Award Fee Determination Scorecard

Contractor: Savannah River Nuclear Solutions

Contract: Management and Operations

Contract Number: DE-AC09-08SR22470

Award Period: October 1, 2011 – September 30, 2012

Basis of Evaluation: Performance and Evaluation Plan (PEMP)

This is a Cost Plus Award Fee contract as defined by federal acquisition regulations (FAR). Fee is made available for the completion of explicit work results, such as completing a task on time, or for implicit performance in areas of cost, schedule/timeliness, quality and business relations. Fee may be earned based on an annual evaluation of contract performance. Total available fee for each contract year is identified in the contract. Fee-bearing work may be assigned as an award fee component for subjectively measured performance requirements or a performance based incentive fee component for objectively measured requirements.

Total Fee Available:
Total fee available for year four of the five-year basic contract was $48,950,000. The contractor earned $41,492,503, which is 85 percent of the total available. Fee-bearing work is funded and evaluated separately by U.S. Department of Energy (DOE) Environmental Management (EM) and National Nuclear Security Administration (NNSA) programs. The determination of earned fee is also made by each program.

Program	Fee available	Fee earned	Percent
EM	$28,039,000	$27,128,500	97%
NNSA	$20,911,000	$14,364,003	69%
Total	$48,950,000	$41,492,503	85%

Award Fee Adjectival Rating:
The DOE Savannah River Operations Office (DOE-SR) performs monthly surveys of federal senior site management who report observations in monthly fee board meetings. These areas are given a subjectively measured adjectival rating in accordance with FAR. For Fiscal Year (FY) 2012, the contractor received a composite performance rating of 86 percent based on feedback from the monthly surveys. As defined by the FAR, this performance rating is very good. This rating means the contractor exceeded many of the significant award fee criteria and met performance requirements of the contract.

Performance Based Incentive Fee:
Contractor work must be planned, funded and approved for each fiscal year, resulting in an approved baseline. The baseline work implements strategic decisions relative to agency and program initiatives. An additional element of strategy includes the decision by federal management to apply a portion of available fee to certain work, or aspects of work that may be interdependent on other work. This fee-bearing work must benefit the agency and/or program goals or strategic initiatives. Fee-bearing work is identified at the beginning of the fiscal year and managed through the baseline Earned Value Management (EVM) and Work Authorization (WA) systems.

Significant Achievements:

General; Safety-related

- Total Recordable Cases (TRCs) for SRNS Overall Workforce (Operations, Construction, and Subcontractor) employees decreased from 32 in FY2011 to 21 in FY2012 for a 34% improvement. Days Away, Restricted, or Transferred Cases (DARTs) also decreased from 15 in FY2011 to 5 in FY2012 for a 67% improvement. The FY2012 TRC rate was 0.36 (a 19% decrease over FY2011) versus an established target rate of 0.45. The FY2012 DART rate was 0.09 (a 57% decrease over FY2011) versus an established target rate of 0.20.
- Received their 12th Voluntary Protection Program (VPP) Star of Excellence Award.
- Within the first quarter FY12 after submittal of the FY12-17 Contractor Performance Baseline (CBP) update, SRNS provided the impacts of their CPB update compared to the FY11 Integrated Lifecycle Estimate (ILCE). The SRNS FY12 CPB update impacts encompassed significant assumption changes; scope and schedule deferrals/accelerations and any technical strategy changes affecting the out years; inter-Project Baseline Summary (PBS) logic ties, milestones and corporate performance metric alignment. Timely receipt of the impacts and the detail provided by SRNS were instrumental in the timely development of the out year estimate portion of the FY12 ILCE submittal to HQ in August, 2012 and supporting the SRS EM liability.
- SRNS also provided support in development of the FY12 SRS EM Program Management Plan (PMP) document. The SRS EM PMP is a high level narrative of the FY12 ILCE, identifying significant changes from the previous year PMP, updated SRS EM Cost and Corporate Metric Profile, key PBS assumptions, milestones and program summary descriptions, with an integrated PBS lifecycle roadmap to EM completion and turnover to Legacy Management for long term stewardship. This document supports the SRS EM liability review as well.
- SRNS Site Services provided the necessary support to assist DOE-SR and Ameresco with the Biomass Cogeneration Facility Readiness Assessment. Additionally, Site Services provided DOE-SR capitalization recommendations and the initial document control for the Biomass Cogeneration Facility (BCF). All assets were added to the SRNS Asset Management Information System (AMIS) and the drawings were placed in the SRNS Document Control Register

(DCR) System. Finally, Site Services led the effort to address support issues, review schedules, and planned future support to ensure a successful transition from the D Area Powerhouse to the Biomass Cogeneration Facility (BCF) operated by Ameresco.

- SRNS Emergency Management provided the following support and services to Ameresco and DOE for the Biomass Cogeneration Facility startup: reviewed the EPHA (Emergency Preparedness Hazard Analysis); developed the drill scenario and trained the Area Emergency Coordinator / Facility Emergency Coordinator; developed Emergency Response Procedures; provided an interim Emergency Preparedness Coordinator; and, assisted with the identification and installation of emergency equipment and supplies.
- Engineering organization implemented the upgrade to NQA-1 (2008/2009a) to enhance engineering efforts and allow compliance with DOE Orders and SR commitments to upgrade from NQA-1 (2000)
- SRNS experienced zero Occurrence Reporting and Processing System (ORPS) reportable personal contamination events in FY2012.
- SRNS achieved a reduction of site overhead costs of 25% by focusing on identified reduction areas, continuous improvement initiatives and tight fiscal controls.
- SRNS was proactive in their support to DOE headquarters Health, Safety and Security (HSS) audits related to the Oak Ridge/Y-12 incident.
- SRNS continues to focus on Continuous Improvement (CI) initiatives with the establishment of a site CI Manager. In FY2012, a total of 31 CI projects were completed, with an overall hard dollar savings of almost $3.4M. Productivity and efficiency savings totaled over $5.7M.

Nuclear Materials Operations

- Nuclear Materials Program provided safe and secure receipt, disposition, packaging and storage of surplus nuclear materials from SRS and across DOE and supported the nation's nonproliferation initiatives by receiving and storing domestic and foreign research reactor fuel.
- Nuclear Materials Program declared readiness in HB Line and began repackaging plutonium oxide to the Waste Isolation Pilot Plant (WIPP) and studies show how it could potentially provide one metric ton of plutonium oxide per year for the Mixed Oxide (MOX) Fuel Fabrication Facility.
- Nuclear Materials Program, HB-Line, implemented Category 1 security measures in preparation for Phase II oxide production in support of early MOX feed.
- Nuclear Materials Program, K Area Complex, received the final FY12 Lawrence Livermore National Lab (LLNL) Special Nuclear Material shipment. This receipt completed the LLNL de-inventory allowing them to transition from a Category I to a Category III security posture, fulfilling a major DOE objective. This culminates a 7 year effort.
- Nuclear Materials Program developed and implemented actions from the Monitoring and Condition Assessment strategy for L Basin fuel.
- Nuclear Materials Program issued the strategy for disposition of high Al/low U used Nuclear Fuel.

- The Nuclear Materials Program, Transuranic (TRU) waste remediation crew, implemented an innovative method of inspecting the interiors of cabinets (e.g., old HB-Line glove boxes) for prohibited items. This new technique has reduced the risk of contamination spread and has significantly reduced the time needed for inspection, thus reducing dose.
- Nuclear Materials Program preparations for beginning Sodium Reactor Experiment fuel dissolution were completed and dissolution of the first bundle of fuel in the campaign was charged to the dissolver approximately two weeks ahead of schedule. Readiness was successfully confirmed with a contractor led Readiness Assessment followed by a DOE led readiness assessment
- Nuclear Materials Program achieved readiness for AFS2 dissolution ahead of schedule. The schedule was very aggressive with little to no contingency. SRNS successfully implemented facility and safeguards/security upgrades, training and nuclear safety/criticality changes and performed a Readiness Assessment to confirm readiness.
- The Nuclear Materials Program completed flushing of bulk fissile material in H Canyon ahead of schedule.
- Nuclear Materials Program prepared and issued the H Canyon Resumption Plan per revised scope ahead of schedule.
- Nuclear Materials Program transferred all remaining Pu solutions from Tanks 11.1 and 16.3 ahead of schedule.
- Nuclear Materials Program also repackaged bulk material of National Environmental Policy Act (NEPA) covered DE-3013 for WIPP ahead of schedule.
- Nuclear Materials Program completed Destructive Examination (DE) Surveillances on 3013 storage containers ahead of schedule.
- Nuclear Materials Program completed the heavy water sampling plan and treatability study ahead of schedule.
- Nuclear Materials Program revised and submitted the Documented Safety Analysis (DSA) to include revised functional classification of the KIS diesel generator ahead of schedule.
- Nuclear Materials Program completed the DSA implementation and declared readiness for culvert receipts ahead of schedule.
- Nuclear Materials Program Purification Area Vault (PAV) vault was operational several months ahead of schedule and $15M under the baseline estimate of $32M, allowing for further storage expansion. The additional storage is expected to allow for further consolidation of nuclear materials at the SRS, ultimately resulting in (expectation of) lower DOE complex storage costs.
- Nuclear Materials Program completed the final shipment of low enriched uranium (LEU) from SRS to the Tennessee Valley Authority (TVA), exceeding the current contract to ship 301 metric tons of LEU for use in TVA's nuclear power reactors. In 335 safe shipments, enough LEU has been delivered to power every home in the United States for 52 days, demonstrating how the use of Cold War-era nuclear waste can further nonproliferation efforts while removing nuclear waste from South Carolina.

Solid Waste

- Throughout FY 2012, SRNS provided quality services in the storage and disposal of routine generated low level waste, hazardous waste, and mixed low level waste using cost effective approaches.
- Completed the first shipment to WIPP of non-MOX plutonium two months ahead of baseline.
- The Solid Waste Program transported a total of 33 containers of down-blended plutonium oxide to WIPP.
- SRNS Solid Waste Program was selected by the DOE Office of Sustainable Performance to win three "2012 DOE Sustainability Awards" for nominated environmental projects. Only 20 Sustainability Awards were granted from 137 total nominations within the DOE complex.

Area Completion Projects/Site Services

- SRNS shut down the massive 1950's era powerhouse in D Area after decades of service.
- Completed ultrasonic testing of over 30 miles of rail on the site railroad network to support future 70-ton cask shipments.
- The Site Infrastructure organization completed the FY12 Facility Information Management System (FIMS) target of 185 building additions ahead of schedule per the SRS Real Property Asset Management Plan. In addition, the FY12 Facility Condition Assessment Survey target of 321 assessments was completed and surpassed (350) ahead of schedule.
- SRNS Environmental Compliance and Area Completion Projects achieved Environmental Management System approval from DOE demonstrating SRNS conformance with ISO 14001; performed environmental sampling activities to meet regulatory requirements (4,566 groundwater and 5,482 other media samples); and, completed 123 milestones - continuing a perfect RCRA/CERCLA compliance record since 1991.

Savannah River National Laboratory (SRNL)

- Throughout FY 2012, SRNL provided quality products and services in support of the research, development, and deployment of technologies to DOE-EM, Nuclear Materials Stabilization Project, Liquid Waste Operations, Closure Project, and the EM Complex for the cleanup mission. Feedback received throughout FY 2012 from the many SRNL customers was very positive. Many noteworthy SRNL accomplishments as the EM Corporate National Laboratory were achieved.
- SRNL constructed a Mini-Thermal Cycling Absorption Process unit which promises significantly higher capacity from a reduced footprint while consuming 60% less energy.
- SRNL established the Center for Applied Nuclear Materials Process & Engineering Research (CANMPER).

- SRNL completed radioactive and pilot-scale simulant tests for VSD of fluoride salts flow sheet, and finalized the design for furnace liner and provided design inputs to HB-Line.
- SRNL also provided direct technical assistance in the design, specification, integration, configuration, and deployment of a high fidelity, custom Data Acquisition system (DAS) for the Drive Train Test Facility (DTTF). SRNL issued the design drawings for the DAS for the 7.5 Mega Watt test rig.
- SRNL provided technical support to the Portsmouth Gaseous Diffusion Plant to facilitate appropriate disposal of D&D waste.
- SRNL issued the 3013 equivalency document; the Sodium Reactor Experiment (SRE) used nuclear fuel flow sheet, and the AFS-2 dissolution flow sheet to support H Area programs, allowing two dissolver operations.
- During FY 2012, SRNL consistently received positive feedback from the DOE Waste Disposition Project (WPD) office and the SRS Liquid Waste (LW) Contractor. SRNL provided particularly timely and needed technical support for the closure of tanks 18 and 19 and received a note of recognition from the SRS LW contractor.
- SRNL increased opportunities for continued growth through partnerships with industry, academia, and small businesses. One noteworthy partnership is the Work for Others Agreement with the Tokyo Electric Power Company (TEPCO) to perform a study to assess the feasibility of applying the laboratories' unique technical expertise and capabilities to assist TEPCO in addressing the items of interest in connection with the accident at the Fukushima Site.
- SRNL performed a successful deployment exercise of the Mobile Plutonium Facility at the Nevada National Security Site.
- SRNL took part in a DOE-wide response to the Fukushima, Japan nuclear disaster. SRNL supplied a radioactive liquid transport assembly and five large steel storage tanks. The Environmental Bioassay Laboratory also assisted by analyzing soil and air filter samples for radioactive contaminants and by providing expedited analytical support for iodine analysis on milk and vegetation samples.

<u>Tritium Programs</u>

- The Tritium Programs achieved a Reservoir TPAG acceptance rate of 99.25%, exceeding the 98.5% goal established by NNSA.
- The Tritium Programs successfully supported the Helium-3 mission for NNSA.
- The Tritium Programs performed Testing and Post-Function Testing, including RAPTOR reporting on schedule.
- The Tritium Programs received Cycle 10a and 10B TPBARS, place in storage, and extracted 10a TPBARS ahead of schedule.
- The Tritium Programs completed R&D activities as scheduled.

<u>Nuclear Non-Proliferation Project:</u>

- The Waste Solidification Building (WSB) Project Team continues to manage a challenged General Subcontractor who is performing the Balance of Plant

construction. Recent changes implemented include: replacement of subcontractor's on-site Management Team, establishment of a Change Order Board, Plan of the Day Meeting with the integrated team, "fresh eyes" reviews of key areas, integrated weekly Management Meetings to review Safety, Quality, Procurement, Engineering and Turnover near and long term work/performance targets vs. performance, and establishment of cross functional, multi-contractor Teams/Champions for key areas of installation/execution. SRNS continues to co-locate their personnel with the Subcontractor for immediate availability to resolve issues/questions.

- The last piece of major Government Furnished Equipment (High Activity Waste/Low Activity Waste Cementation Glove Boxes) has been set in the WSB.
- SRNS effectively and efficiently supported the assigned tasks to the MOX subcontractor, Shaw AREVA, including construction support, and physical security design/modeling support. In addition, support was provided to NNSA related to Program Management, feed material, etc. SRNS also supported environmental permitting by providing support on the regulatory status of MOX material.
- SRNS provided support for the closeout of the Pit Disassembly and Conversion (PDC) project per the closure plan revision.

Significant Deficiencies:

- SRNS successfully implemented PeopleSoft™, equating to 50% of the average industry time for a project of this magnitude. In the course of implementation, SRNS encountered several issues. The initial "go live" sequence for transition to the PeopleSoft Financial and Supply Chain (PSFSCM) enterprise platform proved more challenging than anticipated. Budget driven reductions in training and system testing during FY11 led to less than adequate system functionality and workforce that proved ill equipped to operate the new system. This resulted in several months of unusually difficult monthly financial closings. SRNS remedied this issue by restructuring the enterprise system project team mid-year, and adding a more rigorous approach to system design change and testing prior to implementing the changes. There was also an unacceptably large incidence of overdue payments to vendors. The contractor resolved this by forming a dedicated team to assist those employees who experienced difficulty processing payments to their vendors. The incidence of overdue payments has now been reduced by a factor of 4 and continues to trend downward.
- Nuclear Materials Program fell short of the NNSA desired set of procedures for AFS2. While the basic set of procedures were ready for use, and all other processes were in place, this shortcoming is noteworthy. This mission does not impact EM programs or projects.
- In January 2012, SRNS notified NNSA of a substantial cost and schedule overrun on the Waste Solidification Building (WSB) Project. These overruns had not been previously identified by the various project reporting mechanisms in place, nor had the Earned Value Management System (EVMS) reflected the magnitude of the overruns. In reviewing the EVMS, it was determined that for this project, the EVMS did not meet standards. SRNS senior management involvement with the project increased significantly at that point, although for the majority of the fiscal year, only incremental improvements in the management of the project were observed. Prior difficulties in obtaining the necessary performance from the construction sub-contractor continued. Corrective actions were largely ineffective, although improvements were realized during the latter half of the fiscal year.

  In NNSA's view, had the SRNS Senior Management exerted the effort and involvement in earlier phases of the project, the large overruns could have been easily mitigated or eliminated altogether. The net result is that the delays and overruns were entirely avoidable had Senior Management been sufficiently involved.

- The SRNL Building 705-A renovations were evaluated as unsatisfactory. There were significant cost overruns, and the project was ultimately placed on hold by the contractor to conduct a full assessment and to re-baseline the anticipated costs to complete the structure. Ultimately, in order to save costs, SRNL elected to complete the structure at a reduced scope. Even with the reduced scope, the estimate for completion in FY 2013 is approximately $5.3 million which is

approximately $1.3 million over the original estimate of $4 million. Funding was requested from DOE-IN and was ultimately rejected. SRNL and SRNS continue to work with budgets and are investigating alternate funding sources to complete the project in FY 2013. Because of the incomplete deliverable for the associated PBI, the fee is being evaluated for reduced payment based on the completion percentage of the facility.

- Cost over-runs occurred in the HB-Line facility. This resulted in an overall marginal cost performance rating for the Nuclear Materials Organization (NMO). While the cost over-runs were contained within NMO by good cost performance (offsets) in other facilities, flexibility was lost by management to apply the "off-set" savings to needed infrastructure upgrades.