security

clearance process. While effort has been made, there are still significant gaps to eliminating or reducing program inefficiencies, which are negatively impact Tritium sustainability and increasing programmatic risks.