NATIONAL NUCLEAR SECURITY ADMINISTRATION

Fiscal Year 2008

PERFORMANCE EVALUATION REPORT

OF

SANDIA CORPORATION

For the Management and Operation of

SANDIA NATIONAL LABORATORIES
Contract No. DE-AC04-94-AL85000

December 2, 2008

NNSA **FY2007 PERFORMANCE EVALUATION REPORT (PER)**
OF SANDIA NATIONAL LABORATORIES
TABLE OF CONTENTS

EXECUTIVE SUMMARY

This Performance Evaluation Report (PER) presents the U.S. Department of Energy/National Nuclear Security Administration's (DOE/NNSA) evaluation of Sandia Corporation's (Sandia) performance in managing and operating the Sandia National Laboratories (SNL) for Fiscal Year (FY) 2008 under Contract Number DE-AC04-94AL85000.

The report details NNSA's evaluation of Sandia's performance for meeting objectives, measures and targets within each of the three performance groups: Performance Objectives (POs), Performance Incentives (PIs) and Award Term Incentives (ATIs). Consistent with the Performance Evaluation Plan (PEP) issued pursuant to the contract, presented below are highlights of Sandia's accomplishments and weaknesses during this fiscal year followed by Exhibit 1, *Scoring of FY 2008 Performance*, which delineates the adjectival ratings for each PO, PI and ATI.

Sandia's overall performance and their Mission related performance is rated as Outstanding. Sandia continues to demonstrate exceptional leadership across the Nuclear Weapons Complex (NWC) and provide high quality scientific and engineering support of the United States' national security interests. Sandia successfully removed all remaining security Category I and II Special Nuclear Material in February 2008, thereby completing the objective well ahead of the NNSA Getting the Job Done in FY 2008 schedule. Weapons quality remains a concern and the impact has been recognized in several areas. Sandia continues to provide outstanding science, technology and engineering solutions for a broad spectrum of national security challenges, coupled with maintaining essential technical competencies for DOE, NNSA, other government agencies and multiple constituencies at the federal, state, and local levels. Sandia is continuously striving to be at the forefront of science, technology and engineering in order to be prepared to respond to emerging threats. Sandia is making sound strategic investments in science and technology programs that enable readiness and the ability to respond to technology surprise and other national security challenges. Sandia received numerous prestigious awards and honors for scientific, technology and engineering advances, including three R&D 100 Awards.

Sandia's performance in Operations is rated as Outstanding. Evidence of this level of improvement is their meeting of the Total Recordable Case Rate goal of 1.72, which is an improvement of 55 percent over the 2003 rate and 9 percent reduction from the previous year. The Days Away Case Rate of 0.68 is a reduction of 51 percent from 2003 to 2008 and a 20 percent reduction from the previous year. Sandia exhibited outstanding project management for the Microsystems and Engineering Sciences Applications (MESA) and Test Capabilities Revitalization (TCR) Phase II projects. Sandia demonstrated adherence to applicable physical security and counterintelligence requirements to include protection and control of special nuclear materials and classified matter and continued excellence in most business functions. Sandia continued improvement during implementation of their Integrated Laboratory Management System (ILMS)/Contractor Assurance System (CAS) that is currently the most robust CAS in the NNSA complex.

PERFORMANCE OBJECTIVES

MISSION PERFORMANCE

Defense Programs (DP)

Once again, Sandia was instrumental to NNSA's success in meeting the mission and providing the necessary leadership for the NWC. Sandia continued to demonstrate proficiency in addressing a wide variety of complex issues and in some cases exceeding expectations. Significant accomplishments during this fiscal year included:

- Sandia completed 138 of 140 NNSA Level II milestones for PO 1 (51 LII milestones), PO2 (15 LII milestones) and PO3 (74 LII milestones).
- Sandia completed the activities of the W76-1/Mk4A design for the alternate Nuclear Explosive Package (NEP) material identified by LANL to address a Code Blue issue. Sandia provided expertise that threatened to delay the W76-1/Mk4A FPU in FY 2008. These obstacles included the impact of electro-static discharge at Pantex (a Code Blue activity for explosive components), strong link tester upgrades, and multiple Arming, Fuzing and Firing (AF&F) component production issues. Sandia's accomplishments for the W76-1/Mk4A FPU included completion of the final Inter-laboratory Peer Review and Response, the draft Final Weapon Development Report, release of the Major Assembly Release, and preparation for the DoD Design Review and Acceptance Group (DRAAG) scheduled for October 2008. Sandia successfully completed this work on time and within cost required to the W76-1/Mk4A.
- Sandia completed within costs all scheduled deliveries of all First Production Unit (FPU) components in the W76-1 Life Extension program (LEP) and B61 Alt 356/357/358/359 Programs for the Canned Sub-Assembly (CSA) and Spin Rocket Motor (SRM). Sandia completed the Combined Environment (CE-3) shock and vibration test series for the B61 ALT 357 required to remove DRAAG concerns about the completeness of the qualification technical basis of the B61 ALT 357 and resolving ALT 356/358/359 Spin Rocket Motor (SRM) component production issues.
- Completing the MESA project achieved a Defense Programs "Getting the Job Done" goal for 2008.
- Sandia successfully removed all remaining security Category I and II Special Nuclear Material in February 2008, thereby completing the objective well ahead of the NNSA Getting the Job Done in FY 2008 schedule.
- The Neutron Generator (NG) Enterprise delivered on all commitments, completing all Level II Milestones and improving processes. Sandia's accomplishments included: reduction of neutron generator span time from 171 days to 114 days, 56 percent reduction in errors detected at Quality Assurance Inspection Procedures (QAIP), and 100 percent first time acceptance by NNSA. The NG Enterprise took on 3 new mission assignments while decreasing the costs by 6 percent. The NG Enterprise received the Shingo Prize, the first awarded to a public sector organization. The Shingo Prize is regarded as the premier operational excellence award recognition program for North America. As part of the Shingo Prize mission and model, the Prize highlights the value of using lean/world-class

manufacturing practices to attain world-class operational status. NNSA also recognized the NG Enterprise during the HS-64 Assessment as "best in the complex" for implementation of "state of the art" work control and waste management processes.

- Sandia significantly exceeded the requirement (20,000 lbs) for the removal of explosive material including rocket motors.
- Sandia is to be commended, not only on the project completion, but for delivering parts during the MESA facility construction. Some key components for the active stockpile were fabricated in Microelectronics Development Laboratory (MDL) during its construction.
- Sandia successfully completed, on-time, qualification testing of re-entry bodies to approximate their stockpile to target sequence environmental stresses. This testing allowed the NNSA to meet its FPU date for the W76-1.
- The success to date of the Qualification Alternatives to the Sandia Pulse Reactor (QASPR) is noteworthy.
- Sandia met all their milestones in the enhanced surveillance subprogram. In addition, Sandia also made progress on the outyear milestones for component and material evaluations, Weapons Evaluation Test Laboratory (WETL) tester development, and material studies to support the enduring stockpile and LEPs.
- Sandia significantly exceeded the goal [of 6000 Gross Square Footage (GSF)] for demolished excess square footage (146,883 GSF).
- Sandia completed the second year of the Surveillance Transformation Program. Sandia expanded WETL testing to explore the worst-case Stockpile-to-Target Sequence (STS) requirements through mechanical preconditioning and tests conducted under extreme STS temperatures and electrical signal inputs. Sandia contributed to the completion of Stockpile Flight Tests (SFT) and conducted Stockpile Lab Tests (SLT) and Component and Materials Evaluation (CME) testing across all fielded weapon systems. The expanded technical basis and QMU results, enhanced with the critical stockpile evaluation data obtained annually from Sandia's Core Surveillance activities and the Surveillance Transformation Program, provided information for each weapon system's annual assessment. The annual assessment results were in the briefings and reports provided in the U.S. Strategic Command's (STRATCOM) Strategic Advisory Group Stockpile Assessment Team (SAGSAT) Annual Assessment of the Stockpile.
- Sandia is to be commended for work started in the latter part of the fiscal year as a follow-on to the Joint Nuclear Surety Study (JNSS). This work will be coordinated with the secure transportation activities and will employ some concepts identified in the earlier JNSS activities but not explored with the DoD.
- The Sandia Advanced Scientific Computing (ASC) program has made good progress during the year in (1) code development with achievements such as a successful QASPR blind prediction and XYCE improvements and recognition through an R&D 100 award; (2) strengthening cooperative agreements to make more effective use of resources such as an agreement with Lawrence Livermore National Laboratory (LLNL) to consolidate some code activities, establishing the Alliance for Computing at Extreme Scale with Los Alamos National Laboratory (LANL) and partnering with Oak Ridge National Laboratory to standup the Institute for Advanced Architectures; and (3) supporting the DoD Missile Defense Agency with unprecedented simulations to assist with the national priority to safely bring down an errant U.S. satellite.

Although Sandia demonstrated overall success in their DP assignments, there are areas in which performance could be improved.

- Two milestones (2784 Environmental Compliance and 2671 W88 Continuous Activities) were red. The Environmental Compliance Milestone 2784 was red due to a Notice of Violation (NOV) at the Tonopah Test Range. The W88 Continuous Activities Milestone 2671 was red due to incomplete Dual Strong Link Assembly (DSLA) Nuclear Safety testing defined in one of the four Grading Criteria for the W88 milestone. The W88 Continuous Activity efforts included 11 separate tasks, four of which were chosen for Grading Criteria, and ten of which completed successfully. The DSLA evaluation work does not impact W88 status or any other external deliverable, and will be completed in time to support the FY 2009 annual assessment activities as intended.
- For vendor quality, the second production lot for the MC4779 igniter, used in the MC4627 SRM, was rejected due to poor weld quality. The lots required rework, impacting Lot 12 SRM production and PX lead times. Sandia response following the quality issue was excellent and resulted in the restoration of lead time without impacts to Pantex or Air Force deliverables. Additional focus needs to be maintained on quality by the Product Realization Teams (PRTs) early and throughout the project life time.
- Since several technical issues emerged post W76-1 AF&F FPU, Sandia's qualification test program for future systems should be thoroughly reviewed to ensure that it is sufficiently robust to minimize design problems.
- Sandia will need to substantially increase maintenance funding for Mission Critical facilities to decrease their Mission Critical (MC) Facility Condition Index (FCI) to 4.9 percent in FY 2009. (Sandia's FY 2008 FCI is 5.5 percent).
- Sandia shot allocation for Z should integrate national needs and priorities in order to be consistent with predictive capability framework. Communication pathways with users of Z could improve. Radiation sciences expertise has been dwindling with departures of key personnel which is creating a negative impact on capabilities.
- Sandia needs to improve on cost control of Z single shift operations.
- Now that MESA is completed, Sandia should accelerate its efforts to secure "trusted foundry" status for certain production parts (including from the MDL) of the MESA complex to provide enhanced security for various electronic components destined for critical applications.
- Sandia has made significant efforts to improve coordination and communication with NNSA weapon program managers in FY 2008; however, there is still room for improvement. During FY 2008 there was a notable example in the need for improved communication regarding support for an acting Federal Program Manager (PM) and expectations for B61 program reviews. In this case, the Federal PM request's for changes were resisted and not initially supported.
- Sandia has to be supportive of a HQ initiative to consider sharing nuclear safety-related technologies with countries that are signatories of the Nuclear Non-Proliferation Treaty.
- As a Systems Engineering Organization, Sandia should confirm reviews are in place to ensure the traceability of requirements is maintained and that validation of requirements is appropriately documented.
- Sandia needs to involve as many experts from external organizations as schedule and resource constraints make possible to bolster the peer review Development and Production

(D&P) manual process and improve transparency and potentially minimize design weaknesses.
- Sandia should be quicker to respond to requests that would help the program understand the size of their code development teams.

Science and Technology (S&T) Programs

Sandia's science and technology programs are outsanding as evidenced by the results of numerous advances in science and technologies and by assessments of external peer reviews. Sandia continues to provide outstanding science, technology and engineering solutions for a broad spectrum of national security challenges, coupled with maintaining essential technical competencies for DOE, NNSA, other government agencies and multiple constituencies at the federal, state, and local levels. Sandia is continuously striving to be at the forefront of science, technology and engineering in order to be prepared to respond to emerging threats. Sandia is making sound strategic investments in science and technology programs that enable readiness and the ability to respond to technology surprise and other national security challenges. Performance significantly exceeded the standards in all areas evaluated and examples of their outstanding performance are presented below.

- Sandia received numerous prestigious awards and honors for scientific, technology and engineering advances, including three R&D 100 Awards. R&D 100 awards included 'Xyce' Parallel Electronic Simulator 4.0.2, Silicon Micromachined Dimensional Calibration Artifact for Mesoscale Measurement Machines, and Superhydrophobic Coating. These awards are representative of the strong science and technology base, high quality staff, and global recognition of Sandia's sustained excellence in science, technology and engineering.
- Sandia continues to diversify its Research Foundations and core technical competencies in preparation for emerging threats and technology surprise. Research Foundations evaluated in FY 2008 included Computer and Information Sciences, Pulsed Power Sciences, and Biosciences. Select examples of significant accomplishments by Sandia resulting from research foundation activities included: 1) establishment of a Memorandum of Understanding (MOU) between SNL and LANL to formalize the New Mexico High Performance Computing Alliance in Computing in Extreme Scales (ACES) collaboration; 2) designation as a Center of Excellence by DOE/SC and NNSA for Institute for Advanced Architectures and Algorithms (IAA); 3) further enhancement of Sandia's QASPR for critical technical computational advances to enable a system to qualify future weapons systems for short-pulse fast neutron environments; 4) the commissioning of refurbished Z with numerous successful shots and significant advances in all technical research areas; 5) implementation of Sandia governance plan for Z that includes a formal, proposal-based process to allocate experimental shots; 6) implementation of Sandia developed five-year strategic program plan for Inertial Confinement Fusion (ICF) pulsed power; 7) consolidation of all dynamic material experiments into single group at Sandia; 8) establishment of one of DOE/SC sponsored BioEnergy Research Centers for the Joint BioEnergy Institute (JBEI); 9) formalized partnership between Sandia and the University of Texas Medical Branch (UTMB) at Galveston to create a Joint Institute for Biosecurity; and 10) development of an integrated microfluid platform to interrogate cellular signaling pathways as part of the Microscale

Immune Studies Laboratory (MISL) Laboratory Directed Research and Development Grand Challenge project.

- Sandia has made significant science and technology advances to support other select DOE programs in FY 2008, including supporting the Office of Fossil Energy (FE), Office of Environmental Management (EM), and Office of Civilian and Radioactive Waste Management (OCRWM). Numerous advances in scientific discovery and innovation were achieved by Sandia including:1) geological and geomechanical scientific information for the further characterization and analysis of Strategic Petroleum Reserve (SPR) sites and advances in Clean Coal/Upstream Oil and Gas Technologies (Sandia consistently met milestone targets and has successfully supported the national Fossil Energy program in both upstream and downstream technology needs for enhanced U.S. fossil energy production); 2) ongoing support of the Waste Isolation Pilot Plant (WIPP) project as lead scientific and technical advisor to the DOE for permanent disposal of transuranic (TRU) waste generated by defense programs; and 3) ongoing support of OCRWM sponsored transportation technology development (separate from lead lab License Application support for Yucca Mountain Project work activities), including advances in the Spent Fuel Sabotage Project and the Radioactive Material Transportation (RADTRAN) computer software package – developed at Sandia and used around the world for evaluating the risks of shipping radioactive materials.
- Sandia continues to provide critical support to multiple programs within the Department of Homeland Security (DHS). Sandia has successfully demonstrated an outstanding level of performance by meeting the very demanding criteria and schedules established by DHS. Sandia has broadened its level of collaborations across DHS, supporting multiple DHS directorates including Science and Technology, Domestic Nuclear Detection, Infrastructure and Protection, and other interagency agreements with the Federal Emergency Management Agency (FEMA) and Customs and Border Protection. DHS is very complementary of Sandia support.
- Sandia continues to excel in the management of Technology Partnerships Program, inclusive of administering Cooperative Research and Development Agreements, Funds-in Agreements, and management of Intellectual Property and Licensing. Strategic Partnerships are being developed which contribute to the diversification of science, technology, engineering and innovation within the laboratory – this directly contributes towards strengthening of our national security missions across a broad spectrum of multiple constituents.
- Sandia's performance as the lead laboratory for the Yucca Mountain Project (YMP) has been outstanding. Sandia has been instrumental in risk identification, risk mitigation and risk management. Sandia has delivered high quality work products in support of the YMP License Application. In addition, Sandia's support in the development of presentations and responses to questions in their numerous interactions with the Nuclear Regulatory Commission (NRC), the Nuclear Waste Technical Review Board and the Advisory Committee for Nuclear Waste and Materials has been outstanding. Safety Analysis Report (SAR) sections of License Applications were all delivered on schedule in support of OCRWM.

Defense Nuclear Nonproliferation (DNN) Programs

Sandia performance in the area of Defense Nuclear Nonproliferation was outstanding. Sandia delivered high-quality science, technology, and engineering supporting the Defense Nuclear Nonproliferation mission. Sandia exceeded performance expectations in many areas such as: Global Threat Reduction Initiative (GTRI), Full Toss exercise, Highly Enriched Uranium (HEU) Transparency Program and the Bratislava sites.

- **GTRI** - Sandia was an integral and ongoing part of the development of the Office of Global Threat Reduction's "Protection and Sustainability Criteria" document. They were responsible for the completion of the physical security design at the Baikal-1 Cask Storage Facility and the completion of the physical security installation work at the MAEC Cask Storage Facility. Sandia did an outstanding job of implementing this work under difficult conditions while maintaining the project schedule and milestones. Sandia did an outstanding job of implementing security upgrades at the Dalat Nuclear Research Institute in Dalat, Vietnam securing their nuclear materials from theft or diversion for use in an improvised nuclear device.
- **Full Toss** – Sandia assumed the technical leadership of a large multi-laboratory exercise (Full Toss). Though out the year, the Sandia team accepted significant scope expansion, new research, and complex-wide technical leadership and program management.
- **HEU Transparency Program** - Sandia expertly modified the terms of the contract with VNIITF (All Russia Scientific Research Institute of Technical Physics) on radioactive sources, which provided increased flexibility for future Program plans, and helped keep costs reasonable. Sandia provided key technical and facility experts for Special Monitoring Visits to Russian uranium-processing facilities to ensure the objectives of the agreement were met. Sandia also provided technical management of tamper-indicating seals used by U.S. monitors at four Russian sites, tracking seal usage, responding to monitor requests based on on-the-ground experience to improve performance onsite, and providing recommendations to HQ on improving use of seals.
- **Bratislava** – Sandia has enhanced the reporting to senior management on the status of each site, through monthly reports and project management schedules. Additionally, Sandia's efforts in characterizing schedule expectations have enabled Russian Ministry of Defense to project completion metrics and adjust, where necessary, to address shortfalls. Although most sites require two construction seasons to complete the upgrades process, these large sites were addressed in less than two complete seasons. Sandia's ability to monitor the Russian contractors' progress has allowed Russian Ministry of Defense to ensure that the projects stay on schedule for completion by the end of CY 2008.

OPERATIONS PERFORMANCE

Sandia's operational performance is rated as Outstanding for FY 2008. Performance exceeded the standards in many areas evaluated. Notable accomplishments as well as opportunities for improvement in Operational areas are presented below.

- Sandia demonstrated improvement in many of their safety programs. Evidence of this level of improvement is their meeting of the Total Recordable Case Rate goal of 1.72, which is an improvement of 55 percent over the 2003 rate and 9 percent reduction from the previous year. The Days Away Case Rate of 0.68 is a reduction of 51 percent from 2003 to 2008 and a 20 percent reduction from the previous year.
- In FY 2008, Sandia successfully closed one major 10CFR 851 compliance gap (Occupational Exposure Assessments) but other key gaps are yet to be resolved (e.g. subcontractors' hazard identification and control, work planning and control, and occupational medicine for subcontractors). The majority of new noncompliances reported were related to electrical safety issues. Sandia efforts to improve electrical safety are noted. However, the number of incidences and their potential for serious negative outcome continues to identify this as a class of hazard to be closely monitored and effectively managed by Sandia line organizations and subcontractors.
- Sandia exceeded performance standards and improved processes to be more efficient and effective in the areas of Facilities and Project Management. This resulted in outstanding program management of Microsystems and Engineering Sciences Applications (MESA) and Test Capabilities Revitalization (TCR) Phase II projects. Additionally, Sandia continued to improve in terms of decreasing total recordable case rate and days away. Finally, The HS-64 Environment, Safety and Health (ES&H) Audit results provided validation that improvement was noted in several areas.
- Sandia demonstrated adherence to applicable physical security and counterintelligence requirements to include protection and control of special nuclear materials and classified matter through cost-effective implementation of safeguards and security (S&S) and counterintelligence (CI) programs that are compliant with applicable DOE Orders and NNSA Policy Letters (NAPS). The Sandia Security organization, as well as the line organizations, demonstrated the ability to sustain satisfactory levels of performance in most elements of the S&S programs at the New Mexico and California sites as well as at Sandia's remote site operations.
- Effective business programs and functions are integrated into all work activities throughout Sandia to maintain effective and efficient operations and support mission objectives. To sustain improvement and mature work processes, Sandia continued their effort to seek or maintain third party certification in several business areas. Additionally, Sandia demonstrated complex-wide leadership with implementation of initiatives in cyber security and supply chain
- Sandia has implemented the Model Contract and developed an Integrated Laboratory Management System (ILMS)/Contractor Assurance System (CAS). Sandia's CAS is currently one of the most robust CAS in the NNSA complex. Sandia has made significant strides in improvement and is currently formally providing lessons learned around the NNSA complex.

OPPORTUNITIES FOR IMPROVEMENT:

Opportunities for improvement in operational support areas include:

- Weapons quality assurance program requires focused management attention
- Full implementation of work planning and control system
- Improving electrical safety programs
- Continued focus in the area of Tech Area V Nuclear Operations
- Improvement in the Fire Protection program
- Encryption of electronic transmissions of sensitive unclassified information
- Communication with NNSA on critical business decisions
- Failed to implement Safety Software Quality Assurance.
- Improvement in implementation, use, communication, and assurance results from ILMS to include improvement in self-assessment, identification of deficiencies, and implementation of corrective actions

PERFORMANCE INCENTIVES

Performance Incentive 1, *Stretch Goals Related to Nuclear Weapons Work.* Overall, Sandia has done an outstanding job in achieving the stretch goals in Readiness in Technical Base and Facilities (RTBF), Engineering Campaigns and Directed Stockpile Work (DSW). Specifically,

- Sandia made significant progress in developing the Common Adaptable System Architecture (CASA) and in peer reviewing against a broader set of program space and organizing Sandia against a framework that will allow the creation of core product roadmaps that can be reviewed for CASA compliance.
- Sandia made significant progress in identifying and executing relevant technology maturation projects with Atomic Weapons Establishment (AWE) from the United Kingdom (UK).

Performance Incentive 2, Weapons Quality Assurance. Although there were some improvements due to interim actions, performance has been below NNSA expectations in several areas, such as supplier management, corrective action, design and drawing control.

Performance Incentive 3, Removal of Material from Sandia. Sandia demonstrated outstanding performance in the removal of materials. Specifically:

- To prevent the accumulation of unneeded materials and chemicals (UMC), Sandia launched the "Get Rid of It" website and the Chemical Exchange Program. These tools have reduced costs to the line customers and avoided both new purchases of chemicals and chemical waste disposal.

- The repackaging and preparing for shipment of non-category III materials was completed in eight months – four months ahead of schedule from the Getting the Job Done list.
- Sandia exceeded (62 percent) the FY 2008 targets (60 percent) to remove unneeded equipment, metals and materials from the inventory.

Performance Incentive 4, Process Efficiency Transformation. Sandia continued to dual track process efficiency within the Laboratory for FY 2008. They implemented improvements that provided immediate and permanent, results while continuing to focus on a longer term strategy that reduced complexity, increased standardization and better aligned organizational execution for end-to-end workflow. Sandia's efforts yielded cost efficiencies that significantly exceeded the $13 million target and demonstrated progress toward the institutionalizing of key business processes. An effort to better baseline definitions and processes while generating supporting documentation to validate savings and avoidances made progress, but fell short in final FY 2008 procedural execution.

Performance Incentive 5, *NA-10 Multi-Site.* Sandia had leadership responsibilities for two of the performance targets, did not play a role in two performance targets, and supported the other ten performance targets. Sandia contributed significantly to the Complex's response to the performance target expectation, and exercised leadership in many instances. Sandia's performance resulted in significant and noteworthy work being accomplished on the B61-7/11,

the W76-1, the W76, the W78 and the W88. Sandia's efforts enabled dismantlement of the B53 as well. Sandia supported NWC infrastructure improvements including supply chain management, information technology management, and requirements update and clarification. Sandia contributions enabled NWC capability enhancements, both in high performance computing and in Pantex operations. Sandia provided support for Complex Transformation activities and accomplished disposition of special nuclear material (SNM).

AWARD TERM INCENTIVES

Under the provisions of Sandia's contract, they may be considered for an extension to contract term at the discretion of the NNSA Administrator (the Term Determining Official). To support this potential determination, NNSA has evaluated Sandia's performance against four ATIs. The ATIs are not adjectivally or numerically rated, but are evaluated on a pass/fail basis. NNSA determined that Sandia passed all four ATIs.

Award Term Incentive 1, *Parent Contributions and Sandia Reachback.* Sandia met NNSA performance objective expectations for the parent to provide measurable contribution to improve performance and site management and Sandia effectively reached back to the parent organization for support.

Award Term Incentive 2, *Litigation Management.* Sandia has made significant progress in developing corporate strategies for the prevention and mitigation of legal risks that increase the likelihood of litigation. Two notable achievements include the development and implementation of a rigorous litigation lessons-learned process and the establishment of a formal mechanism for communication of legal risk mitigation measures and recommendations to Sandia management.

Award Term Incentive 3, *Systems Integration Technical Support.* Overall, Systems Integration Technical Support (SITS) provided outstanding support to the Defense Programs Federal Program Managers. SITS did an outstanding job in facilitating discussions to determine technical drivers for weapon refurbishments and the appropriate programmatic response. SITS provided outstanding support to the *Complex Transformation Supplemental Programmatic Environmental Impact Statement* was a significant contributor to the Complex Transformation initiative.

Award Term Incentive 4, Complex Transformation Implementation Activities. Overall, Sandia did excellent work in this area, providing outstanding support in the Complex Transformation activities, Requirements Modernization and Integration (RMI) project and the National Work Breakdown Structure (NWBS).

Exhibit 1
RATING OF FY2008 PERFORMANCE
Sandia Corporation

ELEMENT	RATING	
Mission Performance Group		
PO 1 Defense Programs *(Capabilities, Facilities and Research)*	Outstanding	
PO 2 Defense Programs *(Development and Maturation of NW Technologies and Tools)*	Outstanding	
PO 3 Defense Programs *(Directed Stockpile Work (DSW) and Readiness Activities)*	Outstanding	
PO 4 Defense Programs *(Nuclear Nonproliferation (NA-20))*	Outstanding	
PO 5 Science and Technology	Outstanding	
Overall Mission –		
Operations Performance Group		
PO 6 Integrated Safety Management System and Emergency Management	Good	
PO 7 Facilities and Project Management	Outstanding	
PO 8 Safeguards and Security	Outstanding	
PO 9 Business Systems Performance	Outstanding	
PO10 Contractor Assurance System	Good	
Overall Operations		
Total Performance Objective (PO) Rating		
PI 1 Stretch Goals Related to Nuclear Weapons Work	Outstanding	
PI 2 Weapons Quality Assurance	Satisfactory	
PI 3 Removal of Materials from SNL	Outstanding	
PI 4 Process Efficiency Transformation	Outstanding	
PI 5 NA-10 Multi-Sites	Outstanding	
PI Aggregate Rating		
Amount of Incentive Fee Awarded		
Award Term Incentive (ATI)		
ATI-1 Parent Contributions and Sandia Reachback	Pass	
ATI-2 Litigation Management	Pass	
ATI-3 Systems Integration Technical Support	Pass	
ATI-4 Complex Transformation Implementation Activities	Pass	

FY 2008 Rating Scale (Table 1)

Adjectival Rating	***Definition***
Outstanding	Significantly exceeds the standard of performance in all areas. Achieves noteworthy results. For projectized work, significantly exceeds either or both of the budget and schedule expectations.
Good	Exceeds the standard of performance although there may be room for improvement in some elements. Performance in critical and mission area remained at a high level. For projectized work, exceeds either or both of the budget and schedule expectations.
Satisfactory	Meets the standard of performance although there may be room for improvement in some elements - deficiencies do not substantively affect performance; assigned tasks are carried out in an acceptable manner - timely, efficiently and economically. For projectized work, accomplished the work on schedule and within budget.
Unsatisfactory	Significantly below the standard of performance. Deficiencies are serious, may affect overall results, and urgently require senior management attention. Prompt corrective action is required. For projectized work, falls behind schedule and results in delays of project completion and/or increased costs.

PERFORMANCE OBJECTIVE 1 - DEFENSE PROGRAMS

Defense Programs Capabilities, Facilities and Research: Develop and maintain the science and engineering capabilities, facilities, and associated infrastructure needed to contribute to a flexible and responsive nuclear weapons complex

Adjectival Rating
OUTSTANDING

Summary of Performance

PO1 is comprised of four major Defense Programs categories [Readiness in Technical Base and Facilities (RTBF), Advanced Scientific Computing (ASC), Inertial Confinement Fusion (ICF) Campaign, and Science Campaigns]. Sandia was evaluated based on their performance against 51 Level II milestones. Two (Milestones 2797 and 2461) of the original 53 Level II milestones were moved into FY 2009 per NNSA/HQ direction. The NNSA/Sandia Site Office and NNSA/HQ/NA-10 have jointly reviewed and commented on Sandia's self-assessment and rating. Overall, Sandia successfully completed (blue) all 50 Level II milestones and one Level II milestone (2784) did not reach its required goal. While Sandia experienced success in meeting the Defense Programs (DP) mission, there are still areas that need improvement. In the NNSA final assessment, Sandia rated a Good in Performance Target 1.1.1 and Outstanding in Performance Targets 1.2.1, 1.3.1 and 1.4.1.

Significant Accomplishments

- Sandia successfully removed all remaining security Category I and II Special Nuclear Material in February 2008, thereby completing the objective well ahead of the NNSA Getting the Job Done in FY 2008 schedule.
- Sandia significantly exceeded the requirement (20,000 lbs) for the removal of explosive material including rocket motors.
- Sandia significantly exceeded the goal [of 6000 Gross Square Footage (GSF)] for demolished excess square footage (146, 883 GSF).
- The Sandia ASC program has made good progress during the year in: (1) code development with achievements such as a successful Qualification Alternatives to the Sandia Pulse Reactor (QASPR) blind prediction and XYCE improvements and recognition through a Research and Development (R&D) 100 award; (2) strengthening cooperative agreements to make more effective use of resources such as an agreement with Lawrence Livermore National Laboratory (LLNL) to consolidate some code activities, establishing the Alliance for Computing at Extreme Scale with Los Alamos National Laboratory (LANL) and partnering with Oak Ridge National Laboratory to standup the Institute for Advanced Architectures and Algorithms; and (3) supporting the DoD Missile Defense Agency with unprecedented simulations to assist with the national priority to safely bring down an errant U.S. satellite.

Opportunity for Improvement

- Sandia will need to increase maintenance funding for Mission Critical facilities to decrease their Mission Critical (MC) Facility Condition Index (FCI) to 4.9 percent in FY 2009. (Sandia's current FCI is 5.5 percent).
- Sandia shot allocation for Z should integrate national needs and priorities should be consistent with predictive capability framework. Communication pathways with users of Z could improve. Radiation sciences expertise has been dwindling with departures of key personnel, and a negative impact on capabilities.
- Sandia could be quicker to respond to requests that would help the program understand the size of their code development teams.Sandia needs to improve on cost control of Z single shift operations.

Performance Measure 1.1

Execute work supportive of NNSA's Readiness in Technical Base and Facilities (RTBF) and Facilities and Infrastructure Recapitalization Program (FIRP) initiatives, maintaining the mission critical experimental simulation capabilities for stockpile and science and engineering requirements.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.1.1 Meet Level II Milestones associated with RTBF.	Outstanding	Disagree Good	Sandia achieved a Mission Critical (MC) Facility Condition Index (FCI) of 5.5 percent and a Mission Dependent (MD) FCI of 6.0 percent. Sandia states that they exceeded the FCI goal of 8.25 percent. However the 8.25 percent goal is only for MD facilities. Sandia's MC FCI goal per their Ten Year Site Plan is 5.6 percent and not 8.25 percent. Sandia did significantly exceed the goal for excess gross square footage demolished and achieved most of the milestones. However, NNSA rates Sandia as good since there is room for improvement in the Notice of Violation (NOV) milestone. Though some milestones were exceeded, others only met the minimum requirements.

Performance Measure 1.2

Provide predictive simulation and modeling tools, supported by the required computational platforms and other resources, needed for stockpile stewardship, development, and certification.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.2.1 Meet Level II Milestones associated with the Advanced Scientific Computing (ASC) Campaign.	Outstanding	Outstanding	This has been a transition year for ASC at Sandia. Nonetheless, ASC has been handled with innovation and professionalism, while providing noteworthy mission support capabilities to meet national priorities.

Performance Measure 1.3

Support achievement of Inertial Confinement Fusion (ICF) campaign ignition and high yield goals through application of high energy density physics capabilities.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.3.1 Meet Level II Milestones associated with the ICF Campaign.	Outstanding	Agree	Sandia successfully completed all their ICF milestones. They especially deserve credit for completing their level-1 milestone, measuring the dynamic materials properties of Tantalum up to four megabars pressure. This was a joint milestone with the Science Campaign. To complete this milestone, Sandia had to complete the Z facility and work towards commissioning the Z while completing significant experiments in terms of value to stockpile stewardship. Given the problems with commissioning the refurbished Z, Sandia completed the scientific work on schedule.

Performance Measure 1.4

Integrate science and predictive and experimental simulation in support of stockpile stewardship, development, and certification.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.4.1. Meet Level II Milestones associated with the Science Campaign	Outstanding	Agree	Sandia has successfully completed Science Campaign milestones, and continues to be responsive to national program needs. Particularly noteworthy has been the outstanding work in materials dynamics. Of concern is the loss of radiation science expertise in support of weapon effects.

Other Considerations

None

PERFORMANCE OBJECTIVE 2 – DEFENSE PROGRAMS

Development and Maturation of Nuclear Weapons Technologies and Tools: Develop capabilities to assess and improve the safety, security, reliability, and performance of the non-nuclear components in nuclear weapons without further underground testing and predict the response of all non-nuclear components and subsystems to external stimuli and the effects of aging.

Adjectival Rating
OUTSTANDING

Summary of Performance

PO2 is comprised of Engineering Campaigns and Capital construction for non-nuclear technologies (Performance Measure # 2.5). Specifically, Campaigns 5 – 8 all come under Engineering Campaigns which make up four performance measures in PO2. The NNSA/Sandia Site Office and NNSA/HQ/NA-10 have jointly reviewed and commented on Sandia's self-assessment and rating. Overall, Sandia successfully completed (blue) all 15 Level II milestones either on schedule or ahead of schedule. While Sandia experienced success in meeting the DP mission, there are opportunities for improvement. From the NNSA final assessment, Sandia rated an Outstanding in Performance Targets 2.1.1, 2.2.1, 2.3.1, 2.4.1 and 2.5.1.

Significant Accomplishments

- Completing the Microsystem and Engineering Sciences Application (MESA) project achieved a Defense Programs "Getting the Job Done" goal for 2008.
- Sandia is to be commended, not only on the project completion, but for delivering parts during the MESA facility construction. Some key components for the active stockpile were fabricated in Microelectronics Development Laboratory (MDL) during its construction.
- Sandia successfully completed, on-time, qualification testing of re-entry bodies to approximate their stockpile to target sequence environmental stresses. This testing allowed the NNSA to meet its First Production Unit (FPU) date for the W76-1.
- The success to date of the Qualification Alternatives to the Sandia Pulse Reactor (QASPR) is noteworthy.
- Sandia met all their milestones in the enhanced surveillance subprogram but they also made progress on the outyear milestones for component and material evaluations, Weapon Evaluation Test Laboratory (WETL) tester development, and material studies to support the enduring stockpile and Life Extension Programs (LEPs).
- Sandia is to be commended for work started in the latter part of the fiscal year as a follow-on to the Joint Nuclear Surety Study (JNSS). This work will be coordinated with the secure transportation activities and will employ some concepts identified in the earlier JNSS activities but not explored with the DoD.

Opportunity for Improvement

- Now that MESA is completed, Sandia should accelerate its efforts to secure "trusted foundry" status for certain production parts (including from the MDL) of the MESA complex to provide enhanced security for various electronic components destined for critical applications.
- Sandia has to be supportive of a HQ initiative to consider sharing nuclear safety-related technologies with countries that are signatories of the Nuclear Non-proliferation Treaty.
- Sandia is able to identify the technical requirements, planned work scope, and schedules for the immediate execution year but has not been able to develop sufficient information much beyond the execution year to support workload and resource planning at other sites or budget requirement planning at HQ.

Performance Measure 2.1

Lead the continued development and application of surveillance transformation and assure that new materials introduced into the stockpile through Reliable Replacement Warhead (RRW) or Life Extension Program (LEP) activities perform as expected through the weapon lifetime.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.1.1 Meet Level II Milestones associated with the Enhanced Surveillance sub-program of the Engineering Campaign.	Outstanding	Agree	Sandia achieved the annual assessment support ahead of schedule. Not only did they complete their own embedded evaluation demonstration, but they served as the system integrator and incorporated other laboratories' sensors in the prototype and testing. In the improved predictive capabilities, Sandia met the milestone and also published approximately 95 technical reports on the work with 70 percent in peer review journals.

Performance Measure 2.2

Mature surety technologies that may find application in transforming the stockpile, especially through inclusion in RRW systems, if they are approved by the Administration and by Congress.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.2.1 Meet Level II Milestones associated with maturation of surety technologies identified in the Enhanced Surety sub-program of the Engineering Campaign.	Outstanding	Agree	Applicable FY 2008 Level 2 milestones include 2747, 2748 and 2749. All the applicable milestones were completed on schedule. A minor issue was addressed during 3QFY 2008 pertaining to a specific milestone's title implying delivery of a prototype. Sandia did not hesitate to raise the issue with HQ when funding was allocated to an unbudgeted high priority FY 2008 activity and it was mutually agreed to revise the title of the milestone. The revised milestone title no longer obligated Sandia with the new high priority project needing attention to deliver a prototype, yet Sandia still managed to deliver the prototype as originally agreed. Sandia's legitimate

			concern to meet all the deliverables of the original milestone and their ability to take on a new project in the middle of the fiscal year and still manage to deliver a prototype is noteworthy.

Performance Measure 2.3

Develop and apply tools to support stockpile stewardship, development, and certification, including quantification of margins and uncertainties in engineered systems.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.3. Meet Level II Milestones associated with Quantity, Margins, and Uncertainties (QMU), as well as other tools to support stewardship, development, and certification of the stockpile, as identified in the Weapon System Engineering and Assessment sub-program of the Engineering Campaign.	Outstanding	Agree	Work from Sandia has been exemplary in this sub-program. Sandia completed the preparation of the joint handbook, which for the first time has allowed a greater understanding how stress propagates across complex geometries and how to model the structural loading. Additionally, Sandia completed testing on specialized surety components as predicted.

Performance Measure 2.4

Develop the tools and technologies needed to design and qualify components, subsystems, and systems to meet requirements for radiation environments, including space and hostile environments.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.4.1 Meet Level II Milestones associated with development of tools and technologies needed to foster survivability of weapons in radiation environments, as identified in the Nuclear Survivability sub-program of the Engineering Campaign.	Outstanding	Agree	Although this program is severely limited in funding, Sandia demonstrated tremendous success. The program was monitored by an independent review group and Sandia was successful in soliciting direct involvement by their DoD customers in order to build a constituency for this non-traditional test strategy.

Performance Measure 2.5

Develop capital construction projects that support testing of non-nuclear components and technologies in nuclear weapons.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.5.1 Meet Level II Milestones associated with engineering Campaign construction projects.	Outstanding	Agree	The Campaign funded FY 2008 project included the construction of the MESA, with the Campaign functioning as the Program supporter for both the construction of the Ion Beam Laboratory (IBL) and the construction of the Test Capabilities Revitalization Phase II (TCR-2) projects. The final MESA facility, the Weapons Integration Facility, was completed and Critical Decision (CD) 4 was issued in April 2008. Overall project completion occurred in August 2008, three years ahead of schedule and $48M under budget. Sandia also did an outstanding job justifying the scope of TCR-2 and with their persistence and dedication, CD-2A was approved and both CD-2B and CD-3 were accomplished in FY 2008.

Other Considerations

None

PERFORMANCE OBJECTIVE 3 – DEFENSE PROGRAMS

Defense Programs Directed Stockpile Work (DSW) and Readiness Activities: Conduct design and development, maintain the existing stockpile while supporting stockpile transformation, and develop modern production capabilities and capacity for LEPs and future stockpile requirements.

Adjectival Rating
OUTSTANDING

Summary of Performance

FY 2008 has been extremely challenging, and Sandia staff has demonstrated good leadership in handling emerging technical issues with the W76-1. The Sandia team acted quickly and with a sense of urgency to coordinate with other organizations in resolving issues in a timely manner so that the W76-1 LEP FPU can be achieved.

In FY 2008, Sandia has provided outstanding support for the B61 and B83 weapon systems ensuring critical needs are addressed. Especially impressive was Sandia's level of professionalism and the stewardship for the B61 and B83 program provided by the weapon system groups. There are several examples where Sandia exceeded NNSA expectations. These include the outstanding work supporting the Alt 357 LEP, Alt 356/8/9 Spin Rocket Motor (SRM) retrofits, 9977 project, CMS implementation, efforts to resolve B83 flight test concerns with the AFTU study, and development of DJTA-1B. With regards to the DJTA effort, the Sandia led team faced unique challenges that had to be overcome as well as a compressed time scale. Nevertheless, this "last-of-its-kind" surveillance flight test unit was successfully delivered and flight tested at the Tonopah Test Range (TTR) and all of the unique data was retrieved, post-test, in the field.

Activities for this performance objective included completing the Level II Milestones associated with the engineering support for the enduring stockpile. The scope of these Level II Milestones included the W76 LEP; development and production of weapon components that require replacement due to aging through alterations (ALTs) and limited life component exchanges (LLCEs); activities that strengthen the technical basis for the stockpile, including surveillance tests and component and material evaluations, significant finding investigations (SFIs), reliability assessments, nuclear explosive safety analyses and annual assessment; engineering support required for weapon operations at Pantex, including nuclear explosive safety studies, issue resolution and engineering drawing configuration management; and finally, support for the Nuclear Weapon Complex infrastructure, including engineering release systems, databases and communication systems. Sandia successfully completed or exceeded commitments to the Enduring Stockpile and scored Blue 73 Level II Milestones under this performance objective, while continuing support for the production agencies and making significant improvements to the stockpile's technical basis. In the NNSA final assessment, Sandia rated Good in Performance Targets 3.1.1 and 3.5.1 and Outstanding in Performance Targets 3.2.1, 3.3.1, 3.3.2, 3.4.2, 3.4.2 and 3.6.1.

Significant Accomplishments

Delivering the W76-1 LEP in September 2008 is the highest priority on the list of actions established by the Deputy Administrator for Defense Programs. This milestone represents the most significant product delivery made by the Nuclear Weapon Complex in over a decade, made all the more significant by the fact that Los Alamos National Laboratory was able to certify the warhead without an underground test. This accomplishment demonstrates that the Stockpile Stewardship Program is working. The W76-1 team, as a whole, could not ***Get the Job Done***, without Sandia meeting its commitments. There have been many accomplishments, and Sandia's W76-1 team should be proud for this one in particular, and the team is to be commended for its service, and contribution to NNSA's mission of stewarding the Nation's stockpile.

- Sandia completed the engineering activities to evaluate the impact and re-qualify essential portions of the W76-1/Mk4A design which would incorporate the alternate Nuclear Explosive Package (NEP) material identified by LANL to address a Code Blue issue. Sandia provided engineering expertise to help overcome several technical obstacles that threatened to delay the W76-1/Mk4A FPU in FY 2008. Sandia successfully completed this work on time and within cost with no resulting redesign required to the W76-1/Mk4A.
- Sandia successfully completed the Combined Environment (CE-3) shock and vibration test series for the B61 ALT 357 required to remove DoD DRAAG concerns about the completeness of the qualification technical basis of the B61 ALT 357. Sandia provided ongoing B61 ALT 357 and ALTs 356/358/359 production support for Pantex in addition to performing the DRAAG required ALT 357 CE-3 test and resolving ALT 356/358/359 SRM component production issues.
- Sandia completed all Level II Milestones associated with Readiness and re-organized its technology maturation activities around Sandia's five Core Products. Sandia accomplished significant progress in technology maturation in each of these Core Product areas, including both system architecture accomplishments as well as subsystem and component maturation accomplishments. These accomplishments are on track to support a potential B61 refurbishment.
- The Neutron Generator (NG) Enterprise continued to deliver on all production and development commitments, completing all Level II Milestones and improving processes including: reduction of neutron generator span time from 171 days to 114 days, 56 percent reduction in errors detected at Quality Assurance Inspection Procedures (QAIP), and 100 percent first time acceptance by NNSA. The NG Enterprise took on 3 new mission assignments while decreasing the costs by 6 percent. The NG Enterprise received the first Shingo Prize awarded to a public sector organization for using lean/world-class manufacturing practices to attain world-class operational status. NNSA also recognized the NG Enterprise during the HS-64 Assessment as "best in the complex" for implementation of "state of the art" work control and waste management processes.
- Sandia completed the second year of the Surveillance Transformation Program continuing to expand WETL testing to explore the worst-case Stockpile-to-Target Sequence (STS) requirements through mechanical preconditioning and tests conducted under extreme STS temperatures and electrical signal inputs. Sandia contributed to the completion of scheduled Stockpile Flight Tests (SFT) and conducted Stockpile Lab Tests (SLT) and

Component and Materials Evaluation (CME) testing across all fielded weapon systems. The annual assessment conclusions and results were captured in the briefings and reports provided to the U.S. Strategic Command's (USSTRATCOM) Strategic Advisory Group Stockpile Assessment Team (SAGSAT) Annual Assessment of the Stockpile.

- The Concurrent Design and Manufacturing (CDM) program at Sandia delivered on all its commitments per the Directive Schedule, with 80 percent of deliveries ahead of schedule. The CDM Program created and implemented a statement of work template for the Product Realization Teams (PRTs) to standardize production contracts that address technical requirements; deliverables; quality level and assessment requirements; and drawings and attachments, enabling the Program to better manage and execute projects in support of the directive schedule requirements.
- Sandia has done exemplary work in Readiness Campaigns. The advancements Sandia made directly supported Goals 1 (Deliver limited life components and alteration kits to the DoD and complete all scheduled surveillance activities) and 2 (Down-select the W76 LEP canned sub-assembly by June 2008) from the "Getting the Job Done in FY 2008" list.
- Sandia significantly improved the technical basis of the stockpile through enhanced focus on the completion of technical basis improvement activities and increased utilization of quantification of margins and uncertainties (QMU) methodologies. The expanded QMU analysis scope built on and reached beyond the limited component QMU analyses from FY 2007 that Sandia completed for firing sets, neutron generators, and Sandia-designed gas transfer systems. The work addressed a significant quantity of the highest priority technical basis data needs managed through Sandia's Integrated Data List (IDL) and focused unique concerns as captured through critical performance parameter (CPP).

Opportunity for Improvement

Sandia could improve in the following areas:

- Since several technical issues emerged post W76-1 Arming, Fuzing and Firing (AF&F) FPU, suggest that Sandia's qualification test program for future systems be thoroughly reviewed to ensure it is sufficiently robust to minimize design problems.
- For vendor quality, the second production lot for the MC4779 igniter, used in the MC4627 SRM, was rejected due to poor weld quality. The lots required rework, impacting Lot 12 SRM production and Pantex (PX) lead times. Sandia's response following the quality issue was excellent and resulted in the restoration of lead time without impacts to Pantex or Air Force deliverables. However, this is another example of vendor quality issues. Additional focus needs to be maintained on quality by the PRTs early and throughout the project life time.
- While Sandia has made significant efforts to improve coordination and communication with NNSA weapon program managers in FY 2008, there is still room for improvement. During FY 2008 there was a notable example in the need for improved communication regarding support for an acting federal program manager (PM) and expectations for B61 program reviews. In this case, the Federal PM's requests for changes were resisted and not initially supported. Recently, however, B61 Sandia management has made good efforts to accommodate changes to better support NNSA management needs. Communications and coordination have improved.
- Although Sandia has worked to establish communications channels with HQ Federal Program Managers, Sandia needs to establish better channels of communications with

Sandia Site Office (SSO) Programs Liaisons.

- As a Systems Engineering Organization, Sandia should ensure that appropriate reviews be in place to ensure that traceability of requirements is maintained and that validation of requirements is appropriately documented.
- NNSA has recently issued the D&P manual Chapter 3.7 to establish requirements on Peer Reviews. Recommend for future Peer Reviews that Sandia involves as many experts from external organizations as schedule and resource constraints make possible to bolster the peer review process and improve transparency and potentially minimize design weaknesses.

Performance Measure 3.1

Ensure the safety, security and reliability of the stockpile warheads and perform authorized refurbishments to extend their lifetimes.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.1.1 Meet Level II milestones associated with DSW for Production & Planning Directive (P&PD) delivery requirements, Annual Assessments, Stockpile Maintenance, Life Extension Options, and authorized refurbishments.	Outstanding	Disagree Good	Sandia exceeded expectation set in the PIP for the Level 2 milestones concerning Annual Assessment. FY 2008 has been extremely challenging, and Sandia technical staff has demonstrated good leadership in handling emerging technical issues with the W76-1. Sandia has completed all W76-1 qualification activities, and successfully qualified the alternative Y-12 material for use in the W76-1 design. There have been many accomplishments worthy of commendation. Sandia has delivered the draft Final Weapon Development Report, and the Major Release Assembly to support the DRAAG review. Annual Assessment – Sandia Supported the required deliverables by providing them on time per the schedule. Deliverables provided: 1) Warhead briefings to SAG SAT; 2) 2008 Warhead Annual Assessment Reports; and 3) 2008 SNL Director's Letter. During the review of the qualification evidence for the W76-1/Mk4A Design Review and Acceptance Group, there was no evidence to support or demonstrate that a component had been previously qualified to the Military Characteristics (MC) for 1 Amp / 1 Watt No-Fire for Electro-Explosive Devices (EEDs). The requirement applies to both the W76-0/MK4 and the W76-1/Mk4A. The requirement had not been flowed down as a design requirement to the lower level component. This was a failure of the design agency to adequately assure that MC requirement was completely flowed down to the component level and subsequently to the sub-component level. The requirement should have been flowed down prior to 1996 when the Complete Engineering Release was issued in April 1996. The requirement was not added

			to the lower level component until the revision of CD414240 in May 2007. Also, the lack of sufficient qualification evidence was identified in August 2008 to support the requirement by the W76-1 systems department. Other recent issues have impacted the production at Kansas City Plant. However, since NNSA was able to re-negotiate the deployment schedules with the DoD, these issues will not impact the current DoD planning. However, it has resulted in additional costs due to screening performed on the components. Some component issues have impacted production at the Kansas City Plant, primarily associated with additional costs due to component screening. Because these issues impacted FY 2008 costs at KCP for the W76-1, this measure has been rated as Good. These issues and additional issues that involved the W76-1/Mk4A are discussed in Performance Incentive 2.

Performance Measure 3.2

Execute the Integrated Stockpile Evaluation program to develop and use methodologies which enable continuous and effective improvement of the stockpile technical basis, and assessment and certification of the stockpile without underground testing.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.2.1 Meet Level II milestones associated with the Stockpile Evaluation schedules and implement the Surveillance Transformation Plan initiatives.	Outstanding	Agree	Sandia exceeded expectation set in the Stockpile Evaluation for the Level 2 milestones.

Performance Measure 3.3

Develop and apply advanced design options for a transformed stockpile which improve responsiveness and provide robust safety, security, reliability and survivability.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.3.1 Meet Level II milestones for RRW-1 to achieve successful execution of an RRW-1 development program if approved by the Administration and Congress.	Outstanding	Agree	Sandia completed Level II milestones defining and documenting stakeholder requirements, understanding risks associated with those requirements and identifying handling strategies, and agreeing on scope of work and deliverables for Stage 2.
3.3.2 Meet Level II milestones for advanced systems development, stockpile services and development of common adaptable system architectures for use in future weapon systems.	Outstanding	Agree	Sandia has made a significant effort to have a member of the staff interact with the Federal Program Managers (PMs) to keep them abreast with Common Adaptable System Architecture (CASA) as it develops.

Performance Measure 3.4

Execute the neutron generator enterprise to meet NNSA requirements and accomplish continuous process improvements.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.4.1 Meet Level II milestones for capability maturation of technology in support of design, development and qualification of new neutron generators.	Outstanding	Agree	Applicable FY2 008 Level 2 Milestones include 2681, 2682, and 2683. All the applicable milestones were completed on schedule. Sandia did not exhibit any significant issues with meeting the mutual grading criteria and satisfying the exit criteria for each milestone. A minor issue was addressed during 3QFY 2008 pertaining to specific grading criteria that, if not adjusted, would hinder Sandia, not from satisfying the exit criteria, but simply meeting all the specifics assigned in the grading criteria. Sandia did not hesitate to raise the issue with HQ and it was mutually agreed that adjusting the grading criteria would be a wise decision. Even though the grading criteria adjustment was not detrimental to the success of the applicable milestone, Sandia's concern and continued communication with HQ, on this issue, is noteworthy.
3.4.2 Meet Level II milestones for neutron generator production per the Directed Schedule.	Outstanding	Agree	The Responsive Neutron Generator (NG) Enterprise completed all FY 2008 Directive Schedule requirements at a 100 percent on-time delivery level. For the W-76 and W-78, 21 and 19 shipments were made containing 224 and 148 units. Improvements accomplished during this period include reduction of neutron generator span time from 171 days to 114 days, 56 percent reduction in errors detected at QAIP, and 100% first time acceptance by NNSA.

Performance Measure 3.5

Execute the Concurrent Design and Manufacturing Program to meet NNSA requirements.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.5.1 Meet Level II milestones for production per the Directed Schedule.	Good	Agree	The rating is based on Concurrent Design and Manufacturing (CDM) and the MC4627 Spin Rocket Motor regained full 90 day lead time at Pantex on MC4627 SRM deliveries. Sandia worked with Kansas City Plant (KCP) and ATK (commercial supplier) to improve communications and resolve problems pro-actively.

Performance Measure 3.6

Ensure modern production capabilities and capacities are available on time scales paced by requirements to carry out the LEPs and stockpile evaluation schedules and to support projected stockpile requirements.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.6.1 Meet Level II milestones associated with the Readiness Campaign.	Outstanding	Agree	Sandia met all their Level II milestones either on schedule or ahead of schedule.

Other Considerations

None

PERFORMANCE INCENTIVE 1 – Stretch Goals related to Nuclear Weapons Work

Achieve stretch goals described in the performance targets below to increase Sandia's effectiveness as a leading contributor to the success of the Nuclear Weapons Complex (NWC).

Adjectival Rating
OUTSTANDING

Summary of Performance

Overall, Sandia has done an outstanding job in achieving the stretch goals in Engineering Campaigns and DSW. Based on the RTBF evidence provided by Sandia, Sandia did a good job working with the other NWC sites.

Sandia made significant progress in developing the Common Adaptable System Architecture (CASA) and in peer reviewing against a broader set of program space and organizing Sandia against a framework that will allow the creation of core product roadmaps that can be reviewed for CASA compliance. Sandia made significant progress in identifying and executing relevant technology maturation projects with AWE from the United Kingdom.

Significant Accomplishments

Sandia completed the baseline description of the CASA (Level II Milestone #2684) principles, and engaged systems engineers from both air delivered (AD) systems and reentry systems (RS) to review and apply the principles developed by CASA.

Sandia continued to make progress in establishing enhanced collaborations with the UK AWE. Sandia made significant progress in defining a mutually beneficial replacement effort under the auspices of the Mk5 Advanced Arming, Fuzing and Firing (AF&F) Technology Subcommittee, with strong support from the Navy. Designs were traded for peer review in multiple areas, including direct optical initiation (DOI) stronglink technologies, magnetic barrier switch design, gas transfer system (GTS) valve designs, SCORE microprocessor design and functionality, and collaborative efforts to identify conceptual long-life GTS approaches. A US/UK Enhanced collaboration agreement on condition monitoring was finalized and approved at the Seconds meeting held in April 2008.

Opportunity for Improvement

None.

Performance Measure 1.1

Exceed the PO-1 RTBF Level II milestones to focus on the development and maintenance of the science and engineering capabilities, facilities, and associated infrastructure needed to contribute to a flexible and responsive nuclear weapons complex as described in the target below.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.1.1 Work with other sites within the NWC, and with NNSA itself, to create novel ideas about how to approach infrastructure cost recovery and capitalization and re-capitalization while advancing the competency represented by major facilities at each NWC site. These concepts will address infrastructure and landlord cost sharing and capability sustainment challenges.	Outstanding	Disagree Good	While Sandia has done a good job in working with the other sites to create novel ideas about how to approach infrastructure cost recovery and capitalization and re-capitalization, it is not evident if the new ideas have advanced the competency represented by major facilities at each NWC.

Performance Measure 1.2

Exceed the PO-2 Level II milestones to increase development of capabilities to assess and improve the safety, security, reliability, and performance of the non-nuclear components in nuclear weapons without further underground testing and in predicting the response of all non-nuclear components and subsystems to external stimuli and the effects of aging as described in the targets presented below.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.2.1 To develop and further deploy QMU analysis methodology to more subsystems and components for each weapon system.	Outstanding	Agree	Annual Assessment – QMU was used for different component/subsystems in Sandia's 2008 warhead Annual Assessment reports.

1.2.2 Integrate and transform stockpile evaluation to create a responsive, cost effective, science-based approach and annual evaluation plan that continually strengthens our technical understanding of the critical performance parameters required to support stewardship and contributes to the transformation of the complex by employing predictive state-of-health evaluation capabilities.	Outstanding	Agree	

Performance Measure 1.3

Exceed the PO-3 Level II milestones pertaining to the maintenance of the existing stockpile and in transformation of the stockpile as described in the targets below.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.3.1 Develop system architectures to transform the stockpile and which improve the nuclear safety, use control and security to address current vulnerabilities and are adaptable to multiple applications.	Outstanding	Agree	Sandia completed the baseline description of the CASA (Level II Milestone #2684) principles, and engaged systems engineers from both air delivered (AD) systems and reentry systems (RS) to review and apply the principles developed by CASA.
1.3.2 Develop and implement collaborative projects with the Atomic Weapons Establishment to develop technologies and concepts	Outstanding	Agree	Sandia continued to make progress in establishing enhanced collaborations with the UK AWE. Sandia made significant progress in defining a mutually beneficial replacement effort under the auspices of the Mk5 Advanced AF&F Technology Subcommittee, with strong support from the Navy. Designs were traded for peer review in multiple areas, including DOI stronglink technologies, magnetic barrier switch design, GTS valve designs, SCORE microprocessor

synergistic with our NNSA work.			design and functionality, and collaborative efforts to identify conceptual long-life GTS approaches. A US/UK Enhanced collaboration agreement on condition monitoring was finalized and approved at the Seconds meeting held in April 2008. This agreement engages Sandia from a system-requirements perspective as well as from a collaborative testbed perspective. Sandia engaged to perform a complete review of Sandia's enhanced collaborations under DSW funding to tie the activities together more from a systems perspective and to identify technology demonstration opportunities and incorporate them into the program.

Performance Measure 1.4

In FY 2008, continuously improve upon measures taken in FY 2007 to transform non-nuclear component production (in partnership with the KCP) as described in the target below.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.4.1 Develop and deploy methods to incorporate QMU and other quantitative measures of product and process performance into qualification and product assurance. Demonstrate that the application of these data-driven product assurance activities results in reduced costs without sacrificing product quality.	Outstanding	Agree	

Other Considerations

None

PERFORMANCE INCENTIVE 2 – WEAPONS QUALITY ASSURANCE

Sandia will improve the Weapons Quality (WQ) Program for the Nuclear Weapons activities. Those improvements are identified with SNL's Nuclear Weapon Product Quality Improvement Plan (NWPQIP), dated September 20, 2007.

Adjectival Rating
SATISFACTORY

Summary of Performance

Although there were some improvements due to the interim actions, performance has been below NNSA expectations in several areas, such as supplier management, corrective action, design and drawing control. Supplier management quality deficiencies have affected performance. There have been issues identified in the Sandia Supplier Quality Management System that have not been resolved. The Sandia supplier management issues that have repeated at Sandia in their contracting with a new supplier this year are also issues that have been identified for each of the last four years at Sandia in their contracting with the previous supplier. The impacts have resulted in production being stopped for about two months at the new supplier further impacting other production activities. Impacts included time and cost increases for production to scrub production activities to resolve issues, adding an entire timer production line at Sandia along with new system improvements to prevent these issues in the future. In addition, quality issues have impacted other production activities at Sandia and KC where additional screens and replacement materials have also impacted time and cost increases at both sites. Also, DoD was impacted in their operations by one component at the very end of this fiscal year.

Significant Accomplishments

Sandia initiated and executed a formal root cause analysis for the CDM components to address a Quality Assurance Survey (QAS) QAS 3.0 Finding Number 7. The conduct of the assessment, actions to identify issues, teaming with internal and external organizations and the formality of the causal analysis all contributed to a process that should at the minimum be used by Sandia routinely for repeat and systemic issues.

The MC4379A Team assembled to mitigate Sandia management issues of purchased components by making the product at Sandia has been exceptionally well done, transparency with SSO into what they are doing, feedback was openly requested and quickly incorporated, is very well organized with very tight timetables, and SSO experienced very technically sound decisions, paths taken and judgments for all discussions that we have engaged has been impressive.

Opportunity for Improvement

The overall effectiveness of the Quality Management System (QMS) to include the Sandia self assessment program and corrective action processes need to improve. Although, there is adequate evidence that issues, gaps or inconsistencies in systems and procedures as well as other quality concerns are identified routinely and in a timely manner, the resolution of internal Sandia differences of opinion regarding Sandia and NNSA findings have resulted in delays and ineffective closure of these internal and external audit reports. For example, one self assessment on the Effectiveness of Supplier Quality Management System (SQMS) and Supplier Performance Tracking System (SPTS), the initial report was completed February 2, 2008, updated on September 3, 2008 and the Findings still have not been entered into CATs and a causal analysis has not been performed. In addition, a disposition memo for this self – assessment's Finding #1 indicates a more serious systemic issue than the Finding itself. It states "A large number of the NW quality issues are not due to procedure design, but are due to poor or inadequate implementation." There is nothing in the response that addresses any actions to investigate or correct such implementation issues leaving the issue unresolved. Another example, a QAS 3.0 report went through a number of reviews and factual checks with Sandia and the supplier and then Sandia management called to say they did not understand and did not agree and later provided a formal response that took some further exceptions to the findings. Sandia management not accepting issues and not performing causal analysis for findings before attempting to correct conditions that led to the repeat issues is a failure of the quality management system. Additionally, to neglect indicators such as gaps in procedures, inadequate processes, or non-compliance with existing procedures invites repeat issues that may impact mission performance. Issues identified in self, independent or external assessments should drive continuous process improvement.

Performance Measure 2.1

Improve Weapons Quality (WQ) Assurance.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.1.1 Validate effectiveness of actions associated with the NWPQIP.	Good	Disagree Unsatisfactory	Sandia implemented interim and long-term actions associated with the NWPQIP. Data indicate that there were some improvements due to the interim actions: • NNSA has accepted several components without issue • 49 lots have been accepted • The pre-acceptance pass rate has improved • The NNSA conducted a QAS site visit in July and a QAS in September on Perkin Elmer Optoelectronics in which there were no findings. However, there is data that questions the effectiveness of both interim and long term actions and additional products and issues surfaced from March to the end of the fiscal year that are detailed below.

			Assessments of the Interim Procedures to Address SQMS The Sandia effectiveness reviews of actions associated with the NWPQIP were completed and indicate that the processes need some improvements. One self-assessment signed in February 2008 and then updated with an addendum signed in September, found 8 findings associated with the Procedures that were put in place in July 2007. Sandia management has not entered these issues into a corrective action system and continues to spend more time challenging the assessment than to make improvements. This report has been reviewed by a NNSA/SSO/HQ Team and this Team agrees that the issues are major findings and should be dealt with accordingly. There were other Sandia self-assessments that described some additional improvements needed. The product acceptance assessment had one finding. The end-product assessment had three observations. The roles and responsibilities assessment resulted had one observation. The training assessment had one finding. Internal and External Assessments The internal Sandia Nuclear Weapons Strategic Management Unit (NWSMU) FY 2008 self assessment questions the effectiveness of the interim and long-term actions and states: "The quality management analysis demonstrates that there has not been a significant change between the two specific time periods. Looking back over the period from June, 2007 through June 2008, there continues to be a lack of effective resolution of identified deficiencies. Clear definitions and responsibilities of workers and managers are needed with respect to quality in terms of conformance to requirements. The assessments continue to identify issues related to quality leadership (policy/guidance), product development (procedures/processes), systems design/development (planning), and manufacturing controls, reliability, and maintainability." An external SSO QAS 3 conducted in March at a Sandia vendor questions the effectiveness of the interim and long term actions and found systemic and repeat issues and production was suspended for about two months. The impacts of the systemic issues beyond production stopping are that the mission for the assessed product (MC4378) and other products (MC4379, MC4217) were put at risk and this same risk continues into FY 2009. A major MC4217 self-identified concern which is impacting two DoD organizations, surfaced at the end of the fiscal year.

			The NWPQIP was designed to correct these systemic and repeat issues. However, the evidence questions the effectiveness of the NWPQIP actions. These issues have required expensive mitigation measures with costs exceeding the $1 million described below for the timer driver mitigation issues alone. The NNSA estimated cost at Sandia and supplier due to re-establishing controls of engineering drawings, component production materials and manufacturing processes is over $250,000. The NNSA estimate for the establishment of MC4379A Timer production at Sandia to mitigate the risk of the supplier's slipped schedules is over $750,000. This latter figure is equal to the price paid for development, Parts Prove-In (PPI), and one production lot if produced at a supplier. In addition, Sandia initiated an additional root cause analysis to address the QAS 3.0 Finding 7 and identified several new issues requiring corrective action that had not been previously identified. The results of this latest analysis will require more time to work through a new corrective action plan and might have been avoided if there had been this same emphasis for a formal causal analysis in 2007. Due to this, the opportunity for improvements was lost for FY 2008 and those impacts may still be felt in FY 2009. Other Evidence There were three examples of components that have Sandia design quality issues that have affected production during FY 2008 at the Kansas City Plant. Cost impacts were felt by KCP exceeding $1 million for screens, rework, and scrap. Additional costs will be incurred in the future for redesign and requalification activities at both KC and Sandia. The three examples include: 1) The recently completed evaluations of a component for postulated abnormal electrical environments have revealed additional vulnerabilities for the component. From a design quality perspective, it is questioned as to why these issues are now being brought forth on a component that has been previously qualified for production and delivery to the DoD. The component has recently demonstrated a susceptibility to unlock upon the application of unique abnormal events in combination with specific piece-part tolerance stack-ups. Based on this analysis, the device does not meet the implementation of ideal Enhanced Nuclear Detonation Safety (ENDS). 2) Issues persist with the tightness and security of fasteners in a component. This has resulted in additional product acceptance screening of these

			devices. From a quality perspective, NNSA questions why these deficiencies are present on a component that was qualified for production and delivery to the DoD. The component design requirements and production qualification should have been more critically reviewed to assure that these issues did not exist. 3) Issues with fluid contamination (particles) and ceramic cracking continue in a component. There is interference between components that has resulted in one component bearing on the other. This has resulted in cracking of a ceramic component. The fluid contamination was noted as part of the investigation of the units for another phenomenon. It is postulated that the contamination is from the ceramics in the assembly. From a quality perspective, it is questioned as to why these deficiencies are present on a component that has been previously qualified for production and delivery to the DoD. The component design requirements and production qualification should have been more critically reviewed to assure these issues did not exist. Other evidence of non-conformances and products with Sandia production that had issues in FY 2008 included: the Special Component, Space Hats, MC4217 Detonators, Qual Drivers, Manganin Foil Gages (MFG), Sprytrons, Hybrid Capacitors and Application Specific Integrated Circuits (ASICs). Cost impacts for this list experienced at Sandia could exceed $1 million for screening, rework and replacement of Sprytrons that were made to a tighter specification. As a result of these occurrences, NNSA confidence in the Contractor Assurance System (CAS) was shaken. Due to the lack of confidence, the Interproject (IP) Acceptance delegations were withdrawn for explosive components and ASICs. The Joint Performance Council (JPC) discussions raised the issues as Red for the second and third quarters of FY 2008.
2.1.2 Perform a site-wide WQ self-assessment in preparation for NNSA QAS 1.0.	Outstanding	Disagree Satisfactory	Sandia performed a site-wide self assessment in preparation for the NNSA QAS 1.0. The Sandia self-assessment identified major findings. However, these findings have not been entered into the corrective action tracking system and a thorough causal analysis has not been performed. The NNSA QAS 1.0 identified 2 major findings and three remarks that Sandia's self assessment did not identify. Those included: Finding 1 – Inadequate grading criteria for systemic and repeat issues in the Sandia Risk CPR leads to conditions adverse to quality not being appropriately identified to ensure proper analysis and action is

			taken to prevent recurrence. Finding 2 – Sandia has not entered two assessments into the corrective action tracking system. Remark 1 Informal analysis has replaced formal causal analysis for some assessments. Remark 2 Lack of continuous improvement process to identify systemic issues may impact other Sandia organizations. Remark 3 Unclear that RPPs had been verified to have incorporated solutions to past Findings from QAS and Sandia assessments.
2.1.3 Review the results of the SNL product realization process for trends in the adequacy of the design drawings relative to design changes, e.g., post Complete Engineering Release dates and Specification Exception Releases to determine whether processes could be improved.	Outstanding	Disagree Good	Sandia has made good progress in product realization trending information that was primarily limited to the neutron generator and CDM products. The data gathering has made substantial progress but has not been completed or evaluated against current quality improvement plans.
2.1.4 Develop and deploy ISO 9001 and AS9100 compliant product realization procedures	Outstanding	Disagree Good	Sandia mapped RPSS process areas and individual Realize Product Procedures. The procedures received SME and integration reviews and are available on the Enterprise Model. Requirements or procedural gaps have been identified and are being addressed. The deployment approach for RPSS included multiple meetings between the NW Chief Engineer and key directors to establish expectations for improvements and to review progress, leadership training for senior management, management and staff training for high-risk areas. Every NW center completed gap analyses and gap closure action plan that are in the Laboratory Enterprise Self-Assessment (LESA) system. The director-level Realize Product Council was established as the governing body for the whole system. It meets monthly to ensure leadership engagement on a regular basis, sustainability of continuous improvement in performance and system.

PERFORMANCE OBJECTIVE 4 – Defense Nuclear Nonproliferation (NA-20)

Develop and maintain science and engineering capabilities and facilities required to support detection, prevention, and reversal of the proliferation of weapons of mass destruction.

Adjectival Rating
OUTSTANDING

Summary of Performance

Outstanding in nearly every critical mission area. Some uneven performance in maintaining the best communications with Headquarters, but technical performance and completion of specific contract deliverables are first-rate. In the NNSA final assessment, Sandia received a rating of Good in Performance Targets 4.4.5 and 4.4.8 and Outstanding in all other Performance Targets.

Significant Accomplishments

Sandia had several key accomplishments this year contributing to their outstanding performance in this objective area: They were integral to GTRI in document development, physical protection designs, and security upgrades, provided technical leadership for a major multi-laboratory exercise (Full Toss), provided excellent support to Highly Enriched Uranium (HEU) Transparency Program, and successfully executed an aggressive schedule for the Bratislava sites.

Opportunity for Improvement

Sandia continues to present challenges to NNSA's ability to manage the Department's reputation as a disciplined and responsible participant in the U.S. Government's interagency process to develop and implement U.S. foreign policy and national security policy. Sandia pursues an aggressive Work for Others (WFO) program, for good and defensible reasons; however, Sandia does not do an adequate job of keeping headquarters informed of its efforts to pursue foreign-funded Work for Others. In addition, some Work for Others on behalf of other U.S. Government agencies also conflicts with NNSA's efforts in similar or closely-related areas. NNSA had hoped last year that greater communication between Sandia and headquarters this year would ameliorate some of these problems, and while conversations started well last year this communication will have to be improved in FY 2009. NNSA has particular concerns about some of the Sandia's work in China, the Middle East, South- and Central Asia. Some of these efforts are not large projects in financial terms, but they can have significant impact on the standing in Washington and its Department's mission throughout the world. On a positive note, NNSA has found a very receptive response to issues of this sort from senior Vice Presidents. However, NNSA shouldn't have to call Sandia at such levels to get a satisfactory response, and would prefer to institutionalize a mechanism to prevent such problems in the first place.

Performance Measure 4.1

Strengthen global nuclear and radiological security through the application of capabilities to assess the vulnerabilities of, and secure, remove, and facilitate the disposition of high-risk nuclear and other radiological materials. (NA-21).

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.1.1 Support Global Threat Reduction Initiative (GTRI) efforts to protect domestic and international radiological sites, including the development and provision of training courses on radioactive source security, and initiation of GTRI activities in at least three additional countries and three domestic facilities.	Outstanding	Agree	Sandia is an integral and ongoing part of the development of the Office of Global Threat Reduction's (GTRI) "Protection and Sustainability Criteria" document. In addition, Sandia has been instrumental in establishing and executing the Domestic Security Program which is reducing the risk of theft or diversion of radiological materials to be used for malicious events affecting national security. By improving the security of these materials in the U.S., Sandia assists in reducing the availability of materials for use in a radiological dispersal device (RDD). Sandia has also provided significant technical advice to the interagency working group reexamining the list of radioactive materials of concern. In so doing, Sandia has made consequential contributions in enabling the Federal Government identify what constitutes a significant RDD. They have also significantly assisted in the increase of the number of countries cooperating with GTRI.
4.1.2 Complete the physical protection activities related to an additional 17 percent of the work toward long-term storage of the BN-350 spent fuel for a cumulative 79 percent project completion using Earned Value Management System criteria.	Outstanding	Agree	In FY 2008, the Sandia team was responsible for the completion of the physical security design at the Baikal-1 Cask Storage Facility and the completion of the physical security installation work at the Mangyshlak Atomic Energy Complex (MAEC) Cask Storage Facility, as well as the management of team logistics and management of the Technology Management Consultants (TMC) contract. The Sandia team did an outstanding job of implementing this work under difficult conditions while maintaining the project schedule and milestones.
4.1.3 Complete security upgrades for one additional reactor under the Global Research Reactor Security program, for a cumulative total of 20 research reactors secured).	Outstanding	Agree	Sandia did an outstanding job of implementing security upgrades at the Dalat Nuclear Research Institute in Dalat, Vietnam by March 2008 to secure their nuclear materials from theft or diversion for use in an improvised nuclear device.

Performance Measure 4.2

Develop improved tools, technologies, and procedures that will support the national security community's ability to detect and prevent nuclear proliferation. (NA-22).

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.2.1 Advance remote sensing capabilities and algorithms to enable detection and exploitation of nuclear proliferation signatures worldwide.	Outstanding	Agree	
4.2.2 Improve sample collection and analysis tools for detection and characterization of declared and undeclared Uranium and Plutonium production facilities.	Outstanding	Agree	
4.2.3 Advance detector materials, detector technologies, and/or signal enhancement methods to detect Special Nuclear Material (SNM) movement.	Outstanding	Agree	
4.2.4 Provide NA-22 with timely and accurate reports on merit-reviewed publications and presentations; financial reports on industrial, small and disadvantaged businesses; and academic involvement in all NA-22 funded portfolio projects.	Outstanding	Agree	

Performance Measure 4.3			
Design, develop, and deliver nuclear event detection capability to satisfy national level requirements for treaty verification and nuclear proliferation monitoring. (NA-22, NEM)			
Performance Target	**Sandia Self-Assessment Rating**	**NNSA Agreement**	**Comments**
4.3.1 Fabricate, test and deliver Burst Detector Optical, Burst Detector Analyzer, and Burst Detector Processor sensor and support systems that meet performance specifications for Global Burst Detector (GBD) payloads.	Outstanding	Agree	
4.3.2. Integrate, test and deliver the SNL and Los Alamos National Laboratory (LANL) sensor and support systems in accordance with Government Furnished Equipment delivery dates to the Air Force satellite contractor that meet the performance specifications for the GBD payloads for the space-based Nuclear Explosion Monitoring systems.	Outstanding	Agree	
4.3.3 Conduct risk reduction engineering and design work to prepare for Block IIIA/B GBD payloads and stretch goal size/weight/power reductions for Block IIIC/D GBD payloads.	Outstanding	Agree	
4.3.4 Provide on-orbit analysis and support for legacy	Outstanding	Agree	

launched and delivered, but not yet launched, Space Nuclear Explosion Monitoring systems			
4.3.5 Develop new geophysical data processing and analysis technologies, investigate and characterize sensor technologies, and support integration of NNSA laboratory geophysical research products into the NNSA Knowledge Base to improve ground-based nuclear explosion monitoring capabilities.	Outstanding	Agree	

Performance Measure 4.4

Counter global proliferation and non-state actor threats through the application of capabilities to support policy and provide technical support for dismantlement and transparency, global security engagement, and development and implementation of international regimes and agreements. (NA-24).

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.4.1 Conduct workshops or technical exchange meetings with Russian counterparts based on approved project and contract scope, and participate in joint coordinating group meetings.	Outstanding	Agree	The work conducted for NNSA in this area has been outstanding. The Sandia personnel have been extremely responsive to changing Warhead Safety and Security Exchange (WSSX) program needs due to the changing political relationship between the United States and the Russian Federation. There were no Joint Coordinating Group meetings held this year, so this part of the Target is not relevant.
4.4.2 Manage the contract with VNIITF (All Russia Scientific Research Institute of Technical Physics) to conduct radioactive source replacements at the Blend Down Monitoring Systems installed at three sites in Russia and provide technical management of all seal activities for monitoring visits at four sites in Russia.	Outstanding	Agree	The Sandia team supporting the HEU Transparency Program has provided outstanding support. Sandia expertly modified the terms of the contract with VNIITF on radioactive sources, which provided increased flexibility for future Program plans, and helped keep costs reasonable. Sandia provided key technical and facility experts for Special Monitoring Visits to Russian uranium-processing facilities to ensure the objectives of the agreement are met. The Sandia team also provided technical management of tamper-indicating seals used by U.S. monitors at 4 Russian sites, tracking seal usage, responding to monitor requests based on on-the-ground experience to improve performance onsite, and providing recommendations to HQ on improving use of seals.
4.4.3 Train 30 foreign experts in the areas of Advanced Containment and Surveillance, and Secure Communications, and engage in ten International Cooperation and Sister Labs technology collaborations and	Outstanding	Agree	Sandia has cornered the market in containment and surveillance and secure communications activities. Their aptitude in this area is an excellent complement to many of the nondestructive assay (NDA) activities sponsored by NNSA. Sandia personnel are always responsive to requests for information from headquarters, and their training sessions are well-received by foreign partners. One concern that NNSA has is in the area of transparency. Sandia has invested a significant amount of money in developing "transparency" technologies and activities. NNSA's commitment to these activities is waning in light of the lack of progress made on the Japan-ROK transparency action sheet. It should be noted that

provide training and support of the safe and secure civil nuclear energy infrastructure development.			the lack of progress is by no means Sandia's fault; but Sandia needs to work with headquarters to reframe or transition these projects to more productive topics. Sandia's involvement in infrastructure development has also been extremely valuable. Their expertise and relationships have provided great advantages to this program. As the focus of infrastructure development transitions to the Gulf Cooperation Council (GCC) states, Sandia will be relied on to be the lead laboratory in many of these countries.
4.4.4 Achieve a cumulative total of 400 Former Soviet Union Weapons of Mass Destruction scientists engaged through Global Initiatives for Proliferation Prevention (GIPP) grants in ongoing GIPP projects and 2 GIPP projects developed to the point of commercialization by a U.S. or Russian industry partner	Outstanding	Agree	Sandia has excelled, in particular, in the Iraq scientist engagement portfolio. It is a complex, time-intensive, area that presents unique challenges to any project manager. Over the last 4 years, however, Sandia has managed well the balance of costs, mission and shifting ground realities. Their continued engagement of regional non-governmental organizations (NGOs) that act as the "face" of the projects in Iraq is the keystone of joint success – and a source of respect within DOE and elsewhere. Sandia has engaged a cumulative total of 400 Former Soviet Union (FSU) scientists, engineers and technicians, and has brought several projects at Spektr-Konversia in the Russian closed city of Snezhinsk to the point of commercialization, with the industry partner getting private venture capital and long-term loans based on those projects.
4.4.5 Provide technical analyses and studies on interdiction and proliferation networks.	Good	Agree	Enhancing the technical depth and reachback to technical experts would provide a more robust evaluation.
4.4.6 Conduct 8 physical protection Regional Training Courses or an International Training Course; 10 physical protection bilateral consultations; and support 5 International Atomic Energy Agency physical protection assessment missions.	Outstanding	Agree	

4.4.7 Provide timely technical reviews and training on commerce dual-use export license applications for missile technology.	Outstanding	Agree	
4.4.8 Achieve timely and thorough performance on the FY 2008 Draft Additional Protocol (AP) Update Declaration exercise, and safeguards technology applications deliverables.	Good	Agree	NNSA appreciates Sandia acknowledgment that this area was less than outstanding. They participated in the AP Declaration exercise and training in FY 2008, but they did not complete the process by developing the associated draft AP plan and associated security plan to complete the AP exercise. However, in mid October, Sandia delivered an acceptable draft security plan for the AP exercise.
4.4.9 Provide timely support to the NA-24 Policy Office for both rapid turnaround and longer term studies and analysis of key nonproliferation issues.	Outstanding	Agree	The Cooperative Monitoring Center (CMC) in Albuquerque has demonstrated exceptional technical expertise and project management ability in carrying out directed studies and analyses for the NNSA policy office. In conducting an evaluation of nuclear energy infrastructure sharing options in the Middle East, they have provided valuable insight on nonproliferation engagement strategies in the region. The CMC demonstrated the same high-quality value-added and professionalism in its support of the Policy Office's outreach in East Asia and NGO partnerships in Southeast Asia and the Middle East.

Performance Measure 4.5

Enhance global nuclear warhead and weapons material security by supporting development and application of upgraded security systems at nuclear sites, consolidation of materials at secure sites, and development and application of detection and interdiction systems at international borders. (NA-25)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.5.1 Support comprehensive upgrades for a number of buildings containing weapons-usable material. (The number of buildings will be established in FY 2008 based on funding.).	Outstanding	Disagree Good	NNSA does not agree with the "Outstanding" rating for this performance target. Sandia "met" and at times "exceeded" the project expectations, but there was room for management improvement, especially in the earlier phases of project implementation. Assurance reports and quarterly reports were sometimes late, and lacked quality. The NNSA manager occasionally had to re-accomplish the work to get it done properly. Sandia's PI was changed too frequently and too abruptly to either develop necessary continuity or rapport with the NNSA manager at Headquarters. Ultimately, Sandia did complete the necessary deliverables and worked hard to complete the work by the deadline. However, that final success does not merit an "Outstanding" rating.
4.5.2. Provide effective management oversight of Russian contractors installing security systems at Russian Ministry of Defense nuclear storage sites to support an on-time completion of upgrades to meet Bratislava deadline (end of CY2008)..	Outstanding	Agree	Monitoring the Russian contractors charged with installing the physical security upgrade systems, and protective force facilities, at five (5) Russian Ministry of Defense 12th Main Directorate sites has been a very daunting task. Sandia has enabled this organization to report to senior management on the status of each site, through monthly reports and project management schedules. Additionally, their efforts in characterizing schedule expectations have enabled this organization to project completion metrics and adjust, where necessary, to address shortfalls. Although most sites require two construction seasons to complete the upgrades process, these large sites were addressed in less than two complete seasons. Sandia's ability to monitor the Russian contractors' progress has allowed this organization to ensure that the projects stay on schedule for completion by the end of CY 2008.
4.5.3 Support radiation detection system upgrades at 20 Russian border crossings as part of the Second Line of Defense (SLD)-Russian cooperative	Outstanding	Agree	

program to upgrade 100 percent of their border crossings.			
4.5.4 Support radiation detection system upgrades in 25 countries as part of the SLD Megaports Initiative and Core non-Russia countries.	Outstanding	Agree	
Other Considerations			
None			

PERFORMANCE OBJECTIVE 5 – SCIENCE & TECHNOLOGY

Enhance and foster a strong science and technology base in support of DOE/NNSA's mission and strategic objectives. Maintain an enduring Homeland Security and Defense Program that is both relevant and responsive to the needs of the nation. Note: Specific programs within each measure are evaluated on an alternating basis as specified in Evaluation Planning Guide, Performance Objective 5 Table in Appendix A

Adjectival Rating
OUTSTANDING

Summary of Performance

A comprehensive evaluation of this Performance Objective was conducted with input from both external and internal DOE/NNSA sources, resulting in an outstanding rating for FY 2008.

Select program/functional areas were evaluated for FY2008, including five performance measures:
5.1 – Sandia Research Foundations
5.2 – DOE non-NNSA Programs
5.3 – Homeland Security Programs
5.4 – Technology Partnerships Program
5.5 – DOE/Office of Civilian Radioactive Waste Management (OCRWM), Yucca Mountain Project

Evaluation of these performance measures is based on a standardized set of criteria related to 1) programmatic performance, management and planning, 2) quality of science, 3) performance in the operation of major facilities, and 4) relevance to national needs (5.3 and 5.5 have specific targets). During FY 2008, Sandia has significantly exceeded in all performance measures and continues to maintain a strong science and technology base that significantly contributes to strengthening national security missions of DOE, NNSA and Homeland Security.

Sandia continues to provide outstanding science, technology and engineering solutions for a broad spectrum of national security challenges, coupled with maintaining essential technical competencies for DOE, NNSA, other government agencies and multiple constituencies at the federal, state, and local levels. Sandia is regarded amongst the Science, Technology and Engineering communities as a national security asset. Sandia is continuously striving to be at the forefront of science, technology and engineering in order to be prepared to respond to emerging threats. Sandia is making sound strategic investments in science and technology programs that enable readiness and the ability to respond to technology surprise and other emerging threats. NNSA/SSO has observed and appreciated the concerted efforts by Sandia Corporation to build a diversified portfolio of research foundations that continue to "*enable the science with the mission in mind.*" The establishment of research foundations and independent external peer review boards, including the Sandia Science Advisory Board is commendable. Moreover, the strategic investments in capabilities across all research foundations and

Laboratory Directed Research and Development is helping to accelerate discovery and innovation through strategic partnerships with industry and academia that offer the opportunity for a broader integration of premier science, technology and engineering to create breakthrough results for national security mission needs.

NNSA has also observed Sandia make impressive progress in Opportunities for Improvement areas as identified in FY 2007 PER related to WFO Program. Sandia continues to improve WFO Corporate Survey process and scheduling, further development of WFO business models for enhancing NNSA's ability to administer WFO projects, pursue strategic partnerships in other government agencies, and is working towards implementation of management assurance processes using Sandia's Integrated Laboratory Management System.

5.1 – Sandia Research Foundations

Computer and Information Sciences. Sandia has exceeded expectations in computer and information sciences by continuing to enhance the development and maturation of high performance computing hardware and software technology for a variety of national security applications. Sandia has managed to deliver advanced computational and information tools through a very dynamic year of programmatic and funding uncertainties. Sandia continues to perform at an outstanding level with respect to performance measures and targets established in the Sandia Performance Evaluation Plan. The technical thrusts established during this evaluation period are commendable, including efforts to work towards the development of next generation scalability through advanced applications, transformation of modeling and simulation tools for optimization, uncertainty quantification, visualization, risk assessment, and decision support and other tools and techniques for dealing with informatics problems.

Pulsed Power Sciences. Pulsed power sciences performed at Sandia during FY 2008 has significantly contributed towards national security missions, particularly in the areas of nuclear stockpile stewardship. Sandia is regarded as the nation's steward for fast pulsed power technology and applications that has proven to be an enabling and transforming capability for national security. The commissioning of refurbished Z has progressed extremely well during this evaluation period and outstanding progress has been made in all technical research areas.

Biosciences. In an ongoing quest by Sandia to prepare for emerging threats, Sandia has moved forward to expand the portfolio of research foundations to now include Biosciences. Sandia has provided outstanding science and technology developments in the area of Biosciences and has managed to incorporate ongoing *Biothreats* and *Biofuels* research into a comprehensive research foundation focused on emerging threats that require a better understanding of biosciences in order to counter potential biological attacks against the United States, protect military personnel, strengthen energy security, and protect the environment. Sandia remains prepared to respond to these new types of threats and is diligently working towards further diversifying enduring scientific and technical competencies.

5.2 – DOE non-NNSA Programs

Office of Fossil Energy (FE)
Sandia's support for FE sponsored programs is outstanding, specifically in areas including the Strategic Petroleum Reserve (SPR), Clean Coal, and Upstream Oil and Gas Technology. Sandia has consistently met milestone targets and has successfully supported the national Fossil

Energy program in both upstream and downstream technology needs for enhanced U.S. fossil energy production.

Office of Environmental Management (EM), WIPP. Sandia's role in support of the Waste Isolation Pilot Plant (WIPP) project continues to be outstanding, primarily as the scientific and technical advisor to the DOE for permanent disposal of transuranic (TRU) waste generated by defense programs. In this capacity, Sandia continues to support the DOE Carlsbad Field Office (DOE/CBFO) overseeing the maintenance and further development of the WIPP Performance Assessment (PA) system.

Office of Civilian Radioactive Waste Management (OCRWM), Transportation. Sandia's role in supporting OCRWM activities, other than non-lead lab (License Application support for Yucca Mountain Project) work activities is also evaluated as outstanding. Despite limited DOE funding resources for this past fiscal year, Sandia maintained the ability to support two transportation related activities, including the Spent Fuel Sabotage Project and the RADTRAN computer software package – developed at Sandia and used around the world for evaluating the risks of shipping radioactive materials.

5.3 – Homeland Security Programs

Sandia continues to provide outstanding support to Department of Homeland Security (DHS) and has made significant contributions to multiple directorates of DHS, including Science and Technology, Domestic Nuclear Detection Office (DNDO), Preparedness and Infrastructure Protection, and other DHS agencies and components. Sandia has done exceptional work in testing and evaluating Science and Technology (S&T) Cargo Conveyance security technologies while also providing well written and thorough technical reports to support these testing efforts. Sandia Management has been particularly flexible and has submitted all reports and budgets to DHS S&T in a timely and efficient manner.

The Sandia technical staff members have been regarded by DHS as exceptional in meeting the objectives and delivering the products outlined by S&T. More importantly, Sandia staff members have been professional in working with multiple stakeholders.

DHS S&T's Cargo Conveyance Program test and evaluation team, comprised of Sandia and other DOE laboratories, has proved to be a formidable asset to DHS S&T. Sandia managers have provided the DHS S&T cargo conveyance program with an invaluable pool of Sandia subject matter experts who have collaborated closely and efficiently with personnel from other DOE laboratories to review and analyze cargo conveyance security technologies.

5.4 – Technology Partnerships Program

Sandia continues to demonstrate consistent outstanding performance in Technology Partnerships (TP) as evidenced by several technology outcomes and strengthening of strategic partnerships overall. Sandia TP program continues to support national security missions by enabling the deployment and commercialization of multiple technologies, creating a supplier base for weapons, and supplying technologies for both first responders and warfighters. These partnerships continue to help NNSA laboratories maintain a strong science and technology base while helping to maintain a strong diversified workforce. Sandia continues to attract quality partners that ultimately contribute toward the development of novel technologies that promote both economic and technology development for the nation. Sandia's management of the TP program and all of its components is regarded as outstanding.

5.5 – DOE/OCRWM, Yucca Mountain Project
Sandia's lead laboratory role and support to DOE's OCRWM, for the submission of license application to Nuclear Regulatory Commission (NRC) for Yucca Mountain Project (YMP) was outstanding. Sandia's contribution to the License Application in the development of the Safety Analysis Report (SAR) sections submission was delivered to schedule and certified by Sandia on April 1, 2008. The select aspects of technical products used to support the postclosure safety basis of the license application were thoroughly reviewed by Sandia and delivered to OCRWM.

Significant Accomplishments

Sandia Research Foundations

Computation and Information Sciences
Sandia has completed another successful year by providing computational and informational science tools and platforms critical to national security missions. Sandia's Computer and Information Sciences (CIS) continue to enable a variety of science initiatives. Select notable accomplishments included the ability for the QASPR team to make blind predictions using the CIS Charon code for the qualification of NW electrical systems without the use of 'fast burst reactor' data; creation of Tensor Toolbox for MATLAB which provides ability for large data mining applications; ALEGRA shock physics codes to simulate important experiments for advanced armor development; development of CUBIT 11.0 for advanced improved efficiency of model preparation and simulation; ALEGRA 3D radiation MHD code simulations capability of wire array z-pinches on Sandia Z accelerator; development of a petascale-ready algorithm of Community Climate System Model's (CCSM) atmospheric model; development of novel methods for accelerating interconnect performance in massively parallel supercomputers; and the establishment of synergistic and collaborative multi-institutional partnerships such as IAA and ACES that keep Sandia at the forefront of High Performance Computing.

Pulsed Power Sciences
An external review of the Pulsed Power Sciences Program provided very a favorable review of Sandia's Z refurbishment efforts, startup operations, contributions to NNSA science and engineering campaigns, and further enhancing pulsed power sciences. The most notable accomplishment for pulsed power sciences research foundation was the completion of the major refurbishment of the Z Facility and ability to reestablish experimental platforms, commence the commissioning of the refurbished Z by performing several experimental shots, enhance the science of Inertial Confinement Fusion (ICF), and meet the mission needs for DOE/NNSA. The external review panel (ERP) was very complementary of Sandia's Pulsed Power Sciences program and regarded Sandia's performance as outstanding. The ERP commended Sandia's leadership in pulsed power research, development, and application of fast pulsed power generation. Sandia has performed outstanding in respect to all elements of performance evaluation criteria and continues to make significant progress in planning for future pulsed power research needs such as dynamic plutonium experiments and the planning for the national boost initiative. NNSA shares the same enthusiasm and support as the external advisory board, which regards work performed at Sandia in pulsed power sciences as unique and important research that will require an investment in capabilities in order to continue research in extreme states of matter in the Isentropic Compression Experiments (ICE) field and with z-pinch implosion experiments.

Biosciences
NNSA's view of Sandia's major accomplishment in this research foundation is Sandia's investment, development and further implementation of this very critical research foundation. Sandia has demonstrated it's commitment to rising to new national security challenges and have diligently worked to further develop Biosciences as an enduring scientific and technical competency for the laboratories and Nation. The development of two research thrusts, Biothreats and Biofuels, brings together the opportunities for enhancing the Nation's ability to respond to national security threats such as countering biological attacks against the United States, protection of first responders and military personnel, strengthening of energy security, and protection of environment. Sandia's investments in major initiatives such as the Microscale Immune Studies Program (MISL) and the Joint BioEnergy Institute (JBEI) are a testimony to Sandia's leadership and ongoing contributions towards solving complex national security challenges.

DOE non-NNSA Programs

Office of Fossil Energy (FE)
Sandia's contributions to DOE Energy Security programs, in particular in support of Fossil Energy sponsored programs is outstanding. Sandia's ongoing evaluation of geological and geomechanical suitability of Strategic Petroleum Reserve (SPR) expansion sites such as Richton Dome Site in Mississippi, SPR readiness, Carbon Sequestration research, water treatment and management used in oil and natural gas drilling, and Liquified Natural Gas (LNG) fire safety research is outstanding. The completion of 24 out of 24 FY 2008 milestones for SPR Project Management Office is commendable.

Office of Environmental Programs (EM), WIPP
Sandia's ongoing support to the DOE Carlsbad Site Office for operations of the Waste Isolation Pilot Plant (WIPP) is outstanding. Sandia has successfully provided scientific and technical consultation for the ongoing Performance Assessment (PA) tool used for WIPP site characteristics, waste information, and future natural and anthropogenic events to formulate possible performance scenarios. Sandia continues to work on the Compliance Recertification Application (CRA) scheduled for submission to Environmental Protection Agency (EPA) by DOE in 2009. Sandia continues to offer other technical support in the areas of rock mechanics, geochemistry and hydrology.

Office of Civilian Radioactive Waste Management (OCRWM), Transportation
Sandia continues to support OCRWM sponsored programs related to transportation science and technologies, including the Spent Fuel Sabotage Project and RADTRAN, the computer software packaged developed at Sandia for use in evaluating risks of shipping radioactive materials throughout the world. Despite funding uncertainties and limited resources during this past fiscal year, Sandia has managed to complete milestones in the area of Spent Fuel Sabotage Program that will ultimately be used to assess the overall safety of systems that have been proposed in the Environmental Impact Statements prepared for Yucca Mountain Project and will support other DOE projects that require transportation of spent nuclear fuel; and RADTRAN software upgrade including completion of the economic model, loss of shield model, and the Verify and Validation (V&V) of the latest version of the computer code RADTRAN 6.

Homeland Security
Sandia's performance in support of Homeland Security programs was outstanding during this past fiscal year. Sandia continues to deliver on very challenging assignments focused in chemical/biological research, explosives sciences, borders/maritime security, and infrastructure/geophysical research and development.

This past year, Sandia hosted senior Customs and DHS Policy officials at a proof-of-concept demonstration of S&T's Cargo Conveyance contractor/vendor technology in Albuquerque, NM. Sandia provided and configured the test site in addition to developing a software interface to support the vendor's technology which allowed DHS officials to interactively participate in the demonstration. Sandia also developed several Testing & Evaluation Master Plans (TEMPs) which were the first to be submitted and officially approved by DHS S&T's Test & Evaluation (T&E) office. The technical specifications which were developed as part of these TEMPs led to the creation of technical requirements documents which were released by the Customs and Border Protection (CBP) agency to the general public. In response to these technical requirements, technology vendors have been given the opportunity to submit their solutions for review and consideration by DHS.

Technology Partnerships
Sandia's Technology Partnerships program continues to deliver on a variety of science advances, technology deployments, and diversification of strategic partnerships. Sandia's outstanding performance is reflected by quality partners who continue to seek out collaborative research and development opportunities that ultimately continue to result in numerous technology transfers, technology deployments, and technology partnerships. The results of these collaborations are reflected in numerous awards given to Sandia, and are a reflection of Sandia's strong science and technology base.

Despite both organizational and personnel changes at Sandia this past year, Sandia has managed an outstanding Technology Partnerships program that services all strategic management organizations of Sandia Corporation, thereby strengthening the technical competencies throughout the laboratory. Technology partnerships have also served to strengthen Sandia's workforce by offering attractive research and development career opportunities for both technical and administrative personnel. Sandia has managed to better define all components of technology partnerships, inclusive of Cooperative Research and Development Agreement (CRADA) administration, Funds-in agreements, Licensing and Intellectual Property Management, and Economic and Technology Development Programs.

DOE/OCRWM Yucca Mountain Project

Sandia worked diligently to support OCRWM in the development of the SAR sections of the License Application that was ultimately submitted to the NRC July 2008. The submission of the SAR was delivered to schedule and certified by Sandia on April 1, 2008. The select aspects of technical products used to support the postclosure safety basis of the license application were thoroughly reviewed by Sandia and delivered to schedule. DOE/OCRWM regarded the accomplishment of this endeavor as outstanding.

Sandia's Performance Assessment Integration Team made it possible to react quickly to events and plan a path forward that would enable the meeting of planned dates with quality work. The scenarios developed for the Total System Performance Assessment (TSPA) were well documented and clearly described in Analysis Modeling Reports. Sandia works proactively with OCRWM to ensure that the Postclosure safety testing program is run efficiently and cost effectively. The Office of Quality Assurance surveillance teams worked with Sandia personnel, processes, products, resulting in a TSPA and SAR sections that met the requirements and expectations of the NRC. Sandia produced an outstanding effort and compiling and drafting potential contentions. Additionally, Sandia created an efficient system for processing Requests for Additional Information. Of particular note is the exceptional degree to which Sandia included the OCRWM technical leads in this process.

Moreover, Sandia provided ongoing exemplary support leading towards the ultimate submission of License Application, inclusive of: continually improving processes with a product-focused progressive reduction of staff and innovative product development to meet technical needs within a restrictive budgetary climate; demonstrated outstanding technical-product management skills for delivering highly-quality products under tight schedule and even tighter budget; superior management and stewardship of OCRWM's technical and scientific data systems; exemplary support to OCRWM for License Support Network searches and overall process improvements towards a timely and accurate record submittals tied to data and analyses; ongoing line support to the Surveillance Teams were outstanding, with senior Line representatives exhibiting an open, questioning attitude consistent with a strong and effective nuclear safety culture; and begun to develop the open, questioning attitude consistent with a strong and effective nuclear safety culture.

Opportunity for Improvement

Technology Partnerships: Sandia could improve on the further maturation of Partnerships, Agreements, and Licensing Systems (PALS) for tracking licensing, intellectual property, CRADA agreements, and other pertinent Technology Partnerships program information.

DOE/OCRWM, Yucca Mountain Project: Sandia could improve on consistently following through on the production of technical reports contained in the fiscal year task plans. These plans should be clearly communicated to assess organizational climate and the results obtained from these efforts.

DOE non-NNSA Programs: Sandia could improve programmatic/operational awareness for SSO by keeping SSO Office of Programs informed of achievements measured against DOE Program Work Authorizations.

Performance Measure 5.1

Maintain a strong multidisciplinary science and technology base, inclusive of Sandia's Research Foundations.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.1.1 Programmatic performance, management and planning. Evidence: Achievements measured against DOE Program Office Work Plans in the areas of Computer and Information Sciences, Pulsed Power and Bioscience	Outstanding	Agree	*Pulsed Power Sciences:* The overall performance and science developments in this research foundation area are outstanding; however, there are programmatic management and planning areas that could be better administered in FY 2009, including the following: 1) Shot allocations for Z facility needs to be better integrated with national needs, and a priority review and information flow to users of Z could improve; 2) Cost control of Z single shift operations and efficiency of operations in terms of cost per shot could be evaluated in the future.
5.1.2 Quality of science, technology and engineering. Evidence: Results from technical advisory panels, awards, patents, and significant technical publications.	Outstanding	Agree	*Pulsed Power Sciences:* Sandia's work in the area of dynamic materials is commendable.
5.1.3 Performance in the technical development and operations of major facilities (where applicable)...	Outstanding	Agree	
5.1.4 Relevance to national needs and agency mission. Evidence: Impact of technical achievements on NNSA Laboratories.	Outstanding	Agree	

Performance Measure 5.2

Maintain a strong multidisciplinary science and technology base, inclusive of DOE non-NNSA Programs.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.2.1 Programmatic performance, management and planning. Evidence: Achievements measured against DOE Program Office work plans in the areas of Fossil Energy, Environmental Management and Civilian Radioactive Waste Management.	Outstanding	Agree	
5.2.2 Quality of science, technology and engineering. Evidence: Results from technical advisory panels, awards, patents, and significant technical publications.	Outstanding	Agree	
5.2.3 Performance in the technical development and operations of major facilities (where applicable).	Outstanding	Agree	
5.2.4 Relevance to national needs and agency mission. Evidence: Impact of technical achievements on NNSA National Laboratories.	Outstanding	Agree	

Performance Measure 5.3			
Maintain a strong multidisciplinary science and technology base to ensure success of programs for Department of Homeland Security (DHS) and Other Federal Agencies.			
Performance Target	**Sandia Self-Assessment Rating**	**NNSA Agreement**	**Comments**
5.3.1 Quality of work and support to the DHS Science and Technology Directorate in the application of science, technologies, and system engineering solutions to matters of national security.	Outstanding	Agree	
5.3.2 Quality of work and support to the DHS Domestic Nuclear Detection Office Directorate in providing relevant radiation-detection sciences, technologies, and system-engineering solutions that enhance national security Quality of work and support to the DHS Domestic Nuclear Detection Office Directorate in providing relevant radiation-detection sciences, technologies, and system-engineering solutions that enhance national security.	Outstanding	Agree	
5.3.3 Quality of work and support to the DHS Preparedness Directorate's Infrastructure Protection Program through the National Information Simulation and	Outstanding	Agree	

Analysis Center program.			
5.3.4 Quality of work and support provided to DHS initiatives defined in interagency agreements which are not covered in 5.3.1 through 5.3.3. Evidence for 5.3.1 through 5.3.4: *Quality of science, technology and engineering* embedded in the SNL-provided technologies, studies, and/or solutions implemented/utilized by the customer to enhance national security initiatives; programmatic performance, management and planning measured against Interagency Agreement Statements of Work; relevance of deliverables to national needs and agency mission; and performance in the technical development and operations of major facilities (where applicable).	Good	Agree	

Performance Measure 5.4

Through the use of our scientific and technical capabilities, ensure success of technology partnerships.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.4.1 Programmatic management of Technology Partnership Program including administrative performance and intellectual property management.	Outstanding	Agree	
5.4.2 Quality of Science, Technology and Engineering.	Outstanding	Agree	
5.4.3 Performance in technical development and operations of major facilities (where applicable)...	Outstanding	Agree	
5.4.4 Relevance to national needs and agency mission. Evidence for 5.4.1 through 5.4.4; Performance as measured by customer satisfaction using sponsor/customer surveys and program reviews	Outstanding	Agree	

Performance Measure 5.5

Execute the assigned Office of Civilian Radioactive Waste Management's (OCRWM) Repository activities, including development, review and defense of DOE's License Application (LA) for a Nuclear Repository at Yucca Mountain.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.5.1 Prepare and provide Safety Analysis Report (SAR) sections as	Outstanding	Agree	Sandia Corporation-Lead Lab (SNL/LL) did an outstanding job in preparing and providing the Safety Analysis Report (SAR) sections for submittal. SNL/LL's Performance Assessment Integration Team

assigned for inclusion in the License Application. - By December 31, 2007: Meet License Application Management Plan obligations for preparation and submittal of assigned SAR sections. - By January 29, 2008: Forward SAR sections to Bechtel-SAIC, LLC, for incorporation in the LA.			made it possible to react quickly to events and plan a path forward that would enable the meeting of planned dates with quality work. The scenarios developed for the Total System Performance Assessment (TSPA) were well documented and clearly described in Analysis Modeling Reports. SNL/LL works proactively with OCRWM to ensure that the Postclosure safety testing program is run efficiently and cost effectively. The Office of Quality Assurance surveillance teams worked with SNL/LL personnel, processes, products, resulting in a TSPA and SAR sections that met the requirements and expectations of NRC.
5.5.2 Prepare to support the successful defense of the technical content of these sections in licensing proceedings. Quarterly: Review project risks through OCRWM Risk Management Working Group. By March 31, 2008, Propose expert witness pool for Office of Civilian Radioactive Waste Management consideration. By March 31, 2008: Complete plan work and evaluate Risk Steps of Change Management Plan associated with internal posture for License Defense. Demonstrate organizational preparedness to conduct work in post LA submittal	Outstanding	Agree	SNL/LL produced an outstanding effort in compiling and drafting potential contentions. Additionally, SNL/LL created an efficient system for processing Requests for Additional Information. Of particular note is the exceptional degree to which SNL/LL included the OCRWM technical leads in this process.

program enviro By September 30, 2008, create, document and institutionalize revised internal processes for review and approval of responses to Requests for Additional Information and Contentions. By September 30, 2008, complete internal Readiness Review of internal preparedness to respond to Requests for Additional Information and Contentions. By September 30, 2008, complete FY 2009 planning for the continued identification and retention of key personnel and capabilities.			
5.5.3 Develop, maintain and defend the Postclosure Safety Analysis for a Nuclear Repository at Yucca Mountain, including the supporting technical bases. The supporting technical bases includes Analysis and Model Reports that are based upon work of high technical	Outstanding	Agree	SNL/LL continually improved their processes with a product-focused progressive reduction of staff and innovative product development to meet technical needs within a restrictive budgetary climate.

quality, transparent, peer review panel acceptable, traceable, and are in compliance with the Quality Assurance Requirements Document and implementing rocedures. By December 31, 2008: Complete the Total System Performance Assessment Analysis and Model Report, demonstrated by March 31, 2008, customer acceptance under OCRWM procedure AP-7.5Q. Total System Performance Assessment calculation and analysis-of-results processes will be examined for possible efficiencies, to include planned rapid response to formal Requests for Additional Information and to informal questions. Quarterly status reports will be provided to support Performance Evaluation Plan review.			
5.5.4 Complete work on schedule and within budget, and provide performance metrics to DOE on a monthly basis in accordance with	Outstanding	Agree	In addition to the Sandia self assessment: SNL/LL demonstrated outstanding technical-product management skills for delivering highly-quality products under tight schedule and even tighter budget.

Yucca Mountain Project (YMP) reporting requirements.			
5.5.5 Provide Technical Work Plans that clearly define work to be performed, the [OCRWM procedure AP-5.5Q]-intended use or purpose of each activity and/or product, methods to be used, schedules for completion of activities, procedures to be followed, expected outcomes, provisions for handling unexpected outcomes or off-normal events, and interfaces with other YMP activities.	Good	Agree	SNL/LL provided superior management and stewardship of OCRWM's technical and scientific data systems.
5.5.6 Submit results of data collection, modeling and analysis to project records management, licensing support network and technical data and software management systems on a timely basis.	Outstanding	Agree	SNL/LL provided exemplary support to OCRWM for License Support Network searches and overall process improvements towards a timely and accurate record submittals tied to data and analyses.
5.5.7 Provide technical experts on an as-needed basis for interactions with regulatory and oversight boards, and for addressing existing and new technical issues.	Outstanding	Agree	Line support to the Surveillance Teams were outstanding, with senior Line representatives exhibiting an open, questioning attitude consistent with a strong and effective nuclear safety culture.
5.5.8 Implement the OCRWM Nuclear Safety Culture and	Good	Agree	SNL/LL has begun to develop the open, questioning attitude consistent with a strong and effective nuclear safety culture.

Safety Conscious Work Environment Policy (POL-RW-2006-01), participate in OCRWM-wide efforts to assess organizational climate and Safety Conscious Work Environment, and develop and implement improvement plans for Sandia and other national laboratories and subordinate support organizations. In coordination with all YMP personnel, participate in Office of Civilian Radioactive Waste Management -wide efforts to assess organizational climate and Safety Conscious Work Environment. As required, direct development and coordinate implementation of improvement plans for SNL, other national laboratories, and SNL YMP contractors. Ensure that all national laboratory employees involved in the repository program, upon their departure from the program, are provided an opportunity to document any issues they have with the program.			

PERFORMANCE OBJECTIVE 6 – Integrated Safety Management System and Emergency Management

Sandia will manage and operate its environmental, safety, and health; emergency management; nuclear operations; fire protection; safety basis programs in an efficient and cost effective manner using the Integrated Laboratory Management System (ILMS) to fully support successful accomplishment of mission, while protecting the public, the worker, the environment, and national security assets in accordance with the terms and conditions of the contract

Adjectival Rating
GOOD

Summary of Performance

Sandia performance warranted "significantly exceeds" ratings in most safety and health measures agreed to in the PEP. Weaker performance was noted in terms of Sandia effectively closing certain Findings (such as some identified by the HS-64 predecessor organization in 2005) and points to an opportunity for improvement in Sandia corrective action processes. One example of an unresolved deficiency is that associated with task level work planning and control. The HS-64 Environment, Safety, and Health (ES&H) audit in 2008 acknowledged the improvement in work planning and control was noted but also reaffirmed that it is not yet fully effective at the task level across the laboratory. Overall performance was rated as 14 out of 20 "effective performance" scores when 5 Sandia groups were rated against the 5 core functions.

Sandia improvement was noted again in reduced injury and illness incidence rates, Total Recordable Case Rates (TRCR) and Days Away Restricted or Transferred (DART) Case Rates as well as reportable undesired events [as identified in the Occurrence Reporting and Processing System (ORPS)]. The gradual improvement in rates is recognized, however, Sandia must make more than incremental improvements if performance is to match or exceed DOE averages.

In FY 2008, Sandia successfully closed one major 10CFR 851 compliance gap [Occupational Exposure Assessments (OEA)] but other key gaps are yet to be resolved (e.g. subcontractors' hazard identification and control, work planning and control, and occupational medicine for subcontractors).

The majority of new noncompliances reported were related to electrical safety issues. Sandia efforts to improve electrical safety are noted. However, the number of incidences and their potential for serious negative outcome continues to identify this as a class of hazard to be closely monitored and effectively managed by Sandia line organizations and subcontractors.

The Sandia Emergency Management Program (EMP) performance evaluation for the past two years has been addressed through performance incentives that were developed to ensure overall program performance was restored to satisfactory performance levels. As a result of steady and continued progress and improvement, this year's performance evaluation was addressed through

this comprehensive, program-wide performance objective. While improvements in performance have been recognized by NNSA during this performance period, NNSA does not agree with Sandia's overall assessment that the EMP is functioning at the Outstanding level. It is important to keep in mind that this program has been in recovery for the past couple of years and is just now beginning to be able to consistently demonstrate that it is capable of meeting performance expectations across the board. NNSA recognizes that in two of the five current performance measures Sandia has significantly exceeded expectations resulting in NNSA agreement with those Outstanding ratings; however, in the remaining three the standard of performance was exceeded although there is room for improvement in some elements. As a result, NNSA has assigned an overall rating of Good for this performance measure.

Sandia has significantly exceeded performance expectations with their efforts associated with establishing and formalizing practices and processes for enhancing interactions and effective relationships with the myriad of off-site organizations and entities that interface with Emergency Management. Throughout the year NNSA recognized the continued partnering by Sandia Emergency Management with off-site groups such as the City of Albuquerque, Bernalillo County, the State of New Mexico, and the various local hospitals. NNSA also recognized an increase in the dialog and involvement with the neighboring Pueblo of Isleta. Representatives from the Pueblo actively participated in several of the drills and exercises conducted throughout this performance period. As a result, lines of communication and levels of cooperativeness between these two entities have been significantly improved during this period. Sandia Emergency Management also took the opportunity to enhance their relationship and increase interactions with other organizations to include the New Mexico Department of Homeland Security, the New Mexico Office of Emergency Management, and the City of Albuquerque regarding Joint Information Center construction activities to name a few.

Sandia continues to improve its level of preparedness for emergency events and has continued to improve and enhance its training program in conjunction with its drills and exercise activities including a formal continuous improvement process. Notwithstanding the level of effort and commitment put into Sandia's Emergency Management drill and exercise program, there are still elements that clearly have some room for improvement based on the outcome and results of some of the drills and exercises conducted during this performance cycle. This includes issues with the timeline for the dissemination of emergency information to the media and the public, and identification and verification of event location to ensure appropriate implementation of protective actions and protective action recommendations. During the third quarter, the last drill before the annual exercise was conducted and several objectives being evaluated were not fully met. As a result, a special training session was held to address the issues that were identified during the drill.

The Sandia and NNSA/SSO Emergency Public Information element has also made great strides with the implementation of several improvements, completion of corrective actions, and the closure of findings during the performance period; however, again there is still room for improvement in this element as evidenced by the results of some of the drills and exercises designed to test this element.

Sandia has been extremely effective and significantly exceeded performance expectations with regard to managing the EMP in order to ensure emergency response activities will result in the implementation and deployment of time-sensitive response actions that are necessary to

minimize or prevent unacceptable consequences to responders, workers and the public.

The Emergency Management organization has undertaken many activities to maintain and strengthen its formal self-assessment program. As part of this effort, Sandia has developed and implemented a lessons learned program for emergency management and continued to ensure full implementation of the readiness assurance requirements prescribed by DOE Order 151.1C. These efforts were scoped to include Emergency Management operations at Sandia California as well.

Sandia Emergency Management successfully completed the corrective actions to close seven of the eight findings identified during the Office of Independent Oversight Inspection conducted in 2006. A validation of the remaining corrective action (Finding 8) was attempted during the NNSA FY 2008 EMP Assessment but failed because the requirements prescribed by the Sandia corporate policy requirements for self-assessments were not being met. Sandia has revisited and revised the corrective action and is preparing to request another validation by NNSA in the near future.

During this reporting period, concerns were raised that several of the Emergency Planning Hazards Assessments (EPHAs) were not updated in accordance with order requirements, and response to NNSA comments on several of the EPHAs had not been received in a timely manner. To address this concern, a specific performance target has been incorporated into the FY 2009 PEP for submittal of a schedule for completing EPHAs, updating existing EPHAs, and developing and implementing temporary orders.

Significant Accomplishments

Sandia performance continued to improve this fiscal year in terms of decreasing TRCR from 1.9 in FY 2007 to 1.72 in FY 2008 a greater than 9 percent reduction and DART a 20 percent reduction in FY 2008 to 0.68.

The HS-64 ES&H Audit results provided validation that improvement was noted in several areas, although there is room for improvement in the key areas discussed in the OFI narrative section.

Sandia successfully completed the Occupational Exposure Assessment project and was complimented by HS-64 and NNSA for performance in this area.

Sandia was subject to several Inspector General audits and reviews with no new major issues reported (among these were reviews of student and intern safety, processes for corrective action management of external findings, etc).

Sandia, in conjunction with the NNSA, developed and implemented a new Emergency Operations Center (EOC) concept of operations. The new concept integrates NNSA response elements into the EOC and has proven to improve Sandia's capability to respond to complex emergencies as demonstrated during this year's annual exercise.

Sandia Emergency Management has significantly increased its interaction and levels of cooperation with off-site agencies – especially with the Pueblo of Isleta and the Federal Bureau of Investigation (FBI).

During the first quarter of this performance period the Sandia Emergency Management Program

adopted and implemented the "Blue Card" (Command Officer Training and Certification Program) command system for National Incident Management System Type 4 and Type 5 incidents and has worked throughout the remaining performance period with local entities to facilitate the same for emergency response agencies in the Middle Rio Grande Valley. In support of these activities, Sandia Emergency Management put on a two-day Incident Safety Officer "Train-the-Trainer" course for the Middle Rio Grande Valley agencies.

Sandia provided good support of the interface with the DNFSB. Sandia has supported numerous visits by DNFSB staff, has provided timely responses to DNFSB document requests, and has contributed to the rewrite of the DOE Interface Manual, DOE M 140.1.

Sandia's efforts have provided for a collaborative relationship with the DNFSB site representative. And Sandia's support ensured a smooth transition when the DNFSB site representatives changed.

Sandia's support of the revision of the DOE Interface Manual, DOE M 140.1 is a reflection of their ongoing commitment to maintaining a dedicated, productive relationship with the DNFSB.

Opportunity for Improvement

NNSA agrees with the Sandia self assessment (PEAR) that focus is warranted in the following areas:

- Repeat findings (HS-64 inspection finding);
- Work planning and control (HS-64 inspection finding);
- Assurance (HS-64 inspection finding);
- Tech Area V Nuclear Operations (HS-64 inspection finding);
- Electrical safety;
- Subcontractor flow down of requirements;
- Lock out/tag out; and
- Safety culture

Improvement of performance in the above, but most notably in terms of "safety culture" is required if Sandia is to make more than incremental improvement in key outcomes, such as reduced injury and illness incidence rates (TRCR and DART) or undesired events (such as Noncompliance Tracking System (NTS) noncompliances or ORPS reportable cases).

The concerns regarding safety culture or integration of safety have been reported before (past Sandia Corporate Issues included CIM #7 identified in 2005, #28 in 2006 and now #36 issued in 2008) yet resurface as incompletely resolved.

Sandia shall demonstrate commitment to improved safety culture.

With regards to work planning and control at the task level, Sandia has not been effective in terms of critically self assessing performance. Sandia requested that NNSA close Finding #1 (OA 2005 ES&H Audit) as effectively having resolved the issue when there were indicators to the contrary. Sandia must follow through on commitments in the HS-64 2008 Finding C-1 Corrective

Action Plan (CAP) and ensure that expectations for improvement are clear to all and not partially accepted or recognized as applicable by some. As proven during the HS-64 ES&H Audit and again in the HS-64 Special Reviews of Nanomaterial Safety, performance may not be judged fully effective in organizations with perceived established work planning and control systems until these are scrutinized or closely examined for specific hazard recognition, evaluation and control at the task level.

Subcontractors (including Vendors/Warranty/Service Contractor) performance, with clarity of ES&H expectations and documented effective oversight by Sandia, are a target of opportunity for improvement. Indicators such as a rise in electrical incidents attributed to contractors and lack of clarity in oversight of ES&H expectations for certain classes of contracts (service and warranty contracts) raised concerns regarding effective contractor assurance systems in this area. The urgency of Sandia actions has not always been established or the improvement plans (e.g., issues concerning Sandia delegated representative oversight of subs) are reconveyed in successive iterations.

Events over FY 2008 clearly demonstrate TA-V nuclear operations are not conducted with the appropriate level of formality. Sandia has not acknowledged the need for improvement in this area and is not taking appropriate action.

Sandia management's response to issues and events needs improvement. In some cases, NNSA has had to prompt Sandia to investigate issues that point to weakness in the formality of operations. This reflects a lack of a demanding safety culture in the nuclear activities.

Sandia nuclear operations need to be more process-based rather than expert-based. Some of the events in FY 2008 highlight the utilization of the skill-of-the-worker. Sandia should strive to implement and enforce consistent processes in the operations and maintenance of the nuclear facilities.

Sandia needs to ensure safety improvements are a priority. Sandia has not always sought to ensure safety matters are dealt with before pursuing mission goals.

Sandia continues to be weak in the feedback and improvement area, especially in selection and modification of effective leading performance indicators, any benchmarking activities, and the use of an effective lessons learned program to name a few. Improvements to the process need attention as Sandia must implement avenues to use improvement mechanisms.

During this performance period, two repeat (related) OFIs have been identified. This condition gives the indication that previously implemented corrective measures are not being sustained. One of the repeat OFIs has to do with the verification of the reported geographical position (location) of the emergency event. In at least two separate exercises Sandia failed to verify the actual location of the emergency event. This represents a serious concern since the failure to verify the incident location could cause confusion between the Incident Commander (IC), EOC and Consequence Assessment Team and thereby result in the incorrect identification of appropriate protective actions (PA) and/or PA recommendations. This could also lead to response elements being dispatched to incorrect locations and could unnecessarily lengthen critical response times. The other repeat OFI was administrative in nature and was associated

with the sequential numbering of press releases. Nonetheless, Sandia should review their corrective action process to ensure that actions taken in the future to resolve compliance and performance issues are based on effective causal analysis and are periodically reviewed or performance tested when appropriate to ensure the corrective actions put in place are sustained.

Several of the EPHAs were not updated in accordance with order requirements, and response to NNSA comments on several of the EPHAs had not been received in a timely manner.

The Emergency Public Information element must be assessed and revised to improve the efficiency, quality and timeliness of flow of information. This represents area in which Sandia's longstanding performance issues involving both the EOC and the Joint Information Center (JIC) must be improved.

During the last NNSA evaluation of the Sandia Emergency Management Annual Exercise, there were more OFIs identified by NNSA than were identified by Sandia in their own evaluation of the same objectives. This calls into question the rigor and robustness of some of Sandia's performance assurance activities and indicates an area in which there is room for improvement.

The efforts to close Improvement Actions within the six-month performance goal need to be improved so that the current completion rate of 29 percent can be increased.

The overall content of the FY 2008 PEAR did not accurately reflect the actual performance of the EMP. The PEAR write-up focused more on the positive attributes or the things that went well as an end-of-the-year summation versus providing a more balanced representation of some of the challenges that were met and dealt with throughout the year by the Emergency Management staff. The PEAR is a self-assessment report that should provide both Sandia and NNSA management with critical information that can be used determine the status of Emergency Management program performance and compliance. In some cases the report did not meet that objective which in and of itself represents an opportunity for improvement.

Sandia has successfully completed three significant readiness activities [Logistics Nuclear Operation (LNO) Phase 1, Phase 1a, and Sandia Pulsed Reactor Facility/Critical Experiment (SPRF/CX)] in this evaluation period. Although Sandia has satisfactory procedural and program guidance, they continue to struggle with execution.

The most significant issue is the lack of adequate use of lessons learned. Review of the Site Office Line Management Review reports shows that this is a common repeat theme that was originally identified in 2005.

Another common theme is the lack of adequate preparation. This is related to the lack of adequate planning discipline. Sandia typically does not follow the timeline guidance provided to ensure sufficient time for review and preparation. This last minute attitude of Sandia has even drawn the attention of Headquarters personnel.

Performance Measure 6.1

The Sandia Integrated Safety Management System (ISMS) is comprehensive and effectively implemented using the ILMS by all line organizations to ensure worker safety, safety of the public, protection of the environment and mission success

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.1.1 Demonstrate adequate implementation of 10CFR851 and demonstrate adequate progress on closing 10CFR851 gaps.	Good	Agree	There were a number of new 10 CFR 851 non-compliances reported this year (in the NTS). The accumulation of issues which are not readily closed and in particular those related to electrical safety, point to room for improvement. The Sandia PEAR discussion focuses on completion of tasks rather than the 4 major issues/conditions which led to their reporting in NTS. While the "Occupational Exposure Assessments" noncompliance was closed the remaining "gaps" (e.g. subcontractors' hazard identification and control, work planning and control, and occupational medicine for subcontractors) remain unresolved.
6.1.2 Implement Long-Term Stewardship (LTS) Annual Work Plan and Long-Term Environmental Stewardship (LTES) Program Plan.	Outstanding	Agree	Sandia has met the requirements for outstanding in the LTS area.
6.1.3 Track and trend environmental operational data as compared to NEPA (e.g., SWEIS) operational limits.	Satisfactory	Agree	The requirements to meet the satisfactory rating have been met.
6.1.4 Chemical management system improvements.	Outstanding	Agree	
6.1.5 Assess health of the workforce	Outstanding	Disagree Good	Sandia completed some of the factors directly related to the health of the workforce outlined in the FY 2008 PEAR. These included health assessments that covered a portion of the organizations (three divisions) making an overall determination of health difficult to assess. There was no mention of the Organizational assessment reports that are required by the PEP Target Narrative FY 2008 PEP. There was no mention of an analysis of the between organizations as mentioned in the PEP. The Safety Incident Tracking System (SITS) was a great innovation but not directly related to this

			measure or an improvement in the health of the workforce. Overall, Sandia made some improvements in the overall health of the Workforce but did not fully measure the overall health nor provided analysis. Any results or conclusions reached in this analysis would be beneficial but may be limited because the scope of the factors, and analysis was limited.
6.1.6 Ensure implementation of work planning and control Corporate Process Requirement (CPR) 001.3.14.	Satisfactory	Disagree Unsatisfactory	The measure was intended to assure effective implementation of Work Planning and Control (WPC) at the task level at Sandia. While acknowledging Sandia has made progress and improvement, Sandia failed key tests, including the 2008 HS-64 review which resulted in Finding C-1 (and was reconfirmed in follow-up HS-64 special reviews of nanomaterial safety). Sandia has not yet assured effective (as opposed to partial or incomplete or inconsistent) implementation of WPC at the task level. A NNSA rating of Unsatisfactory does not equate to a condition requiring STOP WORK of Sandia (i.e. conditions do not pose an imminent danger and are more specific to task level work as opposed to facility operations) but does reflect the fact that Sandia failed to deliver on effective implementation. NNSA agrees that an acceptable path forward has been determined in the Corrective Action Plan (CAP) for 2008 HS-64 Finding C-1. The extent of the action Sandia is required to take is indicative of the nature of the deficiency.
6.1.7 Comply with environmental permit and reporting requirements	Good	Agree	NNSA agrees with Sandia Corporation's (Sandia) ranking of "good" for this target but would like to clarify the following statement provided by Sandia "In FY 2008, Sandia Corporation received four notice of violation letters for exceeding copper standards in its waste water discharges. The notices of violation did not...." This statement is somewhat misleading in that each of the four letters clearly stated the number of actual violations which totaled eleven actual violations. Also, in addition to exceeding the permit limits for copper, on August 8, 2008 both zinc and copper exceeded the wastewater permit discharge requirements. SNL/California (CA) has been aggressively working on corrective actions however the actual cause of the violations is still under evaluation. It is because of the work that Sandia is doing to correct the copper and zinc exceedances coupled with the significant improvements in waste and air that NNSA agrees with Sandia's ranking of good.

6.1.8 Finalize Implementation of Environmental Protection Processes (CPR 400.1.1, Section 10).	Outstanding	Agree	Sandia completed all elements for outstanding. The implementation of the Environmental Protection Processes was truly outstanding.
6.1.9 Execute the Industrial Facility Safety Basis (IFSB) Process to assure appropriate IFSB results (hazard id, analysis and controls)	Outstanding	Disagree Good	Sandia initially classified the large scale LNG project as "Low'. While Sandia completed the required 29 CFR 1910.119 Process Safety Management reviews, NNSA intervention was required and argued that the significance of unmitigated consequence warranted a "Moderate" classification, with its associated higher level of rigor in readiness assurance. Although the modification and approval of the High Energy Radiation Megavolt Electron Source (HERMES) SAD is notable, it was NNSA who first noted (in October 2007) that the SAD was out of date and not approved by the proper level of management. NNSA intervention was required (see ISS-FO-10/22/2007-12565). The HERMES III SAD is not approved by the proper level of Sandia management.) Although Sandia has made considerable changes/improvements related to IFSB; the efforts have been primarily in establishing a springboard upon which proper execution of the IFSB process can be achieved. There are still issues related to proper hazard classification of industrial facilities, configuration control of the approved safety basis, and proper implementation & adherence to the credited controls.
6.1.10 Complete ES&H training courses as scheduled.	Outstanding	Agree	The Sandia PEAR discussion accurately reflects progress made in improving training compliance. The compliance rate was expanded by two courses to make it reflect broader ES&H compliance. Compliance rates have increased. Sandia has developed a training accountability process which will be instituted in FY 2009 to promote further gains in compliance rates.
6.1.11 Analyze and trend ESH indicators.	Good	Disagree Satisfactory	Quarterly Performance Analysis was not reviewed by ES&H Council in a timely manner, therefore potential trends were not investigated. In some instance two quarters of information was missed (ISS-FO-9/17/2008-45949).
6.1.12 Improve and implement a formal critique process for unplanned events.	Satisfactory	Agree	While Sandia did implement requirements to perform critiques in FY 2008 in May 2008, the line organization's conduct of critiques is inadequate. Sandia implemented a requirement to invite the SSO Facility Representative (FR) to the critiques. In the first 11 occurrence reports and NOTES, FRs were only invited to 3 critiques. The SSO and Sandia

			POCs discussed this issue and Sandia presented a path forward to improve this issue. This is still in issue. As late as the early September accidental detonation in building 905, the FR was not invited to the critique, the Sandia employees handling the event were not aware of the requirements, and the employees stated that they had no training on how to conduct a critique.
6.1.13 Monitor Near Miss Reports	Good	Disagree Unsatisfactory	Sandia is basing the grade on partial data for the month of July 2008. The target metric is a rolling three month average of near misses as a ratio of total reportable occurrences [ORPS and Non-Occurrence Trackable Events (NOTES)]. The "meets standard" was agreed to be 0.30 based on FY 2007 data. When the complete data for the month of July 2008 is calculated the ratio is 0.23, which is below the criteria for a satisfactory rating. The ratios for August 2008 and September 2008 are 0.21 and 0.24, respectively. When looking at the ratios for the last three months of the fiscal year, Sandia has shown a decline in reporting near misses over FY 2007.
6.1.14 Monitor Late Occurrence Reports.	Outstanding	Disagree Good	The final tally at the end of September 2008 showed that the percentage of on-time categorization of occurrences to be 86 percent (not the 87 percent which is the outstanding mark). 86 percent is "good". In August 2007, Sandia categorized a Significant Category R occurrence which was noted to be late in categorization, late in written notification and late in final report. (reference: NA--SS-SNL-NMSITE-2008-0002 *Recurring Occurrence on Unexpected Equipment Condition*, Significant Category R). It needs to be emphasized that this occurrence has a much higher significance than the typical occurrence. A significant category R occurrence should have additional rigor applied to it to be able to recognize and categorize the occurrence in a timely manner and to perform the investigation in a timely and aggressive manner. Also, the ES&H Council is comprised of three senior managers, two additional managers and five staff members. Two of the senior managers and one of the additional mangers did not have the FM/D 104 occurrence reporting training. All of the other ES&H Council members have taken this training. Although some of the members took this training, Sandia as a whole collectively failed to handle this occurrence properly in accordance with requirements.
6.1.15 Improve the Days Away, Restricted, or Transferred Case Rate (DART-CR)	Good	Agree	

6.1.16 Improve the Total Recordable Case Rate (TRCR).	Satisfactory	Agree	
6.1.17 Improve processes that lead to reduction of the number of electrical incidents that have the possibility of serious or fatal injury.	Satisfactory	Agree	
6.1.18 Management Control of Radiation Exposure.	Outstanding	Agree	The first paragraph of the PEAR discussion is accurate in identifying the improvement in the conduct of Administrative Control Level exceedances investigation in a timely fashion. The first part of second paragraph is not accurate in the radiological issues have resulted in FY 2008 NTS reports and Radiological Protection Improvement Reports (RPIR) reports. These issues by themselves do not demonstrate significant weakness but rather radiation protections maturing efforts to self-identify weaknesses within the program and institute a culture of continuous improvement. NNSA encourages this reporting as part of the transition to systems oversight outline in the model contract.
6.1.19 Reduce repeat findings from external assessments.	Unsatisfactory	Agree	Sandia in the PEAR has acknowledged issues that have hampered internal identification and successful correction of issues prior to external and NNSA identifying them as recurring issues. NNSA concurs with the scoring and encourages Sandia to improve internal processes to identify issues as a way to reduce external repeat findings.
6.1.20 Develop and maintain the annual self-assessment schedule.	Outstanding	Disagree Satisfactory	Review of assessments show improvement of assessment quality is necessary.
6.1.21 Improve the effectiveness of lessons learned.	Outstanding	Agree	Agree with rating although Sandia had to have some urging to work some lessons learned.

Performance Measure 6.2

Sandia continues to make progress in the area of fire protection engineering. The NNSA evaluation of Sandia performance against the performance targets includes the negotiated criteria as well as basic compliance to DOE fire protection requirements and the seven additional elements from the October 23, 2007, Wagner to Hazen letter. NNSA concurred with the Sandia rating in two areas, but disagreed and rated Sandia lower in the other six areas. Significant accomplishments this year were:

- The rigorous self assessment performed in preparation for the HS-64 external assessment,
- The performance of facility fire protection assessments and pre-incident fire plans, and
- Completion of the 2008 Baseline Needs Assessment of Sandia National Laboratory Emergency Response Capability.

The greatest opportunity for improvement (and challenge) in the area of fire protection will be to formalize the Sandia Corporate Fire Protection Program (CFPP) to show how Sandia processes comply with DOE fire protection requirements.

Sandia's fire protection program is effective, efficient, and in compliance with applicable requirements.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.2.1 Required Fire protection program documents are current (updated every three years) and compliant with the requirements of DOE Orders 420.1B, *Facility Safety*, and 440.1A, *Worker Protection Management for DOE and Federal Contractor Employees.* Document submittals must have adequate technical bases and be submitted and implemented in a timely manner.	Outstanding	Disagree Unsatisfactory	**PROGRAM:** According to the rating criteria negotiated during FY 2008 JPRT meetings, Sandia updated and trained on three fire protection administrative procedures (for hot work, impairments, and exemptions & equivalencies). The hot work procedure was also validated. This validation fulfilled the rating criteria for "Significantly Exceeds Standard of Performance." The negotiated rating criteria for Target 6.2.1 addressed some of the fire protection administrative procedures, but neglected to address the base program document. It is impossible to ascertain the status of Sandia's fire protection program documentation without at least considering Sandia's "Corporate Fire Protection Program" (CFPP) document. Issue F of the Sandia CFPP is current, dated June 30, 2008. Many changes have been made to the program over the last two years. The most significant change is in commitment away from expectations, roles, and responsibilities for fire safety enforcement of National Fire Protection Association (NFPA) National Fire Codes (as modified by DOE requirements) to enforcement of the International

			Building Code. The CFPP policy statement does not address the level of service in fire protection that DOE expects and the level of fire protection capability that the Contractor intends to provide. The policy statement also does not contain the state and local fire protection requirements. In order for the CFPP to be successful, it needs to document how the CFPP's processes fulfill DOE fire protection requirements. The CFPP is also missing elements required by DOE Order 420.1B, "Facility Safety," Attachment 2, "Contractor Requirements Document," Chapter II, "Fire Protection": - Missing any process for deviations, equivalencies, exemptions, and variances from fire protection requirements {Sec. 3.b.(16)}; - Does not address use and storage of combustible, flammable, radioactive, and hazardous materials to minimize risk from fire {Sec. 3.b.(2)(e)}; - Section 5, which describes the maintenance process, does not address impairments to fire protection systems {Sec. 3.b.(2)(f)}; - Does not address fire prevention measures that decrease fire risk, including smoking policy and hot work policy, process, and program {Sec. 3.b.(2)(g) and 3.b.(2)(i)}; - While the CFPP addresses design reviews and acceptance testing under Section 4.0 "Design and Modification Reviews," which is under Section 6.0, "Configuration Management," the CFPP does not address any system to ensure that fire protection requirements are documented and incorporated into plans and specifications for new facilities and for significant modifications in existing facilities {Sec. 3.b.(3)}; - Section 4.5 of the CFPP, which addresses Fire Hazards Analyses, does not address the basic requirements for Fire Hazards Analyses from DOE Order 420.1B: "Fire Hazards Analyses must be: (a) Performed under the direction of a qualified fire protection engineer; (b) Reviewed every 3 years; and (c) Revised when 1 Changes to the annual Documented Safety Analysis updates impact the contents in the Fire Hazards Analyses, 2 A new modification to an associated facility poses a significant new fire safety risk, or 3 The 3 year review identifies the need for changes." {Sec. 3.b.(5)};

			- Finally, does not address pre-incident fire strategies, plans, and operating procedures, including use of water or other neutron-moderating materials for fire suppression in or near areas with a potential for inadvertent nuclear criticality accidents; and including fire-fighting techniques to be used during deactivation, decontamination, and demolition phases {Sec. 3.b. (10), 3.b.(11), 3.b.(12), and 3.b.(17)}. **PROGRAM IMPLEMENTING PROCEDURES:** According to the scoring criteria negotiated during FY 2008 JPRT meetings, Sandia updated and trained on three fire protection administrative procedures (for hot work, impairments, and exemptions & equivalencies). The hot work procedure was also validated. This validation fulfilled the scoring criteria for "Significantly Exceeds Standard of Performance. Most procedures have been kept up to date. However, two procedures have not: "Pre-Fire Planning," (No Number), Effective Date: 2004 [sic]; and "Facility Salvage Plan," (No Number), Effective Date: 2004 [sic]. While there is a "Building Code Enforcement Administrative Procedure," AP-220, Revision 2A, Effective Date: May 2007, there is no similar procedure for the enforcement of the NFPA National Fire Codes (as modified by DOE requirements). There are also no stand-alone procedures for performing fire protection self assessments and Fire Hazards Analyses.
6.2.2 Fire Hazards Analyses will be completed in accordance to the requirements in DOE O 420.1B.	Outstanding	Disagree Satisfactory	Progress has been made to provide the nuclear facilities with Fire Hazards Analyses over the past couple of years. Sandia has made Fire Hazards Analyses as well as its other facility assessments accessible via the ILMS web site. The accessibility of these documents fulfilled the scoring criteria for "Significantly Exceeds Standard of Performance," but certain relevant analyses are still missing from current Sandia Fire Hazards Analyses. Both DOE and NFPA require the Fire Hazards Analyses to look at NFPA 101, Life Safety Code, impacts and issues at facilities. But, as a result of movement of the CFPP toward commitment to enforcement of the International Building Code and away from commitment to enforcement of the NFPA National Fire Codes (as modified by DOE requirements), over the last year, the "Life Safety" Section was stripped out of SNL Fire Hazards Analyses and replaced with a Building Code "Egress" Section. Because many of the Fire Hazards Analyses are missing relevant analyses of water supply capacity and reliability; a complete set of fire scenarios; and

			overhaul/salvage/cleanup of smoke damage/area recovery/decontamination costs analyses for Maximum Possible Fire Loss estimates; the plan this year was to upgrade these analyses using the Manzano Nuclear Facility Fire Hazards Analysis as a model. This did not occur.
6.2.3 Fire protection assessment reports will be completed in accordance with applicable contractual requirements.	Outstanding	Disagree Good	Over the last two years, SNL/NM fire protection (with access to SNL/CA fire protection and other matrixed resources including subcontractors) has made significant progress in working off a backlog and keeping to a schedule for building and facility surveys and fire protection assessments. The independent assessment of the CFPP by the LLNL Fire Marshal was performed in January 2008 and was used as the self assessment to satisfy the negotiated scoring criteria. SSO agrees that Sandia met the Standard of Performance (Annual Report and scheduled and completed facility fire protection assessments). SSO agrees that Sandia met the Exceeds Standard of Performance for this target, but the submitted notebook did not contain evidence for Significantly Exceeds Standard of Performance. For that reason, SSO disagrees with the Contractor's Rating of Outstanding.
6.2.4 The Baseline Needs Assessment of the fire protection emergency response organization will be updated to reflect the current capabilities.	Good	Agree	The Sandia Baseline Needs Assessment. Part One, Requirements Document, was initiated in January of this year, and was completed and submitted to NNSA in August of this year. The Baseline Needs Assessment, Part Two, Compliance/Conformance to Requirements Document, was completed and submitted to NNSA in September of this year. Both Parts have been found to be acceptable, and NNSA has the action to approve the Baseline Needs Assessment. As part of the approval, NNSA will be requesting follow-on actions: an implementation plan to address gaps and compensatory measures and integrate these with Documented Safety Analyses and Fire Hazards Analyses; a NFPA 1500 evaluation of emergency responder occupational safety and health; and a five-year master plan to predict out-year emergency response needs.
6.2.5 Fire protection systems (including fire barriers) will be inspected, tested, and maintained in accordance with applicable contractual requirements.	Outstanding	Agree	

6.2.6 Sandia maintains an adequate number of fire protection engineering staff who meet the qualification and training standards defined in DOE-STD-1066-99.	Outstanding	Disagree Good	According to the negotiated scoring criteria for this target, Sandia was supposed to provide a benchmark against other DOE sites by September 1, 2008, to rate Exceeds Standard of Performance. Sandia failed to provide said benchmark. However, Sandia did provide the evidence for the SNL/NM Fire Marshal succession plan cited in the Significantly Exceeds Standard of Performance scoring criteria. This is the basis for our rating of Good.
6.2.7 Sandia will provide facility specific information to the Kirtland Air Force Base (KAFB) Fire Department to support their pre-plans for all Sandia Mission Critical buildings and facilities.	Outstanding	Disagree Good	While Sandia met the Significantly Exceeds Standard of Performance under the negotiated scoring criteria for the 37 Mission Critical Facilities, fire department access and lack of fire crew familiarization tours to the nuclear facilities has continued to plague Sandia throughout this fiscal year. That is why this target is rated Good.
6.2.8 Sandia will perform assessments to verify the closure of fire protection corrective actions.	Outstanding	Disagree Unrated	Due to lack of formality in the closure process, this performance target remains unrated.

Performance Measure 6.3

Timely and compliant Safety Basis (SB) documentation is developed for Sandia hazard category (HC)-2 & 3 nuclear facilities.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.3.1 Sandia will develop and maintain SB documents for HC-2 & 3 nuclear facilities in accordance with DOE and Sandia requirements. SB document submittals must have adequate technical bases and be submitted and implemented in a timely manner.	Outstanding	Disagree Good	NNSA identified deficiencies in Sandia's unreviewed safety question (USQ) program. HS-64 identified a deficiency in the analysis of the Annular Core Research Reactor (ACRR) that resulted in the declaration of a potential inadequacy in the Safety Analysis.

Performance Measure 6.4

Nuclear Operations: Sandia's HC-2 & 3 nuclear facilities are operated within the bounds of their safety bases and are prepared to safely support all programmatic commitments.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.4.1 Facility Self-Assessment: Sandia will implement and sustain a rigorous, integrated self-assessment program for all Sandia HC-2 & 3 nuclear facilities.	Outstanding	Disagree Satisfactory	Events over FY 2008 clearly demonstrate TA-V nuclear operations are not conducted with the appropriate level of formality. Sandia has not acknowledged the need for improvement in this area and is not taking appropriate action. Sandia management's response to issues and events needs improvement. In some cases, NNSA has had to prompt Sandia to investigate issues that point to weakness in the formality of operations. This reflects a lack of a demanding safety culture in the nuclear activities. Sandia nuclear operations need to be more process-based rather than expert-based. Some of the events in FY 2008 highlight the utilization of the skill-of-the-worker. Sandia should strive to implement and enforce consistent processes in the operations and maintenance of the nuclear facilities. Sandia needs to ensure safety improvements are a priority. Sandia has not always sought to ensure safety matters are dealt with before pursuing mission goals. Sandia continued to improve its criticality safety programs by implementing a standardized approach for postings, procedures, criticality safety analyses (CSAs) and criticality safety indices (CSIs). Facility walkthroughs and assessments by SSO showed improvement in Sandia's self-assessment program and training program. This was further evidenced by the external assessment of the Sandia program that had only 5 observations and 2 noteworthy practices. Sandia has failed to implement Safety Software Quality Assurance since being placed in the contract in 2006. SSO has directed Sandia in writing on numerous occasions to address this lack of implementation. Sandia's inability to implement these requirements resulted in a significant finding from HS-64 in February 2008. Although Sandia has made significant progress in the third and fourth quarters of FY 2008, senior Sandia management attention is still required to ensure complete implementation in FY 2009.

6.4.2 Defense Nuclear Facilities Safety Board (DNFSB): Sandia will demonstrate, through processes, procedures, performance measures and assessments, that the system to respond to DNFSB requests will fully meet the applicable requirements of DOE M 140.1-1B *Interface with the Defense Nuclear Facilities Safety Board.*	Good	Agree Good	Sandia provided good support of the interface with the DNFSB. Sandia has supported numerous visits by DNFSB staff, has provided timely responses to DNFSB document requests, and has contributed to the rewrite of the DOE Interface Manual, DOE M 140.1. Sandia's efforts have provided for a collaborative relationship with the DNFSB site representative. And Sandia's support ensured a smooth transition when the DNFSB site representatives changed. Sandia supported 4 visits in FY 2008. Sandia's planning and coordination ensured each visit achieved the DNFSB needs. Sandia supported 6 document requests. Sandia's efforts to maintain candid communication with both the DNFSB and NNSA enabled them to provide timely and appropriate responses. Sandia's support of the revision of the DOE Interface Manual, DOE M 140.1 is a reflection of their ongoing commitment to maintaining a dedicated, productive relationship with the DNFSB.
6.4.3 Startup and Restart: Sandia will effectively implement the requirements of DOE Order 425.1C, *Startup and Restart of Nuclear Facilities*, in accordance with the approved schedule identified in the Quarterly Startup Notification Report and programmatic commitments.	Outstanding	Disagree Satisfactory	The following issues have contributed to this determination. Sandia has successfully completed three significant readiness activities [Logistics Nuclear Operation (LNO) Phase 1, Phase 1a, and Sandia Pulsed Reactor Facility/Critical Experiment (SPRF/CX)] in this evaluation period. Although Sandia has satisfactory procedural and program guidance, they continue to struggle with execution. The most significant issue is the lack of adequate use of lessons learned. Review of the Site Office Line Management Review reports shows that this is a common repeat theme that was originally identified in 2005. Another common theme is the lack of adequate preparation. This is related to the lack of adequate planning discipline. Sandia typically does not follow the timeline guidance provided to ensure sufficient time for review and preparation. This last minute attitude of Sandia has even drawn the attention of Headquarters personnel.

Performance Measure 6.5

Provide a satisfactory and effective Emergency Management (EM) Program through demonstrated adherence to agreed-upon commitments as identified in the approved SNL/New Mexico (SNL/NM) EM plans and procedures and in accordance with the requirements set forth in DOE O 151.C Comprehensive Emergency Management System. Other elements to be considered: oversight for SNL remote sites, training facilities and equipment. (NA-43/40.1).

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.5.1 Establish a formal process which results in increased interactions and effectiveness of these interactions with off-site organizations that interface with EM.	Outstanding	Agree	Sandia significantly exceeded expectations in this performance target. Sandia successfully coordinated and attempted to provide a Citizens Emergency Response Team (CERT) class for SNL/NM employees; established interfaces with Tribal officials from the Pueblo of Isleta; expanded Joint Information Center interface with City of Albuquerque; and expanded interactions with state organizations to include the New Mexico Department of Public Safety (DPS), the Office of Emergency Management (OEM), and the New Mexico Emergency Management Association (NMEMA). SNL/NM also was able to re-establish the Metro Emergency Management manager meetings or equivalent. As a result of this body of work, SNL/NM has improved the standardization of response and procedures for offsite responding agencies; and has integrated the capabilities of responders to include communications, training and equipment. Offsite agencies are now represented on the planning team for exercises and most offsite agencies participate in more than one SNL/NM training opportunity annually.
6.5.1.1 Develop and implement a process that defines expectations with regards to the number and type of interactions with off-site organizations.	Outstanding	Agree	See 6.5.1 above

6.5.1.2 As part of the process definition, establish a quarterly status report that summarizes the participation in and content of each interaction for review by management.	Outstanding	Agree	See 6.5.1 above
6.5.1.3 The quarterly reports will be included in periodic assessments to evaluate their effectiveness.	Good	Agree	
6.5.2 Sandia will demonstrate its preparedness for emergency events through ongoing training and the execution of drills and exercises; and a formal continuous improvement process based upon the results of performance assurance activities.	Outstanding	Disagree Good	Sandia structured their FY 2008 exercise activities so that each subsequent exercise built off the previous exercise in order to build up to the scenario and objectives for the annual exercise. From exercise to exercise the scope and the complexity of each activity were expanded. Early in the performance period SNL/NM conducted one tabletop (Able Sentry-11/29/2008) exercise and three separate evaluated exercises. Although the tabletop exercise was not evaluated, it served as the baseline for identifying areas for potential improvement in the areas of Incident Command and Security interface. Several issues were identified at the conclusion of the tabletop and were tracked and closed in the Sandia Opportunities for Improvement Tracking System (OFITS). The other three field exercises included Helping Hand-2/27/2008; Grave Danger- 5/22/2008 and Cohesive Authority-8/27/2008. At the conclusion of the Helping Hand exercise at least five of the objectives identified as Not Met were again identified, although corrective actions had been implemented, tracked, and closed in OFITS. Additionally, at the conclusion of the Grave Danger exercise two more issues closely related to OFIs from the tabletop were identified. Finally, during the annual exercise, at least six issues were identified that were closely related to those originally identified in the tabletop. As a result of each of these exercises, there were several different objectives that were not fully met throughout the year.

			NNSA conducted an analysis of the performance related issues that were identified at each of these activities and identified six broad categories. These categories include the communications systems (radios); Incident Commander-Protective Force interface and establishment of a joint command post; Joint Information Center (JIC) information flow and FBI roles and responsibilities in the JIC; timeliness of off-site notifications; and maintaining the most current data on EOC status boards during exercises. During the Grave Danger and Cohesive Authority exercise, two of the issues raised were related to issues previously identified during the FY 2007 annual exercise. The first had to do with the Consequence Assessment Team response and the second dealt with the verification of the emergency event location. The discussion above points to questions regarding the adequacy and sustainability of corrective actions or management actions put in place by SNL/NM in response to previously identified OFIs. Following the Grave Danger exercise, SNL/NM Emergency Management conducted a special training session to address the issues that were identified during the exercises – especially those identified in Grave Danger. This training was mainly a response to the issues identified during Grave Danger and did not appear to consider the broad spectrum of issues being observed throughout the year. Although the training was provided and shortly thereafter the annual exercise was conducted and yielded favorable results, NNSA does not believe that SNL/NM has demonstrated sound and sustainable corrective actions based on effective causal analysis without repeat findings/issues being identified from exercise to exercise and more importantly year to year. Furthermore, the situation indicates that the emergency management program's (EMP) Performance Assurance element has not yet fully matured nor has it demonstrated that it is effective in providing this type of analysis.
6.5.2.1 Revise the existing SNL/NM Training Plan and/or Drill/Exercise Guide to clearly define the proficiency requirements for Emergency	Outstanding	Disagree Good	Based on the results and outcomes of some EOC exercises including the need for additional training leading up to the annual exercise, NNSA believes that the basic performance expectations were met in general; however room for improvement exists

Response Organization (ERO) positions and how those requirements are to be met by members of the ERO.			
6.5.2.2 In conjunction with revisions to the existing SNL/NM Training Plan and/or Drill/Exercise Guide to define the proficiency requirements, establish an appropriate record-keeping and reporting requirement to allow periodic management review of proficiency for ERO positions.	Good	Agree	
6.5.3 Sandia and NNSA/SSO Emergency Public Information (EPI) ERO staff will perform all EPI activities required at the Emergency Operations Center in order to ensure a fully compliant and performance-based deployment during emergency events.	Good	Agree	Despite many performance improvements in this element of the overall EMP, there continues to be issues associated with the processes for ensuring that information flowing out of the EOC to the JIC is handled in a timely manner in support of press releases and press conferences.
6.5.4 Sandia's management of its EM program response activities will result in the implementation and deployment of time-urgent response actions necessary to minimize or prevent unacceptable consequences to	Outstanding	Agree	The NNSA FY 2008 assessment of SNL/NM's EMP yielded no significant findings or issues.

emergency responders, workers and the public.			
6.5.5 Sandia will maintain a formal self-assessment program that provides Sandia management and SSO with critical information allowing them to determine the status of EM performance and compliance against applicable order requirements and regulatory standards. Additionally, the self-assessment program will provide data regarding the status, effectiveness and sustainability of planned and completed corrective actions. (NA-40.3.1) (NA-43/40.3)	Good	Agree	There are three distinct types of actions that SNL/NM has used to meet this performance target and they include assessments, surveillances, and improvement actions. Performance regarding the scheduling and conduct of assessments exceeded expectations and performance regarding surveillances significantly exceeded expectations. However, performance expectations regarding improvement actions were not met. 71 percent of the identified improvement actions took longer than six months to resolve. A validation of the remaining corrective action (Finding 8) was attempted during the NNSA FY 2008 EMP Assessment but failed insufficient evidence was gathered to document that the requirements prescribed by the Sandia corporate policy requirements for self-assessments were being met. Sandia has completed self-assessment activities in each of the 15 Emergency Management Program elements as evidenced by review of the Assessment and Surveillance activity logs and exercise reports. The quality and content of the self-assessment activities were further reviewed during the joint NNSA and Sandia Contractor Assurance System assessment conducted during the fourth quarter of the performance period. Self-assessment findings generated by the Emergency Management staff are tracked and managed using the LESA system.
6.5.5.1 Develop and implement a lessons learned program for EM.	Outstanding	Disagree Good	SNL/NM implemented a lessons learned program for the EMP during the second quarter of this performance period. Lessons learned are collected and analyzed for applicability to the SNL/NM EMP and adopted where appropriate. However, it is apparent by the discussion under Target 6.5.2 above that this element of the SNL/NM EMP has not matured to the point that it is providing the desired level of effectiveness.
6.5.5.2 Continue implementation of all components (as defined in DOE Order 151.1C) of the Readiness Assurance program. (NA-	Good	Agree	Sandia has completed full implementation of most elements within the Readiness Assurance program; however, late in the fourth quarter, the Emergency Management staff was continuing work on procedures for issues management and self-assessments. Several of the EPHAs were not updated in accordance with order requirements, and response to

43/40.3).			NNSA comments on several of the EPHAs had not been received in a timely manner. Additionally, as mentioned above, the rate for completing improvement actions within the six month goal was only 29 percent with 71 percent taking longer than six months to complete while assessments and surveillances were being conducted on time.

Other Considerations

None

PERFORMANCE INCENTIVE 3 – Removal of Materials from SNL

Sandia will safely and efficiently remove nuclear material from the site in support of the FY 2006 and FY 2007 de-inventory and regulatory commitments.

Adjectival Rating
OUTSTANDING

Summary of Performance

Overall, Sandia demonstrated outstanding performance in Performance Incentive 3

Significant Accomplishments

- To prevent the accumulation of unneeded materials and chemicals (UMC), Sandia developed and successfully launched the "Get Rid of It" website and the Chemical Exchange Program (web-based application) at both the NM and CA sites. Both of these tools have reduced costs to the line customers and avoided both new purchases of chemicals and chemical waste disposal.
- Sandia exceeded (62 percent) the FY 2008 targets (60 percent) to remove unneeded equipment, metals and materials from the inventory.
- The repackaging and preparing for shipment of non-category III materials was completed in eight months – four months ahead of schedule.
- The Sandia/SSO team should be commended for their professionalism, dedication and teamwork in successfully accomplishing Performance Measure 3.1.

Opportunity for Improvement

Sandia must demonstrate implementation of DOE Order 461.1A.

Performance Measure 3.1

Sandia will safely and efficiently remove nuclear material from the site in support of the FY 2006 and FY 2007 de-inventory and regulatory commitments.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.1.1 Sandia will complete removal of all discrete Security Category I and II Special Nuclear Material by December 2007. Sandia will not be held accountable for issues that are beyond their control	Outstanding	Disagree Good	There were numerous factors that impacted Performance Target 3.1.1 that were beyond Sandia's control. However, Sandia personnel did violate a packaging procedure related to O-ring lubrication in the DT-23 containers. This violation did impact the shipment of material. The shipment of the material was required to take place in December 2007 but did not occur until February 18, 2008.

to include DOE concurrence and cooperation on cross-site issues.			
3.1.2 Sandia will remove the final 18 items stored in NMSF. Sandia will remove off-site 10 items (9 RTGs and 1 Pu plate) in FY 2008. Sandia will complete the necessary FY 2008 process steps to package and ship the remaining items (exclusive of the 18th item). The 18th item (trainer) will be staged at TA-V until final disposition.	Outstanding	Agree	
3.1.3 Sandia will complete the FY 2008 necessary process steps towards an early FY 2009 off-site shipment date of the sealed sources and fission foils.	Outstanding	Agree	
3.1.4 Sandia will stage the Highly Enriched Uranium Scrap at TA-V until final disposition in 3Q FY09.	Outstanding	Agree	
3.1.5 Sandia will complete the necessary steps to request Termination of Safeguards needed to process 4 containers (of 12) of Fresh Enriched Uranium Oxide (FEU) from the Manzano Storage Bunkers and, if granted in a timely manner, remove the 4 containers of FEU off-site in FY2008.	Outstanding	Agree	

Performance Measure 3.2

Sandia will safely and efficiently remove nuclear material from the site in support of the FY 2006 and FY 2007 de-inventory and regulatory commitments.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.2.1 Sandia will develop a multi-year schedule and complete FY 2008 commitments needed to sort, characterize, and package TRU waste in order to meet Federal Facilities Compliance Act Requirements.	Outstanding	Agree	
3.2.2 Sandia will continue to work with the KAFB Explosive Ordinance Division on the identification and disposal of excess explosive materials. During FY 2008, a minimum of 20,000 pounds of explosive material, including rocket motors will be sent for disposal.	Outstanding	Agree	Not only did Sandia work closely and effectively with KAFB but Sandia has also demonstrated effective relationships with other agencies. Sandia has developed relationships that have been very helpful in generating alternative sites and avenues to reduce excess explosives and rocket motor inventories. These established relationships will only enhance Sandia's ability to further reduce their inventory.
3.2.3 Sandia will continue to remove unneeded materials and chemicals (UMC), in accordance with the UMC plan developed in FY 2007.	Outstanding	Agree	Sandia did an outstanding job and exceeded the requirements of their plan.

Performance Measure 3.3

Sandia will provide support to the Office of Secure Transportation (OST) mission work.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.3.1 Sandia will submit accurate and complete Transportation Shipment Requests for weapons materials to OST 30 days prior to requested delivery date 95-percent of the time, and 60 days prior to requested delivery date 85-percent of the time.	Unsatisfactory	Agree	SNL/NM, SNL/CA and TTR have all struggled to meet the requirements of Performance Target 3.3.1. SNL/CA has taken on a more proactive and responsive approach to meet the requirements. As a result from an SSO assessment, SNL/CA has pursued system changes and has met the requirements for the last three years. However, SNL/NM has not trained their personnel to meet the minimum requirements of DOE Order 461.1A nor has SNL/NM fully embraced the requirements of the order.
3.3.2 Perform engineering technical analyses, evaluations, and equipment maintenance to support OST mission.	Outstanding	Agree	

Other Considerations

None

PERFORMANCE OBJECTIVE 7- Facilities and Project Management

Sandia will manage and operate its facilities and project management functions in an efficient and cost effective manner using the ILMS to fully support successful accomplishment of mission, while protecting the public, the worker, the environment, and national security assets in accordance with the terms and conditions of the contract.

Adjectival Rating
OUTSTANDING

Summary of Performance

Sandia performed well in FY 2008 in the areas of Utilities and Energy, Real Property, Project Management, Site Planning, and Maintenance. Sandia exceeded performance standards and improved processes to be more efficient and effective in the areas of Facilities and Project Management. Sandia exhibited outstanding project management for the MESA and Test Capabilities Revitalization (TCR) Phase II projects. Sandia has identified several opportunities to improve its facilities and project management functions to operate in a more efficient and cost effective manner.

Significant Accomplishments

The Center for Integrated Nanotechnologies (CINT) project received the Secretary of Energy's Award of Achievement.

Sandia successfully upgraded its Asset Management System (MAXIMO) at both the New Mexico and California sites.

An electrical power reliability rate of 99.998 percent was achieved with few unplanned outages and no impact to mission.

Sandia reduced its energy usage (per gross square foot) by approximately 8.9 percent for non-exempt buildings.

Staff occupied the new MESA Weapons Integration Facility and the Building 893 was removed from the site, completing MESA, Sandia's largest and most successful construction project to date. The MESA project also achieved Leadership in Energy and Environmental Design (LEED) certification, received the Secretary of Energy's Achievement Award, and was awarded the Defense Programs Award of Excellence.

Opportunity for Improvement

Sandia recognizes there is room for improvement with respect to Space Utilization, General Plant Project (GPP) Program, Earned Value Management System and the quality of Preliminary Real Estate Plans (PREPs).

Performance Measure 7.1

Sandia shall implement efficient and cost-effective programs in the functional areas of Utilities and Energy, Real Property, Project Management, Site Planning, and Maintenance.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
7.1.1 Sandia will track, trend, and meet the requirements of the established FY 2008 Real Property Metrics.	Outstanding	Disagree Good	Overall Performance in Real Property is good. Sandia met all the negotiated goals and achieved outstanding targets for four of the six space and building management measures. Sandia's Space Management Plan and Structured Improvement Activities have resulted in Sandia achieving improvements in the space arena. Space Management: Opportunities for improvement: The FY 2008 Building Capacity (offices occupied/offices available) reported at 89 percent for the New Mexico site is less than desired. Real Property: Opportunities for improvement: Continuous improvement in the Real Estate processes should continue in order to minimize reworks of PREPs submittals.
7.1.2 Maintenance backlogs will be maintained within the accepted industry norm of 4 to 8 weeks...	Outstanding	Agree	The average backlog was within the accepted industry range at 5.4 weeks.
7.1.3 Maintenance expenditures will be maintained within the suggested guideline of a minimum of 2 percent of the representative asset replacement plant value.	Outstanding	Agree	Maintenance expenditures for FY 2008 will be just above the 2 percent requirement. Escalation of the Laboratory's replacement plant value over the last several years makes this a challenging metric to meet.
7.1.4 A robust preventive maintenance program will be maintained with elements of reliability/condition-based maintenance incorporated. The ratio of proactive maintenance to the total will be trended with a target of $\geq$60 percent.	Outstanding	Agree	Sandia met the proactive maintenance target.

7.1.5 Sandia will program and manage the General Plant Projects (GPPs) to meet cost goals from Facilities and Infrastructure Recapitalization Program (FIRP) and Readiness in Technical Base and Facilities (RTBF). Costing plans will be renegotiated for GPP funding received after site splits have been determined. Federal direct contracted projects planning will be included.	Outstanding	Disagree Good	Rating should be "good." The costing for FIRP program, including the line item, was 72 percent. Sandia exceeded the costing targets for D&D, **O&M** restoration, and Deferred Maintenance. The FIRP Recap GPP costing was 78 percent excluding the Federal Directed Contract that had issues with the contractor. The FIRP Planning costing was below expected levels due to uncertainty of out–year funding levels. Sandia costed approximately 72 percent of the non-FIRP GPP funding received by the end of January 2008. Ninety-four percent of Sandia's GPP's and Major Renovations were within (or projected to be within) cost, scope and schedule.
7.1.6 Sandia will develop and implement quality comprehensive master planning processes and documentation (Long-Range Development Plan) to assist and guide Sandia's management in implementing a strategic vision.	Outstanding	Disagree Good	Rating should be "Good". Sandia's Long-Range Development Planning goals appear to have diverged from NNSA efforts to reduce the overall footprint, reduce overall costs, capture program use in NNSA facilities, and facilitate full cost recovery. Sandia goals include developing a new campus center external to the existing footprint. Since many of the products from FY 2008 planning processes (products mentioned in the PEAR) remain draft or internal to Sandia management, it is difficult for NNSA to agree with a rating of "Outstanding".
7.1.7 Corrective actions and findings will be implemented as required by the self assessment and lessons learned conducted on the Ten Year Site Plan (TYSP) in FY 2007.	Outstanding	Agree	There has been much improvement in timeliness and responsiveness related to this target. Sandia had six observations and made changes to address them.
7.1.8 The TYSP will be aligned with DOE/NNSA and Sandia mission assignment requirements and will meet DOE	Outstanding	Agree	Sandia was able to respond when NNSA/HQ revised the process for TYSP approval. Headquarters reviewed the document and provided 14 comments back to Sandia. Sandia addressed these comments and submitted the final TYSP to Headquarters on September 2, 2008.

Order 430.1B *Real Property Asset Management* requirements and NA-54 guidance.			
7.1.9 Within three months of date that SSO forwards the TYSP to NNSA Headquarters, Sandia will provide SSO a version of the TYSP which could be immediately released to the public in response to a Freedom of Information Act request. The copy provided will have each occurrence of Official Use Only information marked and accompanied with a narrative description for each exemption claimed.	Outstanding	Agree	Sandia has submitted a version of the TYSP that is both unclassified and readily releasable under the Freedom of Information Act (FOIA).
7.1.10 Sandia will implement an internal cost recovery mechanism/plan that will allow the generation/application of sufficient funds to stabilize mission critical Deferred Maintenance (DM) growth by FY 2009. Sandia will pursue other options to stabilize DM growth such that the Facility Condition Index will meet the 5 percent goal by FY 2009 for mission critical facilities.	Outstanding	Agree	At the End of FY 2008 the facility condition index will be 5.6 percent, and Sandia projects this number will be reduced to 4.9 percent by FY 2009, meeting the NNSA goal of 5 percent.
7.1.11 The Microsystems Engineering Sciences	Outstanding	Agree	The Weapons Integration Facility (WIF) CD-4 was approved by NNSA March 2008. The WIF CD-4 memo was signed by NA-10 on April 9, 2008. MESA was complete and closeout ahead of the September

Application (MESA) Weapons Integration Facility will receive Critical Decision 4 by May 19, 2008. The MESA Project will be complete and closed out, including demolition of the Compound Semiconductor Research Laboratory, by September 30, 2008.			30, 2008 milestone.
7.1.12 The cumulative Cost Performance Index and Schedule Performance Index will exceed 0.95 for all Line Item and Environmental Restoration projects with approved baselines.	Outstanding	Agree	The Cumulative Cost Performance Index (CPI) in August ranged from 1.00 to 1.46 for all projects. The cumulative Schedule Performance Index (SPI) in August ranged from 1.00 to 1.01. In addition, Sandia's implementation of DOE O 413.3A was reviewed by NNSA/HQ and received a perfect score on all 7 elements for the project management. However, there are some opportunities for improvement such as; the Heat Systems Modernization project (HSM) did not meet the CD-3B milestone, HSM missed 5 of 12 level 2 milestones, and the FY 2007 HSM accounts were slow in closing out.
7.1.13 Sandia will analyze the GPP Program to address areas needing improvement. A mutually acceptable plan will be provided to the SSO in 1st Quarter FY 2008.	Good	Disagree Satisfactory	Rating should be Satisfactory. Sandia and NNSA did not come to an agreement on the GPP Improvement Plan during the entire reporting period. However, Sandia did modify their GPP Program Plan to include many improvements. NNSA has reviewed this plan and has found it to be acceptable.
7.1.14 Sandia will implement Energy Management program lessons learned from the comparative analysis (2007 benchmarking effort) based on priority and budget availability.	Good	Agree	Sandia has implemented two lessons learned that were identified through participating in the Energy Efficiency Working Group.
7.1.15 Sandia will input the 2007 energy usage information into the	Outstanding	Disagree Good	NNSA rates this target as "Good". The goal was met in a quality manner.

Energy Management System data base by November 15, 2007.			
7.1.16 Sandia will present the results of the comparative analysis on energy management and prepare a lessons learned report to share with the participating member labs.	Outstanding	Disagree Good	NNSA rates this target as "Good". The comparison analysis report and lessons learned were shared with the Energy Efficiency Working Group through email. For an outstanding rating, our expectations would be to meet and discuss the report and lessons learned with participating laboratories.
7.1.17 Sandia will install two on-site Renewable Energy systems, one of which is net-metered.	Outstanding	Disagree Good	NNSA rates this target as "Good". Sandia installed two net-metered renewable energy systems. For an outstanding rating, NNSA expectations would have been the installation of more than two systems.
7.1.18 Sandia will obtain by May 30, 2008, an initial proposal for SNL/NM from an Energy Service Company (ESCO) for a comprehensive energy survey, a feasibility report for on-site renewable energy generation, water conservation measures, an advance metering program covering all electric, thermal, and water consumption, as well as a pollution prevention opportunity assessment and implementation plan.	Outstanding	Agree	The ESCO reported that there was not enough energy reducing projects with a good payback to warrant a project which is an indication of the fine job Sandia is doing in energy conservation.
7.1.19 Sandia, based on a review of the ESCO's initial proposal, will provide recommendations, on which energy	Outstanding	Disagree No Rating	See comment above. Since ESCO did not submit any proposals this effort could not be performed.

conservations measures should be pursued, as well as which protocols should be used for operations and maintenance and monitoring and verification by July 31, 2008.			
7.1.20 Sandia will investigate the possibility of obtaining an initial proposal from an ESCO at the SNL/California site. This initial proposal will be developed in conjunction with the Lawrence Livermore National Laboratory (LLNL) as part of Phase 2 of the Energy Savings Performance Contract currently being developed. An initial proposal or an expected date for the initial proposal will be provided by July 31, 2008.	Outstanding	Disagree No rating	This effort was put on hold due to the potential of transfer to another landlord.
7.1.21 Energy usage per gross square foot, excluding SSO approved exempt buildings, is 1.0% less than the previous year.	Outstanding	Agree	Sandia's energy reduction was 8.9 percent.

Other Considerations

None

PERFORMANCE OBJECTIVE 8 – Safeguards and Security

Sandia will manage and operate its operational safeguards and security and counterintelligence functions in an efficient and cost effective manner using the ILMS to fully support successful accomplishment of mission, while protecting the public, the worker, the environment, and national security assets in accordance with the terms and conditions of the contract.

Adjectival Rating
OUTSTANDING

Summary of Performance

Sandia demonstrated adherence to applicable physical security and counterintelligence requirements to include protection and control of special nuclear materials and classified matter through cost-effective implementation of safeguards and security (S&S) and counterintelligence (CI) programs that are compliant with applicable DOE Orders and NNSA Policy Letters (NAPS). Performance with respect to safeguards and security will be measured in accordance with the performance measures and targets presented below. Emphasis will be placed on identifying, controlling, and assessing high and moderate-risk security activities, such as Special Nuclear Material (SNM) storage and de-inventory operations, Top Secret, Accountable Classified Removable Electronic Media (ACREM), and the Security Systems Replacement Program (SSRP). For CI, performance will be measured with an emphasis on Sandia's ability to detect, deter and mitigate Foreign intelligence collections and espionage efforts and international terror threats against NNSA personnel, classified and other sensitive programs and information architecture.

In most cases Sandia met or exceeded performance expectations in the areas of S&S. The information presented in the PEAR for this objective is generally representative of the conditions observed by NNSA during survey and oversight activities. During the period of performance, the NNSA/SSO S&S staff conducted inspection and survey activities that resulted in a comprehensive compliance and performance-based evaluation of the effectiveness of Sandia's S&S program. There were no external inspections by the Office of Independent Oversight (OIO) during this particular performance period. The Sandia Security organization, as well as the line organizations, demonstrated their ability to sustain satisfactory levels of performance in most elements of the S&S programs at the New Mexico and California sites as well as at Sandia's remote site operations. With the exception of two topical elements each topical element inspected by NNSA resulted in "Satisfactory" ratings which represent the highest attainable rating. With the exception of the issues related to two topical areas (i.e., Program Management and Support Personnel Security Program) none of the other reported findings had any adverse impact on the remaining topical ratings; however, some of the S&S subtopical program elements were assigned less than Satisfactory (Marginal) ratings.

The Sandia CI program significantly exceeded performance expectations during this performance period. The information presented in the PEAR for this metric is representative of the conditions observed by NNSA during day-to-day interactions and oversight activities. During the period of performance, the Office of Counterintelligence conducted inspection activities that resulted in a comprehensive compliance and performance-based evaluation of the effectiveness of Sandia's counterintelligence program. At the conclusion of this inspection, the Sandia CI program was rated "Excellent" which represents the highest possible rating assigned by the Department of Energy CI Inspection Program.

Overall, despite some less-than-outstanding ratings on some targets within this performance objective, the assigned rating is Outstanding.

Significant Accomplishments

S&S: Sandia S&S developed a methodology to characterize Threat Level designations for facilities at NNSA sites. The Sandia approach and methodology has been endorsed by NA-10 and NA-70 and is being considered as NNSA-wide standard. Using this methodology Sandia successfully completed the characterization of its own mission critical facilities with a final determination to characterize Sandia as a Threat Level 3 facility requiring a Threat Level 4 protection strategy. This determination was accepted by NNSA/SSO and NNSA HQ NA-10 and NA-70 offices.

Sandia's Requirements Management & Project Engineering and Technical Security Systems departments continue to manage and execute the SSRP in a manner that has resulted in significant cost-savings, cost avoidances and scheduling efficiencies. The project has been on schedule and within scope and cost for the entire performance period with no major issues. All changes to the project have been appropriately processed using the approved change control procedures. All required quarterly updates to NNSA were provided.

Sandia worked effectively with NNSA/SSO and NNSA/HQ to redeploy temporary protection system upgrades and protective force equipment and materials that are no longer necessary because of the removal of all Category I and II discrete SNM items from Sandia. These systems, materials and equipment were provided to other NNSA sites with ongoing advanced protection needs.

Counterintelligence: The Sandia CI program was rated "Excellent" which represents the highest possible rating assigned by the Department of Energy CI Inspection Program.

Sandia CI has made strides in integration of insider threat issues at New Mexico and California sites and these efforts have resulted in an approach that has been recognized as a complex-wide best practice by the DOE CI inspection program. During the performance period, on-line CI training was provided to approximately 6000 Sandia employees and the CI staff met their goals for providing monthly CI classified threat briefings to Sandia employees in NM and CA. Sandia CI partnered effectively with federal & local intelligence agencies to identify, assess, and mitigate CI threats to Sandia. Sandia CI supported the Lab-wide implementation of Enterprise Person, assisted with Lab-wide implementation of the Validation Office; provided cyber support to the Sandia High Risk Program. The Sandia CI office prepared and submitted to DOE HQ a site threat assessment of Sandia and a "complex-wide study" for publication. The Sandia CI staff also prepared and provided a CI report on cell phones to SNL S&S Center.

Opportunity for Improvement

S&S: S&S transition planning represents an area that yielded several areas of concern for NNSA. Originally, the expectations for a transition plan to be developed were included in the FY 2007 Annual Operating Plan (AOP). NNSA further expected that Sandia would execute the transition plan in FY 2008. However, by the end of FY 2007 Sandia was not able to develop an adequate and comprehensive plan. Transition planning continued well into FY 2008 and was monitored under a follow on milestone in the FY 2008 AOP. At the beginning of FY 2008, Sandia was still working to identify staffing and operational requirements relative to the new site protection strategy. Sandia made an attempt to provide an acceptable transition plan; primarily the plan addressed only Protective Force and Physical Security. The original plan did not address TTR or other significant S&S programs, e.g., human reliability, barriers, access controls, searches, etc. This shortcoming with respect to the scope of the plan necessitated significant engagement by the NNSA/SSO S&S staff. The NNSA requested and Sandia agreed to initiate monthly status meetings to ensure the forward progress of this effort was correctly established and maintained through completion. In the fourth quarter of the FY 2008 performance period, Sandia continues to analyze their current staffing in terms of overall numbers and more importantly skill sets necessary to meet the new and reduced protection strategy requirements. While some parts of the transition plan have been executed others remain in progress.

As the Sandia contractor assurance system moves toward full maturity, the overall condition of the technical base becomes more and more critical. While NNSA does not have any specific data directly associated with the technical base that raise concerns in S&S performance, NNSA believes that there are plausible leading indicators that should be analyzed and monitored to preclude potential future performance issues within the S&S program. First, NNSA is concerned with seemingly high attrition and turnover rates within the S&S organization. Current corporate staffing documentation indicates that the attrition rate for Sandia S&S during the first three quarters of FY 2008 to be approximately 11.4 percent for an estimated staff population of 308. This represents the third highest rate across all Sandia organizations. The data also revealed that Sandia S&S is sixth in terms of transfers out of the organization and second with respect to separations. In addition to the corporate level data, the "Sandia Site Office/Sandia National Laboratories FY 2008 End-of-Year Budget Execution Review" presented to NA-70 on September 12, 2008 reflected the total S&S attrition rate, including protective force to be 16.3 percent with a staff population of 283. NNSA/SSO has asked that Sandia conduct an analysis of this particular condition so that its impact on the overall security program, from a training, development, recruitment and retention perspective can be better understood by NNSA. In conjunction with the attrition rates being reported by S&S, NNSA is also concerned that although Sandia S&S has established a "best in class" S&S training program, its effective application of this training amongst S&S professionals, especially some managers, is questionable considering some of the issues raised during the recently completed Program Management self-assessment which was shadowed by a representative from NNSA. It was observed that the individual development plans and other training-related documents for some of the managers currently in place within the S&S organization did not appear to adequately characterize training needs to ensure the affected managers were qualified in the appropriate subject matter areas for which they have responsibility. There are several underlying issues that may be contributing to this condition such as reorganization and realignment of work assignments of the S&S staff due to the changes

resulting from special nuclear material de-inventory activities that have been accomplished during this performance period.

During this performance period, communication between the NNSA/SSO S&S office and the Sandia S&S offices has become less effective and as a result, there have been some indications that the overall effectiveness of the S&S program may be affected. NNSA/SSO and Sandia S&S Senior managers have met and discussed this area of concern with the intent of identifying underlying issues and contributing factors that seem to be compromising the healthy and successful relationship between the NNSA and Sandia for the past several years. Both sides recognize, understand and appreciate the importance of this relationship and the communications between both offices and have begun to collaborate on a plan to ensure highly effective communications are restored and maintained into the future.

While not specifically identified as a performance measure or target in the FY 2008 PEP, it has been noted on several occasions that Sandia has quality and content issues within the S&S organization when it comes to S&S program documentation. In several instances during this performance period key S&S program documents and AOP deliverables were provided to NNSA after being reviewed and signed off by the appropriate staff members and managers. Upon review, NNSA noted these documents had serious issues regarding quality and content. As an example, Sandia provided NNSA with the FY 2009 Implementation Plan (formerly referred to as the Annual Operating Plan) on the established due date; however, NNSA's review of the plan revealed several significant issues with the content of the plan that needed to be resolved before the plan could be approved and sent on to NNSA Headquarters (HQ). As a result, the plan was formally rejected by NNSA and returned to Sandia for correction. Meanwhile, NNSA had to request and negotiate an extension to the original due date established by NNSA HQ in order to give Sandia additional time necessary to revise this important program document. In addition to those quality related concerns mentioned above, other quality issues have also been noted during the performance period with respect to initial corrective action plans and deviations submitted to NNSA for consideration. In several instances requests for deviations are rejected by NNSA and returned to Sandia for rework. Sandia currently has metrics in place to gauge their performance and quality with regard to initial CAPs; however, there are no metrics in place for measuring the overall quality and content of deliverables being generated by the Sandia S&S organization. Other examples of quality-related issues can be seen in the FY 2008 PEAR submittal. For example, there were errors regarding the discussion on event-based versus assessment based approach, the description of activities under the Material Control and Accountability topic was limited to one very specific event, and ratings were assigned to a target (8.2.3) that because of a lack of activity in this area during the performance period should have been "not rated." The PEAR is intended to be the key document that illustrates to the NNSA how well Sandia is managing and assessing its performance against the requirements of the contract and should really showcase the quality of work that the laboratory is capable of performing.

Counterintelligence: As a result of the April 2008 DOE CI inspection, the Sandia CI Program received one finding with two associated recommendations in Information Management. The Sandia CI Program also received three Issue Memoranda with nine associated recommendations and 25 OFIs.

Note: In an attempt to ensure consistency, the criteria used to assign the ratings below are consistent with those reflected on the FY 2008 PEP Rating Scale in Sandia's PEAR.

The overall content of the FY 2008 PEAR did not accurately reflect the actual performance of the S&S Program. The PEAR write-up focused more on the positive attributes or the things that went well as an end-of-the-year summation versus providing a more balanced representation of the overall types of issues in which the NNSA had to be engaged to assist Sandia in meeting some key deliverables and maintaining a satisfactory level of performance throughout the performance period. Keep in mind that the PEAR is a self-assessment report that should provide both Sandia and NNSA management with critical information that can be used determine the status of S&S program performance and compliance. In some cases the report did not meet that objective which in and of itself represents an opportunity for improvement.

Performance Measure 8.1

Plan and resource an effective and efficient security program. *DNS Goal 1: Effective and efficient security operations.*

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
8.1.1 Site security planning activities effectively integrates requirements, resources, and capabilities across all topical areas.	Outstanding	Agree	
8.1.1.1 Requirements traceability is incorporated across all security planning documentation (Annual Operating Plan, Budget, and Site Safeguards and Security Plan).	Good	Agree	This activity is newly implemented and has not matured enough to be able to be fully assessed for effectiveness at this time.
8.1.2 Site Security Planning activities fully support DOE and NNSA planning, programming, budgeting, and evaluation requirements.	Good	Agree	

8.1.2.1 The contractor Site Annual Operating Plan (AOP) is developed and submitted for approval in accordance with established time lines.	Good	Agree	The AOP was in fact submitted on time; however, because of significant quality and content issues it was rejected by NNSA and returned to Sandia for revision. As a result, the document could not be submitted to NNSA HQ in accordance with the original due date and an extension had to be requested thereby making the submittal late.
8.1.2.2 Successfully accomplish all performance targets contained in the approved FY 2008 Safeguards & Security (S&S) AOP. (SSO-1) (PIP-1.1.1/1.1.2/ 1.2.1/1.2.2/1.2.3/1.2 .4/1.2.6/1.2.7/1.2.8/ 1.2.9/1.2.11).	Outstanding	Agree	At the conclusion of this performance period, Sandia has completed approximately 96 percent of all milestones and deliverables in accordance with established schedules in the FY 2008 AOP. The four site deliverables that were not met included: 1.2.2.3.2 (inspections of security areas), 1.2.4.1.4 (monthly incident status reports), 1.2.1.5.5 material asset tracking system for PF) and 1.2.7.1.2 annual MC&A plan).
8.1.2.3 The contractor FS-20 Budget Submission is performance-based and clearly links resources to outcomes.	Outstanding	Agree	
8.1.3 S&S Staffing: Sustain efforts toward managing the security program challenges of personnel recruitment, retention, development and training. (SSO-2).	Satisfactory	Agree	Current corporate staffing documentation indicates that the attrition rate for Sandia S&S during the first three quarters of FY 2008 to be approximately 11.4 percent for an estimated staff population of 308. This represents the third highest rate across all Sandia organizations. The data also revealed that Sandia S&S is sixth in terms of transfers out of the organization and second with respect to separations. In addition to the corporate level data, the "Sandia Site Office/Sandia National Laboratories FY 2008 End-of-Year Budget Execution Review" presented to NA-70 on September 12, 2008 reflected the total S&S attrition rate, including protective force to be 16.3 percent with a staff population of 283. The higher than normal attrition rates in the Protective Force are due in part, to de-inventory and the change in site protection strategy.
8.1.4 S&S Replacement Project: Complete Safeguards & Security project-	Outstanding	Agree	The SSRP has been managed and executed in a manner that has resulted in several major project milestones being completed in accordance with the project schedule and within scope and cost. Additionally, cost savings of approximately $2.3M

related tasks and activities in accordance with approved Project Plans and schedule. (SSO-3).			have been realized and the overall project schedule has been reduced by one year.

Performance Measure 8.2

Operate an effective and efficient physical security program.

Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
8.2.1 All security topical and sub-topical area self-assessments and performance assurance program meet DOE order requirements.	Good	Agree	Two of the topical elements have been rated as Marginal, with the remaining topics rated Satisfactory via Sandia's self-assessment program for the performance period. Several subtopical areas received Marginal ratings. Sandia Safeguards and Security with CI supported the Lab-wide implementation of Enterprise Person and implementation of the Validation Office..
8.2.2 All security topical and sub-topical areas achieve a rating of Satisfactory as part of the SSO periodic survey program.	Good	Disagree Satisfactory	Performance expectations were not met in two of the eight topical areas (i.e. Program Management and Support, Personnel Security Program) of the S&S program. Marginal ratings in the subtopical areas below contributed to the overall Marginal ratings of the two topical areas: ▪ S&S Planning and Procedures ▪ Security Incident Management Program ▪ Program Wide Support ▪ Facility Approval & Registration of Activities ▪ Security Management in Contracting ▪ Basic Requirements ▪ Operations Security ▪ Access Authorizations ▪ Control of Classified Visits Access Authorizations and Control of Classified Visits Marginal ratings affected the overall Personnel Security topic rating. Additionally, there is an outstanding DOE IG issue regarding the justification of clearances at the Sandia CA site. Weighted in Sandia's input was: • That NM took over functions from TTR and program management from CA this year

			• Personnel Security implemented HSPD-12 • Personnel Security implemented many unprogrammed but directed changes in the access authorizations area to include expanded drug testing. While six of the eight topical elements at Sandia New Mexico have been rated Satisfactory via the NNSA survey program for the performance period, two topics were rated Marginal and some subtopical elements received Marginal ratings as well. The deficiencies responsible for the less-than satisfactory topical ratings are mostly compliance-related and there are no issues regarding the direct protection or control of classified assets or nuclear materials; therefore a composite rating of Satisfactory is assigned to the New Mexico program. Sandia California and the Tonopah Test Range received special limited scope surveys. Some of the previously reported less-than-satisfactory program topics/sub-topic ratings were elevated based on improved performance. NNSA also conducted surveys at Sandia's remote locations in Washington, D.C., Minnesota and Kauai. Each of these programs received Satisfactory composite ratings.
8.2.3 All security topical and sub-topical areas are rated as Satisfactory during NNSA or DOE oversight inspections.	Outstanding	Disagree Not Rated	Despite the performance shortcomings discussed in Target 8.2.2 above, Sandia has maintained an effective protection program. However, no inspections were performed by either DOE or NNSA HQ during this performance period; therefore, this target and its subordinate targets should not have been rated.
8.2.3.1 Protective Force Program topical area is rated Satisfactory.	Outstanding	Disagree Not Rated	
8.2.3.2 Physical Security Program topical area is rated Satisfactory.	Outstanding	Disagree Not Rated	
8.2.3.3 Unclassified Visits and Assignments by Foreign Nationals topical area is rated Satisfactory.	Outstanding	Disagree Not Rated	

8.2.3.4 Information Security Program topical area is rated Satisfactory.	Good	Disagree Not Rated	
8.2.3.5 Personnel Security Program topical area is rated Satisfactory.	Satisfactory	Disagree Not Rated	
8.2.3.6 Materials Control & Accountability topical area is rated Satisfactory.	Good	Disagree Not Rated	
8.2.3.7 Program Management topical area is rated Satisfactory.	Outstanding	Disagree Not Rated	

Performance Measure 8.3

Plan for, resource, and implement the 2005 Design Basis Threat (DBT) policy and security modernization improvement program. *DNS Goals 2 and 3: Security complex modernization, infrastructure recapitalization, and transformation.*

Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
8.3.1 Implement an effective 2005 DBT policy for non-Category I Special Nuclear Material.	Outstanding	Disagree Good	While Sandia S&S has completed its portion of this corporate effort, Sandia in general, has not met the performance expectation for this target. As a result, NNSA disagrees with the rating of Outstanding. Sandia S&S developed a unique and effective methodology to characterize Threat Level designations for facilities at NNSA sites. The Sandia approach and methodology has been endorsed by NA-10 and NA-70 and is being considered as an NNSA-wide standard. Using this methodology Sandia S&S completed the security analysis of its own mission critical facilities. The Sandia Program Office was tasked by NNSA to provide final programmatic impacts in March 2008. To date, this deliverable has not been provided. Therefore the plan remains incomplete. Interim guidance from NA-10 and NA-70 pending the determination of final programmatic impacts is to characterize Sandia as a Threat Level 3 facility requiring a Threat Level 4 protection strategy.

8.3.1.1 Develop and provide to Defense Nuclear Security (DNS) a comprehensive DBT implementation plan for non-Category I Special Nuclear Material.	Outstanding	Disagree Good	See discussion above under Target 8.3.1.
8.3.1.2 Unless provided an exception by DNS, fully resource the 2005 DBT Implementation Plan for non-Category I Special Nuclear Material in the FY 2008 budget and out year budget requests.	N/A	Agree	
8.3.2 Develop a site security modernization and infrastructure recapitalization program.	Outstanding	Disagree Not Rated	Although this target was identified as a DNS goal, it did not apply to Sandia during FY 2008 as a result of SNM deinventory activities. It was included in the AOP for FY 2008 as a placeholder in the event a project was identified that met this particular goal. A review of Sandia's AOP Milestone reporting tool reflects that there were no deliverables provided for this target. Throughout the performance period, Q1 – Q4 were reflected as "N/A.".
8.3.2.1 Develop and provide to DNS a comprehensive site modernization and infrastructure recapitalization plan	Outstanding	Disagree Not Rated	See Target 8.3.2
8.3.2.2 Provide a cost-benefit analysis of proposed alternatives to be funded in FY 2010-2013 (Future-Years Nuclear Security Program).	Good	Disagree Not Rated	See Target 8.3.2

8.3.3 Assist in the development and implementation of NNSA's Complex Transformation (previously "Complex 2030").	Good	Agree	

Performance Measure 8.4

Counterintelligence Program - Detect, deter, and mitigate Foreign Intelligence collections and espionage efforts and international terrorists' threats against NNSA personnel, classified and other sensitive programs, and information architecture. (SSO-4).

Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
8.4.1 Counterintelligence Training and Awareness Program – Provide a counter-intelligence training and awareness program that will assist personnel with their understanding of the general risks posed by foreign intelligence services and international terrorist organizations.	Outstanding	Agree	
8.4.2 Counterintelligence Investigations Program – Implement and manage an effective counterintelligence investigations program that addresses the latest specific threats through the investigation and assessment of any suspicious activities that may occur	Outstanding	Agree	

during contacts between NNSA employees and persons from sensitive countries or international terrorist organizations.			
8.4.3 Counterintelligence Information and Special Technologies Program – Implement and manage a counterintelligence information and special technologies program capable of identifying and mitigating cyber-based threats against NNSA.	Outstanding	Agree	
8.4.4 Counterintelligence Analysis Program – Provide a counterintelligence analysis program capability that can effectively analyze, compile and provide appropriate threat information to senior leadership in NNSA, Department of Homeland Security and other elements of the U.S. intelligence community.	Satisfactory	Agree	During the April 2008 DOE CI Inspection of the Sandia CI program Issue Memoranda were issued to Sandia resulting in nine recommendations and 25 OFIs.
Other Considerations			
None			

PERFORMANCE OBJECTIVE 9 – Business System Performance

Sandia will manage and operate its Business functions in an efficient and cost effective manner using the ILMS to fully support successful accomplishment of mission, while protecting the public, the worker, the environment, and national security assets in accordance with the terms and conditions of the contract. Business functions include: Information Technology, Cyber Security, Supply Chain, Human Resources, and Finance.

Adjectival Rating
OUTSTANDING

Summary of Performance

Effective business programs and functions are integrated into all work activities throughout Sandia to maintain effective and efficient operations and support mission objectives. Performance in the areas of Information Technology (IT), Cyber Security, Supply Chain, and Contractor Human Resources were measured through negotiated performance objectives matrices developed for each of these programs, in conjunction with a subjective assessment of their overall policy area program performance. The Finance program was evaluated through objectives and measures established by the NNSA Chief Financial Officer (CFO). To sustain improvement and mature work processes, Sandia continued their effort to seek or maintain third party certification in several business areas. Additionally, Sandia demonstrated complex-wide leadership with implementation of initiatives in cyber security and supply chain. Sandia exceeded the standard of performance by deploying integrated business processes throughout its infrastructure in support of mission and other work activities. While Sandia did not significantly exceed performance in all business functions, NNSA rated business system overall performance as outstanding.

Significant Accomplishments

Sandia should be commended for their effort on a number of business fronts during this fiscal year. They addressed their extensive computer footprint by starting a multi-pronged reduction in the second quarter. During the evaluation period, they eliminated 3000 desktops and "virtualized" 177 servers. This effort reduced overall IT costs while also limiting their cyber security exposure. This effort is expected to continue in FY 2009. Additionally, the Information Solutions and Service Center achieved Capabilities Maturity Model Index Level 4 certification. This is just one of several corporate centers receiving, or recertifying, the quality of their processes through a third party appraiser. Sandia also maintained their International Organization for Standardization (ISO) certification for Computing Support, Telephone and Network organizations. Sandia made impressive strides through complex-wide initiatives with the development of the Enterprise Secure Network and its resident security infrastructure, and their continuing contribution to cyber forensics and incident remediation work. Other cyber accomplishments of note include Sandia's implementation of two-factor authentication for all remote network access and an intrusion detection system capable of monitoring internal network traffic. Sandia achieved an outstanding 57.2 percent in overall awards to Small Businesses

which well exceeded their goal of 48 percent. However, there is some room for improvement in the subcategories of HubZone and Veteran owned small business. Sandia awarded three Staff Augmentation contracts, each with a separate focus, to three small businesses. This was a tremendous accomplishment with very little disruption to day-to-day activities. During the transition period, they were able to maintain a 99 percent retention rate among staff augmentation personnel. It is anticipated that the new awards will provide efficiencies as well as a cost avoidance of approximately $1,000,040/year. They also won a Fleet Services Safety partnership Award from New Mexico Department of Public Safety. Sandia's Finance functional area received the NNSA Administrator's first ever Award for Excellence in Internal Controls and were recognized by the Office of Field Financial Management for their Contractor Assurance System implementation.

Opportunity for Improvement

Two areas providing opportunity for improvement in the Business measure are in cyber security and the communication of critical business decisions. Relative to cyber security, Sandia needs to take appropriate action, in accordance with their implementation plan and on an expedited timeline, to encrypt all e-mail transmissions of sensitive unclassified information. For communications, Sandia needs to obtain NNSA advance coordination or approval, as may be contractually required, while providing sufficient substantiation for proposed actions and adequate processing time. This advanced coordination or approval is particularly important on critical business decisions that are precedence setting or have potential complex-wide implications.

Performance Measure 9.1

Business System: Business programs and functions are integrated into all work activities throughout Sandia to maintain effective and efficient operations and support mission objectives.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
9.1.1 Sandia will develop and implement an effective and efficient program for Information Technology in accordance with applicable Federal requirements. Performance will be measured through a variety of means to include the established goals in the negotiated performance measures objectives matrix for Information Technology.	Outstanding	Agree	Sandia's disaster recovery initiatives are to be commended for meeting all milestones. Backup procedures are critical for ensuring systems are restored in order of priority as well as testing contingency plans for reliance. Sandia has followed through with their testing and bringing up their servers to ensure continuing, uninterrupted operations. NNSA would like to see more progress towards reaching the goals addressed by the Energy Policy Act of 2005, Executive Orders, and the Federal Acquisition Regulation (FAR). Sandia has made progress toward these goals, by their server/workstation consolidation efforts. However, Sandia needs to make more improvements to eliminate excess equipment. In May 2008, NNSA placed a procurement hold on an $8 million high performance computer acquisition known by Sandia as Project Y. NNSA placed a hold

			on the acquisition due to questions raised on the appropriateness of the indirect funding profile, confusion associated with the intended use of the machine, and the absence of the appropriate exhibits. Sandia did not follow established government standard business operating procedures as it relates to this acquisition. NNSA had not reviewed, approved or been made aware of the Project and thus was denied the opportunity to assess the impact on Sandia indirect rates. The supporting documentation required by Office of Management and Budget (OMB) and Department of Energy Order 4 13.3A, ***Program and Project Management for the Acquisition of Capital Assets,*** seemed non-existent before the review and had been routed direct to National Nuclear Security Administration headquarters without NNSA/SSO acknowledgement or involvement. This resulted in the unnecessary use of Office of Field Financial Management (OFFM), NNSA/SSO, and Sandia resources to address issues that could have been avoided with upfront planning and communication.
9.1.2 Sandia will establish and monitor metrics to ensure that Information Technology programs and projects are operating within established control levels. When negative trends are noted, Sandia will take effective corrective action. SSO will have access to these metrics and be able to measure and monitor Sandia performance.	Outstanding	Agree	Sandia has made continuing strides in the Information Technology (IT) Management Assurance program. Sandia's launch of an IT dashboard with Information Management metrics facilitated transparency and heightened awareness of key corporate and oversight measures. Sandia identified aging equipment in the Sandia infrastructure which is reaching its life's end through quarterly program reviews. While this provided some insight of networking infrastructure equipment, its age, and corrective/mitigating actions, NNSA has not received a full accounting and analysis as Sandia proceeds with its revitalization effort. Sandia has not adequately documented trends. Better documentation would lead to more effective risk analysis and corrective action.
9.1.3 Sandia will develop and implement an effective and efficient program for Cyber Security in accordance with applicable Federal requirements. Performance will be measured through a variety of means to include the	Good	Agree	Sandia was slow in responding to an NNSA letter of direction requiring the use of encryption to protect sensitive unclassified information transmitted through e-mail. A letter was issued by the NNSA/SSO Contracting Officer to the Sandia Chief Information Officer on June 26, 2007, requiring that Sandia submit an implementation plan by August 1, 2007 to outline actions to encrypt all e-mail transmissions containing sensitive unclassified information. After requesting a two-week extension to the August 1, 2007 suspense date, Sandia submitted an implementation plan on August 14, 2007 that did not satisfy the requirements of the letter of direction and

established goals in the negotiated performance measures matrix for Cyber Security.			was rejected by NNSA. A revised implementation plan was not submitted by Sandia until September 18, 2008 -- more than a year later, despite requests from NNSA for a status update on the implementation plan on January 2, April 21, and July 29, 2008. As a result, Sandia's progress over the past year on the requirements identified in the letter was minimal. In light of the excessive workload imposed on the Sandia Cyber Security staff in 2008 through numerous external inspections and the introduction of a completely new set of cyber security policy requirements from NNSA, NNSA concurs with Sandia's overall proposed rating of Good for Performance Target 9.1.3. However, we will expect substantial progress to be made by Sandia before the end of calendar year 2008 on ensuring all e-mail transmissions of sensitive unclassified information are encrypted.
9.1.3.1 Sandia ensures that managers, cyber security professionals, and users are made aware of the applicable requirements and security risks associated with their activities through the dissemination of Corporate Process Requirements and ensuring that organizational personnel are adequately trained to carry out their assigned cyber security duties and responsibilities.	Good	Agree	
9.1.3.2 Sandia must: (1) establish an operational incident handling capability for all systems that includes adequate preparation, detection, analysis, containment, recovery, and user response activities; and (2) track, document and report incidents to	Outstanding	Agree	

appropriate organizational officials and/or authorities			
9.1.3.3 Sandia must provide effective oversight of the tools, techniques, mechanisms, and personnel used to provide information system security, to include periodic assessments.	Good	Agree	
9.1.3.4 Sandia regularly scans all systems for vulnerabilities and performs timely maintenance to mitigate or eliminate new vulnerabilities as they are identified.	Outstanding	Agree	
9.1.4 Sandia takes appropriate actions to research and respond to negative trends indicated by the cyber security performance measures matrix.	Good	Agree	
9.1.5 Sandia successfully completes all milestones contained in the approved FY 2008 Cyber Security Annual Operating Plan.	Outstanding	Agree	
9.1.6 Sandia will develop and implement an effective and efficient Supply Chain management program in accordance with applicable Federal requirements. Performance will be measured through a variety of means to include the established goals in	Outstanding	Agree	Sandia earned an overall rating of "Outstanding" for this measure. They received equivalent "outstanding" scores in 18 of 20 metrics in the Supply Chain objective Matrix. No rating in the Matrix received lower than a satisfactory. Sandia Procurement recertified International Organization for Standardization (ISO) 9001:2000 and an OMB-123 Audit of Fleet Service concluded effective operational controls. Finally, Sandia Property achieved an "Outstanding" on a local Accountability Statement exercise with an overall Sandia response rate of over 96 percent. Although an overall Supply Chain performed exceptionally, certain discrepancies were noted.

the negotiated performance measures objectives matrix for Supply Chain.			The Procurement Evaluation and Re-engineering Team (PERT) identified inconsistent and/or inadequate file documentation as a weakness in the PERT report. This weakness did not affect the overall rating of the Contractor Purchasing System; however, it has been an ongoing issue for several years. Contract File Self-assessment is an Objectives Matrix measure which Sandia has consistently rated as "outstanding". This brings into question the robustness and credibility of Sandia's self-assessments in this area. Sandia is not in compliance with CFR 101-25.109-1, "*Identification of Idle Equipment*" which requires conduct of inspections on a scheduled basis no less than every two years for the purpose of identifying idle and unneeded laboratory research equipment. Sandia agreed to review the requirement and establish procedures for compliance.
9.1.7 Sandia will establish and monitor performance metrics to ensure that Supply Chain programs and projects are operating within established control levels and in accordance with applicable Federal requirements. When negative trends are noted, Sandia will take effective corrective action. SSO will have access to these metrics and be able to measure and monitor Sandia performance.	Outstanding	Agree	Great strides have been made to ensure transparency in the Supply Chain Management Center (SCMC). SCMC Management Assurance reviews were timely but require additional rigor to ensure a high degree of effectiveness and compliance in all areas. Sandia's performance relative to IT property management is laudable. Metrics indicated P-Card property purchases remained a challenge and this area will require continued vigilance in the coming year.
9.1.8 Sandia will develop and implement an effective and efficient program for Contractor Human Resources in accordance with applicable Federal requirements. Performance will be measured through a variety of means to include the established goals in the negotiated	Outstanding	Disagree Good	Sandia did not "significantly exceed" the standard of performance in all areas. However, Sandia senior management is to be commended for the commitment and attention given to some of the Human Resource (HR) challenges confronted in FY 2008. Sandia did achieve an Outstanding rating in 12 of the 18 Objectives Matrix performance measures, equating to approximately 67 percent, and they are applauded for the Outstanding ratings. Sandia also achieved a rating of Good on five objectives but had one Unsatisfactory performance measure. Sandia's Unsatisfactory rating was for the measure: "Percent Offers to Acceptance Ratio of Minorities at Minority Institutions." NNSA recognizes the resulting

performance measures objectives matrix for Human Resources.			acceptance rate of 70.4 percent was based on a relatively small number (i.e., there were eight declines out of twenty-seven offers). Notwithstanding, the result is at the negotiated unsatisfactory level. In addition to the Objectives Matrix measures, Sandia's actions to implement new pension and health benefits programs for new employees to facilitate cost containment is to be commended. This initiative will provide new employees at Sandia with market based healthcare benefits and a flexible pension plan while reducing the government's long-term liability. Sandia's actions are consistent with the Administrator's direction to make practical adjustments to move toward greater compliance with contractually required benefit value comparators. Sandia also took the initiative to evaluate its financial strategies that will help manage and budget for expected future contributions to the pension plans. This initiative is intended to minimize the impact to NNSA's future operating budget by contributing to the pension plan earlier than is required by minimum funding standards. Also, Sandia is credited with identifying and disclosing their non-compliance with Federal Acquisition Regulation 31. 205-45 *Training and Education Costs* for the Doctoral Studies Program (DSP). Their disclosure and successful pursuit of a waiver enabled employees currently in the DSP to continue the program while Sandia simultaneously revised policies to comply with contract requirements. Sandia's performance in the following areas were also considered in the overall performance rating: • Sandia addressed a need to reduce a total of 21 employees with implementation of a seniority-based, right of first refusal lay off of employees of the Metal Trades Council (MTC) and Office and Professional Employees International Union (OPEIU), a process that resulted in approximately $687K of additional cost to the government. Sandia and the MTC, OPEIU and Security Police Association mutually agreed to negotiate the right of first refusal lay off as a one-time agreement outside of the existing collective bargaining agreements. Sandia did not adhere to its contractual requirements, specifically DOE Order 350.1 Contractor Human Resources Programs, due to its failure to consult with the contracting officer prior to and during the course of negotiations with labor unions, and during the term of resultant contracts on economic issues and other matters that have a potential significant impact on work rules, make-or-buy decisions, or other matters that may cause a significant

			deviation from past customs or practices. Sandia's efforts to initiate a seniority based right of first refusal lay off to union employees was not currently in any of the three collective bargaining agreements, offered an incentive that was more generous than currently offered at any other NNSA site and independently offered an incentive that could set a precedence for other NNSA sites. Although Sandia *may* ultimately be able to demonstrate the additional costs were justified given the unique facts and circumstances, they acted without prior NNSA knowledge. • Although Sandia provided NNSA/SSO and NNSA HQ with a timely presentation of their proposed labor negotiation approach, they did not provide timely or complete information regarding the impact of their approach on long-term costs or reasonableness of resulting benefits, nor did they provide alternatives to the approach after NNSA repeatedly advised that the approach was not acceptable because it increased long-term liabilities. NNSA acknowledges numerous meetings with Sandia; however, written supporting documentation from Sandia to facilitate an NNSA decision was lacking. For instance, in May NNSA requested Sandia to provide the benefit value impact for each proposed benefit change. In June, NNSA reminded Sandia that a complete and thorough package was necessary for consideration and suggested all the information be consolidated into one package. NNSA further explained that the package should include but not be limited to items such as valuations, planned documents, full actuarial developments, a contact point, impact to long-term liabilities and benefit value with explanations, explain what each and all the changes would cost, and articulate why the changes are in NNSA's best interests. While Sandia facilitated discussions between the actuaries for NNSA and Sandia concerning its cost and liability estimates, there continued to be disagreements over the substantiating data and NNSA communicated to Sandia that the pension approach was not acceptable to NNSA. During the discussions, NNSA also indicated if Sandia wanted to extend the bargaining agreements, further discussions could take place but NNSA could not currently approve the pension approach. Despite the late receipt of the Sandia data, there had been no other proposed alternatives relative to pension issues. • Sandia's annual Compensation Increase Plan (CIP) submittal to the NNSA did not comport to the direction of the NNSA/SSO Manager. As a result,

			the Sandia proposal did not include compensation data in their justification for the FY 2009 CIP proposal that the NNSA/SSO Manager specifically stated should be included in the FY 2009 CIP proposal. After the CIP decision was rendered by NNSA, Sandia provided information questioning the validity of the approach required by NNSA 11 months earlier. • Sandia has taken some initiative to reduce its Hewitt Benefit value for existing employees to meet the range of acceptability of 105 (i.e., no more than 5 percent above the comparator for other organizations). While this initiative is expected to produce little impact with an expected employer paid index value in 2010 of 119.6 compared to the most recent index of 121.6, the initiative follows a Secretarial initiative to offer DOE contractor employees benefits that are competitive with market comparators while reducing the government's long-term liability. These are positive, first steps, Sandia can build upon to pursue an overall value of employee benefits consistent with DOE Order requirements. • While HR does not directly oversee the management of the workforce in the Manufacturing Science & Technologies Service Center (MS&TSC), Sandia was not efficient in the management of its MS&TSC workforce. This inefficiency lead to increased idle time, questionable subcontracting, and increased costs. NNSA estimated idle time equivalent to approximately 12 employees, while other employees were working overtime, and Sandia was outsourcing approximately $10M to $20M without written documentation for such decisions. NNSA acknowledges Sandia is now giving this matter attention and is taking steps to reduce idle time in the machining operations and make those operations as efficient as possible. Although NNSA recognized the idle time costs, the cost allowability determination stated that Sandia could have applied more effective management which could have mitigated the conditions that resulted in these costs. Notwithstanding cost allowability, the management of the MS&TSC offers opportunity for improvement.
9.1.9 Sandia will establish and monitor performance metrics to ensure that Contractor Human Resource programs and projects are operating within	Outstanding	Disagree Good	Sandia did not "significantly exceed" the standard of performance in all areas. They did exceed the standard of performance in many areas but there is room for improvement. Sandia's self-assessment rating is based primarily on the Objectives Matrix but other factors contributing to the health of the Human Resource program are evaluated and a consideration of all the factors resulted in an overall rating of "Good

established control levels and in accordance with applicable Federal requirements. When negative trends are noted, Sandia will take effective corrective action. SSO will have access to these metrics and be able to measure and monitor Sandia performance.			Sandia has made great strides with populating and organizing ILMS in the HR area; however, HR has not addressed all the criteria identified in Sandia's five Corporate Process Requirements. Therefore, SSO cannot adequately measure and monitor Sandia's performance. For example, Sandia has not adequately documented trends and any necessary follow-up corrective actions or reassessment of risks through the monitoring of its performance measures. It is not apparent that HR is using ILMS as a management and/or decision-making tool. While SSO recognizes the sensitivity associated with some HR data, not all data is sensitive. While Sandia has performed benchmarking, there is not significant evidentiary data to support positive and sustainable results. The return on investment has not clearly been demonstrated. In addition, benchmarking plans and rationale for organizations selected for benchmarking are not documented in ILMS. SSO acknowledges the efforts Sandia has made to demonstrate ILMS through its talented HR professionals.
9.1.10 Sandia will develop and implement an effective and efficient program for Finance in accordance with applicable Federal requirements. Performance will be measured through a variety of means to include the established goals in the negotiated performance measures for Finance.	Outstanding	Disagree Good	Sandia's hard work in this area has been recognized by NNSA over the past year. They received the NNSA Administrator's first ever Award for Excellence in Internal Controls and were recognized by the Office of Field Financial Management for their Contractor Assurance System implementation. Additionally, Sandia continued to meet or exceed most performance measures. Although overall they have a strong program certain areas could use additional attention. Sandia received an overall unsatisfactory rating in two areas: 1) Requests for funding determinations are submitted in accordance with prescribed guidance and are of sufficient quality to achieve concurrence/approval; and 2) At each fiscal month end, ensure that no legal cost violations occur in regards to the management of appropriations at the IC, Allottee, or Departmental levels for which controls have been established. Sandia has continuously had Obligation Control Level (OCL) and administrative overcosts throughout the fiscal year. A memo was sent by the OFFM CFO requesting Sandia develop a corrective action plan identifying what course of action and improvements Sandia will implement to ensure reported costs will not exceed OCLs. A Corrective Action Plan was developed and submitted by Sandia. Sandia had a fourth quarter balancing edit in August caused by Sandia processing a correction entry prior to it being reflected in their AFP. During the August Supplemental reporting process, the WFO team

			notified Sandia that if they processed the entry it would result in a balancing edit. The entries processed by Sandia have the same accounting effect as a refund (de-obligation from one fund and re-obligation to another fund). The failure of compliance with government standard business operating procedures as it relates to Project Y was primarily IT. However, finance has culpability as they should have been the "safety net" for an acquisition of this size and ensured the procurement of Project Y complied with all requirements. In order to receive an outstanding rating, Sandia must follow protocol, be free of systemic issues that can cause potential legal and civil penalties, and have no unsatisfactory ratings throughout the fiscal year. As a result of Sandia's issues, an Outstanding rating is not warranted in FY 2008.

Other Considerations

None

PERFORMANCE OBJECTIVE 10 – Contractor Assurance System (CAS)

Sandia Corporation will manage the Laboratories through the utilization of the ILMS/CAS, Contractor Accountability and Standards Management to ensure that the programs are managed in an effective and efficient manner, continuously improving, and support the accomplishment of mission.

Adjectival Rating
GOOD

Summary of Performance

Sandia has implemented the Model Contract and developed an Integrated Laboratory Management System (ILMS)/Contractor Assurance System (CAS) that is currently the most robust CAS in the NNSA complex. With Sandia entering the fifth year of implementation of CAS, following initial benchmarking, design, and development, NNSA's expectation is for Sandia to continuously improve ILMS/CAS. Sandia has clearly made significant strides in improvement and is currently formally providing lessons learned around the NNSA complex. NNSA values CAS implementation higher as it is fundamental to success and thus Measure 10.1 is weighted higher than the other two measures associated with the objective. NNSA assigns an overall rating of Good for this objective.

Significant Accomplishments

Significant accomplishments include continued progress meeting the Enterprise Transformation Plan schedule for third party certification of ILMS, development of a robust suite of operational and mission related performance measures, improvements to the ILMS software to address usability, and increased population of data.

Opportunity for Improvement

Opportunity for improvement exists in three areas. First, opportunity for improvement exists in the areas of contract Clause H-3, Contractor Assurance System (CAS). Sandia needs to continue to improve implementation, use, communication, and assurance results from the ILMS/CAS in accordance with the CAS attributes contained in Clause H-3. Second, opportunity for improvement exists in the area of contract Clause H-5, Accountability. Sandia needs to continue to improve the quality of its products and the assessment of its operations, programs, and business systems, the identification of deficiencies, and implementation of needed improvements. Third, opportunity also exists in the area of contract Clause H-6, Standards Management. Sandia needs to more aggressively continue to regularly benchmark with industry to identify best commercial standards and best business practices that will improve site operations with the goal of improving performance where cost effective. In this context, the term "standard" encompasses DOE Directives, DOE/NNSA requirements and mandates, and national and international consensus and generally accepted standards in accordance with NNSA policy.

Performance Measure 10.1			
Continue to improve implementation, use, communication, and assurance results from the ILMS/CAS in accordance with Clause H-3 "Contractor Assurance System," of the contract.			
Performance Target	**Sandia Self-Assessment Rating**	**NNSA Agreement**	**Comments**
10.1.1 Continue to seek third-party certification of the ILMS in accordance with the International Organization for Standardization (ISO) 9001 elements of the FY 2008 Enterprise Transformation Plan delivered on September 21, 2007.	Outstanding	Agree	Sandia is effectively executing the phases as defined in the FY 2008 Enterprise Transformation Plan (ETP) and is on schedule to seek ISO registration of the Integrated Laboratory Management System (ILMS)/ Contractor Assurance System (CAS) in 2009.
10.1.2 Complete the FY 2008 Enterprise Transformation Plan (to be delivered on September 21, 2007) milestones related to ILMS on schedule. This will include closing transparency gaps and effectiveness gaps identified by the Sandia self-assessment and SSO in FY 2007.	Outstanding	Disagree Good	The target focuses on closing transparency gaps and effectiveness gaps identified by the Sandia self-assessment and NNSA in FY 2007. Discussions between NNSA, Sandia and a member of the Sandia Board Governance Committee in FY 2007 resulted in recognition that the ETP was not being used as a planning tool but instead to status progress. It is commendable Sandia delivered the first work product reflecting the formalized project management structure, although this was late in the year (May 2008). In late 2007, NNSA discussed the need for Sandia to revise the ETP to reflect effectiveness gaps that had been identified in the Risk Based Oversight Procedure (RBOP) assessment of CAS effectiveness of implementation and transparency. NNSA noted during the first three quarters JPC PO 10 quad charts a weakness existed in that Sandia had not updated the ETP to reflect effectiveness gaps. The Sandia PEAR accurately reflects that closing such gaps remained an open issue throughout FY 2008.
10.1.3 Establish performance measurements, setting of performance targets and comparison to best-in-class metrics. Ensure they are effectively deployed,	Outstanding	Agree	Sandia efforts with respect to this target are exemplary. The structured approach involved utilization of external expertise to augment Sandia experts. The independent external assessment, performance measure development training, institutional development of the 400 plus hierarchical measures, the selection, purchase and installation of Performance Soft software and subsequent population of the application were critical steps executed in a well managed project.

integrated with other associated goals and objectives, and continuously improved using best industry practices or other information from high-performing/best-in-class organizations. Provide FY 2008 measures and targets to SSO by November 15, 2007. Track metrics and achieve targeted performance.			
10.1.4 Ensure ILMS communication and training are effectively deployed, integrated and continuously improved using best industry practices or other information from high-performing/best-in-class organizations.	Outstanding	Agree	Sandia developed a communication and training strategy and plan and executed it in a well managed fashion. Noteworthy is the involvement of a communications specialist to spearhead and develop the work products and the supporting performance measures that were implemented to assure progress and performance.
10.1.5 Continue to improve the ILMS website incorporating input from the ILMS Users Needs Assessment to provide the SSO with effective, efficient, and timely access to Sandia assurance information.	Outstanding	Disagree Good	Sandia designed and conducted a statistically controlled usability study to further improve ILMS. ILMS has continued to mature and become a more robust management tool as result of Sandia's prioritization and implementation of improvements of user needs from the FY 2007 assessment that included NNSA. Sandia was also very responsive to requests from NNSA to improve access by designing, testing, and implementing a new architecture. As a result, ILMS access improved over the last quarter of the fiscal year due to the personal involvement of Sandia senior management. However, NNSA personnel only receive visitor privileges in most Metagroups and not all links are available and visible to NNSA/SSO staff. NNSA ILMS access has improved however, NNSA assessments of CAS have found the following repeat systemic issues with implementation of ILMS throughout Sandia:

			1. Transparency issues remain in all functional areas. 2. Processes on ILMS reflect Joint Performance Review Team Objective Matrix (OM) results. 3. Data population is improving, but items like FY 2009 Corporate Self-Assessment Schedule is not fully populated. 4. Data supporting OM results not available or easily accessed through ILMS or supporting software, LESA. 5. Unable to see and/or access all documents available to Sandia personnel and leadership. 6. Critical business activity/decisions not communicated through ILMS.

Performance Measure 10.2

Continue to improve the quality of products and the assessment of operations, programs, and business systems. Identify deficiencies and implement needed improvements in accordance with contract Clause H-5 "Accountability."

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
10.2.1 Demonstrate that NNSA oversight is not being relied upon by the Laboratory in assessing its performance.	Good	Agree	The Sandia Assurance Review Board (SARB) process is maturing and demonstrating that Sandia has ownership and responsibility for the quality of its products and the assessment of operations, programs and business systems. NNSA has requested the SARB process better document the agreed upon path forward resulting from quarterly briefings to the EO/LLT. NNSA also believes the SARB needs to be more self-critical of Sandia operational performance to ensure the effectiveness of this critical management assurance process.
10.2.2 Execute the Sandia FY 2008 self assessment schedule, collect self assessment data, combine with other assurance information, perform tracking and trending, and input issues to Issues Management for resolution in accordance with the ILMS assurance processes.	Outstanding	Disagree Satisfactory	Sandia has improved processes and products over the last year, but opportunities exist for continued improvement. Noted below are areas of weakness and strength: **Self Assessment Weaknesses**: 1. Sandia self assessments need improvement. NNSA assessments of ILMS/CAS have found the following repeat systemic issues with implementation of ILMS/CAS throughout Sandia: a. Lack formal planning for most scheduled self-assessments, b. Observed as a weakness due to lack of rigor, depth and quality, and c. Narratives do not correlate with the adjectival ratings, i.e., grade deflation. 2. Self assessments are not tied to the Sandia Risk Matrix. A three year cycle of self assessments is not identified to ensure all risks have been schedules and

			implemented. 3. More self assessments were conducted. However, fewer findings have been identified and the vast majority of those few findings are categorized as minor findings or observations, even when they are significant. 4. The table used to identify if a finding is a significant finding does not include systemic issues or repeat findings. Therefore, systemic issues and repeat findings are being downplayed as minor findings or observations. 5. In LESA, decisions are made to not perform causal analysis and there is no rationale documenting these decisions. 6. Self assessments are performed with findings identified. These findings are rolled up to higher level findings but there is no track record of closing the original findings by closing the higher level finding. 7. Not all of the NNSA findings have been inserted into Corrective Action Tracking System (CATS). 8: The line organizations are being held accountable and findings are being assigned to the line. Nevertheless, the line organizations remain too dependent on the NNSA to identify and address problems. 9. NNSA questions how well Sandia has trained supervisors and employees on its CAS. As Sandia transitions from its CPRs for CAS to the 13 corporate procedures, an opportunity exists to improve training so as to avoid the concurrent process of roll-out and implementation leading to inconsistent results. 10. With the number of assessment requirements, a formal flow-down and crosswalk of the DOE and regulatory requirements and Sandia procedures should be performed to ensure that departmental procedures capture and align to the overarching requirements. **Self Assessment Strengths**: 1. The Security Tactical Assurance Team (STAT) is a group comprised of managers representing all Sandia Divisions and is chaired by a senior security manager appointed by the Corporate Security Officer. The STAT's objective is to drive more security assurance to line organizations and, is a good first-step in establishing a mechanism to improve line and security integration now (tactical) and in the future (strategic). 2. The S&S Assurance organization has a well documented, structured, and executed program as it relates to planning and scheduling of S&S self-assessments and Resolution of Findings for both external and internal S&S findings. The challenge for Sandia is to utilize this experience to transfer effective processes and greater responsibilities to the line organizations and improve their assurance

			activities for security thereby making the line organizations more accountable for security implementation. **Corrective Action Management Weaknesses**: 1. The on time completion rate in CATS is poor. 2. Sandia performed their Annual Laboratory Management System Assessment. The findings have not been captured in CATS and causal analysis has not been performed. 3. Prevention of incidents is tied to having effective corrective actions based on comprehensive causal analyses that include an analysis of human performance. The team found work remains to ensure line managers and employees are well-trained to oversee and support a more comprehensive and systematic causal analysis process. Key to the causal analysis process is also having well-qualified root cause analysts accomplish the causal analyses and the discipline to ensure that sound causal analysis techniques and oversight are applied with the same degree of rigor for incidents as is applied to findings. **Corrective Action Management Strengths**: The S&S Quality Review Board (QRB) was adapted for use at Sandia after a "comparison activity" at LLNL. This provides a forum for discussion and decision leading to a determination of findings, understanding of issues relevant to the findings and ownership for findings. Recent enhancements to the QRB now enable the Security Assurance Program to use the QRB to identify system issues by assessing the extent of conditions. There are opportunities to make greater use of the QRB within the S&S Program (e.g., review of deviations) and beyond Sandia's Security Organization perhaps by other policy areas and by line organizations.
10.2.3 Demonstrate continuous improvement of deployment and results of ILMS/CAS implementation based on assessment, issues management, and corrective action management.	Outstanding	Disagree Satisfactory	Sandia has responded to internal and external input to improve the deployment of ILMS. The degree of Sandia/CA ILMS implementation is behind Sandia/NM. Noted below are areas of weakness and strength. **Risk Management Weaknesses**: 1. The Policy and Division Risk matrices tend to be too general and there is no tie to lower Center level risk. 2. Risk matrices are fully developed in all business functional areas although the process for development / maintenance needs further maturation. **Risk Management Strengths**: Action by Sandia security leadership to establish the "Sandia Security Performance Improvement Project"

			with senior Sandia executive involvement demonstrates a commitment to improve security by Sandia. This project not only responds to concerns raised by DOE's Office of Enforcement but, as structured, relies on integrated (line and security support) teams to reduce security risks in selected areas using proven project management methodologies. **Issues Management Weaknesses**: 1. A consistent Corporate Issues Management roll-up process has not rolled down to all Sandia divisions. Therefore, many qualifying issues are not being raised to the Corporate level. 2. Not seeing concerns raised by NNSA and external sources, i.e., GAO, IG, etc. NNSA recognizes that Sandia is implementing a new software tool to aid in identification and linkage of critical issues. 3. The Assessment Team found little evidence that "Corporate Issue Criteria" has been applied to address and resolve a issue. Since the purpose of the Corporate Issues Management Process is to "proactively identify, analyze, and mitigate broad, cross-cutting, or high-impact weaknesses and prevent recurrence," it appeared to the Team that some of the significant issues qualified as corporate issues based on the criteria in the CPR. **Management Assurance Weaknesses**: 1. For the Management Assurance Corporate Process Requirement, meaningful performance measures were not developed in many areas until late in the year. In addition, these measures were not rolled up to corporate and transparent to NNSA. There is little to no evidence of tracking and trending of these performance measures. 2. A corporate lessons learned process has not been implemented in all organizations. 3. A corporate benchmarking process has not been implemented in all organizations. 4. Benchmarking/Comparative Analysis process should be formalized to ensure the results of the comparative analysis are properly documented and dispositioned. 5. High-level metrics that meet the intent of the CPR requirements are being maintained by Sandia and presented using ILMS on the ES&H dashboard. However, PEP process indicators focus on deliverables of what is being measured (assessment and surveillances completion, and timeliness of improvement actions) rather than the performance/quality of the deliverables. Moreover, the indicators may be expressed at too high of a level to benefit specific improvements for the EM program contractor assurance functions.

			6. Transparency continues to be an issue in the EM policy area. The level of information available through ILMS regarding the results of the implementation of CAS is still lacking. **Management Assurance Strengths**: 1. Some policy areas pursued robust benchmarking activity while working toward third party certification. Findings are evaluated and results documented. 2. A highly collaborative relationship and partnership between the NNSA and the Sandia Security Program Assurance Team is evident. Such an exemplary relationship provides opportunities for both NNSA and Sandia to support future Sandia initiatives to improve line management execution of their security responsibilities including security assurance activities. 3. The S&S program has a very mature analysis and trending process. Every quarter, metrics, assessments, performance tests, and other emerging trends are assessed and reported in the Quarterly Sandia S&S Data Analysis and Trending Report. Security Program leaders then meet to review these trends and identify corrective or follow-up actions. The process, if more effectively applied to the line's performance, can help the line organizations enhance assurance of their activities. 4. Sandia has improved transparency of ES&H operational information and assessments. Responsibilities and action completion have better documentation and is available for oversight review. Work file share systems are now available and most information is no longer restricted from NNSA oversight, LESA records have dramatically improved in the last six months. The threshold for entry of issues into the corporate database tracking system is so high that many issues are tracked at a department level using local database tracking systems. OFITS does not screen issues for potential Price Anderson Act Amendment (PAAA) noncompliance nor is formal periodic trending performed to evaluate for repetitive and recurring issues. Although not evaluated during this performance period, it is highly suspected that this weakness is not an individual isolated case. Moreover, even if individual departments were screening issues for potential PAAA noncompliance, there is no process to roll-up the potential noncompliant issues from the various local corrective action tracking systems to perform trending and evaluation for repetitive and recurring issues.

Performance Measure 10.3

Continue to regularly benchmark with industry to identify best commercial standards and best business practices that will improve site operations with the goal of improving performance where cost effective in accordance with contact Clause H-6 "Standards Management."

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
10.3.1 Provide SSO with the FY 2008 benchmarking schedule by November 15, 2007 and execute it	Good	Disagree Satisfactory	Sandia executed key benchmarking activities consistent with the benchmarking plan. However, the list of targeted areas cited in the Sandia PEAR are not related to identifying best commercial standards and best business practices that would improve site operations with the goal of improving performance where cost effective in accordance with contract Clause H-6. In this context, the term "standard" encompasses DOE Directives, DOE/NNSA requirements and mandates, and national and international consensus and generally accepted standards in accordance with NNSA policy. NNSA provided feedback to Sandia during the first three quarters JPC meetings that the Standards Management Plan was not being executed.
10.3.2 Develop proposals according to an institutionally established process for tailoring of standards to be used at the Laboratory using the jointly agreed upon NNSA process.	Good	Agree	Sandia provided evidence and justification that many elements of the NNSA Model Contract implemented by Sandia at the end of FY 2007 meet all the requirements of the DOE Order. These include contract Clause H-3, Contractor Assurance System, Contract Clauses H-5, Accountability, and contract Clause H-6, Standards Management.
10.3.3 Execute project plans to adopt approved industry standards in lieu of DOE practices.	Satisfactory	Agree	

Other Considerations

None

PERFORMANCE INCENTIVE 4 – Process Efficiency Transformation

Establish enduring SNL practices for assessing and achieving efficiency and effectiveness of Laboratory-wide processes that are comparable to world class performers in Sandia's peer group

Adjectival Rating
OUTSTANDING

Summary of Performance

Sandia continued to dual track process efficiency within the Laboratory for FY 2008. They implemented improvements that provided immediate, yet permanent, results while continuing to focus on a longer term strategy that reduced complexity, increased standardization and better aligned organizational execution for end-to-end workflow. Sandia's efforts yielded cost efficiencies that significantly exceeded the $13M target and demonstrated progress toward the institutionalizing of key business processes. An effort to better baseline definitions and processes while generating supporting documentation to validate savings and avoidances made progress but fell short in final FY 2008 procedural execution. Overall, Sandia significantly exceeded requirements in all but one target area. Even in this target, Sandia still exceeded requirements.

Significant Accomplishments

Sandia has again far exceeded the targeted $13M in FY 2008 cost savings and avoidance. Approximately half of this year's cost efficiencies came from supply chain processes that should continue to realize savings in future years. Additionally, Sandia devoted substantial effort to institutionalize efficiencies through implementation of the Realize Product Sub-system in Nuclear Weapons. The impact of this new process should have a trickle down effect across Sandia.

Opportunity for Improvement

The FY 2008 PI-4 objective was to establish enduring practices for assessing and achieving efficiency of Lab-wide processes comparable to world class performers. The 2006 Hackett benchmark defined opportunities for targeted improvement. While progress has been made and some process improvements implemented, Sandia has yet to establish a definitive path forward to address FY 2010 expectations associated with meeting these benchmarks.

Sandia needs to continue to work closely with government personnel to more clearly define qualifying cost savings/avoidance. While the validated, fiscal year's savings or avoidance was apparent and exceeded the performance target, a substantial amount of the claimed savings was not deemed acceptable. Acceptable savings for this measure are those that come from process improvements. Sandia claimed $34M in savings associated with procurement activities but did not differentiate between process improvements and normal procurement activities. Thus, savings are less than claimed in the PEAR.

Performance Measure 4.1			
Continue development of and institutionalize business practices for managing key Sandia end-to-end processes for sustained high-efficiency and effectiveness.			
Performance Target	**Sandia Self-Assessment Rating**	**NNSA Agreement**	**Comments**
4.1.1 Develop and institutionalize key Lab-wide end-to-end business and operational processes per an Enterprise Transformation-approved project plan.	Outstanding	Pass	
4.1.2 Provide SSO with a quarterly report that summarizes progress on the lab-wide end-to-end business and operational process plan implementation and the associated efficiencies.	Outstanding	Pass	

Performance Measure 4.2

Achieve SNL-wide business and operational efficiencies that annually offset the projected FY 2008 - FY 2012 standard labor rate cost increases that are caused by increased benefits costs.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.2.1 Sandia will identify to SSO and implement improvement initiatives that result in demonstrated lab-wide cost efficiencies that, at minimum, offset standard labor rate increases caused by benefit costs ($13M). By October 30, 2007, provide SSO with the FY 2008 projected cost savings and the project plan for achieving them. Provide quarterly reports to SSO summarizing progress on the plan.	Outstanding	Pass	Sandia implemented some excellent new processes that resulted in current year savings and future year cost avoidance. In addition, Sandia achieved efficiencies resulting in cost savings and both current and future cost avoidances. These efforts resulted in Sandia exceeding the performance target of $13M. However, the actual amount is less than the $69.6M reported in the PEAR. Sandia achieved efficiencies resulting in cost savings of $8.2M and current and future year cost avoidance of $24.4M. Sandia claimed $34M in savings associated with procurement contracting activities. NNSA disagrees with that assertion. Sandia identifies 14 different types of reportable savings from contracting efforts. The type of savings and dollar amount are recorded within each Procurement Action Summary document. However we determined that not all of the savings qualifies. There were saving "types" (such as the difference between original vendor proposal and final agreement) we deemed unacceptable for this measure. There was not sufficient detailed evidence to make a determination as to the actual amount of savings from the acceptable types. Thus, Sandia's cost savings, and current and future year cost avoidance is greater than the $32.6M NNSA validated, but appreciably less than the $69.6M claimed in the PEAR.
4.2.2 For Lab-wide Finance, Human Resources, Procurement, and Information Technology processes, as defined and measured by the 2006 Hackett benchmark, achieve the FY 2008 cost efficiencies required to achieve targeted improvement toward Sandia's peer group by FY 2010.	Outstanding	Pass	Sandia has made significant progress and in FY 2008 started to execute improvement plans based on the 2006 Hackett Benchmarks. Their activities centered on reducing complexity within and across the five Hackett-identified functional areas (Finance, IT, HR, Procurement, and Corporate Services). Sandia demonstrated physical process progress (reduced cycle time or resources) in all areas with financial progress in four of the five. They will need to springboard FY 2008 progress to meet all FY 2010 milestones.

4.2.3 Reduce actual cost from FY 2007 business meals, regardless of the funding source, by 20 percent to $1.3M.	Good	Pass	

Other Considerations

None

PERFORMANCE INCENTIVE 5 - NA-10 Multi-Site

NA-10 Multi-Site.	
	Adjectival Rating OUTSTANDING

Summary of Performance

Sandia had leadership responsibilities for two of the Multi-Site performance targets in FY 2008: Performance Target 5.9 [Implement Elements from FY 2007 developed Multi-Site Enterprise Information Technology (IT) Plan] and Performance Target 5.10 [Implement Requirements Modernization Initiative (RMI) Phase II Implementation]. Sandia's leadership resulted in outstanding performance in fulfillment of both performance targets. In two other cases – Performance Target 5.12 [Build six New W88 Pits and Install Equipment in FY2008 to increase pit capacity to 80 pits per year by the operational date of a Chemistry and Metallurgy Research-Replacement (CMRR)-Nuclear facility], and Performance Target 5.13 (Reduce Uncertainty in Warhead Performance) – Sandia did not play a role in meeting the performance target. In each of the other ten performance targets, Sandia contributed significantly to the Complex's response to the performance target expectation, and exercised leadership in many instances, as illustrated in the below performance target summaries.

Sandia participated with other sites in the Complex to meet the challenges presented in the FY 2008 Multi-Site Performance Incentive. As reflected below, Sandia's performance in this regard was outstanding. This performance resulted in significant and noteworthy work being accomplished on the B61-7/11, the W76-1, the W76, the W78 and the W88. Sandia's efforts enabled dismantlement of the B53 as well. Sandia supported NWC infrastructure improvements including supply chain management, information technology management, and requirements update and clarification. Sandia contributions enabled NWC capability enhancements, both in high performance computing and in Pantex operations. Sandia provided support for Complex Transformation activities and accomplished disposition of certain categories of Special Nuclear Material (SNM).

Significant Accomplishments

- Sandia completed Level II Milestone #2725 for qualification tests with the alternate material, to issue qualification test reports, and to complete peer review of analysis on the impacts of the alternate material to Sandia components in support of the W76-1 LEP CSA FPU.
- Sandia supported and successfully completed the Engineering Evaluation (EE) activities at Pantex (PX) and released the required Qualification Engineering Release (QER) necessary to authorize rebuild work to meet program control document (PCD) requirements at PX.
- Sandia supported Contractor Readiness Assessment and findings resolution from the NNSA's Readiness Assessment (RA) and provided weapon response for completion of the SS-21 Bay Hazard Analysis Report (HAR) submitted by the W88 SS-21 PT.
- The Responsive Neutron Generator (NG) Center completed all FY 2008 Directive Schedule requirements to a 100 percent on-time delivery level. Sandia made the following neutron

generator shipments supporting Directive Schedules: W76--224 units in 21 shipments, W78--148 units in 19 shipments, UK--14 units in three shipments.

- Sandia and Kansas City co-led the Information Technology (IT) Multi-site team and met all milestones for the strategic focus areas. The governance team, led by Sandia, developed a governance framework with processes, standard templates, scoring methods, and governance-specific entities.
- For the RMI Phase II implementation, Product Definition and Configuration (PDC), Technology Maturation, and Integrated Phase Gates (IPG), all processes were delivered and are in draft form awaiting final review and approval.
- Sandia completed its final shipment of SNM discrete Security Category I and II materials to Nevada Test Site Device Assembly Facility (NTS/DAF) in February 2008. Sandia was no longer an "SNM Sec-Cat I/II possessing" site.

Opportunity for Improvement

None

Performance Measure 5.1

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.1.1 Down-select W76 Life Extension Program (LEP) Canned Sub-Assembly (CSA) material.	Outstanding	Pass	Sandia completed all requirements in support of the September 30, 2008, FPU including the Independent Laboratory Peer Review Response and Close Out Report, the draft Major Assembly Release (MAR), and the preparations for the Design Review and Acceptance Group (DRAAG). Sandia completed Level II Milestone #2725 for qualification tests with the alternate material, to issue qualification test reports, and to complete peer review of analysis on the impacts of the alternate material to Sandia components. Support of the JT4A-2D included the mechanical test series and report and the mass properties testing and report.
5.1.2 Deliver *861-7/11* LEP Quantities to DoD On Time per P&PD.	Outstanding	Pass	Sandia supported and successfully completed the Engineering Evaluation (EE) activities at Pantex (PX) and released the required QER necessary to authorize rebuild work to meet PCD requirements at PX. The first B61-11 rebuild was completed and delivered in May 2008. Sandia supported the PCD rebuild requirements at PX, which include incorporation of alterations (ALTs) 357/358 for the mod-7 and ALTs 357/359 for the mod-11. Sandia continues to provide ongoing engineering support as Pantex executes against ALT357 B61-7/11 LEP PCD requirements.

5.1.3 Approve W88 S5-21 HAR	Outstanding	Pass	Sandia supported the W88 Bay Engineering/ Evaluation Process verification tryout and readiness verification through a very tight schedule. Sandia supported Contractor Readiness Assessment (CRA) and findings resolution from the NNSA's RA. Sandia supported the SS-21 Nuclear Explosive Safety Study (NESS) in-briefs and ensured demonstrations and deliberations were completed on schedule. Sandia provided weapon response for completion of the SS-21 Bay Hazard Analysis Report (HAR) submitted by the W88 SS-21 PT.
5.1.4 Complete Complex 2030 NEPA Process by AUG08.	Outstanding	Pass	Sandia coordinated internally and externally with Subject Matter Experts (SMEs) to develop and deliver high quality input to the Supplemental Programmatic Environmental Impact Statement (SPEIS) process on or ahead of schedule. The SMEs delivered this input to NNSA points of contact as formal and detailed descriptions through the Sandia Complex Transformation Site champion. Sandia supported the development of the Preferred Alternative and Independent Business Case analysis processes, Integrated Transformation Planning and associated red teams. Sandia fully supported and participated in SPEIS public meetings in communities of interest to Sandia such as: Tonopah, NV; Las Vegas, NV; Socorro, NM; Albuquerque, NM; Tracy, CA; and Livermore, CA. Sandia fully participated in the Accelerated Complex Transformation (ACT) initiative led by the NWC Integration Council, collaborating with other NNSA sites to improve systems, business practices and integration across the complex.
5.1.5 Match 2007 Dismantlements	Outstanding	Pass	Sandia provided weapon systems engineering support to Pantex to keep the dismantlement lines operating. Pantex dismantlements exceeded 2007 numbers and met directive schedule commitments. Sandia, working as part of the multi-site B53 SS-21 Project Team (PT), defined the B53 SS21 dismantlement process. Ninety-five percent of the Pantex production tooling was designed, fabricated, and demonstrated using B53 trainers in Sandia's Building 809 facility. The B53 SS-21 dismantlement process is on track to meet an October 2009 authorization as defined in the approved B53 SS-21 Project Plan maintained by Pantex. Weapon response technical issues at Lawrence Livermore National Laboratories delayed the W84 SS-21 Baseline Schedule and Project Execution plan. The approved SS-21 project plan and schedule were released in June and are maintained by Pantex. The initial and conceptual walk downs of the baseline disassembly are complete per the SS-21 Project Plan. Sandia's Component Characterization for Disposition (CCD) team completed characterization of over 10,700 parts, including all Enduring Stockpile components identified in Stockpile Dismantlement

			Database (SDDB) to date. Sandia completed disposition of B/W53 trainers and trainer components in 2008 at the DoD storage location.
5.1.6 Deliver Products for DoD On Time Per P&PD	Outstanding	Pass	The Responsive Neutron Generator (NG) Center completed all FY 2008 Directive Schedule requirements to a 100 percent on-time delivery level. Sandia made the following NG shipments supporting Directive Schedules: W76--224 units in 21 shipments, W78--148 units in 19 shipments, UK--14 units in three shipments. Improvements accomplished during FY 2008 include reduction of NG span time from 171 days to 114 days, 56 percent reduction in errors detected at quality assurance inspection procedures (QAIP), and 100 percent first time acceptance by NNSA. During FY 2008 the NG Center took on three new mission assignments while decreasing the cost by approximately 8 percent. Sandia completed 11,441 Components (44 Lots) in FY 2008, delivering 80 percent of requirements at least two months early and the remaining 20 percent line-to-line (per negotiated schedule with NNSA and the next user).
5.1.7 Implement a NNSA Supply Chain Management Center (SCMC).	Outstanding	Pass	Sandia participated on three commodity teams: Staff Augmentation, Electrical Supplies, and Lab Supplies/Equipment. All three teams that Sandia is participating on submitted the sourcing strategy by the fiscal year end per the multisite criteria. The sites executed approximately $179M that far exceeded the goal of $80M of Procurement-spend through e-sourcing. In support of this effort, Sandia performed eight reverse auctions with spend totaling $25.6M and $5.7M in savings. Sandia has a representative on the Integrated Contractor Purchasing Team (ICPT) Steering Committee who has been actively engaged in the ICPT efforts to complete strategic sourcing agreements.
5.1.8 Implement Gas Sampling Activities using Powerless Pump Module.	Outstanding	Pass	Sandia provided Pantex with design requirements for leak rates and the desired range of accurate frost point measurement. The first Powerfree Pump Module (PPM) implementation was qualified for use on February 21, 2008, and met the Pantex March 2008 need date.
5.1.9 Implement Elements From FY 2007 developed Multi-Site Enterprise IT Plan.	Outstanding	Pass	Sandia and Kansas City co-led the Information Technology (IT) Multi-site team with representatives from all eight NWC sites aligned with three programmatically funded elements to: 1. Deploy Product Data Management (PDM) pilots; 2. Develop As-Is, and To-Be enterprise architecture; and 3. Ensure Enterprise Secure Network (ESN) services are accredited at all sites. The leads provided support and involvement to ensure that the PDM pilots, architecture definition, and ESN projects reached their milestones. As per the FY 2008 strategic plan, the team addressed four strategic areas: 1. Leadership and Governance,

			2. Interoperability & Information Sharing, 3. Strategic Acquisitions, and 4. Improved Cyber Security Practices & Infrastructure. All milestones for the strategic focus areas were met. The governance team, led by Sandia, developed a governance framework with processes, standard templates, scoring methods, and governance-specific entities. The Information Sharing team established a process using a collaborative **wiki** (a website that allows users to add and update content on the site using their own web browser) to facilitate sharing of IT and Cyber Security knowledge across the NWC. Sandia was a key contributor to this team. The purpose of the Strategic Acquisitions strategy is to identify opportunities to leverage complex-wide procurements for IT products and services, identify standardization opportunities, reduce total complex-wide cost of ownership, and consolidate site IT spending with partnering suppliers. The initiative included leveraging the Enterprise Wide Agreement team activity to address complex-wide licensing needs. The Cyber Security strategic area addressed the issue of Need to Know (NTK) across the complex. The project brought together NNSA and M&O leaders to develop consistent business practices for making NTK decisions about access to weapons program data in a way that understands risks and maintains security. The PRIDE Executive team sponsored a widely attended NTK business practices workshop for the complex. With input from the workshop, the team developed a NTK to-be action plan (WFS762550) and milestones for FY 2009. The multi-site team also developed a mobile devices protection policy, which was approved and implemented by all eight sites.
5.1.10 Implement Requirements Modernization Initiative (RMI) Phase II implementation.	Outstanding	Pass	For PDC, Technology Maturation, and IPG, all processes were delivered and are in draft form awaiting final review and approval. The Sandia support for tools (e.g., Sharepoint, PRP Online, Explorer, and RMI website) was outstanding. The IT personnel went above and beyond in supporting mission needs, facilitating the success that the complex achieved. The core team released Gates A, B, C, D, E, and F task lists into the RMI Explorer PPI Site under Document Explorer, Core Mission, Weapons Acquisition Life Cycle, and released the Technology Readiness Level (TRL) and Manufacturing Readiness Level (MRL) Assessment Criteria onto the RMI PPI site under Document Explorer, Technology Assessment. These releases successfully completed Level II milestone 2778.
5.1.11 Implement Advanced Simulation and Computing (ASC) Tri-Lab Productivity	Outstanding	Pass	The ASC TriLab TriPoD operating environment software was successfully installed, tested, and verified by all three laboratories on the common Tri-Lab Linux Capacity Cluster (TLCC) hardware delivered to each site in FY 2008. Sandia team

on Demand (TriPoD) Initiative by 30SEP08			members accomplished the testing and integration of the TriPoD software environment while simultaneously managing a major repair effort required due to a manufacturing defect in the TLCC equipment which was not discovered until the system was delivered, installed and undergoing test at Sandia. The Sandia team discovered and identified the error condition and worked with LLNL and LANL to verify the presence of the problem on all TLCC hardware.
5.1.12 Build six New W88 Pits & Install Equipment in FY 2008 to increase pit capacity to 80 pits per year by the operational date of a CMRR-Nuclear facility.	N/A	N/A	Sandia was not a participating site in this target.
5.1.13 Reduce Uncertainty in Warhead Performance.	N/A	N/A	Sandia was not a participating site in this target.
5.1.14 Remove 11 metric tons of SNM From NNSA Sites by 30SEP08.	Outstanding	Pass	Sandia completed its final shipment of SNM discrete Security Category I and II materials to Nevada Test Site Device Assembly Facility (NTS/DAF) in February 2008. Sandia was no longer an "SNM Sec-Cat I/II possessing" site. While the site-wide SNM inventory will continue to roll up to Security Category II, it will be protected by Security Category III measures. The SNM de-inventory project is now closed except for a low level ongoing effort to maintain and support Sandia's storage presence at the Nevada Test Site Device Assembly Facility.

Other Considerations

None

AWARD TERM INCENTIVE 1 - PARENT CONTRIBUTIONS AND SANDIA REACHBACK.

The Parent Organization provides measurable contribution to improve performance and Site management and Sandia effectively reaches back to the Parent Organization for support.

Adjectival Rating
PASS

Summary of Performance

Sandia met NNSA's Award Term-1 Parent Contributions and Sandia Reachback performance objective expectations for the parent to provide measurable contribution to improve performance and site management and Sandia effectively reached back to the Parent Organization for support.

Significant Accomplishments

Sandia demonstrated significant accomplishment in reachback to the parent. Notable areas included the Board of Directors, Executive Recruiting, Independent Assessments and Audits, Management Review, Strategic Management Unit Support and Technical Support. LMC demonstrated significant accomplishment in contribution to Sandia improved performance. Notable areas included the Board of Directors, numerous Policy Areas that include Environment, Safety and Health (ES&H), Facilities, Finance, Human Resources, Laboratory Management, Safeguards & Security, Supply Chain Management, and Technology Maturation.

Opportunity for Improvement

None

Performance Measure 1.1

Demonstrate parent contributions which improve contractor performance and site management.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.1.1 Sandia shall provide quarterly reports that describe the measurable contributions of the corporate parent to improving site management and performance.	Outstanding	Pass	Sandia's efforts that focused on formalizing and institutionalizing the Parent Contributions and Sandia Reachback process by involving Lockheed Martin Corporation expertise in governance processes, proactive communication with NNSA, support of Sandia executive management, and inclusion of the Governance Committee are considered exemplary.

1.1.2 Sandia shall provide quarterly reports as to how it is using its parent corporation's private-sector expertise to improve contractor performance.	Outstanding	Pass	Sandia's efforts that focused on formalizing and institutionalizing the Parent Contributions and Sandia Reachback process by involving Lockheed Martin Corporation expertise in governance processes, proactive communication with NNSA, support of Sandia executive management, and inclusion of the Governance Committee are considered exemplary.

Other Considerations

None

AWARD TERM INCENTIVE 2 – Litigation Management

Sandia effectively and efficiently manages its litigation.

Adjectival Rating
PASS

Summary of Performance

Sandia has made significant progress in developing corporate strategies for the prevention and mitigation of legal risks that increase the likelihood of litigation. Sandia's performance merits a "pass" on this Award Term Incentive.

Significant Accomplishments

Significant accomplishments include: (1) Negotiated and obtained NNSA/SSO Site Counsel approval of the Legal Management Plan per 10 C.F.R. Part 719 and Clause I-91, DEAR 970.5228-1 Insurance—Litigation and Claims (Mar 2002) (Deviation); (2) Developed and implemented a rigorous litigation lessons-learned process; (3) Established a formal mechanism for communication of legal risk mitigation measures and recommendations to Sandia management, including training and briefing on litigation lessons-learned and prevention/mitigation of legal risk; (4) Recommended revisions to selected Sandia policies to mitigate inherent legal risk.

Opportunity for Improvement

Sandia will continue to face significant challenges in defending employment litigation. The likelihood of rising outside counsel costs and settlement costs will require more attentive, effective litigation management by the Sandia Legal Division. The Legal Division should conduct annual self-audits for compliance with the Legal Management Plan, 10 C.F.R. Part 719, Clause I-91 of the Contract, and any other applicable requirements. The timing of such self-audits should be coordinated with the Site Counsel to occur prior to the annual NNSA/SSO litigation management audit to support continued "streamlined litigation management", as approved by DOE/Office of the General Counsel. Future benchmarking should focus on comparing Sandia's litigation management processes, including identification of litigation risk and prevention, with comparable business entities, and not be limited to a comparison of size of the legal organization and total (in-house and outside counsel) legal costs.

Performance Measure 2.1

Sandia manages its litigation in accordance with Clause I-91, Insurance--Litigation and Claims, DEAR 970.5228-1, (MARCH 2002); 10 C.F.R. Part 719; and the SSO-approved Sandia Corporation Legal Management Plan, as modified from time to time, in order to ensure that the conduct of litigation serves broader NNSA and Sandia interests.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.1.1 Sandia proactively identifies and implements "lessons learned" from litigation outcomes.	Outstanding	Pass	The Sandia Legal Division developed and implemented a litigation lessons-learned process to ensure the rigorous review of all litigation cases at their conclusion. The purpose of the process is not only to evaluate the Legal Division's management of the litigation itself, but, moreover, (1) to identify underlying causes, e.g., Sandia policies, management practices, external factors, and the like, that may have contributed to the litigation, (2) facilitate the development of effective legal risk mitigation measures, and (3) establish a formal mechanism for effective communication of such measures and legal recommendations to Sandia management. The Legal Division appropriately collaborated with NNSA/SSO Site Counsel in development of the process and solicited feedback re: mitigation measures and recommendations. First year experience with the process suggests it has added considerable value by (1) heightening management awareness of the significant legal risk inherent in certain Sandia policies and practices, (2) underscoring the importance of communication between Sandia management and the Legal Division, (3) educating Sandia management on the current litigation environment in New Mexico, and (4) illustrating the need for management decision making informed by legal advice and counsel. NNSA/SSO expects the process will produce long-term benefits by reducing the number of litigation cases filed against Sandia and reducing legal costs.
2.1.2 Sandia demonstrates effective strategies for prevention and mitigation of litigation risk.	Outstanding	Pass	The Sandia Legal Division made significant contributions to Sandia's leadership and managerial training program by providing briefings and training to address specific concerns identified by the litigation lessons learned process. The Sandia Legal Division collaborated on an internal review of the Entrepreneurial Separation to Transfer Technology (ESTT) program that led to a revised corporate policy requiring more robust conflict of interest mitigation.
2.1.3 Sandia shall benchmark its litigation management processes against industry standards	Outstanding	Pass	The Sandia General Counsel and the NNSA/SSO Site Counsel negotiated and signed a Legal Management Plan that (1) meets or exceeds the minimum requirements of 10 C.F.R. Part 719, (2) addresses areas of special interest to NNSA, (2)

to demonstrate effective and efficient stewardship of litigation activities and funds.			emphasizes acknowledgement of Sandia's duty to support and further the best interests of the government, inherent in Sandia National Laboratories' status as a Federally Funded Research and Development Center (FFRDC), and (3) sets forth legal management best practices that, if achieved, will set Sandia apart from its peers in the NNSA Complex. Sandia's benchmarking activities suggest that the Sandia Legal Division is smaller and operates at a lower cost than comparable corporate entities, but further analysis appears to be warranted. Future benchmarking should focus on comparing Sandia's litigation management processes, including identification of litigation risk and prevention, with comparable business entities, and not be limited to a comparison of size of the legal organization and total (in-house and outside counsel) legal costs.

Other Considerations

None

AWARD TERM INCENTIVE 3 – Systems Integration Technical Support

Provide systems integration technical support to Federal Program Managers within Defense Programs for: (1) planning, organization and management of weapon and stockpile activities to include Life Extension Programs, stockpile analyses, new programs and on-going stockpile surveillance; (2) the maintenance and improvement of federally-directed requirements processes; and (3) other tasks as requested by the program managers to include independent research and analysis, tradeoff studies, cost analyses, and systems analyses. As requested by Federal program managers and agreed upon with the Principal Assistant Deputy Administer for Operations at NNSA, provide planning, research, analyses and studies, as well as integrated schedule management, products and other systems engineering and integration activities as required.

Adjectival Rating
PASS

Summary of Performance

Overall, Systems Integration Technical Support (SITS) provided outstanding support to the Defense Programs Federal Program Managers.

Significant Accomplishments

- SITS did an outstanding job in facilitating discussions to determine technical drivers for weapon refurbishments, and the appropriate programmatic response.
- SITS outstanding support to the Complex Transformation Supplemental Environmental Impact Statement was a significant contribution to the Complex Transformation initiative.

Opportunity for Improvement

None

Performance Measure 3.1

Demonstrate that Systems Integration Technical Support (SITS) is improving the integration of the complex through meaningful initiatives and excellent deliverables.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.1.1 Establish and collect metrics to represent progress integrating the Nuclear Weapons Complex.	Outstanding	Pass	

Performance Measure 3.2

Assist Federal Staff in Decision Making.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.2.1 Complete FY 2008 planned activities (including planned requirements and functional analysis) in support of Complex Transformation activities.	Outstanding	Pass	SITS provided excellent support to the Complex Transformation Supplemental Environmental Impact Statement preparation and completion of business cases to support development of preferred alternatives. They made a significant difference in advancing the objectives of Complex Transformation.
3.2.2 Complete NA-11 Science & Technology Roadmapping.	Outstanding	Pass	
3.2.3 Complete analyses deemed useful by NA-10, i.e., improve the "impact" of work performed by SITS.	Outstanding	Pass	SITS support to the stockpile transformation planning effort was outstanding, as well as their support to the Nuclear Transformation Working Group (NTWG) and Transformation Coordinating Committee (TCC). They were very timely with their inputs, consistently being proactive in their support, and always willing to support last minute tasks.

Performance Measure 3.3

Assist Federal staff in Program Integration.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.3.1 Assist Federal staff in development of integrated program plans and implementation	Outstanding	Pass	SITS provided outstanding support in this area. They were very helpful in facilitating discussions to determine technical drivers for weapon refurbishments, and the appropriate programmatic response. Additionally, they were very helpful in

plans for Campaigns, DSW, and RTBF.			Green Book and Strategic Framework development.

Performance Measure 3.4

Assist Federal staff in project integration.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.4.1 Successfully lead and complete planned activities for the integration effort associated with "Transformation of the Nuclear Weapons Complex" (also referred to as the blue-bar/green-bar activity) per the NA-10 approved Management Plan. Activities include: establishing the current view of transformation; integrating the Preferred Alternative into existing NA-10 program planning; developing an integrated Resource-Loaded Logic and Schedule; and documenting the performance baseline for transformation.	Outstanding	Pass	Sandia support to transformation activities has been outstanding.

Performance Measure 3.5

Assist NNSA in Creating a Systems-Engineering based approach.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.5.1 Share Quality Management transformation activities and products from	Outstanding	Pass	The RMI Program Office managed through Sandia within organization 00522 did an outstanding job providing the project management support to the project, the content writers to the sub team leads, the development and release of the RMI Portal Explorer

within Sandia to Requirements Modernization & Implementation (RMI) and the rest of the complex.			and logistics and meeting support.
3.5.2 Implement program and systems engineering rigor in establishing management systems and operations protocol for SITS, e.g., lead by example.	Outstanding	Pass	

AWARD TERM INCENTIVE 4 – Complex Transformation Implementation Activities.

Participate and ensure support for implementation of the Complex Transformation measures at SNL. In addition, facilitate communication and contractor support for overall Complex Transformation integrating activities to develop efficient business practices and systems integration processes across the Complex.

Adjectival Rating
PASS

Summary of Performance

Overall, Sandia did excellent work in this area, providing outstanding support in the Complex Transformation activities, Requirements Modernization and Integration (RMI) project and the National Work Breakdown Structure (NWBS) in particular.

Significant Accomplishments

See AT3 above.

Opportunity for Improvement

See AT3 above.

Performance Measure 4.1

Demonstrate leadership and support for Complex Transformation implementation progress measures

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.1.1 Fully participate in Complex Transformation activities that support implementation of the Transformation Strategy Implementation Plan and the progress measures.	Outstanding	Pass	Sandia support to transformation activities included active participation in the development of the Supplemental Programmatic Environmental Impact Statement (SPEIS) and in the review of the SPEIS after the draft was published. Sandia also effectively collaborated with other sites in the Accelerated Complex Transformation initiative.

4.1.2 Develop and implement efficient business practices and systems integration processes across the Complex.	Outstanding	Pass	Sandia has done an outstanding job in supporting the RMI project, including excellent work in leading several sub-teams.
4.1.3 Sandia shall fully participate in and provide input to a collection of planned efforts to achieve improved operations of the NWC. Activities will include but not be limited to development of: (1) a National Work Breakdown Structure; (2) a common approach to cost estimation; (3) a complex-wide master integrated schedule process; (4) a complex-wide risk assessment methodology and management plan; (5) a responsive infrastructure assessment process; and (6) a common information system for planning, budgeting, cost collection, and performance measurement.	Outstanding	Pass	Sandia provided outstanding support of the National Work Breakdown Structure (NWBS) activities and was the first site surveyed for the NWBS effort.

Other Considerations

None

ACRONYM LIST

ACREM	Accountable Classified Removable Electronic Media
ACRRF	Annular Core Research Reactor Facility
AF&F	Arming Fuzing and Firing
ALTs	Alterations
AOP	Annual Operating Plan
AP	Additional Protocol
ASC	Advanced Scientific Computing
ASIC	Application Specific Integrated Circuits
ATI	Award Term Incentive
CA	California
CAC	Corrective Action Complete
CAP	Corrective Action Plan
CAS	Contractor Assurance System
CASA	Common Adaptable System Architecture
CAT	Consequence Assessment Team
CATS	Corrective Action Tracking System
CBP	Customs and Border Protection
CD	Critical Decision
CDM	Concurrent Design and Manufacturing
CDM	Customer Delivery Metrics
CDNS	Chief of Defense of Nuclear Safety
CERT	Citizens Emergency Response Team
CFO	Chief Financial Officer
CFPP	Corporate Fire Protection Program
CHR	Contractor Human Resources
CI	Counterintelligence
CIN	Center for Integrated Nanotechnologies
CIP	Compensation Increase Plan
CIS	Computer and Information Sciences
CMC	Cooperative Monitoring Center
CME	Component and Material Evaluation
CMRR	Chemistry and Metallurgy Research-Replacement
CMS	Code Management System
CPI	Cost Performance Index
CPR	Corporate Process Requirement
CRADA	Cooperative Research and Development Agreement
CSA	Canned Sub-Assembly
DART	Days Away and Restricted Duty Case Rate
DBT	Design Basis Threat
DHS	Department of Homeland Security
DM	Deferred Maintenance
DNDO	Domestic Nuclear Defense Organization
DNN	Defense Nuclear Nonproliferation
DNFSB	Defense Nuclear Facilities Safety Board
DoD	Department of Defense
DOE	Department of Energy
DOI	Direct Optical Initiation
DP	Defense Program
DSP	Doctoral Studies Program
DSW	Directed Stockpile Work
EE	Engineering Evaluation
EMP	Emergency Management Program
EMS	Environmental Management System
EPI	Emergency Public Information
EOC	Emergency Operations Center

EPHA	Emergency Preparedness Hazard Assessment
ERO	Emergency Response Organization
ERP	External Review Panel
ES&H	Environment, Safety, and Health
ESCO	Energy Service Company
ESN	Enterprise Secure Network
ESTT	Entrepreneurial Separation to Transfer Technology
ETP	Enterprise Transformation Plan
FBI	Federal Bureau of Investigations
FCI	Facility Condition Index
FE	Office of Fossil Energy
FEU	Fresh Enriched Uranium Oxide
FFRDC	Federally Funded Research and Development Center
FIRP	Facilities Infrastructure Replacement Program
FPU	First Production Unit
FSU	Former Soviet Union
FY	Fiscal Year
GBD	Global Burst Detector
GIPP	Global Initiatives for Proliferation Prevention
GNEP	Global Nuclear Energy Partnership
GPP	General Plant Project
GSF	Gross Square Footage
GTS	Gas Transfer System
HAR	Hazard Analysis Report
HC	Hazard Category
HERMES	High Energy Radiation Megavolt Electron Source
HEU	Highly Enriched Uranium
HQ	Headquarters
HR	Human Resources
HSM	Heating System Modernization
IC	Incident Commander
ICF	Inertial Confinement Fusion
ICPT	Integrated Contractor Purchasing Team
IFSB	Industrial Facility Safety Basis
ILMS	Integrated Laboratory Management System
IMQIP	Issues Management and Quality Improvement Process
IPG	Integrated Phase Gates
ISMS	Integrated Safety Management System
ISO	International Organization for Standardization
IT	Information Technology
JIC	Joint Information Center
JNSS	Joint Nuclear Surety Study
JPC	Joint Performance Council
JPRT	Joint Performance Review Team
JTA	Joint Test Assembly
KAFB	Kirtland Air Force Base
KB	Knowledge Base
KCP	Kansas City Plant
LANL	Los Alamos National Laboratory
LEP	Life Extension Program
LESA	Laboratory Enterprise Self Assessment
LLCE	Limited Life Component Extensions
LLNL	Lawrence Livermore National Laboratory
LNG	Liquid Natural Gas
LNO	Logistics Nuclear Operation
LTES	Long-Term Environmental Stewardship
LTS	Long-Term Stewardship
MAEC	Mangyshlak Atomic Energy Complex
MC	Mission Critical
MD	Mission Dependent
MESA	Microsystems and Engineering Sciences Applications
MNF	Manzano Nuclear Facility

MS&TSC	Manufacturing Science & Technologies Service Center
NAPS	NNSA Policy Letters
NDA	Nondestructive Assay
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NG	Neutron Generator
NHI	Nuclear Hydrogen Initiative
NMSF	Nuclear Materials Storage Facility
NNSA	National Nuclear Security Administration
NOTE	Non-Occurrence Trackable Event
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
NTK	Need to Know
NWBS	National Work Breakdown Structure
NWC	Nuclear Weapons Complex
OCL	Obligation Control Level
OCRWM	Office of Civilian Radioactive Waste Management
OEA	Occupational Exposure Assessment
OFFM	Office of Field Financial Management
OFI	Opportunities for Improvement
OFITS	Opportunities for Improvement Tracking System
OIO	Office of Independent Oversight
OM	Objectives Matrix
OST	Office of Secure Transportation
P&PD	Production & Planning Directive
PA	Performance Assessment
PA	Protective Actions
PAAA	Price Anderson Act Amendment
PCD	Program Control Document
PDC	Product Definition and Configuration
PDM	Product Data Management
PEAR	Performance Evaluation and Assurance Report
PEP	Performance Evaluation Plan
PER	Performance Evaluation Report
PERT	Procurement Evaluation and Re-engineering Team
PI	Performance Incentive
PM	Program Manager
PO	Performance Objective
PREP	Preliminary Real Estate Plan
PRT	Product Realization Team
PX	Pantex
QASPR	Qualification Alternatives for the Sandia Pulsed Reactor
QE	Qualification Evaluation
	Qualification Engineering Release
QMU	Quantity, Margins, and Uncertainties
QRB	Quality Review Board
RA	Readiness Assessment
R&D	Research & Development
RBOP	Risk Based Oversight Procedure
RDD	Radiological Dispersal Device
RMI	Requirements Modernization Initiative
RPPs	Realize Product Procedures
RRW	Reliable Replacement Warhead
RTBF	Readiness in Technical Base and Facilities
S&S	Safeguards and Security
S&T	Science and Technology

SAGSAT	Strategic Advisory Group Stockpile Assessment Team
SAR	Synthetic Aperture Radar
SARB	Sandia Assurance Review Board
SB	Safety Basis
SCMC	Supply Chain Management Center
SFI	Significant Finding Investigation
SITS	Safety Incident Tracking System
SITS	System Integration Technical Support
SLD	Second Line of Defense
SNL	Sandia National Laboratories
SNL/LL	Sandia Corporation Lead Laboratory
SME	Subject Matter Expert
SNM	Special Nuclear Material
SPEIS	Supplemental Programmatic Environmental Impact Statement
SPI	Schedule Performance Index
SPR	Strategic Petroleum Reserve
SQMS	Supplier Quality Management System
SRM	Spin Rocket Motor
SSO	Sandia Site Office
SSRP	Security Systems Replacement Project
STS	Stockpile-to-Target Sequence
STAT	Security Tactical Assurance Team
TCR	Test Capabilities Revitalization
TEMPs	Testing and Evaluation Master Plans
TLCC	Tri-Lab Linux Capacity Cluster
TP	Technology Partnerships
TRCR	Total Recordable Case Rate
TRU	Transuranic
TSPA	Total System Performance Assessment
TSR	Technical Safety Requirements
TTR	Tonopah Test Range
TYSP	Ten Year Site Plan
UMC	Unneeded Materials and Chemicals
USI	Unreviewed Safety Issue
USQ	Unreviewed Safety Question
VNIITF	All Russia Scientific Research Institute of Technical Physics
WETL	Weapons Evaluation Test Laboratory
WFO	Work For Others
WIF	Weapons Integration Facility
WIPP	Waste Isolation Pilot Plant
WPC	Work Planning and Control
WQAP	Weapons Quality Assurance Plan
WSSX	Warhead Safety and Security Exchange
YMP	Yucca Mountain Project