



NATIONAL NUCLEAR SECURITY ADMINISTRATION

Fiscal Year 2007

PERFORMANCE EVALUATION REPORT

OF

SANDIA CORPORATION

For the Management and Operation of

SANDIA NATIONAL LABORATORIES

Contract No. DE-AC04-94-AL85000

December 4, 2007

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

EXECUTIVE SUMMARY	2
SCORING OF FY2007 PERFORMANCE.....	11
PERFORMANCE OBJECTIVE 1 - DEFENSE PROGRAMS	13
PERFORMANCE OBJECTIVE 2 – DEFENSE PROGRAMS	18
PERFORMANCE OBJECTIVE 3 – DEFENSE PROGRAMS	22
PERFORMANCE OBJECTIVE 4 – DEFENSE PROGRAMS	27
PERFORMANCE OBJECTIVE 5 – SCIENCE & TECHNOLOGY.....	30
PERFORMANCE OBJECTIVE 6 – DEFENSE NUCLEAR NON-PROLIFERATION (NA-20)	49
PERFORMANCE OBJECTIVE 7 – CONTRACTOR ASSURANCE SYSTEM.....	61
PERFORMANCE OBJECTIVE 8 – BUSINESS AND OPERATIONAL SUPPORT.....	65
PERFORMANCE OBJECTIVE 9 – COUNTERINTELLIGENCE	103
PERFORMANCE INCENTIVE 1 – MULTI-SITE PERFORMANCE INCENTIVE.....	107
PERFORMANCE INCENTIVE 2 – NUCLEAR WEAPONS.....	113
PERFORMANCE INCENTIVE 3 - PROCESS EFFICIENCY TRANSFORMATION	122
PERFORMANCE INCENTIVE 4 – EMERGENCY MANAGEMENT	125
PERFORMANCE INCENTIVE 5 – DISPOSE NUCLEAR MATERIAL.....	133
AWARD TERM INCENTIVE 1 - PARENT CONTRIBUTIONS AND SANDIA REACHBACK.	137
AWARD TERM INCENTIVE 2 – STRATEGIC RELATIONSHIPS	139
AWARD TERM INCENTIVE 3 – COMPLETE FOUR PILOT PROJECTS AND THE REMAINING SSO/SNL RETREAT PROJECTS.....	142
ACRONYM LIST.....	147

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) 2007 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 FY2007 Performance*, which delineates the adjectival ratings and scores 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 completed all scheduled deliveries under their responsibility to support the First Production Unit (FPU) in the W76 Life Extension Program (LEP) and B61 Alt 357 Programs. Sandia also assisted NNSA in achieving several of the NA-10 "Getting the Job Done" milestones, as evidenced by completing 162 out of 163 Level II milestones for POs 1-4. Sandia made commendable progress in Complex Transformation and Integration initiatives, including removal of several categories of Special Nuclear Material. Weapons Quality will need continuous improvement for FY2008 to ensure production milestones are met in a timely manner. Sandia achieved five Research and Development (R&D) 100 Awards during FY2007. Sandia also provided outstanding support to NNSA in advances in radar and burst detection, as well as support to the Bratislava Agreement.

Sandia's performance in Operations is rated as Good. Central to Sandia's operational achievements was full implementation of the Model Contract and the Sandia Integrated Laboratory Management System (ILMS), which includes their Contractor Assurance System (CAS). Sandia exhibited outstanding project management for the Microsystems and Engineering Sciences Applications (MESA), Center for Integrated Nanotechnologies (CINT), and Exterior Communications Infrastructure Modernization (ECIM). NNSA also noted significant performance improvement in the areas of Safeguards and Security (as evidenced by an "Effective Performance" rating by the DOE Office of Independent Oversight), Emergency Management, and continued excellence in the business areas. Sandia improved their safety performance, as evidenced by a Total Recordable Rate of 1.7, which is an improvement of 37 percent over the 2006 rate. The Days Away/Restricted Case Rate of 0.79 is a reduction of 28 percent from 2006 to 2007. Additionally, although NNSA noted improvement in Safety Basis documentation and some elements of Sandia's safety program, improvement is still needed in various aspects of their safety program to include fire protection, electrical safety, lockout/tagout, and work control.

PERFORMANCE OBJECTIVES

MISSION PERFORMANCE

Defense Programs (DP)

Sandia was instrumental to NNSA's success in meeting the needs of the stockpile and developing a new path forward for surveillance of the enduring weapons systems. Sandia continued to demonstrate proficiency in addressing a compendium of issues to assist NNSA in developing and meeting the needs of the NWC. Significant accomplishments during this fiscal year included:

- Sandia completed 162 of 163 NNSA Level II milestones for POs 1-4. Sandia also successfully completed all scheduled deliveries of all FPU components for which Sandia was responsible in the W76 LEP and B61 Alt 357 Programs. In order to meet this milestone, Sandia overcame significant technical and programmatic challenges associated with the stronglink and is commended for their teamwork and leadership in working with the Kansas City Plant and vendors to ensure that these FPUs were met.
- Sandia surpassed NNSA expectations by providing technical support in developing a re-qualification plan for the W76-1 design to use an alternate material for the Canned Sub-Assembly (CSA) in response to emerging issues with the Y-12 material.
- Sandia completed key nuclear survivability milestones and has garnered praise for their work from the nuclear survivability community.
- Sandia has taken major steps toward transforming non-nuclear component and material surveillance in order to gain a better understanding of the state of health of the nuclear weapons stockpile.
- Sandia provided major support to NNSA's Complex Transformation initiatives.

Although Sandia demonstrated overall success in their DP assignments, there are areas in which performance could be improved. In particular, major issues were noted by NNSA in weapons quality assurance during FY2007 that prevented Sandia from achieving total success. Quality assurance problems were noted in product marking, quality evidence, incomplete lot record book, and detonators with voids that affected MC4378 Lot 11 and 12 timers. Additional evidence of weapons quality assurance issues was the lack of an upfront analysis of a proposed combining of environmental tests for neutron generators and a neutron generator that was shipped to the Department of Defense (DoD) with a missing set screw and had to be returned. Finally, NNSA once again notes Sandia's lack of an effective Supplier Management System. This deficiency was noted during three separate NNSA Quality Assurance Surveys during FY2006 and in the FY2006 Performance Evaluation Report.

Science and Technology (S&T) Programs

Sandia's science and technology programs are outstanding as evidenced by the results of numerous advances in science and technology and by assessments of external peer reviews. 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 five R&D 100 Awards and R&D Magazine Editor's Choice award for the 'Most Enabling New Technology,' namely the Mode-Filtered Fiber Amplifier. Sandia also received the Horning Award from the Society of Automotive Engineers for best technical contribution to the engine/fuel research fields. The 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 support other DOE programs including Office of Science, Office of Nuclear Energy and Office of Energy Efficiency and Renewable Energy. Numerous advances in scientific discovery and innovation were achieved by Sandia in areas such as basic energy sciences, advanced scientific computing, biological and environmental research, fusion energy sciences, energy efficiency research, energy technologies, critical infrastructure, water research, and advanced nuclear energy technologies.
- Sandia's Laboratory Directed Research and Development (LDRD) program continues to play a key role in fostering strong science, technology and engineering foundations. Four of the five R&D 100 Awards mentioned above were LDRD funded projects. In addition, over 40 percent of Sandia's scientific publications are generated by LDRD projects, and over 30 percent of Sandia's patents are acquired by ongoing LDRD research. The External Advisory Board for the Sandia LDRD Grand Challenge Terahertz project found Sandia to be a leader in developing tools and technology to exploit the Terahertz spectrum for national security needs.
- 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.

- 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.

Defense Nuclear Nonproliferation (DNN) Programs

Sandia's overall performance in DNN programs exceeded expectations and is rated as outstanding.

Advances in Radar

In support of NA-22's Nuclear Fuel Cycle Remote Sensing Proliferation Detection Mission, Sandia successfully completed an experimental effort on the Ka-band (frequencies between 27.5 GHz and 31 GHz) Synthetic Aperture Radar (SAR) system to validate radar technologies critical to radar traffic monitoring for proliferation detection. The frequency, resolution, and overall image quality of the Ka-band radar provide significant advantages in proliferation detection applications, including the ability to do persistent, high-resolution, and change detection imaging in day/night, all weather, and adverse environmental conditions (e.g., sand storms and smoke). These experiments extended the use of SAR technology for the detection of movement, including ground moving target identification, high-range resolution imaging, and vibrometry.

Burst Detection Systems

Sandia delivered three sets of BDY (optical burst detector), BDA (burst detector analyzer), and BDP (burst detector processor) sensors and systems to the Air Force contractor for Space Vehicle integration as agreed. Meeting this required deliverable represents a significant achievement for two reasons. First, Sandia received 10 percent less funding in FY2007 without an equivalent reduction in scope or performance requirements. Second, an extraordinarily subtle yet significant problem was discovered during final testing and was completely resolved. These systems will greatly enhance the capability of the United States to detect and analyze nuclear detonations from a space based platform.

Strategic Nuclear Rocket Force Sites (Bratislava Agreement)

Under the 2005 joint nuclear security statement issued by President's Bush and Putin at Bratislava, NNSA committed to upgrading the security at 25 Russian nuclear warhead sites in its Strategic Rocket Forces. The agreement covers 25 rocket sites at 11 Russian missile bases. Sandia completed successful contract negotiations for additional work for the Bratislava Agreement sites. These sites were considered extremely vulnerable and were of the highest priority to NA-20. Upgrades include state-of-the-art intrusion detection and monitoring systems, metal and explosives detectors, new entry control portals, and nuclear material detectors. In addition, security guard forces at the sites received strengthened fighting positions, a centralized response facility and look-out towers.

OPERATIONS PERFORMANCE

Sandia's operational performance continues to improve in many areas and is rated as Good for FY2007. Performance significantly exceeded the standards in many areas evaluated. Notable accomplishments as well as opportunities for improvement in Operational areas are presented below.

- Central to the improvement noted in Sandia's operational areas is the completion of the implementation of their ILMS. Sandia, with the commitment of the Laboratory Director and Deputy Laboratory Director, dedicated senior managers and support staff, was able to achieve implementation of key contract H-clauses, *H-3 Contractor Assurance System, H-5, Accountability, and H-6 Standards Management*. Sandia's performance has enabled NNSA to complete implementation of the Model Contract, and to share lessons learned with the NNSA Complex.
- 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 1.7, which is an improvement of 54 percent over the 2003 rate. The Days Away Case Rate of 0.79 is a reduction of 43.7 percent from 2003 to 2007.
- Sandia exceeded the standard of performance by developing compliant safety basis documentation for their Hazard Category 2 and 3 nuclear facilities and high-hazard industrial facilities. Sandia has improved safety basis document development and related process quality over the last year.
- Sandia demonstrated outstanding project management performance as follows:
 - ✓ The MESA Project successfully completed all milestones three years ahead of schedule and is running approximately \$40M under budget.
 - ✓ The Exterior Communication Infrastructure Project was completed three months ahead of schedule and \$4.2M under budget.
 - ✓ The New Master Substation Utility (NMSU) project was completed on schedule and under budget by \$70K.
 - ✓ Sandia and LANL successfully worked together on the CINT Project which was completed on schedule and under budget by \$70K.
 - ✓ Sandia developed several workarounds to address cost increases and component delivery delays on the Z Refurbishment (ZR) Project, aggressively pursued cost reductions to stay within the Total Project Cost, and completed the project with a schedule and budget close to established baseline.
- Sandia underwent a comprehensive safeguards and security inspection by the DOE Office of Independent Oversight (OIO) during this performance period. Each of the topical elements inspected by the DOE OIO resulted in "Effective Performance" ratings which represent the highest rating attainable under this system – a first within the NNSA Complex.

- Sandia made notable improvements in the overall structure and implementation of a robust cyber security program. The progress achieved was evidenced by the recent DOE OIO survey of classified and unclassified systems that resulted in fewer findings and a higher overall rating of unclassified systems.
- Sandia continued to execute exceptional business systems and exceeded performance expectations in the areas of contractor human resources, finance, procurement, property management, and information technology.

Opportunities for improvement in operational support areas include: (1) achieving full implementation of an institutional work planning and control system (process) that ensures adherence to a set of comprehensive work requirements and consistent implementation across the institution; (2) improving the adequacy, robustness and implementation of the electrical safety and lockout/tagout safety programs; (3) improving the accuracy of the Sandia Chemical Inventory System; (4) implementing a robust Space Management Program in order to manage space and occupancy more effectively; (5) reducing repeat findings from the New Mexico Environment Department; and (6) reducing the gaps identified in ILMS. Finally, improvement is still required in the area of fire protection. Sandia senior management needs to provide continued focus on these areas to ensure continuous improvements/upgrades are implemented to meet expectations.

PERFORMANCE INCENTIVES

Sandia's overall performance associated with the Performance Incentives (PIs) was Outstanding.

Performance Incentive 1, *NA-10 Multi-Site*

Sandia met 12 of the 13 performance measures related to "Getting the Job Done." The Nuclear Weapons Complex met all targets associated with (1) delivering Limited Life Components (LLCs), (2) eliminating the backlog of surveillance units, (3) accelerating dismantlements, (4) delivering on the B61-7 FPU, (5) certifying the W88 with a new pit and manufacturing ten new pits, (6) extracting tritium, (7) supporting the science basis for warhead design, assessment and certification by applying new facilities and infrastructure, (8) transforming from a life extension program to a Reliable Replacement Warhead strategy, (9) transforming the nuclear weapons infrastructure to take Responsive Infrastructure from concept to reality, (10) nuclear materials consolidation, (11) information resources management, and (12) implementing an NNSA Supply Chain Management Center. The one performance measure that was not met was associated with W76-1 FPU. NNSA has assessed NWC performance for this PI as Outstanding with a score of 92.

Performance Incentive 2, *Achieve Mission Stretch Goals*

Sandia achieved the following accomplishments that were beyond performance target requirements:

- Sandia successfully completed environmental tests of the MC4700 Arming, Firing & Fuzing under an aggressive schedule and the units shipped ahead of requirements even while needed test capabilities were being transferred into the Weapon Evaluation Test Laboratory (WETL) and the national stockpile evaluation program was being transformed.
- Qualification of electronics to radiation environment requirements: Qualification Alternatives to the Sandia Pulsed Reactor completed numerous computational and experimental tasks and received positive program reviews, while the Enhanced Surveillance Campaign fielded an embedded evaluation test bed that was demonstrated at WETL.
- Sandia removed a total of 46,024 gross square footage (GSF) of excess space, exceeding the Readiness in Technical Base and Facilities stretch goal by over a factor of two.
- A Sandia/Kansas City Plant (KCP) collaboration led to the implementation of a Commercial Off the Shelf (COTS) Insertion Process for the W76-1 LEP for an estimated cost savings of \$35M while significantly exceeding parts acceptance goals.
- Sandia provided support for three major facilities with weapons useable materials covering more than six buildings, exceeding the stretch goal of three buildings.
- Sandia completed 12 physical training courses, exceeding the stretch goal of six.

NA-12 has assessed NWC performance for this PI as Outstanding with a score of 95.

Performance Incentive 3, *Process Efficiency Transformation*

Sandia has exhibited leadership by reducing indirect costs through a variety of means to include changes in end-to-end processes and short-term cost efficiency/cost avoidance measures. Sandia's accomplishments, performance, and efforts towards the reduction of their indirect costs during the performance period were commendable. It's very challenging to change culture, develop, and install end-to-end business and operating processes to achieve cost efficiencies. To this end, Sandia made progress towards the Process Efficiency Transformation Project (PETP) Plan implementation. The end-to-end processes were more difficult to implement than anticipated and Sandia realized that cost savings would not be able to be realized from process improvements in FY2007. Through the "Just Do It" initiatives, Sandia identified short term solutions and cost efficiencies which resulted in cost savings or cost avoidances exceeding the \$15M target. NNSA assessed Sandia's performance for the PI as Good with a score of 88.

Performance Incentive 4, *Emergency Management*

This particular PI was designed to measure and reward Sandia's continued improvement in the following aspects of the Sandia emergency management program: Emergency Planning, Emergency Preparedness; Emergency Public Information; Emergency Response, and Readiness Assurance. Sandia, with few exceptions, has continued to move this program forward and into a more mature state than was observed during the last major inspection. For example, Sandia effectively developed and executed corrective action plans that closed all but one finding in the SNL/NM program, continued to aggressively pursue a persistent drills and exercise program with particular attention paid to lessons learned, and continued to make positive adjustments in the Emergency Public Information and Joint Information Center elements. Sandia Emergency Management has instituted a formal training and qualification program specifically for the Incident Commander position.

While making significant headway in most of the program elements and activities, Sandia has struggled to achieve desired results in a few areas. During the identification and development of emergency preparedness hazard assessments (EPHAs) Sandia discovered an error in the correction factor being used to develop all screening threshold levels for hazard surveys. This error has resulted in the need to revisit the affected EPHAs and ultimately could potentially result in the need for new EPHAs. Sandia also underestimated the level of effort associated with some of the FY2007 milestones in the Emergency Management Improvement Project Plan (EMIPP) and as a result was able to complete most but not all of their commitments. NNSA assesses Sandia's performance as Outstanding with a numerical score of 94 for this PI.

Performance Incentive 5, *Dispose of Nuclear Material*

Sandia made significant progress in the removal of Special Nuclear Material (SNM) from SNL in FY2007. Sandia achieved success in removing most Category I and II quantities of SNM from SNL. However, due to Sandia, receiver site, and programmatic issues, some materials were not shipped according to the FY2007 plan. The work planning that went into the Melt Progression (MP)-1 and MP-2 repackaging was outstanding. It resulted in significantly lower dose to the workers than calculated and all scheduled items were shipped off-site on schedule. NNSA assesses Sandia's performance as Good with a numerical score of 89 for this Performance Incentive.

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 three ATIs. The ATIs are not adjectivally or numerically rated, but are evaluated on a pass/fail basis. NNSA determined that Sandia passed all three ATIs.

Award Term Incentive 1, Parent Contributions and Sandia Reachback

Sandia achieved full performance by demonstrating numerous contributions from their Parent Corporation that resulted in measurable performance improvement. Sandia developed and implemented a project plan to identify opportunities for Parent Corporation Contributions and Sandia Reachback that utilized the Integrated Laboratory Management System, identified criteria to prioritize and rank opportunities to improve site management and performance consistent with the Model Contract implementation, and developed supporting performance measures. NNSA was impressed with the depth and breadth of the opportunities being worked across the institution by the parent organization.

Award Term Incentive 2, Strategic Relationships

Sandia has worked diligently to establish strategic relationships with DOE and other Federal agencies that have proven to both complement and enhance DOE/NNSA goals and objectives. Overall, Sandia's performance in establishing strategic relationships is noteworthy. Sandia's efforts in enhancing or building strategic relationships were successful; Sandia concentrated on those agencies and corporations that support the CINT, MESA, High Performance Computing (HPC), and National Nanotechnology Enterprise Development Center (NNEDC).

Award Term Incentive 3, Complete Retreat and Pilot Projects

Sandia met the intent of the four Pilot Projects and the remaining Retreat Concept Papers to demonstrate implementation of the Model Contract and provide lessons learned that could be used institutionally at Sandia to complete implementation of the NNSA Model Contract. The process improvements at Sandia can be shared with the NNSA Complex. In all areas including Sandia Site Office delegation of Critical Decision (CD)-1 and CD-3, Foreign Travel, Fleet Services, Personal Property Management and Procurement, Sandia demonstrated improvements to management performance and effectiveness resulting in gains in operational efficiency and significant savings that are being redirected to mission and operational priorities.

Exhibit 1
SCORING OF FY2007 PERFORMANCE
Sandia Corporation

ELEMENT	RATING	SCORE
Mission Performance Group		
PO 1 Defense Programs <i>(Stockpile And Surveillance)</i>	Good	87
PO 2 Defense Programs <i>(Methodologies, Plans, & Tools for Certification)</i>	Outstanding	95
PO 3 Defense Programs <i>(Lifetime Extension & Options for Future Arsenal)</i>	Outstanding	96
PO 4 Defense Programs <i>(Flexible & Responsive Infrastructure)</i>	Outstanding	94
PO 5 Science and Technology	Outstanding	95
PO 6 Defense Nuclear Nonproliferation	Outstanding	94
Overall Mission –	Outstanding	
Operations Performance		
PO 7 Contractor Assurance System	Outstanding	90
PO 8 Business and Operational Support <i>(Secure, Safe, Environmentally Sound Operations & Infrastructure to Support Mission Objectives)</i>	Good	88
PO 9 Counterintelligence	Outstanding	90
Overall Operations		
Total Performance Objective (PO) Score		
Performance Incentive (PI)		
PI 1 NA-10 Multi-Site	Outstanding	92
PI 2 Achieve Mission Stretch Goals	Outstanding	95
PI 3 Process Efficiency Transformation	Good	88
PI 4 Emergency Management	Outstanding	94
PI 5 Dispose of Nuclear Material	Outstanding	90
PI Aggregate Rating and Score		
Amount of Incentive Fee Awarded		
Award Term Incentive (ATI)		
ATI-1 Parent Contributions and Sandia Reachback	Pass	
ATI-2 Strategic Relationships	Pass	
ATI-3 Complete Retreat and Pilot Projects	Pass	

The FY2007 Performance Objectives Group weighting is based upon the final scores achieved in Operations in FY2007. Sandia scored a 89 in Operations, which falls within the range of 88 and 92, resulting in a Mission weight of 63% and an Operations weight of 37%. This variable weighting factor was pre-determined and agreed to by both parties in the FY2007 PEP.

FY 2007 Rating Scale (Table 1)

<i>Adjectival Rating</i>	<i>Numerical Rating</i>	<i>Definition</i>
Outstanding	90-100	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	80-89	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	70-79	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	0-69	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

Performance Objective 1. Meet the immediate needs of the stockpile and conduct surveillance program in support of annual certification. (PO derived from NA-10 Top Priorities List – Priority 1 and 2.) (NA12 Base, PM4.1) (NA12 Stretch, PM1)

Adjectival Rating
Good

Numerical Score
87

Summary of Performance

Sandia completed 66 out of 66 Level II milestones that made up this Performance Objective.

Sandia was instrumental in NNSA's success in meeting the needs of the stockpile and developing a new path forward for surveillance of the enduring weapon systems. Covering a wide variety of technical and management challenges in FY2007, Sandia program managers were able to independently assess programs in light of emerging requirements and transformation initiatives to provide substantive solutions. NNSA is fortunate to have a strong partner with the flexibility to respond to changing requirements and meet project needs.

The annual assessment reporting process and the work that is accomplished to support the completion of that reporting process are key activities under this performance measure. The FY2003 National Defense Authorization Act (NDAA) provides the specific guidance for the annual assessment process and the deliverables for Sandia include: providing input to the cycle surveillance report, meeting Significant Finding Investigation (SFI) closure plan deliverables, submitting Annual Assessment Reports for each weapon system to the Project Officer Group (POG) and NNSA Headquarters, briefing the Strategic Advisory Group Stockpile Assessment Team (SAGSAT), and submitting the final reports to the Secretary of Energy for submission to the President of the United States.

During FY2007 Sandia frequently required significant intervention by NNSA to resolve weapons quality issues and meet established milestones. This emphasizes the need for continuous improvement in their Contractor Assurance System (CAS) to enable them in identifying and correcting quality issues early on as mandated by QC-1 rather than at the end of production and acceptance activities. Also, adequacy of design reviews and qualification of testers, processes, and products as well as lack of attention to detail in preparation of quality evidence documentation to support product submittals to NNSA contributed to the impression of an ineffective Sandia CAS.

Significant Accomplishments

Sandia support for the Directed Stockpile Work (DSW) program cuts across multiple weapon systems and required constant vigilance to ensure product deliverable schedules are maintained and achieved. Sandia's vast technical and management resources have enabled DSW to achieve not only Defense Program's "Getting the Job Done" list but also the many supporting roles and responsibilities at the sub-program level.

Sandia accomplished all annual assessment reporting process activities on time or ahead of schedule and within budget. The SAGSAT briefings were very well conducted and Department of Defense (DoD) provided positive feedback on the briefing. Sandia also included Quantification of Margins and Uncertainties (QMU) studies on three components and/or subsystems (firing set outputs, neutron generator, and Sandia gas transfer systems). Sandia has demonstrated improved value in applying QMU to provide basis and efficiency in their assessment of warhead performance. Sandia is finishing up the QMU methodologies instructions for their site which is in final review.

Sandia provided good support to the NNSA mission by completing work that fills knowledge gaps and addresses critical performance parameters for stockpile weapons. The identification and prioritization of needed information for work planning into an Integrated Data List is commendable. The support Sandia obtained from the Advanced Simulation and Computing (ASC) Program is consistent with NNSA objectives for identifying DSW requirements for ASC.

Sandia continues to provide outstanding performance and has gone beyond NNSA expectations in many areas. With regard to Sandia's B-61 Spin Rocket Motor (SRM) effort, Sandia rapidly overcame technical engineering challenges on the path for successful completion of the SRM first production unit (FPU) and met all FPU dates early (ranging from one week to six weeks early). Sandia was able to modify the design within cost and schedule. Note that this completion is a critical component of meeting the broader B61 ALT 357 FPU. All other efforts supporting the B61 system were completed on time or ahead of schedule.

Sandia support for the RRW2 was very strong and positive.

All weapon projects accomplished the significant amount of work planned under the "Continuous Activities" category of work. For example, the W76 and W88 teams have accomplished in a timely fashion and within budget the work required under continuous activities to support the annual assessment reporting process.

Sandia provided leadership and guidance on the Product Realization Integrated Digital Enterprise (PRIDE) initiative, leading Defense Program's into the application of information technology to improve business processes throughout the nuclear weapon complex. Sandia was particularly effective in achieving consensus on the PRIDE approach without focusing on the individual needs of Sandia. Sandia also was a key contributor to the over-the-road transfer of B53s to Pantex (PX).

Sandia was an important player with the W88 4T gas transfer system Product Realization Team (PRT) which was completed 15 months ahead of schedule. Furthermore, Sandia was able to support the production plants, resolving Pantex pit issues.

Sandia worked well with project teams toward the W80 JTA8 development and the W80 Seamless Safety for the 21st Century (SS-21) project.

Opportunity for Improvement

During FY2007 and previous years Sandia frequently required significant intervention by NNSA to resolve weapons quality issues and to meet established milestones. This emphasizes the need for a robust Contractor Assurance System (CAS) that would identify and correct quality issues early on as mandated by QC-1 rather than at the end of production and acceptance activities. Also, adequacy of design reviews and qualification of testers, processes, and products as well as lack of attention to detail in preparation of quality evidence documentation to support product submittals to NNSA contributed to the impression of an ineffective Sandia CAS. Due to numerous identified quality issues, senior management assembled an independent review team to study these issues and report their findings. The review team validated the previously identified quality issues, Sandia management acknowledged four root causes that contributed to these issues. These root causes included: “(1) Inadequate leadership, attention, and action by the management responsible for nuclear weapon product have resulted in the absence of an effective nuclear weapon product quality management system; (2) Absence of an effective nuclear weapon product quality management system has resulted in PRT practices that are inconsistent in their application and ineffective in assuring with certainty the quality of the product we provide our customers; (3) Poor knowledge and understanding by our management and staff of NNSA QC-1 requirements and our corporate quality requirements have prevented effective integration of quality requirements with mission planning and execution; and (4) Our competency-based organization culture has led us to manage quality based on worker competence and commitment augmented by locally-developed quality practices, procedures, and systems.” Using the results of their review, Sandia developed and is implementing a comprehensive Nuclear Weapon Product Quality Improvement Plan that addresses the identified root causes of the issues. The work underway has engaged all nuclear weapon product management and staff at Sandia, and all commitments have been completed or are on schedule to be completed per the required dates. Supplier Quality Management processes and procedures have been revised, and QC-1 training provided. NNSA will monitor the effectiveness of actions during FY2008.

Specific Weapons Quality Assurance (WQA) issues this year involved: (1) MC4379 Qualification Evaluation (QE) Lot timer markings timer and MC4378 Lot 12 timer detonators with voids. Both lots had quality evidence issues, incomplete lot record books, and supplier management issues), (2)neutron generators (upfront analysis of proposed combining of environmental tests was inadequate, neutron generator shipped to the DoD was missing set screws and had to be returned), (3) spin rocket motors (igniter closure disk issues), (4) supplier management issues regarding incomplete lot record books and an optical comparator issue, (5) issues with nuclear safety specifications on Sandia drawings prompted a massive drawing review by Sandia at Kansas City Plant, duplicative serial numbering for a specific component used in timers, MC4217 Detonator definition (halted pre-acceptance process), and MC4729 Igniter (delayed product acceptance). To preclude recurrence of recent quality issues Sandia needs to become more self-reliant in identifying the root causes of quality issues and implementing effective and timely corrective action. If Sandia focuses on these activities in an ongoing effort, it should eventually lead to a functional and robust CAS for weapons quality.

The QMU approaches could have been better defined and described sooner, which would have allowed more complete application in current stockpile assessments. Sandia should continue the QMU work started in the 2007 Annual Assessment Reports by including additional components and/or subsystems discussion on QMU for each system.

Regarding the area of continuous activities for each weapon system, Sandia should make it clear what is actually being done under Critical Performance Parameters, Knowledge Gaps, and Integrated Data Lists for the particular weapon system. For FY2008, Sandia can correct this weakness by providing greater detail on the contents of the Continuous Activities workload.

Sandia needs to conduct a more focused effort to identify early in the fiscal year the work needed to strengthen the technical basis for the stockpile and to track progress throughout the fiscal year on accomplishing continuous activities that form the basis for confidence in stockpile performance, safety, and reliability. This scope of work should also be communicated as grading criteria for the DSW milestones for continuous activities supporting annual assessment.

Sandia has also been slow in adopting the DSW work breakdown structure and associated level of budget detail which is being used to make uniform planning decisions. Near the end of the fiscal year, Sandia did improve its support of this budget process, but early cooperation should be more forthcoming.

Work scope definition and communication by Sandia with NNSA program managers requires improvement. In some cases, with grading and exit criteria defined to allow program flexibility, Sandia did not keep program managers informed of changes in scope or in meeting end of year requirements. Within the bombs program, clarification of surveillance cycle testing should have been requested to decide the governing document for FY2007 requirements. Without this discussion, Sandia and the program manager were working under different assumptions which led to a Level 2 milestone slipping into FY2008.

Performance Measure 1.1

Meet the delivery requirements established by the Production & Planning Directive (P&PD) with particular emphasis on meeting established joint Department of Defense (DoD) and NNSA commitments in accordance with the Directive Schedule. In addition, annually assess the safety, security and reliability of the stockpile and provide the required assessments of certification and reports to the Secretary for submission to the President.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.1.1 Meet Level II milestones associated with Directed Stockpile Work for P&PD delivery requirements, Stockpile	Outstanding	Disagree	NNSA rates this target as Good as a result of issues that were identified in Sandia's weapons quality program.

<p>Maintenance, and Stockpile Evaluation. <i>Per the 7/14/06 DSW Stockpile Management Implementation Plan, there are 68 Level II Directed Stockpile Work (DSW) Milestones. These 68 will be binned as targets in either PO1 or PO3.</i></p>			
---	--	--	--

Other Considerations

None.

PERFORMANCE OBJECTIVE 2 – DEFENSE PROGRAMS

Develop methodologies, plans and tools for certification. (PO derived from NA-10 Top Priorities List – Priority 3, 4, and 8) (NA12 Base, PM1a) (NA12 Stretch, PM1)

Adjectival Rating
Outstanding

Numerical Score
96

Summary of Performance

Sandia had a very successful year in FY2007 supporting the goals of the Engineering Campaign in support of the nuclear weapons stockpile and national security. Sandia's capability development, technical analysis, and methodology improvements in support of the Surveillance Transformation Project, Annual Assessment, and the nuclear weapons stockpile have been commendable. Sandia continues to provide outstanding performance and has garnered praise throughout the Nuclear Survivability community. The activities in the Engineering Campaign were also critical to the development and qualification of the Arming, Fuzing, and Firing (AF&F) component for the W76-1 Life Extension Program (LEP).

Significant Accomplishments

During the completion of this year's key Nuclear Survivability milestones, Sandia received confirmation of their world-class status. Sandia continually met their objectives and went beyond expectations. Specifically, Sandia's Radiation Effects Sciences research garnered best Paper Award in March 2007. Additionally, Sandia has sought critical review of the Qualification Alternatives to the Sandia Pulse Reactor (QASPR) process. During their most recent Independent Review, the review panel noted that that QASPR is performing "high quality work, using appropriate methodology, tools, and expertise; and results are significant to the scientific community." This is indicative of their superior work in the Engineering and Science Campaigns

The full implementation of the technical basis requirements team (TBRT) process for each weapon system has truly focused the investment of resources toward the requirements and knowledge gaps with the highest priority. The integration and impact of the basic aging research and assessments into the Annual Assessment process for the stockpile has improved again this fiscal year. This was evidenced by the inclusion of the aging assessments in the Annual Assessment Reports for each weapon system. Sandia has taken major steps toward transforming non-nuclear component and material surveillance in order to gain a better understanding of the state of health of the nuclear weapons stockpile. Through the continued development of the pilot programs for component and material evaluation (CME), Sandia is developing the basis for establishing the most beneficial and cost-effective non-nuclear surveillance program in the future. Additionally the Weapons Engineering Program at Sandia

provided immediate positive impact in support the W76-1 Life Extension Program by delivering the upgrades to the Weapon Evaluation Test Laboratory (WETL) over six months early. This diagnostic improvement allowed the WETL to be used as a test platform for three experimental tests to support the qualification of the Arming, Fuzing, and Firing (AF&F) component. Sandia also continued efforts to transform surveillance for the stockpile of the future by developing embedded evaluation technology. The embedded evaluation test bed, which incorporated sensors and an interface architecture, was successfully demonstrated in the relevant environment of the WETL centrifuge during this fiscal year. Sandia continued to provide superb scientific analysis in the area of component and material aging in order to develop predictive capabilities and increase knowledge of the stockpile. This superior work was formally recognized by an Independent Review Panel (IRP) during the biennial program review. The panel's report included positive comments, such as "the IRP found program balance was, in a word, excellent." and "in short, the Enhanced Surveillance Campaign (ESC) program is one of the best-managed and best-integrated programs the members of the IRP have ever observed."

Additionally, Sandia has demonstrated excellent support for the stockpile stewardship program and the Nuclear Weapons Complex through technology development of the dual stronglink for WR1 and a passive shock sensor for multiple applications. The expertise and integration across multiple technical disciplines with which Sandia applied to the maturation and testing of these technologies was noteworthy and greatly impacted the options for the future stockpile.

Sandia met the planned subsystem FPU for the W76-1 AF&F by completing the required assessments (normal/abnormal/hostile environments) using advanced engineering assessment capabilities developed over time by the laboratory.

Opportunity for Improvement

Through part of the fiscal year, Sandia was slow to engage as the system integrator with the embedded evaluation capability development. The physics laboratories and the plants have a stake and a role with the development of this capability and until later in the year, each site was progressing on individual paths. Sandia's role goes beyond the normal system integrator functions because the integration and interface of all sensors to architecture that the data can be retrieved is central to the overall success of embedded evaluation development.

Sandia has conscientiously provided a mission needs statement for the capabilities associated with the Phase 2 of the Test Capability Revitalization project (TCR-2). However Sandia needs to exercise better flexibility and responsiveness with developing alternatives to the original project plan due constraints imposed by declining budgets and supporting the goals of a transformed complex.

Performance Measure 2.1

Provide predictive simulation and modeling tools, supported by necessary computing resources, to maintain long-term stewardship of the stockpile.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.1.1 Meet Level II Milestones associated with Advanced Scientific Computing (ASC).	Outstanding	Agree	Sandia successfully completed all fourteen Level II milestones as scheduled. Two milestones (2355 and 2356) were moved to FY2008 by NNSA/HQ to allow urgent and higher priority projects to be serviced by Red Storm and Purple in FY2007.

Performance Measure 2.2

Continue work that will complete the first ZR stewardship experiment in 2008 and support beginning integrated ignition experiments on the National Ignition Facility

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.2.1 Meet Level II Milestones associated with Inertial Confinement Fusion Ignition and High Yield (ICF) Campaign (NA16, PM NIC)	Outstanding	Agree	Sandia successfully completed all five milestones (ahead of schedule). Two milestones (2320, 2326) were moved to FY2008 by NNSA/HQ due to the Z refurbishment not being completed as scheduled. All hardware and diagnostics have been installed and activated but waiting on the completion of the Z refurbishment.

Performance Measure 2.3

Sustain the long-term leadership and vitality in science and engineering to support national security (NA Top 10 #4).

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.3.1 Meet Level II Milestones associated with the Engineering and Science Campaigns.	Outstanding	Agree	Sandia has demonstrated superior leadership in the areas of science and engineering in support of the Stockpile Stewardship Program, the nuclear weapons stockpile, and national security. Sandia successfully completed all 22 Level II milestones and had no significant weaknesses noted. Milestone 2424 was completed six months early while Milestones 2299, 2410, and 2412 were completed 3 months ahead of schedule. Early completion of milestone 2410, allowed the use of the WETL tester for Qualification Evaluations (QE) of three W76-1 AF&Fs. Milestones 2460 (Pu capability on Z) and 2461 (high pressure on Z) were delayed to late FY08 through a formal change control process approved by HQ.

Other Considerations

None.

PERFORMANCE OBJECTIVE 3 – DEFENSE PROGRAMS

Extend the lifetimes of weapons currently in the stockpile and Develop Options for the future arsenal. (PO derived from NA-10 Top Priorities List – Priority 3 and 5) (NA12 Base, PM4.1) (NA12 Stretch, PM1) NA-12 Stretch, PM1)

Adjectival Rating
Outstanding

Numerical Score
96

Summary of Performance

Sandia completed 37 out of 37 Level II milestones that made up this Performance Objective.

Sandia's support to the Life Extension Program (LEP) for the W76-1, B61 ALT 357, and W80 shut down, the Life Extension Options planning, and the Reliable Replacement Warhead (RRW) programs in FY2007 have met and at times exceeded NNSA's requirements, thereby meeting DoD critical schedules and production needs. Of particular note is the performance on the W76-1 LEP program to meet component build schedules that included close coordination with NNSA and the Nuclear Weapon Complex Management and Operation (M&O) contractors. Sandia provided both programmatic and technical expertise to meet long-term output and efficiency measures necessary to complete Defense Programs "Getting the Job Done" and transformation (stockpile, surveillance, and complex) initiatives.

Sandia has done an outstanding job at completing work associated with the W76-1 FY2007 baseline schedule in a timely fashion. The work included:

1. Completion of qualification tests associated with abnormal lightning, hostile shock, normal proof, radiation, and fuel fire environment.
2. Completion of quick look and final Test /Evaluation reports as part of the FY2007 deliverables.
3. Fabrication and delivery of several sets of tooling to support production at Pantex.
4. Issuance of qualification engineering release (QER) for the AF&F.
5. Completion of the peer review in support of Phase 6.5 conditional approval. This was a requirement of the Phase 6.X process.
6. Completion of production readiness reviews to support Phase 6.5 conditional approval.
7. Completion of site sub-system FPU associated with Intent Stronglink (ISL), Trajectory Stronglink (TSL), Lightning Arrestor Cable (LAC), Terminal Protection Device, Impact Fuze, Arming and Fuzing Subsystem, Thermal Battery Assembly, AF&F simulator.
8. Delivery of AF&F FPU.
9. Support to production agency in completing the first prototype build with a W76-0 Canned Subassembly (CSA).
10. Development of a plan for re-qualifying the W76-1 system with an alternate material to address emerging issues with the special Y12 material.

Consistent with the schedule and budget, Sandia has also completed work associated with the W88 Joint Test Assembly (JTA) 2 refresh. Sandia also supported the B61 Alt 357 in a noteworthy manner completing all responsibilities in its area.

Sandia's performance in the area of conducting research and development (R&D) activities to support LEP, advanced warhead concepts, and potential requirements and needs for NNSA and DoD has been outstanding. Sandia has established a clear focus to approach weapon system, subsystem, and component development with a strategic vision in support of transformation of the stockpile and complex transformation. Sandia conducts many activities covered under this performance measure, including WR1, Life Extension Option (LEO) process, Code Management System (CMS), nuclear safety R&D, and the DoD/DOE Joint Munitions Program.

Significant Accomplishments

W76-1 - The most significant accomplishment in FY2007 is the achievement of the AF&F FPU. In order to meet this milestone, Sandia overcame significant technical and programmatic challenges associated with the stronglink. Sandia has shown strong leadership in dealing with adversity and demonstrated excellent teamwork by working with the Kansas City Plant (KCP) and vendors to resolve issues in a timely manner, so that the AF&F FPU could be met. The next significant accomplishment will be the completion of re-qualification tests, technical reviews and documentation required to support Phase 6.5 conditional authorization. Without the Phase 6.5 authorization, the first prototype build could not be realized.

Sandia has surpassed the baseline work by providing technical support in developing a re-qualification plan for the W76-1 design that uses an alternate material for the CSA in response to emerging issues with the Y12 material. Without timely responses from Sandia, the W76-1 FPU could be delayed even further.

Sandia completed the W76-1 LEP AF&F component design drawings and assisted with production to meet first prototype unit build at Pantex.

Regarding the completion of classified tooling for the W76 LEP, NNSA is extremely pleased with Sandia's demonstrated dedication to getting the job done. Sandia provided the capability to produce classified tooling for the W76 LEP to help NNSA meet project schedule. Sandia completed the full run of tooling even though the funding provided less than 70% of the anticipated need. Despite the offer of reduced scope, Sandia, through coordination with NSNA on program priorities, achieved efficiency in the program to pull up work scope into FY2007 that had planned to be shifted into FY2008. This was more efficient and reduced the total program cost. Sandia's willingness to balance risk across program areas and stretch limited Sandia resources for the benefit of the entire program is very commendable.

B61 Alt 357 - Sandia support to the B61 Alt 357 FPU delivery was exemplary with deliverables provided ahead of schedule.

Sandia's forward thinking and integrating activities under the development of the Common Adaptable System Architecture (CASA) has been commendable. This architecture development has been a critical beginning to provide Sandia and NNSA with the ability to reduce the timelines

for design of future warheads, such as the RRW or a LEP. Sandia has also demonstrated excellent R&D, engineering, and responsiveness in the neutron generator program. Sandia has worked well to ensure that the requirements for the stockpile are being met while being responsive to unexpected discoveries affecting this critical weapon component. Additionally Sandia has demonstrated clear progress in supporting shorter technology development timelines for Application Specific Integrated Circuits (ASICs) through the ViArray platform. This technology will allow for a much shorter development cycle for integrated circuits. Sandia also achieved success by development of a miniature monolithic capacitor discharge unit which shows potential impact for future systems. This maturation process has simplified the design and minimized the volume of these components through support of the joint DoD/DOE munitions program.

Sandia is a member of the WR1 Project Officer Group (POG) and its sub-committees as well a member of the NNSA-led Core Team. Sandia, along with the other Nuclear Weapons Complex sites, has worked to implement Enhanced Program Management techniques for the WR1 project, including work breakdown structure, program planning, risk management, integrated phase gates and earned value management. The Phase 2A work scope, schedule and deliverables have been defined to support the August 2008 study completion date. Product realization teams have been formed to support requirements analysis, concept development and detail cost estimation study activities. Some progress was made toward alignment of Engineering Campaigns and other DSW technology maturation projects with the WR1 project needs. Design Trade Studies have commenced.

Sandia demonstrated improved engagement and integration of their support of the Life Extension Options (LEO) planning and report development. LEO planning is an important tool for use when conducting stockpile planning and Sandia supported this process well during this fiscal year.

The current phase of the Code Management System (CMS) supports fielding of CMS at Pantex and Sandia is a key player in this activity. In addition to providing general technical support for the hardware and software, Sandia committed to completing the Concept of Operations (CONOPS) for CMS at Pantex and to supporting fielding of the system in FY2008. The Concept of Operations is developed jointly between the developers and the users, and both sign the document when they reach agreement with its contents. The newest copy of the CONOPS was submitted for review to an Interagency PRT composed of members from NNSA, Pantex, and Sandia on November 21, 2006. The Concept of Operations was signed and the milestone covering this work scope was completed on February 12, 2007. Sandia was proactive in completing this work.

Sandia supported the RRW-2 IPT and Phase 1 Study for the Air Force and continued planning efforts for an overall air-delivered transformation strategy. Specifically, support from Sandia's Advanced & Exploratory Systems Department was instrumental in leading efforts for the RRW-2 Military Characteristics for the DoD submittal.

Opportunity for Improvement

From the W76-1 peer review out brief given at NNSA HQ, the peer review contents and format should be improved to communicate the results more clearly. The presentation during the review did not follow a well structured format that clearly communicated each issue and how each issue

was being addressed. NNSA is in the process of issuing peer review guidelines that outline the details of what is expected from the peer review. Contents and format of the peer review reports and out brief provided by LLNL and LANL on the W76-1 are excellent examples of what NNSA is expecting.

Further work and Sandia management attention is needed to align campaign with specific WR1 project needs (defined work scope and scheduled deliveries). Sandia management has been slow to consistently support new NNSA business practices as a means to begin complex transformation. In particular, various elements within Sandia have demonstrated contradictory positions by either being supportive or slow to adopt the phase gate approach under development for the WR1 program. Sandia should resolve differences in approach prior to NNSA involvement and provide a unified laboratory position to NNSA.

Sandia has met the Level 2 milestone for nuclear safety research and development activities and most of the deadlines for submissions set by the grading criteria. Although the execution and quality of the submissions to headquarters has improved over the past year, further improvement in these areas is needed. To achieve this, Sandia must provide sufficient resources to Sandia personnel for preparing the submissions at the expected level of quality.

Performance Measure 3.1

Conduct authorized refurbishments to extend the life and/or maintain the reliability and functionality of the nuclear weapons stockpile.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.1.1 Meet Level II Milestones associated with LEPs and Refurbishments.	Outstanding	Agree	FY2007 has been a difficult and a busy year for Sandia. Sandia has demonstrated excellent leadership in addressing technical issues in a timely manner. Without such dedication and focus, the AF&F FPU could not be achieved. The W76-1 team has done an outstanding job in "Getting the Job Done".

Performance Measure 3.2

Conduct Research & Development (R&D) activities necessary to support Life Extension Program (LEP) and define and begin implementation of a framework for developing advanced warhead concepts and other topics relevant to establishing an agile response to potential future requirements, to support the emerging needs of the DoD.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.2.1 Meet Level II Milestones associated with Stockpile R&D that enables technologies, capabilities, and a framework for future warhead concepts.	Outstanding	Agree	

Other Considerations

None.

PERFORMANCE OBJECTIVE 4 – DEFENSE PROGRAMS

Contribute to the implementation of a flexible and responsive infrastructure. (PO derived from NA-10 Top Priorities List – Priority 8 & 10) (NA12 Base, PM1a) (NA15 Base, PO1, PM1.1) (NA17 Base/Stretch, PO1)

Adjectival Rating
Outstanding

Numerical Score
94

Summary of Performance

The Readiness in Technical Base and Facilities (RTBF) program at Sandia is an important element in maintaining capabilities and sustaining mission-essential facilities in support of the nuclear weapons program. The Sandia RTBF program funds operations of facilities (sustaining mission-critical and mission-dependent facilities in a mission-capable state) and program readiness (Facility Readiness, Technology Readiness and People Readiness). Budget pressures are eroding the health of the RTBF capabilities and facilities and are forcing Sandia to work with Campaigns and Programs to increase support for facilities. Even with this support, budget cuts are causing pressure on capabilities. Given the budget concerns, Sandia continues to sustain the mission-critical facilities and capabilities needed to meet the nuclear weapon program missions. In addition, Sandia has also demonstrated leadership and responded to unfunded mandates (e.g. SNM de-inventory project). Overall, Sandia has done an outstanding job in contributing to the implementation of a flexible and responsive infrastructure.

Sandia supported the activities associated with Responsive Infrastructure as required for this performance measure in areas, such as the Supplemental Programmatic Environmental Impact Statements (SPEIS) and the various Integrated Project Teams (IPT) developing options for complex transformation.

Significant Accomplishments

In addition to completing the Level II milestones, Sandia's noteworthy accomplishments are noted.

- MESA, a major line item construction project, achieved CD-4 while coming in 3 years ahead of schedule and approximately \$40M under budget while maintaining the original scope.
- Sandia developed a new test capability at the superfuge. This new capability (Sandia submitted a patent) supports the W-76 Qualification Test (QT)-1 testing.
- Sandia successfully removed Melt Progression (MP) MP-1, MP-2, uranium calibration sources, SPRII control rods and Sandia Pulse Reactor (SPR) SPR II and SPR III fuel plates.
- Sandia met all requirements and expectations of NNSA supporting Responsive

Infrastructure. The activities were completed on time and within budget.

Opportunity for Improvement

None.

Performance Measure 4.1

Prepare and execute an integrated, comprehensive Readiness in Technical Base and Facility (RTBF)/Facilities and Infrastructure Recapitalization Project (FIRP) plan consistent with the Nuclear Weapons Complex Enterprise Strategy, and the NA-10 memorandum dated July 18, 2005, "Maintenance of the National Nuclear Security Administration (NNSA) Facilities and Infrastructure to ensure a flexible, responsive, robust infrastructure.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.1.1 Meet Level II Milestones associated with RTBF.	Outstanding	Agree	Concur with Sandia's self-assessment rating of "Outstanding" based on their ability to achieve most of the footprint reduction than what was estimated at the beginning of FY2007. Their use of RTBF funding to prepare buildings for demolition by FIRP was excellent. The total square footage (regardless of funding source) reduction was 46,024 gsf as compared to 46,304 gsf. (RTBF = 18,697 gsf and FIRP = 27,327 gsf)

Performance Measure 4.2

Ensure modern production capabilities and capacity is available on time scales paced by requirements to carry out the LEPs and to support projected stockpile requirements.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.2.1 Meet Level II Milestones associated with the Readiness Campaign.	Outstanding	Agree	<p>Sandia met all of its Level II milestones. Several of those milestones including the Commercial-Off-the-Shelf (COTS) qualification of components are significant in terms of the potential savings to the Department. Sandia provided assistance to Pantex for their models based tooling. Sandia has demonstrated leadership in several areas helping the complex to achieve its overall objective.</p> <p>Sandia also has provided technical expertise to the tritium readiness program that should be noted as well. The redesign of the Tritium Producing Burnable Absorber Rods (TPBARs) has been aided by the modeling and experimental support provided by Sandia.</p> <p>Progress on baseline validation comments is expected, but Sandia has been very responsive to this exercise.</p>

Performance Measure 4.3

Contribute to implementation of a responsive and sustainable Nuclear Weapons Complex infrastructure necessary to guarantee the Nation's nuclear security in a dynamic and uncertain threat environment.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.3.1 Meet Level II Milestones associated with Responsive Infrastructure and Office of Secure Transportation Support.	Outstanding	Agree	Sandia met all requirements and expectations of NNSA supporting Responsive Infrastructure. The activities were completed on time and within budget.

Other Considerations

None.

PERFORMANCE OBJECTIVE 5 – SCIENCE & TECHNOLOGY

Enhance and foster a strong science and technology base in support of NNSA mission and strategic objectives. Maintain an enduring Homeland Security and Defense program that is both relevant and responsive to the needs of the Nation.

Adjectival Rating
Outstanding

Numerical Score
95

Summary of Performance

Overall, Sandia's performance in Science and Technology is Outstanding. Sandia continues to develop innovative technologies that help to sustain and modernize our nuclear arsenal, preventing the spread of weapons of mass destruction, protecting our national infrastructures, defending against terrorism threats, protecting our homeland, enhancing capabilities to our armed forces, and leading the way to ensure the stability of our nation's energy and water supplies.

5.1 – DOE NNSA Research Foundations

Sandia's performance was Outstanding in the three select research foundation areas evaluated this performance period including Material Sciences, Microelectronics & Microsystems, and Engineering Sciences. Work performed in these research foundation areas is critical for maintaining the strong science and technology base required to support DOE/NNSA missions and strategic objectives. Sandia had a very successful year supporting the goals of these three research foundations that directly support the nuclear weapons stockpile and national security. In an environment of declining budgets and limited resources, Sandia has proactively managed in a manner to maintain the essential expertise and technical capability base.

The Sandia Science Advisory Board successfully completed external peer reviews of all three research foundation areas and comments from reviewers about Sandia's research foundation areas are consistently positive, regarding Sandia's science, technology and engineering programs as "world-class" and "outstanding."

5.2 – DOE non-NNSA Programs

Office of Energy Efficiency and Renewable Energy (EERE)

Sandia's support of EE sponsored programs is Outstanding, directly contributing towards DOE strategic planning goals to strengthen "energy security" for our nation. Major contributions and noteworthy accomplishments in the areas of FreedomCar & Vehicle Technologies (FCVT), Hydrogen, Fuel Cells & Infrastructure Technologies, Geothermal Technologies, Solar Energy Technologies, and Wind & Hydropower Technologies were performed this evaluation period.

Office of Nuclear Energy (NE)

Sandia continues to provide outstanding NE support in the development of advanced nuclear

energy technologies in the areas of Nuclear Hydrogen Initiative (NHI), the Generation IV Initiative, and the Radioisotope Power Systems program.

Office of Science (SC)

Sandia's contributions toward advancing science and support of SC sponsored programs are Outstanding, directly contributing towards DOE strategic planning goals to strengthen "scientific discovery and innovation" for the nation. Major contributions and significant accomplishments in the areas of Basic Energy Sciences (BES), Advanced Scientific Computing Research (ASCR), Biological and Environmental Research (BER), and Fusion Energy Sciences were performed during this evaluation period.

5.3 – Homeland Security Programs

Sandia continues to provide Outstanding products and services in support of Homeland Security mission requirements. Sandia's accomplishments and major contributions towards strengthening homeland security have resulted in the broadening and further diversification of technology options and homeland security for our nation.

5.4 – Institutional Programs, Laboratory Directed Research and Development

The SNL Laboratory Directed Research and Development is rated overall Outstanding for FY2007. Sandia has an outstanding record of participation in the NNSA LDRD Quarterly Working Group (WG) meetings. Sandia collected statistics on all metrics assigned to the LDRD program and has performed outstanding in the quality of science and relevance to national needs and DOE/NNSA mission as shown at the Annual LDRD Symposium and Review and at LDRD Day. In addition, the programmatic performance, management and planning is also outstanding with the leadership of the SNL Chief Technology Officer and active involvement of the Investment Area Managers. Sandia has an effective and well-documented project selection process and method for peer review especially, for the larger Grand Challenge projects.

5.5 – Office of Civilian and Radioactive Waste Management, Yucca Mountain Project

Overall, Sandia continues to provide Outstanding services as the Office of Civilian Radioactive Waste Management (OCRWM) lead laboratory for repository systems as related to Yucca Mountain Project. Sandia is diligently working towards providing complete, accurate and credible technical basis as part of the license application being prepared by DOE for submission to the Nuclear Regulatory Commission by June 30, 2008.

5.6 – Global Nuclear Energy Partnership (GNEP) Program

Performance Measure 5.6 was not evaluated during this performance period as a result of budget reductions and associated descoping of Sandia GNEP related activities. Existing GNEP activities are discussed in the Office of Nuclear Energy portions of Performance Measure 5.2.

5.7 – Institutional Programs, Work for Others (Other Federal Agencies)

Sandia continues to apply appropriate levels of management attention and support to the Work for Others (WFO) program. They have been responsive to NA-116 WFO requests for information, maintaining a program that supports the DOE/NNSA missions, goals, and objectives, and maintaining a customer focus.

Significant Accomplishments

5.1 – DOE NNSA Research Foundations

Sandia received numerous awards and honors, including five R&D 100 Awards, for their ongoing excellence in research that continues to build on their long history of awards and honors. The awards represent the strong science and technology base, very high quality of staff and the broad and international recognition of their sustained excellence in science, technology and engineering. The success of DOE/NNSA mission is dependent upon the successful planning and execution of its research foundations. Sandia continues to provide outstanding leadership in this performance objective area, always seeking opportunities for improvement in order to be prepared to respond to a variety of national security issues.

5.2 – DOE non-NNSA Programs

Office of Energy Efficiency and Renewable Energy (EE)

Sandia has achieved major accomplishments, contributing towards advances in renewable energy technologies, such as solar energy (concentrating solar energy and photovoltaics), wind and hydropower, and geothermal technologies. These advances in technologies are helping our nation to reduce its dependence on foreign energy sources.

Research conducted by Sandia resulted in improving the load range capabilities and avoiding emissions at the load extremes for high-efficiency engines using various advanced low-temperature combustion (LTC) strategies (e.g., Homogeneous Charge Compression Ignition (HCCI) and various forms of Premixed Charge Compression Ignition (PCCI) continue to be major research goals of the Office of Freedom Car and Vehicle Technologies (FCVT) program. Research this year has expanded the understanding of how thermal stratification, fuel stratification, exhaust-gas-recirculation, and fuel injection pressure impact the heat release rates, the high load limits, and the emissions of Nitrogen Oxides (NOx), Carbon Monoxide (CO), unburned hydrocarbons (UHCs), and soot. The results are providing guidance to industry on how to increase the low- and high-load capabilities of HCCI engines, while minimizing formation of emissions. Sandia received the prestigious Horning Award from the SAE for best technical contribution to the engine/fuel research fields in October 2006 and a patent on a strategy for improving the high-load capability of HCCI engines. Sandia principal investigators continued to receive numerous awards and honors for their DOE/FCVT supported research that build on their long history of awards and honors. The awards are indicative of the very high quality of their staff and the broad and international recognition of their sustained excellence in engine/fuels research. Regarding career achievement awards, four Sandia staff members have reached Fellow status in the international Society of Automotive Engineers (SAE) based on the impact and excellence of their accomplishments overtime for DOE/FCVT funded research - a recognition earned by only about 400 of the 90,000 active members in the SAE. Annual awards in FY2007 included: (1) the prestigious annual SAE Horning Award for best technical contribution in the area of fuels and engine research in October 2006 (the sixth Horning award for Sandia since about 1980, which is more than any other organization has received in the same time frame); (2) another SAE Withrow Distinguished speaker award for sustained excellence in technical presentations; (3) two more SAE distinguished speaker awards for an individual presentation.

Office of Nuclear Energy (NE)

Sandia met or exceeded the expectations of the Office of Gas Reactor Deployment, Nuclear Hydrogen Initiative, and Generation IV Nuclear Energy Systems Initiative (NE-33) during fiscal year 2007. Sandia's expertise in assigned areas of Gen IV Energy Conversion, Nuclear Hydrogen Initiative (NHI) Technical Integration, and Thermochemical Hydrogen production cycles were vital assets in accomplishing DOE/NE goals and objectives.

Sandia completed design and procurement of a small-scale supercritical Carbon Dioxide (CO₂) compressor loop which will become operational in early FY2008. This unit will allow proof-of-concept testing of compact energy conversion systems to be coupled to Generation IV advanced nuclear reactors.

Sandia assembled, tested, and transported a skid-mounted high-temperature sulfuric acid decomposition apparatus and incorporated it into an integrated laboratory-scale experiment for hydrogen production using the Sulfur-Iodine Thermochemical cycle.

Sandia assembled a talented team to support the Presidential Launch Approval Process for the NASA 2009 Mars Science Laboratory (MSL) mission. The team will characterize the potential risks of launching the MSL radioisotope powered rover from Kennedy Space Center. The team has made an extraordinary and successful effort to be responsive to the demands of the launch approval process as set forth by the Presidentially directed Interagency Nuclear Safety Review Panel (INSRP). In addition, Sandia delivered the Preliminary Safety Analysis Report (PSAR) for the MSL Mission. The PSAR describes the analysis tools and methods which Sandia will use in assessing the safety of the MSL launch. The INSRP has been highly complementary of the quality of the PSAR and the responsiveness of the Sandia team. Sandia has built and advanced the analysis tools used for previous radioisotope power missions. The assembly of those tools will expedite the submission of the MSL Final Safety Analysis Report to INSRP, the Secretary of Energy, the NASA Administrator, and the NASA Program Director.

Office of Science (SC)

Noteworthy accomplishments by Sandia have included start of the Center for Integrated Nanotechnologies (CINT) User Program, awarding of funding to the Joint BioEnergy Institute of which Sandia is a major partner, numerous papers published in peer-reviewed journals, numerous professional awards, and positive external reviews of SC sponsored programs.

5.3 – Homeland Security Programs

Among many Sandia accomplishments in Homeland Security, Sandia has provided outstanding support to the development of the Department of Homeland Security (DHS) Infrastructure/Geophysical Division's (IGD) Critical Infrastructure Protection Decision Support System (CIPDSS). Because of their efforts, the CIPDSS will be transitioned to operational use at the National Infrastructure Simulation and Analysis Center (NISAC). As the lead for the tri-lab CIPDSS team, Sandia ensured that all project deliverables were completed on time and within budget and that programmatic and technical documentation was available to the DHS sponsor. Sandia has consistently provided exceptional technical support and advice to the IGD and has been selected to assist IGD and its customer agencies in defining future requirements.

5.4 – Institutional Programs, Laboratory Directed Research and Development, and

5.7 – Institutional Programs, Work for Others – Other Federal Agencies

Sandia was successful in supporting national defense partners in many projects, such as the launch of the Strategic Target Systems (STARS) and representative targets in support of the Missile Defense Agency. In FY2007, the Sandia total WFO portfolio was approximately \$835M. Of this amount, \$802M or 96 percent was provided by Other Federal Agencies (OFAs) demonstrating a strong commitment and relationship to homeland security and defense related programs.

Sandia LDRD and WFO programs play key roles in fostering strong science, technology and engineering foundations. As an example, LDRD has produced 50 percent of Sandia's top ten most prestigious papers, which demonstrates that Sandia technical advances are highly relevant to the nation, and the global scientific community.

External review committees such as the External Advisory Board and NNSA reviews verified that Sandia's LDRD and WFO programs help to provide the framework for a world class science and engineering base that is aligned with the DOE/NNSA mission.

Sandia has been the most proactive member in the NNSA complex in support of a HQ chaired strategic outline for the NNSA transformation vision.

Opportunity for Improvement

5.2 Office of Science – The baseline peer review report of operations (April 2007) noted the lack of a full-time, on-site Director at the Center for Integrated Nanotechnology (CINT) Core Facility.

5.7 Work for Others – Sandia should realign and redesign the Corporate Survey process so that full disclosure (e.g., sponsor, raw comments, and Sandia analysis) of the current year's survey data is available to the NNSA by October 1 of each fiscal year to support that year's appraisal activity. This is a repeat finding and Sandia attention to this matter is needed.

Sandia is encouraged to work with NNSA HQ to develop new business model(s) for enhancing WFO program. Sandia also is encouraged to collaborate with other NNSA sites on establishing joint WFO projects. Strategic alliances with key mission partners are strongly encouraged.

Sandia should support SSO operational oversight by increasing the WFO program/project "transparency." The recent Risk Based Oversight Process (RBOP) conducted by SSO revealed several opportunities for increasing "transparency" within the WFO program. Invitations to demonstrations, select internal and external project and/or program reviews, briefings, as well as more notifications concerning significant technological developments and/or reports would aide in keeping NNSA better informed of activities and accomplishments. More frequent meetings between SSO and Sandia concerning WFO problem areas and successes would also improve communications and enhance NNSA's operational oversight.

Performance Measure 5.1

Maintain a strong multidisciplinary science and technology base, inclusive of DOE NNSA Research Foundations.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>5.1.1 Programmatic performance, management and planning</p> <p>Evidence: Achievements measured against DOE Program Office Work Plans, including Level II milestones as negotiated with Program Offices.</p>	Outstanding	Agree	Sandia effectively manages its S&TE portfolio to ensure alignment with key DSW and Engineering Campaign deliverables, as evidenced by the successful completion of on-time qualification deliverables.
<p>5.1.2 Quality of science, technology and engineering</p> <p>Evidence: Results from technical advisory panels, awards, patents and significant technical publications.</p>	Outstanding	Agree	The annual External Review Panels in Materials Science and Technology, Microelectronic and Microsystems, and Engineering Sciences were all impressed with the research performed at Sandia.
<p>5.1.3 Performance in the technical development and operations of major facilities (where applicable).</p>	Outstanding	Agree	Key electronic components have already been delivered from MESA to the stockpile, including an innovative shock sensor using MEMS technology.
<p>5.1.4 Relevance to national needs and agency mission</p>	Outstanding	Agree	The advances made by the Research Foundations directly support the mission of the NNSA, other DOE program offices, and other federal agencies including the intelligence community.

Performance Measure 5.2

Maintain a strong multidisciplinary science and technology base, inclusive of DOE non-NNSA Programs, including Science (Center for Integrated Nanotechnologies, Office of Basic Energy Sciences, Office of Biological and Environmental Research and Office of Fusion Energy Sciences), Energy Efficiency and Renewable Energy, Nuclear Energy, and Water Programs. Presidential Initiatives (i.e., Energy Policy Act) will be highlighted.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>5.2.1 Programmatic performance, management and planning</p> <p>Evidence: Achievements measured against DOE Program Office Work Plans, including Level II milestones as negotiated with Program Offices.</p>	<p>Outstanding</p>	<p>Agree</p>	<p><i>Office of Energy Efficiency and Renewable Energy</i> Sandia continues to exceed or meet all milestones set in collaboration with FCVT and industry to achieve DOE/EERE program goals. Their research is on schedule and within cost and is marked by sustained technical excellence and research leadership. They are also responsive to and exceed or meet all programmatic and other requests on time. Moreover, there are effective and sustained communication channels. Sandia program and project leaders are clearly identified and always accessible.</p> <p><i>Wind Energy Program</i> – The work performed at Sandia to support the EERE mission in the realm of Wind Energy development has exceeded the goals and expectation of the DOE Program Manager. The work accomplished in testing the 9 meter test blades and developing new approaches to both measure and control the mechanical loads on blades has been exceptional.</p> <p>The new effort to develop a reliability consortium with members from all development and operational aspects of the wind business has been exemplary and exceeded the broadest hopes of the supporting Program at DOE.</p> <p><i>FreedomCAR and Vehicle Technologies Program</i> – Sandia is the lead lab for organizing and running several engine combustion related working groups which involve other DOE laboratories, industry, and universities.</p> <p><i>Office of Nuclear Energy</i> Sandia met a key performance objective in November 2006 with the submission of the Preliminary Safety Analysis Report for the NASA Mars Science Laboratory. The report was delivered by Sandia on schedule. Sandia has established an excellent software quality assurance program. An excellent tracking system has been developed to track and produce the extensive safety analysis documentation and references.</p>

			<p>Sandia completed all milestones, deliverables, and objectives for the Office of Gas Reactor Deployment NE-33) on or ahead of schedule.</p>
<p>5.2.2 Quality of science, technology and engineering</p> <p>Evidence: Results from technical advisory panels; awards, patents and significant technical publications.</p>	<p>Outstanding</p>	<p>Agree</p>	<p><i>Office of Energy Efficiency and Renewable Energy</i> The Sandia engine combustion research program continues to make major contributions to developing the science-base needed by industry to develop high-efficiency, emission compliant engines and continues to be recognized as one of the leading engine research programs in the world, if not the leading program.</p> <p>A merit/peer evaluation of DOE-supported engine research is conducted every year by FCVT. Industry and academic experts serve as reviewers. Sandia's projects have consistently been judged to be at the top every year for the ten years over which the review has been held. FY2007 evaluations of Sandia projects have been uniformly positive. In the most recently available review, the highest scores in four of five review categories were received by Sandia. Comments from reviewers about Sandia projects such as the following are routine: "A model for other technology programs." "Benchmark of program quality." "World leading" "The program is extraordinarily well designed and coordinated ..."</p> <p>"Understanding ... (detailed list of effects) ... are going to make or break HCCI as a production technology."</p> <p>A patent resulting from Sandia's HCCI research was issued (U.S. Patent Number 7128046 B1) on a strategy for improving the high-load capability of HCCI engines.</p> <p><i>Office of Nuclear Energy</i></p> <p>Sandia successfully established and calibrated computer models to simulate the response of the radioisotope power system hardware to accident environments. The MSL Interagency Nuclear Safety Review Panel (INSRP) has been highly complementary of the Sandia modeling effort. The INSRP evaluation of those models will continue through FY2008 and FY2009.</p> <p><i>Office of Science</i></p> <p>Office of Science programs at Sandia had a Science Advisory review meeting for CINT, a program peer review meeting at the Combustion Research Facility (CRF) and for the Materials Science & Engineering Core Program. All reviews noted the high quality research performed at Sandia. Sandia has received several awards for their research in this area including two R&D 100 awards.</p>

<p>5.2.3 Performance in the technical development and operations of major facilities (where applicable).</p>	<p>Outstanding</p>	<p>Agree</p>	<p><i>Office of Energy Efficiency and Renewable Energy</i> The Sandia FCVT engine combustion research program is an effective user of the Office of Science/Basic Energy Sciences (BES) Combustion Research Facility, but does not operate a facility. The program significantly leverages FCVT and BES investments.</p> <p><i>Office of Nuclear Energy</i> While this effort does not involve the operation of facilities, the execution of a safety analysis for the launch approval process involves over a half a million lines of computer code to evaluate all potential threats that can exist during a mission from launch to potential reentry. It addresses threats including launch vehicle propellant fires, explosive overpressures, fragments, impacts and reentries and radiation transport including significant efforts in modeling propellant fire plumes and meteorology.</p>
<p>5.2.4 Relevance to national needs and agency mission</p> <p>Evidence: Impact of technical achievements on Laboratories.</p>	<p>Outstanding</p>	<p>Agree</p>	<p><i>Office of Energy Efficiency and Renewable Energy</i> Sandia's Energy Technologies Program is making major contributions towards national energy strategy goals and objectives, coupled with increasing energy security for our nation.</p> <p><i>Office of Nuclear Energy</i> DOE is responsible for preparing radioisotope power systems to support the nation's space programs and is responsible for safety of the public in the application of these systems. Without these power systems, humankind's knowledge of the planets in our solar system would be much more limited. The launch approval process is a key element in characterizing the safety of these vital missions and in obtaining permission to execute them.</p> <p>Sandia's leadership as Technical Integrator for the Nuclear Hydrogen Initiative, and Energy Conversion National Technical Director for the Generation IV Nuclear Energy Systems Initiative, has had a strong positive impact on the Office of Gas Reactor Deployment's ability to accomplish DOE missions.</p> <p><i>Office of Science</i> Sandia is leading the way towards scientific discovery and innovation.</p> <p>The Center for Integrated Nanotechnologies (CINT) has begun full operations on schedule.</p>

Performance Measure 5.3

Ensure a strong and responsive scientific and technical Homeland Security capability, inclusive of Department of Homeland Security (DHS) sponsored programs and initiatives.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.3.1 Quality of work and support to the DHS Science and Technology (S&T) Directorate in the application of science, technologies, and system engineering solutions to matters of national security.	Outstanding	Agree	<p>Sandia supported multiple DHS programs, including Chemical/Biological, Explosives, Borders & Maritime, Infrastructure Protection & Geophysical, and, Command, Control & Interoperability.</p> <p>Sandia successfully deployed Biological Warning and Incident Characterization (BWIC) system.</p>
5.3.2 Quality of work and support to the DHS Domestic Nuclear Detection Office (DNDO) Directorate in providing relevant radiation-detection sciences, technologies, and system-engineering solutions that enhance national security.	Outstanding	Agree	<p>Sandia had noteworthy accomplishments in the areas of architecture, test & evaluation, transformational R&D, and operations.</p>
5.3.3 Quality of work and support to the DHS Preparedness Directorate's Infrastructure Protection (IP) Program through the National Information Simulation and Analysis Center (NISAC) program.	Outstanding	Agree	<p>Despite major DHS programmatic changes, Sandia continued to make major contributions towards advancing Infrastructure Protection and expanding NISAC capabilities.</p>

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.	Outstanding	Agree	In addition to DHS primary customers, Sandia supported Federal Emergency Management Agency (FEMA) and Customs and Border Protection (CBP) entities.
---	-------------	-------	---

Other Considerations

None.

Performance Measure 5.4

Maintain an Institutional Laboratory Directed Research and Development (LDRD) Program.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.4.1 Programmatic performance, management and planning Evidence: Achievements measured against DOE Program Office Work Plans, including Level II milestones as negotiated with Program Offices.	Outstanding	Agree	Sandia had an outstanding LDRD Annual Report and conducted an LDRD Day to recognize top scientists/engineers and to foster communication among the Sandia technical staff, other labs, and industry. This outstanding rating for Sandia is based on NNSA staff participation in numerous external peer review meetings & written reports; the August 28-29, 2007 LDRD Annual Review and Symposium (over 30 projects); and the LDRD Day on September 19, 2007 (over 35 projects); and review of a project extended for a fourth year, annual reports, and other program documents, and on Sandia outstanding participation in the NNSA LDRD Working Group (WG) quarterly meetings and numerous telephone and video conferences throughout the year. Sandia has led many tasks such as the Communications Committee and hosted and led several Working Group meetings.
5.4.2 Quality of science, technology and engineering Evidence: Results from technical advisory panels; awards, patents and significant technical publications.	Outstanding	Agree	Collection and results of metrics on publications, citations, intellectual property, R&D 100 Awards, and comments from external advisory boards (EAB) are outstanding. LDRD provides over 40 percent of total number of technical advances; almost 50 percent of patent applications; about 35 percent of issued patents; 80 percent of R&D 100 Awards in FY2007 and 60 percent of all SNL R&D 100 awards since 1992 were supported by LDRD; about 20 percent of refereed publications during 2002-2006 (latest data avail.); and 50 percent of Sandia's top ten most highly cited papers. Sandia leads other national labs in optoelectronics, electrical engineering, and applied physics. The EAB in 2007 for the Terahertz Grand

			Challenge LDRD Project said that Sandia was "world-class" in S&T and was a leader in developing tools and technology to exploit the THz spectrum for national security applications. Numerous other EAB made similar positive comments. Over 65 outstanding projects were reviewed by NNSA during the Annual LDRD Review and Symposium and LDRD Day during FY2007. The quality of science is rated as outstanding based on the numerous EAB findings and advances in science and engineering observed at the Annual Review; LDRD Day; and in the written LDRD Annual Report.
5.4.3 Performance in the technical development and operations of major facilities (where applicable).	N/A	N/A	Not applicable to the LDRD program. LDRD does not run any facilities.
5.4.4 Relevance to national needs and agency mission Evidence: Impact of technical achievements on Laboratory.	Outstanding	Agree	The Program Plan and Funding Level document for FY2008 was outstanding with strong emphasis to the DOE/NNSA missions. The program has top management support with the Chief Technology Officer (CTO) being the executive and champion who ensures strategic direction and alignment with the national security mission of the DOE/NNSA. The strong ties to this mission were shown by Sandia managers during two outstanding briefings at the August 28-29, 2007 LDRD Annual Review in Los Alamos. All Sandia posters at the Annual Symposium and at LDRD Day had a section for "relevance to mission" and all depicted strong ties to DOE/NNSA missions. The LDRD program has four strategic investment categories that tie to the missions of Sandia and the DOE/NNSA as shown in their Institutional Plan and presented to NNSA at the Annual Review. 1) Science, Technology & Engineering (ST&E) provides critical support to all mission areas; 2) Mission Technologies aligns with strategic management unit goals; 3) Grand Challenges are bold, high-risk ideas using multi-disciplinary teams and aligned to a national security need; 4) Corporate Investments seek collaborations with academia and support high-risk, leading edge R&D aligned with lab and DOE/NNSA missions. LDRD has produced 50 percent of Sandia's top ten most highly cited papers which proves that Sandia technical advances are highly relevant to the Nation and the global scientific community. For example the cognitive sciences & exploratory systems area initially started with an LDRD Grand Challenge and now is a Sandia Department and has several WFO projects.

Other Considerations

None.

Performance Measure 5.5

Execute the Office of Civilian Radioactive Waste Management's (OCRWM) Repository activities, including development and review of DOE's License Application 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 assigned for inclusion in the License Application. Support the successful defense of the technical content of these sections in licensing proceedings.	Outstanding	Disagree	Sandia as the lead laboratory has provided several iterations of the draft SAR sections for review and modified the sections based on reviewers' comments. The quality of the SAR sections was generally high; though one section was rejected by the Senior Management Team reviewer (SAR sections are not deliverables). However, OCRWM notes that many deliverables are conditionally accepted. The project is high risk, and Sandia has found innovative ways to work through difficult issues. As of the end of the fiscal year, the project was still on track to meet the final License Application (LA) completion date. Thus, NNSA rates Sandia's performance for this target as Good.
5.5.2 Provide Analysis and Model Reports (AMRs) that are based upon work of high technical quality, transparent, peer review panel acceptable, traceable, and are in compliance with the Quality Assurance Requirements Document and implementing procedures.	Outstanding	Disagree	Two products required significant additional technical work. Sandia developed innovative means to accelerate critical work at the expense of the near-term schedule, thus providing a level of confidence that the LA completion date could still be met. NNSA rates Sandia's performance for this target as Good.
5.5.3 Complete work on schedule and within budget; performance metrics are provided to DOE on a monthly basis in accordance with YMP reporting requirements.	Outstanding	Disagree	OCRWM believes there are numerous issues with regard to schedule. Sandia provided metrics on a monthly basis, but the metrics showed that while some elements of the project (associated with the total System Performance Assessment, TSPA) were behind schedule, the overall project remained on track. However, Sandia has not adhered to the schedules agreed to with DOE and Bechtel SAIC, LLC, and therefore has not met the criteria for an outstanding rating. In spite of the schedule issues, and because Sandia has worked closely with DOE OCRWM and NNSA to develop solutions to the problems, Sandia's performance for this target as Good.

<p>5.5.4 Provide Technical Work Plans (TWPs) that clearly define work to be performed, the 5.5-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 Yucca Mountain Project (YMP) activities.</p>	<p>Good</p>	<p>Disagree</p>	<p>TWPs were generally provided on schedule and were of high quality. Sandia is to be commended for the effort that went in to developing the Technical Work Plans. NNSA rates Sandia's performance for this target as Outstanding.</p>
<p>5.5.5 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.</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>5.5.6 Provide technical experts on an as-needed basis for interactions with regulatory and oversight boards.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia, its contractors and participating National Laboratories are to be commended for the high quality of presentations and responsiveness to questions in numerous interactions with the Nuclear Regulatory Commission, the Nuclear Waste Technical Review Board and the Advisory Committee for Nuclear Waste and Materials.</p>
<p>5.5.7 Implement the OCRWM Nuclear Safety Culture and Safety Conscious Work Environment Policy (POL-RW-2006-01),</p>	<p>Outstanding</p>	<p>Agree</p>	

participates in OCRWM-wide efforts to assess organizational climate and Safety Conscious Work Environment (SCWE), and develop and implement improvements plans for Sandia and other National Laboratories and subordinate support organizations.			
--	--	--	--

Other Considerations
None.

Performance Measure 5.6
Contribute to the development of the Global Nuclear Energy Partnership (GNEP) to address spent nuclear fuel, reduce proliferation risks, and expand the promise of clean, reliable, and affordable nuclear energy.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.6.1 Take measurable actions to participate as a national laboratory member of the GNEP effort for DOE and ensure GNEP goals are clear to stakeholders.	N/A	N/A	NNSA and Sandia agreed to remove PM 5.6 as a separate Measure as a result of budget reductions and associated descoping of Sandia GNEP activities. Existing GNEP activities are discussed in the Office of Nuclear Energy portions of PM 5.2.
5.6.2 Develop and apply state-of-the-art modeling and simulation methods and systems analysis to advance the objectives of GNEP.	N/A	N/A	

<p>5.6.3 Performance of overall progress reporting, Program Office reviews/oversight and deliverables for SNL related GNEP activities, including timely and effective development and execution of the GNEP strategy; the level of effective strategic partnerships established with academic institutions and other laboratory partners; and willingness to pursue novel approaches and/or demonstration of innovative solutions of the GNEP program challenges.</p>	<p>N/A</p>	<p>N/A</p>	
---	------------	------------	--

Other Considerations

None.

Performance Measure 5.7

Ensure efficient management and execution of Institutional Work for Others (Other Federal Agencies) activities.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>5.7.1 Programmatic performance, management and planning</p> <p>Evidence: Results from program reviews, and customer satisfaction surveys.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>In March, NNSA assessed nuclear weapon laboratory WFO customer feedback programs. Sandia by far has the most developed and integrated customer feedback program across the complex. They have placed considerable thought in their customer survey form content and layout, how WFO sponsors are contacted, how many to contact, and from what areas WFO customers are contacted. NNSA was briefed on the most recent customer survey results, which are FY2006. Sandia is currently in their FY2007 customer survey cycle, and results were not available. In FY2006, of the 90 WFO/OFA projects surveyed, 38 responded, for a response rate of 42 percent. Overall, WFO customers are very satisfied with Sandia's performance. Overall satisfaction was rated a 9, and willingness to continue and willingness to recommend were rated 9.3 and 9.2, respectively. These ratings are on a scale of 1-10, with 10 being highest. NNSA finds Sandia to be very proactive in identifying WFO programmatic issues and, where appropriate, taking the initiative to resolve issues in a timely manner. Sandia also has been instrumental in assisting NNSA in developing a complex wide WFO strategic vision and plan for the future.</p>
<p>5.7.2 Quality of science, technology and engineering</p> <p>Evidence: Results from program reviews, and customer satisfaction surveys.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>As noted in 5.7.1 above, WFO customers are very satisfied with Sandia's science, technology, and engineering work. Of the five R&D 100 Awards recently presented to Sandia, two involved collaborations with Other Federal Agencies. Sandia's technical expertise and diversity of skills and capabilities result in products, services, and solutions to challenging national security issues that are not readily available elsewhere. Sandia's WFO funding has experienced consistent growth over the past three fiscal years. Since the last WFO/OFA appraisal in FY2005 the WFO/OFA program at Sandia has grown 29 percent, or on average approximately 15 percent per year over the last two years. The continued increase in funding is due to Sandia's initiative and vision, their ability to provide unique technical capabilities and innovative solutions, and their demonstrated technical leadership and the ability to work difficult, complex, multi-disciplinary</p>

			problems for a variety of organizations in a dynamic environment of escalating and emerging threats and technical challenges.
5.7.3 Relevance to national needs and agency mission Evidence: Impact of technical achievements on SNL/NNSA's national security mission.	Outstanding	Agree	NNSA undertook reviews of select WFO projects to determine the relevance of Sandia's WFO to national needs and agency mission. It is noteworthy that seemingly non-relevant WFO projects had deep roots into the DOE/NNSA missions, were mutually beneficial, and in many cases were synergistic between DOE/NNSA and non-NNSA work. Sandia has an extensive portfolio of WFO projects, and ensures that they meet DOE/NNSA WFO policies for performing the work. In 2001, DARPA and the Army's Future Combat Systems Program established a WFO project with Sandia that has resulted in the development of a system of systems (SoS) enterprise modeling and simulation program that now provides them with the capability to model weapon system life-cycle, assess life-cycle costs, and model dynamic changes in enterprise during life-cycle. The synergistic benefits to the DOE/NNSA include the ability to model nuclear weapon surety, stockpile stewardship, and Complex 2030. The foundation for this project is Sandia's unique nuclear weapon modeling and simulation expertise. Sandia is a leader across the nuclear weapons complex for integrating relevant WFO projects into their capabilities base.

Other Considerations

5.3 Homeland Security Programs

Explosives – Additional studies include conducting sampling efficiency for outdoor surfaces as well as a system study which is primarily funded by DTRA who is a new DHS partner in the program. Sandia's expertise has been a valuable asset to the program. This program leverages Sandia's experience in the airport restoration programs. It has been noted in the area of obtaining quality data on a short turn around basis, that Sandia has set a standard for quality.

Sandia has also been called upon to undertake lab evaluations of important new technologies, e.g., the chemical luminescence FIDO technology for detecting hydrogen peroxide. Sandia has demonstrated this capability at both the laboratory and at Albuquerque's Airport. This work, published in NEXESS reports, has been the objective basis upon which airport testing has been undertaken with S&T and TSA. NEXESS has published over 15 technical reports over the past year on a variety of topics relating to explosives characterization and equipment performance.

5.5 – Office of Civilian and Radioactive Waste Management, Yucca Mountain Project

The project established schedule and content requirements for the License Agreement, including supporting documents requirements that were very ambitious. Sandia has worked hard to meet the project milestones and is to be commended for moving the program forward in less than ideal circumstances.

NNSA is extremely pleased with the level of communication and coordination with SNL Yucca Mountain Project (YMP) staff regarding YMP issues as appropriate. Sandia has worked very hard to keep NNSA informed on critical issues and activities in a timely manner. As a result NNSA has been in a strong position to support OCRWM's Yucca Mountain Project. Sandia is to be commended in this regard.

5.7 – Work for Others, Other Federal Agencies

The eWFO system continues to be a very valuable asset to NNSA/SSO in processing, tracking, and trending the thousand plus (~1750) WFO OFA proposals/SOWs and Interagency Agreements each year. In addition, the centralized WFO policy and processing organization within Sandia is to be commended for their dedication and commitment to standardizing the WFO process throughout Sandia and codifying the process in a manner consistent with DOE/NNSA requirements and expectations. The Sandia Site Office considers the centralized Sandia WFO organizational model to be a very efficient and effective organizational structure that enhances communications among all the various WFO stakeholders, both internal and external, in order to minimize issues and manage expectations.

PERFORMANCE OBJECTIVE 6 – DEFENSE NUCLEAR NON-PROLIFERATION (NA-20)

Develop and execute a sound and relevant nonproliferation program basis which reduces the threat of nuclear proliferation and enhances counterterrorism capabilities.

Adjectival Rating
Outstanding

Numerical Score
94

Summary of Performance

NNSA has found that with few qualifications, that Sandia has significantly exceeded stated standards of performance. NNSA greatly appreciates Sandia's efforts in FY2007 to improve communications with NNSA- HQs regarding foreign activities and Congressional interactions, as well as its annual self-assessment. Sandia's rating is based on: (1) the very demanding technology associated with Sandia's research and development work, and the additional burden this year of dealing with an Organizational Conflict of Interest issue that limited the Sandia's ability to fully do the work; (2) Sandia's many significant successes throughout the nonproliferation program, and; (3) the personal efforts of several Sandia staff members.

Significant Accomplishments

Support to GTRI, satellite component manufacture and delivery, development of new radar technologies, work in the Middle East, East Asian fuel cycle, additional Protocol implementation, support to new international travel procedures, biosecurity work, and scientist engagement in Libya and Iraq.

Opportunity for Improvement

Sandia needs to improve the quality of some of the assessments it provides to NNSA. Sandia must also fully communicate problems or contentious issues that arise during the year with all cognizant levels of NNSA. Sandia needs to resolve issues raised by program managers in a more expeditious manner.

Performance Measure 6.1

Strengthen Nuclear and Radiological Security by providing training, technical support and security upgrades at specific international sites/facilities. (NA-20, PO-6)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.1.1 Conduct 6 physical protection training courses. (Global Threat Reduction NA-21)	Outstanding	Agree	Sandia conducted 12 physical protection training courses and provided training materials for an additional course. Training courses were held in India, Mexico, China (2), Indonesia, Tanzania, Estonia, Vietnam, Philippines, Australia, and for the Iraq Radioactive Source Regulatory Authority (IRSRA) in Jordan. Sandia also provided training materials for Nigeria.
6.1.2 Complete Security Upgrades for International radiological sites at Aktau, complete vulnerability assessments for 8 radiological sites, and complete 2 research reactors subject to authorization and the availability of funding for both SNL and the international partner (Global Threat Reduction NA-21).	Outstanding	Agree	Sandia completed security upgrades at 10 international radiological sites and began installation of the physical protection system for the BN-350 spent nuclear material at Aktau. In addition, Sandia supported radiological threat reduction at the 2008 Olympics venue in China, and completed five vulnerability assessments. Finally, Sandia completed physical security upgrades at four research reactors.
6.1.3 Provide training to foreign experts under International Safeguards Cooperation Agreements and engage in 10 technology collaborations under International Cooperation and Sister Labs programs for the purpose of enhancing the effectiveness of International Safeguards and reducing the risk of	Outstanding	Agree	Sandia significantly exceeded the metrics for this performance target through technology installations/evaluations and technical collaboration. Technology evaluations included remote monitoring, 3-D visualization and data authentication, and multispectral satellite imaging. In addition, Sandia provided technical and administrative support to 13 meetings, and conducted training in South America on new surveillance and secure communications equipment.

proliferation of nuclear weapons of mass destruction, subject to authorization and the availability of funding for both SNL and the international partner (Global Security Engagement & Cooperation NA-24)			
6.1.4 Conduct 8 regional training courses or international training courses (ITCs), 10 physical protection bilateral consultations, and support 5 International Atomic Energy Agency (IAEA) physical protection assessment missions (International Physical Protection Advisory Service (IPPAS), etc) as requested by IAEA or the host country and funding (International Regimes & Agreements NA-24)	Outstanding	Agree	Sandia exceeded the FY2007 training course target by presenting 11 physical protection courses and 13 physical protection bilateral consultations. In addition, Sandia helped develop several IAEA Nuclear Security guidance documents, which were not part of the original work scope for the year.
6.1.5 Provide support for securing 2 buildings with weapons usable material based on approved project scope (Weapons Material Protection NA-25)	Outstanding	Agree	The summary on page 110 of the self-assessment is factually incorrect, in stating that Sandia is working at three facilities. In reality, there are only two such facilities (A-16 and C-70). Sandia may be counting Tomsk as the third site, but that work was completed in FY2005. Sandia also claims six building – not including the building at Tomsk. That number should be five. However, five still exceeds the goal of supporting two buildings.
6.1.6 Prepare site survey, design requirements documents, and concept of operations documents for	Outstanding	Agree	

<p>Megaports installations in Egypt, Jamaica, and the Dominican Republic, provide support for equipping 20 Core sites in Russia, 2 Container Security Initiative (CSI) Ports, and 5 Megaports with radiation detection equipment (megaports measure is shared with LANL) and provide technical expertise in development of communications requirements and in evaluation of Megaports deployed communications systems, in accordance with approved schedules and acceptance test plans in support of Second Line of Defense (SLD)NA-25.</p>			
<p>6.1.7 Provide support for Material Protection Control & Accounting (MPC&A) upgrades and sustainability cooperation at 2 Rosatom civilian reactor sites; support for development of an MPC&A cooperation strategy for India (shared with INL, LANL, and ORNL); and support for MPC&A "best practices" and training cooperation</p>	<p>Outstanding</p>	<p>Agree</p>	<p>NNSA believes the completion percentage listed in the self-assessment should be higher. Recommend making the following change to eliminate the percentage and simply differentiate between the status of work at IPPE and OKBM: <i>"Physical protection upgrade collaboration with two Rosatom sites — the Afrikantov Experimental Machine Building Design Bureau (OKBM) and the Institute for Physics and Power Engineering (IPPE) — is ongoing. Upgrades at IPPE are nearing completion, and upgrades for OKBM are currently in the implementation phase."</i></p>

with Chinese civilian nuclear facilities and specialists (shared with several other U.S. laboratories) (Material Consolidation and Civilian Sites NA-25)			
6.1.8 Provide support for the securing of 3 warhead sites (Nuclear Warhead Protection NA-25)	Outstanding	Agree	Sandia completed physical protection upgrades at four weapons storage sites on schedule and within budget; successfully negotiated additional scope to Bratislava site contracts signed earlier; and put the final Bratislava weapons facility under contract in FY2007.

Performance Measure 6.2

Develop improved counterterrorism and nonproliferation tools and technologies which will reduce the risk of nuclear proliferation and terrorism. (NA20, PO-6.2)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.2.1 Fabricate, test and deliver Burst Detector Optical (BDY), Burst Detector Analyzer (BDA), and Burst Detector Processor (BDP) sensor and support systems that meet performance specifications for Global Burst Detector (GBD) payloads (Nuclear Explosion Monitoring Space Based Systems NA-22)	Outstanding	Agree	Sandia delivered three sets of BDY, BDA, and BDP sensors and systems to the Air Force (AF) contractor for SpaceVehicle integration. Meeting these required deliverables represented a significant achievement because Sandia received 10 percent less funding for this work in F2007, but without an equivalent reduction in work scope or performance requirements. Second, a statistically rare but nevertheless significant problem was discovered during final testing of an electronic component that did not perform to stated specifications. The problem might have caused an on-orbit failure, but Sandia found an innovative way to read memory from the chip with no loss of performance.
6.2.2 Perform GBD system integration of Combined X-ray Dosimeter (CXD), Burst Detector Verification (BDV),	Outstanding	Agree	The SNL/LANL team met all agreed-to deliveries (three systems), and worked together extremely well to resolve technical issues, and made appropriate schedule adjustments to accommodate the additional time required to test and pass the subsystems and components involved. The adjustments resulted in

<p>Burst Detector Optical (BDY), Burst Detector Analyzer (BDA), and Burst Detector Processor (BDP) to meet negotiated Government Furnished Equipment (GFE) delivery dates to Air Force satellite contractor (Nuclear Explosion Monitoring Space Based Systems NA-22)</p>			<p>no delays or negative impact to the USAF space vehicle contractor.</p>
<p>6.2.3 Support delivered but not yet launched, and legacy launched Space Nuclear Explosion Monitoring (SNEM) systems (Nuclear Explosion Monitoring Space Based Systems NA-22)</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>6.2.4 Integrate products from LANL and LLNL into the Nuclear Explosion Monitoring research & Engineering (NEMRE) Knowledge Base (KB) at a rate to support two KB deliveries in FY07 (Nuclear Explosion Monitoring Ground Based Systems NA-22)</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>6.2.5 Enhance synthetic aperture radar (hardware and/or data processing) technology for Weapons of Mass Destruction (WMD) nonproliferation applications</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia has consistently demonstrated its extraordinary ability to deliver high quality research that enhances national nonproliferation capability. For example, the lab's work on Advanced Radar Systems (ARS) provided critical technology to the Nuclear Fuel Cycle Remote Sensing Proliferation Detection Mission. Sandia also completed an experimental effort on the Ka-band Synthetic Aperture Radar (SAR) to validate technologies useful for traffic monitoring. The frequency, resolution, and</p>

(Proliferation Detection NA-22)			overall image quality of the Ka-band radar provide significant advantages in proliferation detection applications, including the ability to do persistent, high-resolution, and change detection imaging in day/night, all weather, and adverse environmental conditions (e.g., sand storms and smoke). These experiments extended the use of SAR technology for the detection of movement, including ground moving target identification, high-range resolution imaging, and vibrometry. In addition to demonstrating fieldable SAR technologies and algorithm advancements, the SAR team expanded its focus by tapping into Sandia's new MESA capabilities.
6.2.6 Support research and development of improved tools for collection and analysis of Uranium (U) and/or Plutonium (Pu) samples (Proliferation Detection NA-22)	Outstanding	Agree	Sandia successfully conducted a test flight of the Airborne Radiological debris Collection System (ARCS) particulate collection pod on the Mobius Unmanned Aerial Vehicle, during which Sandia successfully tested the pod under satellite communication and autonomously. Sandia completed test flights and analysis for four different Lidar payloads, and did good work on advancing particle forensics.
6.2.7 Support research and development to advance radiation sensing technology and the development of advanced materials for radiation sensing (Proliferation Detection NA-22)	Outstanding	Agree	Sandia completed system performance comparisons of liquid scintillator detectors and plastic scintillator detectors for a Neutron Scatter Camera, and in particular, increased the sensitivity threefold and achieved a cost reduction of 75 percent. In another research area, Sandia found a way to upgrade a radio frequency grounding, saving time, reducing costs, and eliminating unnecessary down time.

Performance Measure 6.3

Provide technical expertise to assist policy development and to carry out nonproliferation activities. (NA20, PO 6)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.3.1 Manage Highly Enriched Uranium (HEU) transparency contract with VNIITF to conduct radioactive source	Outstanding	Agree	Sandia maintained Blend Down Monitoring Systems at three sites, conducted training, analyzed data, and supported all required site visits.

replacements at the Blend Down Monitoring Systems installed at 3 sites in Russia and provide technical management of all HEU program seal activities for monitoring visits at 4 sites in Russia (Dismantlement and Transparency NA-24)			
6.3.2 Provide the Policy Office analysis on the fuel cycle (Nonproliferation and International Security NA-24)	Outstanding	Agree	Sandia did excellent work on developing the East Asian fuel cycle demand model and the fuel cycle supply and commerce visualization tool. Sandia also supported work in Korea, Japan and Singapore. Sandia also worked in conjunction with Pacific Northwest National Laboratory to provide valuable help on GNEP nonproliferation activities. Sandia's performance in providing analytical support to the NA-24 Policy Office was consistently outstanding throughout the year. Sandia worked closely with Headquarters on an important project related to nuclear fuel management in East Asia that was coordinated with the State Department and other laboratories.
6.3.3 Provide technical analyses and studies for the newly formed Interdiction Team, timely technical reviews on Commerce dual use export license applications for missile technology, and a training seminar on dual use items controlled for missile reasons (International Regimes and Agreements NA-24)	Good	Disagree	NNSA appreciates Sandia's candor in acknowledging less-than-outstanding performance providing support to the interdiction team. However, NNSA still disagrees with Sandia's self-assessed performance as "Good," and appreciates their efforts since those problems were elevated to higher-level management to improve that situation. Some of the Sandia's initial deliverables were disappointing, and the Sandia took too long to remedy the problem, to the extent that it became necessary to engage other laboratories to pick up the slack. Those issues appear now to be on the road to correction. Sandia's performance for this target is rated as Satisfactory.
6.3.4 Support NNSA on the Proliferation Security Initiative and complete a	Outstanding	Agree	

study on newly emerging proliferation threats (International Regimes and Agreements NA-24)			
6.3.5 Provide support for the FY07 Advances Safeguards Initiative (ASI) based on approved project scope and funding (International Regimes and Agreements NA-24)	Outstanding	Agree	
6.3.6 Effectiveness in the face of and responsiveness to unexpected, unplanned US national security requirements of an immediate nature, which require implementation of bilateral or multilateral, Presidential-directed or Congressionally-mandated nonproliferation and international security requirements stemming from surprising events, high-level initiatives or agreements, or from unanticipated technological or political opportunities (Nonproliferation and International Security NA-20)	Outstanding	Agree	Sandia responded to numerous ad hoc requests for analysis of unexpected issues in the Middle East and South Asia in FY2007. Sandia also provided ad hoc reports on recommendations and analysis of Executive Order 13382 (<i>Blocking Property of Weapons of Mass Destruction Proliferators and Their Supporters</i>), and on attempted illegal sales to foreign countries, including North Korea and Iran.
6.3.7 Comply with DOE Order 551.1B including providing timely, complete, and accurate entries into the	Outstanding	Agree	Sandia contributed practical leadership and worked persistently on several issues related to how the NNSA complex manages foreign travel in support of programmatic objectives. For example, Sandia proposed and funded a Value Stream

<p>DOE Foreign Travel Management System and NN Travel Information System for NN-20 funded overseas travelers, recognizing that there may be a need for short notice travel requests from NNSA, which cannot be input in as timely a manner as routine foreign travel. (Nonproliferation and International Security NA-20.1, International Operations)</p>			<p>Mapping assessment, which revealed that the current travel process included more than 60 unnecessary steps. That exercise was a watershed event that spurred efforts at both headquarters and the lab to re-engineer the travel approval processes, benefiting the entire NNSA complex.</p>
---	--	--	--

Performance Measure 6.4

Strengthen the Nonproliferation Regime (NA-20, PO 6)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>6.4.1 Provide NNSA support to international agreements and regimes through timely submission of Confidence Building Measures for the Biological Weapons Convention (BWC) and the FY07 Additional Protocol (AP) Declaration exercise (International Regimes and Agreements NA-24)</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia provided technical support for the implementation of the US Additional Protocol (AP) by providing input for an annual draft declaration exercise. Sandia also worked to establish corporate processes for the lab to meet its AP obligations, once project support ends. Sandia also participated in various multi-laboratory activities to address DOE complex-wide AP implementation issues.</p>

6.4.2 Execute biosecurity training in South Asia and initiate biosafety/ biosecurity discussions with the appropriate Indian officials (Global Security Engagement and Cooperation NA-24)	Outstanding	Agree	Sandia conducted exemplary technical work on two international biosecurity engagement projects in Indonesia and India. Sandia met ambitious deadlines under challenging circumstances, and successfully implemented both rapid and comprehensive physical security upgrades at a major biological research facility in Indonesia.
---	-------------	-------	---

Performance Measure 6.5

Develop Nonproliferation and counterterrorism relationships with foreign technical experts and private sector partners such that it reduces the threat of proliferation and terrorism. (NA-20, PO 6.5)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.5.1 Under Warhead Safety and Security Exchange (WSSX), conduct workshops or technical exchange meetings with Russian counterparts based on approved project and contract scope and participate in Joint Coordinating Group meetings per HQ (Dismantlement and Transparency NA-24)	Outstanding	Agree	Sandia held 10 technical exchanges under the WSSX agreement, and worked with Russian scientists in a variety of technical areas.
6.5.2 Along with 8 other labs, complete 4 technical exchanges with U.K. counterparts to develop new (and evaluate existing) technologies and monitoring procedures to confirm the presence or absence, or the dismantlement, of	Outstanding	Agree	Sandia worked with British counterparts in two technical exchanges focused on technologies for detecting and monitoring the presence or absence of nuclear weapons components. The work completed was very good, but the original target of four technical exchanges was revised downward to two by HQ for reasons completely unrelated to performance (there was a fire at one of the British facilities that made further interactions this year impossible).

nuclear weapons-related components of a potential future nonproliferation agreement or confidence building measure based on approved project scope (Dismantlement and Transparency NA-24)			
6.5.3 Support NNSA WMD scientist engagement goals through Global Initiatives for Proliferation Prevention (GIPP) grants in ongoing GIPP projects, achievement of industry partner commercialization potential for 2 GIPP Projects (Global Security Engagement and Cooperation NA-24)	Outstanding	Disagree	Sandia did not provide acceptable proposals to support nonproliferation goals with respect to the global expansion of civilian nuclear energy, which was an important new priority for the program this fiscal year. Sandia also had no new acceptable proposals for cooperative technology development in FY2007 and closed two projects for non-performance. There has been a high level of turnover in the Sandia points of contact (POC) for this program, and Sandia is now on its fifth program manager for the GIPP program. The program would have recommended an even lower rating than Good, were it not for very high performance in the Libya and Iraq portfolios. As the Sandia manager for this activity has recently become the program-wide POC, NA-24 is guardedly optimistic that performance will improve in the future. NNSA rates Sandia's performance for this target as Good.
6.5.4 Manage nonproliferation projects in the Middle East through the Cooperative Monitoring Center (CMC)-Amman; maintain Outdoor Test Facility operations, and conduct the Training Course on Cooperative Monitoring as directed and funded (Global Security Engagement and Cooperation NA-24)	Outstanding	Agree	Sandia's performance in this area was outstanding. Specifically, Sandia's contribution to the Radiation Measurements Cross Calibration project was particularly noteworthy. Sandia responded to all NA-24 requests in a timely and thorough manner, and individual efforts were instrumental in helping establish this project as a sustained regional effort, an important goal for NA-24.

Other Considerations
None.

PERFORMANCE OBJECTIVE 7 – CONTRACTOR ASSURANCE SYSTEM

Sandia will self govern through a Contractor Assurance System (CAS), which demonstrates that the programs are managed in an effective and efficient manner, continuously seek improvement, and support the accomplishment of mission.

Adjectival Rating Outstanding	Numerical Score 90
----------------------------------	-----------------------

Summary of Performance

This Performance Objective was modified mid-year FY2007 to focus on completion of implementation of the National Nuclear Security Administration (NNSA) Pilot Model Contract. The Performance Objective (PO) then focused on what NNSA and Sandia jointly had agreed were the critical milestones and were working as high priority objectives to meet the NNSA Headquarters (HQ) directed completion date of the end of FY2007. Sandia dedicated senior managers and supporting staff to achieve this goal. Most importantly, this PO had the commitment of the Laboratory Director and the Deputy Laboratory Director. Sandia met the intent of the PO.

Significant Accomplishments

The critical milestones were completion of implementation of four key contract H-Clauses. Three of the H-Clauses, H-3, *Contractor Accountability System*, H-5, *Accountability*, and H-6, *Standards Management* were the responsibility of Sandia. Their implementation would allow implementation of Clause H-4, *NNSA Oversight*, for which NNSA is responsible for implementation. Sandia met the intent of the key H-Clauses demonstrating implementation in both robustness of the process and results. This allowed NNSA and Sandia to complete implementation of the NNSA Pilot Model Contract and to share lessons learned with the NNSA Complex.

Opportunity for Improvement

None

Performance Measure 7.1

Demonstrate that Sandia's ILMS/CAS implements contract Clause H-3, Contractor Assurance System, by the end of FY2007.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
7.1.1 Develop a Project Plan to complete implementation of the Model Contract by March 30, 2007	Good	Agree	
7.1.2 Complete a rigorous self-assessment of the effectiveness of implementation of ILMS/CAS and provide results to the Site Office by the approved schedule.	Good	Agree	
7.1.3 Based on the Project Plan developed in 7.1.1, by September 28, 2007 close remaining gaps identified in ILMS/CAS Framework.	Outstanding	Disagree	<p>While a very robust process for Management Assurance has been developed to address the SSO identified gap in performance measurement as well as other gaps, Sandia will not complete development of a high level suite of measures and deliver to SSO until mid-November.</p> <p>The continuous improvement gap relative to incident investigation is still being addressed at the end of the FY2007.</p> <p>The SSO rating is a high Good.</p>
7.1.4 Based on the Project Plan developed in 7.1.1, by September 28, 2007 close high priority gaps identified in ILMS/CAS Transparency.	Outstanding	Disagree	<p>Sandia has developed a more robust process flow diagram for the Assure, Assess and Improve process within the Integrated Laboratory Management System (ILMS). This is very positive as it is indicative of another cycle of improvement. The updated process flow diagram will not be evident in ILMS until the first quarter of Fiscal Year 2008.</p> <p>The SSO rating is a high Good.</p>

Performance Measure 7.2

Demonstrate that Sandia's ILMS/CAS implements contract Clause H-5, Accountability, by the end of FY2007.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
7.2.1 Document and provide to the Site Office evidence of processes and results that demonstrate that Sandia meets the intent of Clause H-5 including acceptance of responsibility for quality of products, and assessing and improving operations without reliance on NNSA oversight.	Outstanding	Agree	Sandia has demonstrated a commitment in the area of accountability. The effort to include the H-5 Accountability language in all the Corporate Process Requirements is commendable. Many of the other improvements noted in the Performance Evaluation Assessment Report are also process improvements that support a commitment to Accountability.

Performance Measure 7.3

Demonstrate that Sandia's ILMS/CAS implements contract Clause H-6, Standards Management, by the end of FY2007.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
7.3.1 Document and provide to the Site Office evidence of processes and results that demonstrate that Sandia meets the intent of Clause H-6 including benchmarking and comparisons with other organizations and identifying industry standards and/or changes/exceptions to DOE/NNSA requirements that can improve	Outstanding	Disagree	The redesigned process implemented by Sandia should allow the "regularly benchmarking 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" to further mature in FY 08 and beyond. Current proposals are limited to Directives in Facilities with plans to address other areas in FY 08.

performance and provide efficiencies.			
---------------------------------------	--	--	--

Performance Measure 7.4

Provide the Site Office with evidence of the improvements to management, performance and effectiveness, and gains in mission and operational efficiency (both measured and inferred) that have been realized as a result of successful Model Contract implementation at SNL and demonstrate how these efficiencies have been applied.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
7.4.1 Document and provide to the Site Office evidence of mission and operational performance and efficiency improvements that have been realized as a result of the Model contract implementation in addition to those previously provided in Performance Targets 7.2.1 and 7.3.1.	Outstanding	Agree	The identified gains in mission and operational efficiency over the four years of Model Contract implementation are a testament to the selection of Sandia to Pilot the NNSA Model Contract. Sharing of Lessons Learned with the NNSA Complex will complete the NNSA Pilot.

Other Considerations

None.

PERFORMANCE OBJECTIVE 8 – BUSINESS AND OPERATIONAL SUPPORT

Sandia will manage and operate its business and operational functions in an exemplary and efficient manner in accordance with the Integrated Laboratory Management System 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 and Operational functions include: Facilities and Project Management, Business Systems (Information Technology, Procurement, Contractor Human Resources, Logistics, Finance), Safeguards and Security, Environment, Safety, and Health, Safety Basis, and Nuclear Operations.

Adjectival Rating
Good

Numerical Score
88

Summary of Performance

Overall, Sandia exceeded the standard of required performance with respect to managing and operating its business and operational functions in an exemplary and efficient manner that fully supports successful accomplishment of mission, while protecting the public, worker, environment, and national security assets in accordance with the terms and conditions of the contract.

As described below, Sandia's accomplishments, performance, and efforts during the performance period are recognized as strengths for their continuing focus in achieving the mission with demonstrated success in: (1) system integration to accomplish mission; (2) proactive stewardship of facilities and infrastructure; (3) effective day-to-day business management; (4) overcoming operational obstacles; (5) pursuit of benchmarking, certification and (6) management systems.

Notwithstanding these exhibited areas of strength, as described below, NNSA continues to have concerns with: (1) inconsistent management follow through or attention; (2) inadequately developed and implemented processes and procedures to include inadequate corrective action plan (CAP) development and implementation; and (3) recurring and systemic problems. It is noted that Sandia's performance in these problematic areas did improve during this year with increased management involvement, but continued improvement is still required.

NNSA rates Sandia's FY2007 performance for PO 8 as Good with a numeric score of 88. Sandia exceeded the standard of performance although the need for improvement in performance was identified in several areas.

Performance Measure 8.1 Facilities and Project Management: *Sandia will manage and operate its facilities and projects in an exemplary and efficient manner in accordance with the Integrated Laboratory Management System (ILMS) to fully support successful accomplishment of mission,*

while protecting the public, worker, environment, and national security assets. Performance will be measured in the areas of Utilities and Energy, Real Property, Project Management, Site Planning, and Maintenance. Sandia significantly exceeded the standard of performance by continuously improving processes in order to be more efficient/effective in support of utility systems and maintenance while supporting the mission. Sandia exhibited outstanding project management for the Microsystems and Engineering Sciences Applications (MESA), Center for Integrated Nanotechnologies (CINT), ECIM and Test Capability Revitalization (TCR) Phase II projects, however continuous improvement is needed in the areas of real property, project management, and site planning.

Performance Measure 8.2 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 in the areas of Information Technology, Property and Logistics, Procurement, and Contractor Human Resources will be measured through objectives matrices that have been developed for each of these programs. Finance will be measured through objectives and measures that are established by the NNSA Chief Financial Officer.

Effective business programs and functions are integrated into all work activities throughout Sandia to maintain effective and efficient operations and support mission objectives. Sandia significantly exceeded the standard of performance by deploying integrated business processes throughout its infrastructure in support of mission and other work activities. This was achieved through outstanding performance as measured through performance in the areas of Procurement, Property Management, Contractor Human Resources, and Information Management (cyber security is addressed under Safeguards and Security). Whereas performance in the area of Finance did not significantly exceed requirements, re, Sandia's performance in this area still exceeded requirements.

Performance Measure 8.3 Safeguards & Security: Sandia demonstrates adherence to applicable cyber and physical security requirements to include protection and control of special nuclear materials and classified matter through cost-effective implementation of a safeguards and security program that is compliant with applicable DOE Orders and NNSA Policy Letters (NAPS). *Performance will be measured in accordance with the performance 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 operations, Top Secret, Accountable Classified Removable Electronic Media (ACREM), Security Systems Replacement Project (SSRP), cyber perimeter defense, and cyber incident response. (PEG 4 and PIP 70)*

Sandia significantly exceeded performance expectations in the areas of safeguards and security. The information presented in the PEAR for this metric is representative of the conditions observed by NNSA during survey and oversight activities. During the period of performance, the Office of Independent Oversight (OIO) and the NNSA/SSO Safeguards and Security staff conducted inspection and survey activities that resulted in a comprehensive compliance and performance-based evaluation of the effectiveness of Sandia's safeguards and security program. The Sandia Security organization as well as the line has demonstrated its ability to sustain satisfactory levels of performance in all elements of the site safeguards and security programs at both the New Mexico and California sites. Each of the topical elements inspected by OIO resulted in "Effective Performance" ratings which represent the highest attainable rating. None of the findings identified had any adverse impact on any of the topical ratings.

Performance Measure 8.4 Environment Safety and Health: The Sandia Integrated Safety Management System (ISMS) is comprehensive and effectively implemented in accordance with the ILMS by all line organizations to ensure worker safety, safety of the public, protection of the environment and mission success. Performance will be measured in the areas of Behavior Based Safety, Self-Assessment, Work Control, Performance Measurement, Concerns Management, Risk Management and Continuous Improvement. Sandia's performance exceeded expectations in the development of a leading and lagging indicator ES&H performance dashboard, timely environmental reporting to regulators, and consistently improving key injury and illness performance indicators (Total Recordable Case Rate (TRCR) and Days Away and Restricted Duty Case Rate (DART)) over a three year period. NNSA has found that Sandia's performance did not meet expectations in the following areas: (1) the lack of high-quality ES&H self assessments; (2) ensuring that NMED audit findings are corrected and sustainable; (3) ensuring the accuracy of Chemical Information System (CIS) data, (4) demonstrating effectiveness of electrical safety improvements by the Electrical Safety Severity Index, (5) improving NNSA confidence of fire protection activities, and (6) ensuring effective implementation of Work Planning and Control (WPC) throughout SNL and its contractors. Overall, Sandia met expectations for this performance measure.

Performance Measure 8.5 Safety Basis: Sandia's hazard category (HC)-2 & 3 nuclear facilities and high-hazard industrial facilities have developed compliant safety basis (SB) documentation. Sandia exceeded the standard of performance by developing compliant safety basis documentation for their hazard category (HC)-2 & 3 nuclear facilities and high-hazard industrial facilities. Sandia has improved the conduct of safety basis document development and related process quality over the last year. However, opportunities for improvement remain in the area of integration of DSA/TSR/Fire Hazard Analysis, Unreviewed Safety Question process and independent internal review process.

Performance Measure 8.6 Nuclear Operations: Sandia's HC-2 & 3 nuclear facilities are operating within the bounds of their safety basis and are prepared to safely support all programmatic commitments. Sandia's performance in operating their nuclear facilities significantly exceeded expectations in support of programmatic commitments. Additionally, the SNL nuclear facilities exceeded expectations with respect to their compliance with regulatory requirements. Sandia safely shipped Special Nuclear Material (SNM) offsite in support of security Category I and II de-inventory efforts, and reduced the inventory of SNM in the Manzano Nuclear Facility. Sandia has not fully implemented Safety Software Quality Assurance and Fire Hazard Analysis requirements at the nuclear facilities. Additionally, there are weaknesses in the Cognizant System Engineer program and an Unreviewed Safety Issue program needs to be implemented at the HERMES facility.

Significant Accomplishments

Presented below are areas in which Sandia's performance has significantly exceeded NNSA expectations in the areas of (1) system integration to accomplish mission; (2) proactive stewardship of facilities and infrastructure; (3) effective day-to-day business management; (4) overcoming operational obstacles; (5) pursuit of benchmarking, certification, and awards; and (6) management involvement.

(1) System Integration to Accomplish Mission

Based on a thorough technical review, the NNSA Safety Basis Review Teams recommended approval of five new or upgraded safety basis documents and four Documented Safety Analysis (DSA) annual updates for the nuclear facilities with no pre-start Conditions of Approval (COAs) in accordance with the Safety Basis Improvement Project (SBIP).

The Nuclear Material Storage Facility (NMSF) safety basis scope was evolving throughout the DSA development due to the unique nature of the operations, yet Sandia was able to complete a quality DSA and Technical Safety Requirements (TSRs) with no conditions of approval COAs, in spite of an extremely aggressive schedule.

(2) Proactive Stewardship of Facilities and Infrastructure

Environmental Restoration Project achievements in FY2007 include completion of activities at the Mixed Waste Landfill (MWL) including submittal of a soil gas sampling and analysis plan (SAP), completion of sub-grade preparation activities, and early submittal of the Long-term Maintenance and Monitoring Plan (LTMMMP). Notable regulatory achievements include receipt from the New Mexico Environment Department of Corrective Action Complete (CAC) certificates for four Solid Waste Management Units (SWMUs), and bringing the DOE complete site counts from 259 to 263 of 265.

Real Property noteworthy accomplishments include the development and execution of the Land Use Agreement to construct the new National Atomic Museum (NAM) building on NNSA land and returning the old NAM building to the Air Force.

The Photovoltaic roof on Building 833 won a Federal Energy Management Program award and has been a showcase project to the community and other DOE sites.

The Sustainable Building program is showing good results. The Microsystems Engineering Science Applications (MESA) MicroFab was the first computer chip fabrication facility to receive a sustainability certification from the US Green Building Council (USGBC). Also, the Center for Integrated Nanotechnology (CINT) and the Weapons Evaluation Testing Lab (WETL) both were certified as sustainable by the USGBC, while the Joint Computational Engineering Lab (JCEL) was awarded a SILVER certification. Additionally, the MESA MicroLab and Weapons Integration Facility facilities have been submitted to the USGBC for certification.

Sandia demonstrated outstanding performance on the MESA Project and on nearly all Line Item Projects. Several successful Project Critical Decision milestones were met this year:

- The MESA Project successfully completed all milestones and achieved CD-4 while coming in 3 years ahead of schedule and approximately \$40M under budget while maintaining the original scope.
- The Sandia Program has done an outstanding job supporting the Test Capabilities Revitalization Phase 2 Project during the challenges related to changing funding profiles.
- The Exterior Communication Infrastructure Project completed three months ahead of schedule and, \$4.2M under budget.
- The New Master Substation Utility (NMSU) project completed on schedule and \$70,000 below budget.

- Sandia and LANL successfully worked together on the Center for Integrated Nanotechnologies (CINT) Project which was completed on schedule and \$70,000 under budget.
- Sandia developed several workarounds to address cost increases and component delivery delays on the Z Refurbishment (ZR) Project, aggressively pursued cost reductions to stay within the Total Project Cost and completed the project with a schedule and budget very close to established baseline.
- Sandia has committed to implement an internal cost recovery mechanism/plan that will allow the generation/application of sufficient funds to stabilize mission essential deferred maintenance growth by FY2009.

Sandia completed preventive maintenance on schedule at a rate of 96 percent which is substantially greater than the goal of 85 percent.

The average maintenance backlog was 5.3 weeks, which is below the established goal of 8 weeks.

(3) Effective Day-to-Day Business Management

Sandia should be commended for developing a solution to a complex-wide financial audit finding related to depreciation of additions to fixed assets. The Sandia solution was shared with other NNSA Management and Operating contractors experiencing the same problem and was recognized by the NNSA Office of Field Financial Management as an exemplary effort.

(4) Overcoming Operational Obstacles

Sandia successfully developed, managed and executed an approved 2007 Safeguards and Security (S&S) AOP. Sandia effectively utilized change control for this plan and also met quarterly reporting requirements established by NNSA. Sandia has also continued to apply lessons learned to the AOP and continues to improve and enhance the document and its applicability. For example, Sandia worked closely with NNSA to develop the 2008 S&S AOP so that it also serves as the basis for the 2008 PEP in that each of the performance targets set by either NNSA HQ or NNSA will be included in the AOP as either a Level I or Level II milestone.

The Office of Independent Oversight (OIO) conducted a comprehensive security inspection at the New Mexico and California sites during this performance period. The inspection activities included compliance and performance-based evaluation activities in each topical and sub-topical element of the Sandia security program with a few exceptions. Those areas not reviewed directly by the OIO inspection team were identified in a gap analysis and were surveyed separately by the NNSA S&S team. For example, the Protective Force Operations and the Material Control and Accountability program at the California site were not reviewed by OIO; however, a special survey team from NNSA was dispatched to conduct comprehensive survey activities of each. While the OIO inspection revealed 14 findings and the NNSA survey identified two additional findings, none were considered significant nor were any considered repeats.

NNSA recognizes the remarkable improvement in the key injury and illness performance indicators (Total Recordable Case Rate (TRCR) and Days Away and Restricted Duty Case Rate (DART)) from FY2003 to FY2007. NNSA recognizes that Sandia's implementation of Behavior Based Safety (BBS) contributed to the improved safety and health of the workforce.

Sandia has managed the Occupational Exposure Assessment (OEA) project in an exemplary manner, with a comprehensive approach to baselining the industrial hygiene hazards on site, and validating the subject matter expert opinions concerning the occupational health risks associated with activities on site.

(5) Pursuit of Benchmarking, Certification, and Awards

Sandia has achieved initial International Organization for Standardization (ISO) 9001-2001 registration or been recertified for ISO registration in several business areas to include: Sandia's Computing Support Services in New Mexico and CA, Sandia's NM Telephone and Networking organizations and the Procurement organization.

(6) Management Systems

Sandia's development of a leading and lagging indicator Environment, Safety, and Health (ES&H) performance dashboard and the process followed to define these with NNSA is a positive accomplishment.

Environmental reporting response time was good. For non-reportable quantity (RQ) releases, Sandia reported to NNSA within the eight business hour time requirement (spills) and within the required time frames to outside regulators. Spills that occurred resulted in no impact to human health or the environment. For RQ releases, Sandia reported to NNSA and the appropriate outside agencies within the two business hour time requirement.

Sandia developed and implemented a compliance deliverable database for tracking dates and requirements in the second Quarter of FY2007. Dates of deliverables from that database are reported quarterly to NNSA. Greater than 98 percent of the deliverables were on time. In addition, Sandia is implementing a permitting tracking database for all outside agency issued permits. The database will show real-time compliance with permit conditions and allows NNSA access. Thirteen air permits have been put into the database for implementation in FY2008.

Sandia developed an Electrical Safety Plan with clear set points/goals for program improvement. This resulted in management focus on the program and will provide significant improvement in the future.

Sandia exceeded expectations regarding work control in the performance of SNM de-inventory activities. The preparation and shipment of the Melt Progression (MP) 1 and 2 items and the removal, disassembly, and shipment of the Sandia Pulsed Reactor material from the In-Ground Storage Vault involved significant planning, coordination and flexibility.

Opportunity for Improvement

Presented below are areas of significant concern where Sandia's performance did not meet NNSA expectations. These exhibited areas needing improvement are: (1) inconsistent management follow through or attention; (2) inadequately developed and implemented processes and procedures; and (3) recurring and systemic problems.

(1) Inconsistent Management Follow Through or Attention

Sandia needs to ensure Institutional General Plant Project (IGPP) processes are in place and Project Managers are properly trained to prevent IGPP projects from starting without prior NNSA review and approval.

Sandia submitted several Preliminary Real Estate Plans (PREPs) for leasing without sufficient National Environmental Policy Act (NEPA) documentation. The Real Estate Program requirements and the Prime Contract requirements have not been thoroughly understood by Sandia Real Estate and the experience and educational levels for Subject Matter Experts (SME) as required by Sandia's Real Estate Guidelines have not been met.

NNSA continues to note improvements in safety basis processes and documents but improvement is needed to insure quality safety basis documents are submitted to NNSA. Some examples for improvement are: (1) ensuring quality and consistency between DSA chapters and TSRs, (2) integrating Fire Hazard Analysis (FHA) into the safety basis, and (3) improvement of the Sandia independent internal review comment resolution process.

(2) Inadequately Developed and Implemented Processes and Procedures

The Sandia General Plant Project (GPP) review/QA process did not ensure the Project Authorizations (PAs) & Baseline Change Proposals (BCPs) contained accurate and appropriate information, i.e., mission need statements.

Sandia did not document the Energy Program actions to be implemented based on the benchmarking efforts. Sandia needs to ensure that the energy usage data is updated to reflect fourth quarter information in the FY2008 Energy Management Plan and Sandia did not enter the energy data for SNL remote sites into the Energy Management System by November 15, 2006.

Sandia did not provide an appropriate management response considering the overall sensitivity and seriousness of an incident involving the loss of control of a protective force credential at the Tonopah Test Range (TTR) facility. As a result, several security-related elements were mishandled. There were obvious issues regarding the access controls in place that may have contributed to the incident; the notification of the incident to NNSA after the condition was discovered was not timely; Sandia improperly characterized the condition (loss versus unauthorized access). Additionally, the length of time it took Sandia to implement interim protective measures regarding the access control issues demonstrated a lack of responsiveness considering the nature and seriousness of the incident.

NNSA has identified issues with Unreviewed Safety Questions (USQ) Process at Sandia's nuclear facilities. The NNSA 2nd Quarter FY2007 USQ Assessment had a Repeat Finding concerning inadequate USQ Screens. NNSA also has identified issues with Sandia's causal analysis and CAP development processes used to address the problems with inadequate USQ Screens.

Sandia did not fully implementing Safety Software Quality Assurance at the Nuclear Facilities in accordance with requirements presented in DOE Order 414.1C, Quality Assurance and Sandia Corporate requirements.

(3) Recurring and/or Systemic Problems.

Two areas providing opportunity for improvement are the Purchase card (Pcard) Program and Small Business Subcontracting Program. Each of these areas had repeat findings or findings similar to those found in the past by the Office of Inspector General and the Small Business

Administration, respectively. There is no evidence that Sandia validated remedial measures taken to ensure that the corrective action in the past was sustainable.

NNSA expects Sandia to actively manage the electrical safety program, including adhering to an aggressive schedule for implementing improvement plans to show significant reductions in incidents and severity of incidents. NNSA expects Sandia to react to any serious incident. For example, while the Electrical Severity Index (ESI) now employed at Sandia may allow for direct contact with electrical energy to be categorized as non-reportable (e.g. ORPs) incident, the fact remains that such an event is a recognizably serious incident that requires management action.

Sandia must refine the criteria which have led to the selection of consequence planning thresholds and the selection of containers to be tracked to 100 percent accuracy. The accuracy of Chemical Inventory System (CIS) data is paramount when it serves as the repository of data employed by Sandia for effectively identifying inventories which approach thresholds of concern to emergency management consequence planning.

Ensure corrective actions from findings issued by the NMED are in place and sustainable. On September 6, 2007, Sandia received a Notice of Violation (NOV) from the NMED resulting from a FY2007 NMED Audit. Findings included failure to close two hazardous waste containers at Building 897 (Basic Energy Science (BES)-supported facility), and failure to sign and date the original manifest upon receipt of a hazardous waste shipment at Building 959 (RTBF-supported facility). The fine levied was \$4,504.00. Although the violations were individually corrected in October 2006, the findings of open containers in this inspection are repeat findings from previous inspections, and effective corrective actions must be implemented to prevent recurrence.

Sandia needs to improve the consistency of their causal analyses. Sandia also has not fully socialized the importance of reporting Near Misses. Non-Occurrence Trackable Event (NOTE) and Occurrence report are repeatedly not categorized as Near Misses when they should be or it takes encouragement from NNSA to report them.

Performance Measure 8.1

Facilities and Project Management: Sandia will manage and operate its facilities and projects in an exemplary and efficient manner in accordance with the Integrated Laboratory Management System (ILMS) to fully support successful accomplishment of mission, while protecting the public, worker, environment, and national security assets. Performance will be measured in the areas of Utilities and Energy, Real Property, Project Management, Site Planning, and Maintenance.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>8.1.1 Sandia shall ensure that utility systems are operated in an efficient manner and resources are conserved.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>The NNSA rating is primarily based on Sandia's hard work to institutionalize efficient operations in order to conserve resources. The energy intensity for regular buildings decreased by 0.41 percent from FY2006 to FY2007. The submittal of 7 project applications to the FEMP. Additionally, the projects were designed while awaiting FEMP approval. The Photovoltaic roof on Building 833 won a FEMP award and has been a showcase project to the community and other DOE sites. The Sustainable Building program is showing good results. The Microsystems Engineering Science Applications (MESA) MicroFab was the first computer chip fabrication facility to receive a sustainability certification from the US Green Building Council (USGBC). Also, the CINT and the WETL both were certified as sustainable by the USGBC, while the Joint Computational Engineering Lab (JCEL) was awarded a SILVER certification. Additionally, the MESA MicroLab and Weapons Integration Facility facilities have been submitted to the USGBC for certification. The SNL Metering Plan was submitted on time and clearly demonstrated the outstanding performance of Sandia in effective metering. Sandia met the metering requirements for 99 percent of its facilities 5 years ahead of the date mandated by the Energy Policy Act of 2005. However, Sandia still needs to reduce the overall energy usage. This has increased and resulted in an increase in Greenhouse Gas emissions. Additionally, water usage while down from last year has not significantly decreased from the 1985 baseline and Sandia did not enter the energy data for SNL remote sites into the Energy Management System by November 15, 2006. Sandia needs to document the actions to be implemented based on the benchmarking efforts and ensure that the energy usage data is updated to reflect fourth quarter information in the FY2008 Energy Management Plan.</p>
<p>8.1.2 Sandia shall acquire, operate, manage and dispose of Real Property in a</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates Sandia's performance as Good for this target. NNSA's rating is primarily based on Sandia's ability to meet all the negotiated goals and achieve the outstanding targets for three of the four measures. NNSA agrees with the SNL Real Property</p>

<p>manner to support the DOE mission utilizing policy and standards established by DOE and Sandia procedures and guidelines with regard to optimization of space and proper utilization of facilities.</p>			<p>accomplishments as written in the PEAR. Real Property noteworthy accomplishments include developing and executing the Land Use Agreement to construct the new National Atomic Museum (NAM) building on NNSA land and returning the old NAM building to the Air Force. However, Sandia has the following areas for improvements: (1) Sandia needs to implement a robust Space Management Program in order to manage space and occupancy more effectively, (2) the Real Estate Program requirements, actions, and the Prime Contract obligations have not been thoroughly understood by Sandia Real Estate personnel. The experience and educational levels for Subject Matter Experts (SME) as required and defined by Sandia's Real Estate Guidelines is absent. Sandia's decision and action to consolidate two SMEs into one full-time and use of a non-real estate employee has increased the risk of not meeting Real Estate Program requirements, and (3) Sandia submitted several Preliminary Real Estate Plans (PREPs) for leasing without sufficient NEPA documentation.</p>
<p>8.1.3 Sandia shall implement an exemplary and efficient Performance Management Program on all projects, Major Systems Acquisitions, Environmental Restoration Projects, and Other Line Item Projects.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates Sandia's performance for this target as Good. The NNSA agrees with the PEAR write-up on accomplishments. The NNSA rating is primarily based on Sandia's outstanding performance on the MESA Project and on nearly all Line Item Projects. Several successful Project Critical Decision (CD) milestones were met this year. However, there were a few performance issues with respect to the Heating System Modernization (HSM) Project, Environmental Restoration Project, and projects under \$5 Million.</p> <p>The MESA Project successfully completed Level I-NNSA/HQ milestones to Complete MESA MicroFab Tooling April 17, 2007, Approve CD-4 for MESA MicroFab July 2, 2007, and Approve CD-4 for MESA MicroLab June 1, 2007. All of these milestones were accomplished on or ahead of schedule. Project also completed Level-2 NNSA controlled milestone Start Demolition of Building 893 (CSRL) on March 16, 2007, ten months ahead of schedule. Overall the project is running three years ahead of schedule and \$40M under budget.</p> <p>The SNL Program has done an outstanding job supporting the Test Capabilities Revitalization Phase 2 Project. There has been an on-going effort to justify the full scope of the project and its importance to the overall NNSA environmental testing program. Additionally, the project team has done an outstanding job staying focused on completing the design despite the uncertainties with the final scope and the changing construction funding profile.</p> <p>The Exterior Communication Infrastructure Project</p>

		<p>completed 3 months ahead of schedule, \$4.2M under budget, and submitted the final cost report ahead of schedule.</p> <p>The New Master Substation Utility (NMSU) project received CD-4 (approval to closeout project). NMSU completed on schedule and \$70,000 below budget.</p> <p>Sandia and Los Alamos National Laboratory (LANL) successfully worked together on the Center for Integrated Nanotechnologies (CINT) Project and achieved CD-4b, <i>Approve Start of Full Operations</i>. The project was completed on schedule and \$70,000 under budget.</p> <p>Sandia developed several workarounds to address cost increases and component delivery delays on the Z Refurbishment (ZR) Project. Sandia aggressively pursued cost reductions to stay within the Total Project Cost. The ZR project was completed with a schedule and budget very close to established baseline. Sandia did a good job of keeping NNSA well informed of the project status.</p> <p>Bids for the Heating System Modernization (HSM) project came in substantially higher than the Sandia's government estimate. This resulted in Sandia using 87 percent of the contingency for FY2007 contract awards and revised government estimates for out year bids. Due to this poor estimating, the HSM project is at high risk to completing within the total project costs.</p> <p>The FY2007 Environmental Restoration (ER) Project performance is assessed as "Good." Four of five performance objectives were completed on or ahead of schedule. The project scope was completed on schedule with a year-to-date Schedule Performance Index (SPI) of 1.00. The year-to-date cost performance index (CPI) is 0.85. The Cumulative SPI and CPI are 1.02 and 0.99 respectively at year-end FY2007. During the 2nd Quarter, the ER Project experienced cost over-runs primarily due to additional requirements imposed by NMED, however, in two instances, Sandia contributed to the negative cost variance due to underestimating the soil required for the sub-grade preparation activities at the Mixed Waste Landfill (MWL) and lateness on including the SNL infrastructure costs for FY2007. Important ER Project achievements in FY2007 include completion of activities at the MWL including submittal of Notice of Disapproval (NOD) responses for the Corrective Measure Implementation (CMI) Plan; submittal of a soil gas sampling and analysis plan (SAP); completion of sub-grade preparation activities; and early submittal of the Long-term Maintenance and Monitoring Plan (LTMMMP). Notable regulatory</p>
--	--	--

			<p>achievements include receipt from the New Mexico Environment Department of Corrective Action Complete (CAC) certificates for four Solid Waste Management Units (SWMUs), bringing the DOE corporate site counts from 259 to 263 of 265.</p> <p>For projects under \$5 Million, the timeliness and quality of some of the Project Authorizations (PA) and the Baseline Change Control (BCP) Requests did not meet the NNSA's expectations. Sandia's review process has recently expanded to include security, planning, and business. However, issues associated with project justification, project interfaces, and safety has delayed approvals. Sandia should reevaluate their review processes to ensure that the proper personnel are reviewing mission need, accuracy, and completeness.</p> <p>On the IGPP Temporary Boiler Project, Sandia initiated and awarded Design in April/May 2007 and spent \$32,000 prior to receiving the PA. Sandia should establish modified controls to prevent this from happening again.</p>
8.1.4 Sandia shall develop, document, maintain, and implement an exemplary Ten-Year Site Plan (TYSP) for the physical infrastructure at Sandia.	Outstanding	Disagree	<p>NNSA has rated Sandia's performance as Good for this target. The NNSA rating is primarily based on Sandia's ability to develop a Long Range Management Plan, submitting the Ten Year Site Plan (TYSP) on schedule and developing a Lessons Learned activity. However, these Lessons Learned process improvements have not been demonstrated. In addition, Sandia has committed to implementing an internal cost recovery mechanism/plan that will allow the generation/application of sufficient funds to stabilize mission essential deferred maintenance growth by FY2009. Trends indicate that Sandia is making progress towards this Facility Condition Index (FCI) 5 percent goal. However, Sandia has yet to develop additional measures to ensure the FCI remains within this goal and stable beyond FY2009.</p>
8.1.5 Sandia shall maintain all facilities and infrastructure (F&I) in a safe, life-cycle cost effective, and regulatory compliant manner, paying close attention to important and critical safety and mission related systems. Execution of facilities maintenance (restorative,	Outstanding	Agree	<p>NNSA agrees with rating of Outstanding and the PEAR write-up on accomplishments. The NNSA rating is primarily based on Sandia's performance in meeting or exceeding the following maintenance performance measures:</p> <ul style="list-style-type: none"> ▪ The maintenance Total Recordable Case Rate (TRCR) was lower than the FY2006 rate. In FY2006, the TRCR was 9.81; the FY2007 TRCR was 3.87. ▪ Sandia exceeded the goal to complete preventive maintenance on schedule at a rate of greater than 85 percent. At the end of FY2007, the cumulative rate was 96 percent. ▪ Every dollar spent on the elimination of deferred maintenance (DM) and Replacement in Kind (RIK) from Facilities Infrastructure

<p>preventive, and predictive) shall support operational needs and be performed in general conformance with established schedules.</p>			<p>Recapitalization Program (FIRP) or restoration funds yielded approximately a 125 percent corresponding DM reduction.</p> <ul style="list-style-type: none"> ▪ The average maintenance backlog was 5.3 weeks, which is below the established goal of 8 weeks. ▪ No facilities were unavailable due to unplanned outages in FY2007. <p>Sandia is evaluating past findings to address recurring issues related to maintenance work controls. Sandia completed a Work Planning & Control Gap Closure Plan in May 2007. The plan contains measures to improve the documentation of work descriptions, hazard identification & analysis, and hazard controls at the work activity/task level. At the end of FY2007, Lockheed Martin conducted another work control related assessment. This corporate assessment also identified work control issues</p>
--	--	--	---

Performance Measure 8.2

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 in the areas of Information Technology, Property and Logistics, Procurement, and Contractor Human Resources will be measured through objectives matrices that have been developed for each of these programs. Finance will be measured through objectives and measures that are established by the NNSA Chief Financial Officer.

Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
<p>8.2.1 Meet the established goals in the negotiated performance measures objectives matrix for Information Technology</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia has met most of negotiated performance metrics for FY2007 for Information Technology at the Outstanding level. However, Sandia did not meet all of the negotiated parameters for both improvement initiatives, metrics, and/or the quality of the input was of such poor quality that NNSA did not accept the input as meeting the milestone. For instance, Business Impact Analysis (BIA) Initiatives were to be completed for - the Washington, D.C. Office and D.C. area Sandia employees, the remote sites of Kauai Test Facility, Waste Isolation Pilot Plant (WIPP) Sandia Operations (Carlsbad), the Yucca Mountain Project Office Sandia Operations (LasVegas), Tonopah Test Range, and, the following functional areas of SNL: Health Services, ES&H and Human Resources. The plans that were provided for <i>Yucca Mountain</i> and for ES&H services were incomplete or of a very poor quality. The BIA for ES&H appears to be incomplete in that several questions are asked in the document that are not answered. Additionally, even though the ES&H BIA states that no interruption of services for the EOC can</p>

			<p>be tolerated - no mitigations are shown for in the credible threats listing for California for threats resulting from earthquakes - yet that is the backup site for NM and earthquakes are a high probability for CA. Additionally BIAs were not provided for Washington D.C., WIPP or for Human Resources as called for in the project plan.</p>
<p>8.2.2 Meet the established goals in the negotiated performance measures objectives matrix for Property and Logistics</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia exceeded all negotiated performance metrics with the majority of the measures rated at the Outstanding level.</p> <p>In addition, Sandia achieved excellent wall-to-wall inventory results with a "find rate" of 99.84 percent for attractive items and 99.97 percent for equipment items.</p>
<p>8.2.3 Meet the established goals in the negotiated performance measures objectives matrix for Procurement.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Although NNSA agrees with Sandia's self-assessment rating of Outstanding, there are two areas of concern that warrant Sandia management attention: P-Card program and Small business Subcontracting Program. After considering all the elements assessed, these two areas although very important, did not diminish the Outstanding rating.</p> <p>First, DOE/IG-0754 Inspection Report on <i>Sandia National Laboratory-California Procurement Card Program</i>, dated January 22, 2007, identified numerous internal weaknesses with Sandia's P-Card Program, i.e., approval of purchases without a description of the purchase, questionable item purchases (e.g., adult novelty items), and an excessive number of P-card holders. Sandia stated that corrective actions have been implemented in these areas and steps have been taken to reduce the large number of P-card holders; however, continued effort in further reducing the number of P-Card holders is needed.</p> <p>Secondly, in August 2007, the Small Business Administration (SBA) conducted an audit of Sandia's Small Business Subcontracting Program. The Program was rated unsatisfactory. The findings were as follows:</p> <ul style="list-style-type: none"> • Subcontractor size and self-certification process is inadequate; • Review and monitoring of flow-down subcontracting plans is inadequate; • Small business achievements are based on award amount versus costed amount; • Sandia is not taking advantage of accomplishment in all appropriate small business categories; and • Sandia is counting three HUBZone small businesses that are not SBA certified.

			<p>The first three items are repeat findings from the SBA review conducted in August 2004. In Sandia's 2004 response to the Sandia Site Office, it was stated that corrective action was implemented.</p> <p>Problems with the P-Card Program and the Small Business Subcontracting Program span over several years and are either similar to or are repeat findings. This leads NNSA to the conclusion that the corrective actions are inadequate or incomplete. Additionally, there is no evidence that Sandia has validated the corrective measures taken to ensure that the corrective actions are sustainable.</p>
8.2.4 Meet the established goals in the negotiated performance measures objectives matrix for Contractor Human Resources	Outstanding	Agree	<p>During this fiscal year, HR has become more responsive, attentive, and customer oriented in trying to meet NNSA requirements. The support provided during the Contractor Assurance System review was outstanding. In addition, the numerous self-assessments and surveys identified in their Integrated Laboratory Management System provided additional insight into Sandia's continuous process improvement efforts.</p> <p>Sandia achieved a rating for the HR Objectives Matrix measures of Good that was one point below Outstanding. Sandia earned Outstanding in the majority of Objective Matrix measures but achieved ratings of Good and Unsatisfactory in the following two areas: Minorities in the Candidate Pool for SMTS Requisitions and Change in Average FTE Labor Cost which brought the overall score down to Good.</p> <p>With regard to the Minorities in the Candidate Pool, Sandia is required by the terms of its contract to use innovative strategies for increasing opportunities to fully use the talents and capabilities of a diverse work force. The results of this performance metric indicate that Sandia efforts to increase the opportunities for a diverse candidate pool for SMTS workforce have not achieved desired results.</p> <p>The "Unsatisfactory" results for the Objectives Matrix measure of Change in Average FTE Labor Cost (Adjusted for Inflation) are difficult to understand given Sandia's compensation position to market. That is, the results of the average FTE labor cost appear to be inconsistent with Sandia's compensation position to market. Sandia needs to understand the relationship and perform further investigation.</p>
8.2.5 Meet the established goals in the negotiated performance measures for Finance	Outstanding	Disagree	<p>NNSA has rated Sandia's performance as Good for this target. We concur with Sandia's assessment as presented in the PEAR, but not the overall rating.</p> <p>Of the 31 measures that were rated, Sandia achieved an Outstanding rating on 18 and a Good rating on 13</p>

			<p>measures. There were several areas where Sandia's performance was exemplary. Sandia should be commended for developing a solution to a complex wide Office of Inspector General audit finding related to depreciation of additions to fixed assets which was shared with other M&Os experiencing the same problem.</p> <p>As part of the Risk Based Oversight Procedure (RBOP) and CAS Sandia performed a self-assessment on Finance and Budget. The overall NNSA CAS confidence rating was 94.</p> <p>Three Obligation Control Level (OCL) violations occurred in the third quarter and two over-cost violations in the fourth quarter. Technically these are OCL violations, but in reality they are accounting errors. Because of these errors, reports showed Sandia's costs exceeding available funding. These violations are a precursor to problems and indicate a systemic control issue. Sandia needs to monitor their costs better and take steps to ensure system controls are in place and functioning.</p>
--	--	--	--

Performance Measure 8.3

Safeguards and Security: Sandia demonstrates adherence to applicable cyber and physical security requirements to include protection and control of special nuclear materials and classified matter through cost-effective implementation of a safeguards and security program that is compliant with applicable DOE Orders and NNSA Policy Letters (NAPS). Performance will be measured in accordance with the performance 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 operations, Top Secret, Accountable Classified Removable Electronic Media (ACREM), Security Systems Replacement Project (SSRP), cyber perimeter defense, and cyber incident response. (PEG 4 and PIP 70)

Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
8.3.1 Accomplish all Level I and Level II Milestones contained in the approved FY07 S&S AOP (PIP 70.3)	Outstanding	Agree	Sandia has successfully completed the activities associated with this performance measure. It is important to note that each of the LEVEL I milestones in the approved FY2007 AOP have been fully integrated into the FY2007 PEP under this performance objective. As of the fourth quarter, Sandia has completed 92 percent of the Level III AOP milestones; 97 percent of the LEVEL II milestones and 100 percent of the Level I milestones.
8.3.2 Operate an effective Defense Nuclear Security (DNS) program. (PIP 70.1/PEG 1)	Outstanding	Agree	Sandia was subjected to a comprehensive security inspection at the New Mexico and California sites by the Office of Independent Oversight (OIO) during this performance period. The inspection activities included compliance and performance-based evaluation activities in each topical and sub-topical element of the Sandia security program with a few

			<p>exceptions. Those areas not reviewed directly by the OIO inspection team were surveyed separately by the NNSA S&S team. For example, the Protective Force Operations and the Material Control and Accountability program at the California site were not reviewed by OIO; however, a special survey team from NNSA was dispatched to conduct comprehensive survey activities of each. Each of the topical elements inspected by OIO resulted in "Effective Performance" ratings which represent the highest rating attainable under this system. While the OIO inspection revealed 14 findings and the NNSA survey identified two additional findings, none were considered significant and did not adversely impact any of the ratings.</p>
<p>8.3.3 Initiate transition from a Threat Level 1B to a Threat Level IV facility in accordance with scheduled milestones and commitments. (SSO1/PIP 70.3)</p>	<p>Outstanding</p>	<p>Disagree -</p>	<p>NNSA has rated Sandia's performance as Satisfactory for this target. The purpose of this particular target was to ensure Sandia took action to begin transitioning the facility status from Level IB to Level IV using the criteria defined in the 2005 Design Basis Threat document. This activity has been the subject of several Sandia and NNSA S&S management discussions to include the NA-70 program staff. As of the end of the performance period, no transition activities have been completed and the transition plan itself has not been approved.</p> <p>Sandia provided documentation (a memorandum) outlining their approach for the transition to a Level IV facility; however, that data led NNSA to believe a Level III status was more likely. Sandia developed and submitted a transition plan entitled "Workforce Transition Plan" to NNSA on June 29, 2007, that addressed the Level III status. In a formal response NNSA indicated that the planning assumptions with respect to protection strategies that would be deployed to meet the Threat Level III requirements needed to be included in the plan. With respect to Protective Force, NNSA also recognized that Sandia was planning to conduct additional comprehensive analysis during the fourth quarter of this performance period and into the first quarter of 2008. With respect to Physical Security NNSA did not agree with the staffing projections regarding the overall number of Vulnerability Analysts. NNSA does not believe workload projections will require the number of analysts cited in the plan. For TTR Operations, NNSA requested that Sandia conduct a detailed analysis regarding staffing needs at TTR.</p> <p>In the fourth quarter, Sandia submitted a Baseline Change Proposal Request (BCPR) regarding the transition plan that was not approved. NNSA requested that the BCPR be revised to include more definitive milestones that would cover the activities necessary to be completed before a revised transition</p>

			<p>plan could be submitted to NNSA.</p> <p>NNSA understands and appreciates the complexity that this particular activity entails; however, Sandia's efforts in completing this activity to date have not been at a level that would ensure that a defensible transition plan was completed and transition activities initiated this year.</p>
<p>8.3.4 Demonstrate effective use of the results derived from S&S Performance Assurance activities i.e. CAS. (PIP-70.2/PEG 3/SSO2)</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia was successful in this particular performance target as demonstrated by the successful outcome of the inspection and survey activities described under Performance Target 8.3.2 above. In fact, the Sandia performance assurance program was touted by the OIO as "a model program for the rest of the complex." Additionally, during this performance period, Sandia was able to begin compiling, analyzing and publishing performance assurance related data in formal quarterly reports.</p>
<p>8.3.5 Ensure continued compliance with security systems and programs necessary to meet the 2003 DBT policy. (PEG 2)</p>	<p>Outstanding</p>	<p>Agree</p>	<p>As demonstrated during the OIO inspection activities (performance testing) in this particular element of the overall Sandia S&S program the results of the inspection indicated that Sandia successfully implemented and maintained an effective protection strategy compliant with the 2003 DBT policy with a rating of "Effective Performance" being assigned to this element during the 2007 OIO inspection. Sandia has maintained compliance with the national policy by ensuring effective management of the protective force especially with the challenges of retaining adequate numbers of trained and qualified officers while removing all Category I and II Special Nuclear Material from the site which in and of itself has a profound effect on the protective force because of the uncertainty such a change entails. Sandia has also effectively maintained physical security technology that can be removed, adjusted or redeployed to best fit the site's physical protection needs once the SNM-de-inventory activities are concluded.</p> <p>While NNSA agrees with the overall Sandia PEAR assessment for this target, it should be noted that during the 2007 OIO inspection it was determined that a very specific element (PF emergency response operations) needed some attention. The rating assigned to the overall Protective Force topic was "Effective Performance;" however, Sandia's PF emergency operations, as a subtopic, was rated "Needs Improvement." Sandia immediately began addressing this issue and had many of the corrective action milestones completed before the end of this performance period. Additionally, while not rating impacting, the OIO assessed a finding and some opportunities for improvement against Sandia's vulnerability assessment practices and procedures. Again, Sandia began immediate corrective action.</p>

			Neither of these activities had any direct adverse impact to continued compliance with the requirements of the 2003 DBT and did not represent a less-than-adequate level of protection with respect to the 2003 DBT policy; however, they should be addressed to ensure degradation in the current level of performance is avoided.
8.3.6 Employ technology into security operations. (PIP-70.4)	Outstanding	Agree	Sandia was successful in completing three separate technology-based initiatives in support of this target; one of which supports a Presidential Directive and the other two provide efficiencies within the Sandia security program across multiple sites. Because Sandia is working toward reducing SNM inventories at New Mexico, very little work in the way of employing new physical security-related technologies was warranted during this performance period.
8.3.7 Effectively manage the security program challenges of personnel recruitment, retention, development and training. (SSO 3)	Good	Agree	Sandia has continued to experience difficulties related to staffing; however, Sandia S&S management has been following internal practices and procedures to ensure critical positions are kept filled with appropriately trained and qualified personnel. The most notable vacancy in the S&S program was that of the Vice President for S&S. Sandia staffed the vacant Vice President position with an acting manager for several months while trying to recruit and fill that position permanently. The position was filled during the fourth quarter and subsequently left the Sandia Director for Security position vacant. This position remains vacant at the end of this particular performance period.
8.3.8 Execute the Security Systems Replacement Project (SSRP) Project Management Plan in accordance with defined scope, cost and schedule. (SSO 4)	Outstanding	Disagree	<p>Despite a few minor setbacks early on, Sandia recovered this important security-related project and is clearly executing to the approved plan in accordance with defined scope, cost and schedule. Simultaneously, the technical security staff has also remained focused on the technical job at hand and has been able to successfully implement several improvement elements on the new system while continuing to maintain the existing system at adequate performance levels which is becoming more and more challenging due to the less-than-optimal state of the aging system.</p> <p>During late calendar year 2006, Sandia worked to complete corrective action plans related to the findings and concerns identified during the 2005 OIO inspection regarding the questionable reliability of the existing intrusion detection system. Additionally, Sandia instituted a completely new project management team in the Technical Security Systems organization for the sole purpose of enhancing the project management controls being implemented on the Security System Replacement Project (SSRP). This new team quickly developed and presented a resource loaded project plan and schedule outlining</p>

		<p>the path forward for the SSRP. In November 2006 (Q1), the Sandia Technical Security Systems staff made an incremental improvement to the existing system hardware/software configuration (emulators) that has basically provided and additional 5-7 years of operability for a significant component of the system. It is important to note that this approach was tested and evaluated by the OIO with very favorable results during the 2007 inspection.</p> <p>Also in the first quarter of FY2007, the NNSA/SSO Site Manager requested a status briefing of the overall project to gain a better understanding of project controls as well as project scope, cost and schedule. The materials presented indicated a cost increase from the original project cost of \$8.5M with a completion date of March 2007 to a revised cost estimate of approximately \$42M with a completion date projected to be September 2010. As a result of this discussion and upon review of the Sandia project management plan for this activity, early in the second quarter NNSA directed Sandia to consider DOE 413-like project controls for the activity. NNSA also required that a CD-0 package be pulled together for this project and set a due date of May 21, 2007 which Sandia met.</p> <p>The first attempt to characterize this project in terms of the requirements outlined in DOE O 413 led to a significant increase in both project cost and schedule. To Sandia's credit, Sandia recognized that this approach would be unacceptable for many reasons and set out to revisit each aspect of the work to be completed in order to successfully replace the existing aging system as quickly and efficiently as possible. Working together and with NNSA, the Sandia team devised an alternative acquisition strategy that carefully divided the overall Security System replacement Project (SSRP) into four separate and distinct project activities while continuing to keep in mind the NNSA's direction to consider a DOE 413-type approach. The alternative acquisition strategy was then presented to the Sandia and NNSA chief financial officers for evaluation in order to ensure established cost accounting practices were not being violated. Sandia, working closely with NNSA, also provided additional information to the NNSA Security Program Office, NA-70, regarding the overall project cost and schedule and a wide-scale cost comparison based on a standard ARGUS system installation. The alternative acquisition strategy was approved by NNSA and has been implemented. Sandia is expected to provide quarterly status briefings on the overall SSRP to the NNSA/SSO Assistant Manager for Safeguards and Security beginning in the first quarter of FY2008 in an</p>
--	--	---

			attempt to ensure Sandia's performance in this area remains on a positive vector.
8.3.9 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	<p>As identified in Sandia's PEAR for this performance target, established thresholds were met on two of the four measures under this target. The factors causing Sandia to not meet the established threshold for the number of cyber security incidents were beyond Sandia's control as they reflected an increased number of attacks through external websites and externally generated e-mails. The overwhelming majority of these attacks were unsuccessful, but were required to be reported as incidents nonetheless. The primary factor preventing Sandia from meeting the measure pertaining to training of cyber security professionals is that their current processes do not provide a means to record the completion of recurring training by all cyber security professionals. In short, although the training is made available to cyber security professionals, they cannot accurately record what percentage of this population is current on the training. Additional emphasis is needed in this area to ensure all training is recorded, but this is not a weakness of such significance that it would lower the overall rating for this performance target below the proposed rating of good.</p> <p>It should be noted that a statement made by Sandia in the PEAR for Performance Target 8.3.9 is inaccurate. Performance testing of the SNL unclassified network by the Office of Independent Oversight does not support the claim made by Sandia that "Data ex-filtration has been made exceedingly difficult and in many cases impossible." However, this shortfall in SNL capabilities has little relevance for Performance Target 8.3.9, which pertains to cyber security training. Therefore, we have addressed the aforementioned capability shortfall in the rating of Performance Target 8.3.11, which deals specifically with cyber security incident detection, analysis, containment, and recovery.</p> <p>OFFICIAL USE ONLY</p>
8.3.10 Sandia routinely assesses and monitors the security controls in place for its classified and unclassified information systems to determine if the controls are effective in mitigating or eliminating vulnerabilities.	Outstanding	Disagree	<p>NNSA has rated Sandia's performance as Satisfactory for this target. Sandia stated in the PEAR that progress has been slow on implementing controls to prevent unprivileged user access to Universal Serial Bus (USB) and Firewire ports due to "the uniqueness of these efforts and the time it takes for DOE approval of the alternate protections." The primary contributors to the lack of Sandia's progress in implementing these controls was inadequate testing by Sandia of the software being deployed to implement the controls and a poor initial effort on the part of Sandia as cyber security staff to develop effective validation methodologies for the controls as well as proposals for alternate protections. The delay</p>

			<p>in getting alternate protections approved was not due to the time it took for DOE approval, it was due to the time it took for Sandia to first develop and then revise this document so that the protections could be approved. Sandia was advised by NNSA on January 10, 2007, that any alternate protections they intended to use had to be approved in writing by NNSA. The first draft document containing alternate protections wasn't submitted by Sandia until May 16, 2007. A response was provided to Sandia on that first alternate protection document within five days, but the revised document was not resubmitted by Sandia for another two months. After additional Sandia revisions to the document based on NNSA feedback, the document was formally approved by NNSA two weeks later.</p> <p>SNL's Chief Information Officer committed to DOE and NNSA senior leadership that Sandia would deploy software to manage USB and Firewire ports on all Windows-based systems by January 15, 2007. However, Sandia was not able to provide conclusive evidence that USB and Firewire ports were controlled on at least 95 percent of Windows-based classified systems until the end of July 2007. Although substantial progress was made over a relatively short period of time once a new cyber security project manager was assigned to oversee this effort, Sandia did not exhibit due diligence initially in attempting to satisfy their commitments to DOE and NNSA in this area.</p>
8.3.11 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 appropriate organizational officials and/or authorities.	Outstanding	Disagree	<p>NNSA has rated Sandia's performance as Good for this target. During its assessment in July 2007, the Office of Independent Oversight was able to demonstrate methods for successfully transmitting ex-filtrated data from SNL's unclassified network for approximately 12 hours without being detected by Sandia. Although Sandia has deployed a number of tools that are effective in detecting known attack signatures, additional emphasis is needed on developing capabilities to detect anomalous traffic that does not fit a known attack signature. OFFICIAL USE ONLY</p>
8.3.12 Sandia must provide effective oversight of the tools, techniques, mechanisms, and	Outstanding	Agree	

personnel used to provide information system security.			
8.3.13 Sandia regularly scans all systems for vulnerabilities and performs timely maintenance to mitigate or eliminate new vulnerabilities as they are identified.	Outstanding	Agree	
8.3.14 Sandia will demonstrate that it has implemented the Integrated Laboratory Management System.	Outstanding	Disagree	NNSA has rated Sandia's performance as Good for this target. While Sandia did develop some metrics and indicators to support ILMS, the effectiveness of its cyber security programmatic self-assessment is questionable in that no findings were identified and only four opportunities for improvement were noted. Furthermore, as pointed out by the Office of Independent Oversight in its findings against Sandia's self-assessment program, actionable feedback from the self-assessments was not made available to cyber security management or to the line organizations who participated in the self-assessments. As a result, very few improvements were actually implemented as a result of self-assessments conducted or compiled by Sandia's cyber security staff. Finally, Sandia incorrectly claimed in its PEAR that Sandia received validation from NNSA for all corrective actions from prior years. In fact, Sandia has yet to close out an open cyber security finding from 2003 (03-SNLNM-501-SSSA-IS-CAISS-4-01).

Performance Measure 8.4

The Sandia Integrated Safety Management System (ISMS) is comprehensive and effectively implemented in accordance with the ILMS by all line organizations to ensure worker safety, safety of the public, protection of the environment and mission success. Performance will be measured in the areas of Behavior Based Safety, Self-Assessment, Work Control, Performance Measurement, Concerns Management, Risk Management and Continuous Improvement.

Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
8.4.1 Repeat Findings (Lagging) SNL will reduce repeat ES&H or EM findings in FY2007 from external or independent	Unsatisfactory	Agree	Information presented by Sandia in the PEAR is incomplete. This was evidenced by the following: The definition of external audit includes "audits conducted by NNSA"; however the Facility Representative surveillance reports for FY2007 were not reviewed by Sandia to determine if any repeat findings exist. Sandia relies on the Organization 12870 audit reports to identify if a repeat finding

internal audits by 50 percent compared to the baseline of FY06.			existed in the conclusion of the report. As part of NNSA's validation, two 12870 audit reports were reviewed. One of the audit reports contained an "audit conclusion" section and the other one did not. Within the audit conclusion section it was not clear whether there was or was not any repeat findings
8.4.2 Behavior Based Safety (Leading) Sandia has implemented a Corporate BBS process based on a risk-based ranking of operations or organizations in which BBS can reduce injuries and incidents.	Outstanding	Agree	
8.4.3 Corrective Action Plan (CAP) Closure Timeliness (Lagging) SNL will meet each CAP final corrective action on time.	Outstanding	Disagree	NNSA rates Sandia's performance for this target as Good. The monthly report submitted to NNSA tracked the corrective action closure timeliness for Sandia. Sandia closed 27 CAPs on time and 1 late, however Sandia's rating did not take into consideration that change control was required for some findings and that in the case of the Work Planning and control (WPC) Finding (2005 OA #1) NNSA has indication that full effective implementation has yet to be achieved throughout Sandia and by its subcontractors. (For additional information regarding CAPs, please see discussion under 8.4.13).
8.4.4 ES&H Training—Course Design (Leading) Key ES&H courses are based on sound training design standards, including development of course learning objectives and testing.	Outstanding	Agree	
8.4.5 ES&H Training—Retention (Leading) SNL will have a training retention program that contributes to the ongoing improvement of the ES&H training program.	Outstanding	Agree	

<p>8.4.6 ES&H Training— Completion (Lagging)</p> <p>ES&H training courses are completed in a timely manner. For FY07 recently developed courses ESH100 and NEO200 were selected for tracking, in addition to other ES&H courses based on risk to worker safety. For FY08 and beyond the courses selected for monitoring will be presented to SSO based on a risk-based analysis and increase in number of courses monitored.</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>8.4.7 Percent Scheduled Self Assessments Performed On Time (Leading)</p> <p>A risk-based self assessment schedule that the laboratory uses to evaluate and assess performance throughout the year.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates Sandia's performance for this target as Satisfactory. This rating is based on the self-assessments that Sandia has performed in accordance with the January 2007 schedule. The Integrated Corporate Self-Assessment Schedule was submitted a month late (January 2007 rather than December 2006).</p> <p>As a result of the Building 878 arc flash occurrence, the department manager (2452) conducted a department wide self-assessment to determine other areas of concern. This resulted in 154 issues being found of which 15 involved electrical safety. SSO was told that all departments in Division 2000 were conducting similar type self-assessments to look for electrical issues. Following up on these self assessments, SSO conducted interviews with Senior Managers in Division 2000 to determine the level of attention and the quality of the self-assessments. Based on interviews with 5 Senior Managers in Division 2000 and a review of data in the LESA database, it did not appear that all departments took the same level of rigor in conducting the self-assessments as the Department 2452 Manager. Only two the Senior Managers were able to talk about issues found during these self-assessments</p>

			and these were not documented in LESA. One Senior Manager with direct ES&H responsibilities was able to discuss how the planned monthly self-assessments were used and documented in LESA, although this process resulted in no findings. Overall, it was not clear that lessons learned and the new level of awareness in Department 2452 was being effectively shared or embraced across Division 2000 and the rest of Sandia as reflected in the results of the self-assessments.
8.4.8 Self Assessments: Data Analysis (Leading) Data from Sandia assessments will be rolled up, analyzed, and trended in a timely manner. Concerns identified will have a corrective action developed and implemented in accordance to an approved schedule.	Good	Disagree	NNSA rates Sandia's performance as Satisfactory for this target. Sandia established the Self-Assessment Review Board (SARB) in February 2007. Since the SARB is new, this organization focused more approach than on results. For example, assessments involving the areas of Lock-Out-Tag-Out (LOTO) and electrical safety by line organizations did not contribute to the identification of significant issues until these were identified and reported by organizations external to Sandia.
8.4.9 Self Assessments: Concerns Management and Corrective Action Management (Leading) Concerns identified will have a corrective action developed and implemented in accordance to an approved schedule.	Good	Disagree	NNSA rates Sandia's performance as Satisfactory for this target. Concerns with Sandia's performance for this target were discussed at various Joint Performance Review Team (JPRT) meetings and at the 3 rd Quarter Joint Performance Council (JPC) meeting. The essence of the NNSA's noted concerns was whether the newly established SARB was taking a broad approach to identify concerns (e.g., how often the SARB reviews data, disposition of results, escalation to Corporate Issues Management Board (CIMB), and timely communication to NNSA). The discrepancy between the scores is due to the limited evidence provided for NNSA to evaluate the effectiveness of the SARB. For example, in March 2007, SNL Safety Basis identified a serious non-compliance at the High Energy Radiation Megavolt Electron Source (HERMES) III accelerator. The non-compliance was that Sandia did not have an Unreviewed Safety Issue (USI) process for HERMES which is required by DOE O 420.2B, <i>Safety of Accelerator Facilities</i> . In late September 2007, the NNSA Facility Representative performed a USI review of SNL accelerators and found that no USI process exists at HERMES. Sandia knew about this non-compliance for at least six months and took no action to develop and implement a USI process at HERMES.
8.4.10 Environmental	Outstanding	Agree	

<p>Management System (EMS) (Leading) SNL will ensure an effective EMS that will review and revise aspects/impacts and set new, challenging objectives and measurable targets identified in Division EMS Action Plans; update Environmental Program Plans, with detailed schedule, roles and responsibilities and performance metrics; update the EMS Program Manual to include corporate aspects/impacts and set new objectives and measurable targets; and develop a process for evaluating and tracking environmental operational limits.</p>			
<p>8.4.11 Analysis of Near Misses (Leading) Near misses should be significantly reduced and the frequency of near misses will be reduced and those that do occur are rigorously analyzed and the opportunities that are identified to prevent more serious events are acted upon.</p>	<p>Unsatisfactory</p>	<p>Agree</p>	<p>Sandia's path forward for achieving performance for this target does not adequately address the issue of consistency of Sandia's causal analyses. The Occurrence Reporting/Lessons Learned Assurance Sub-team has, at many of its meetings, identified the inconsistency in causal analysis as an issue. Just re-training will not adequately improve the quality of the causal analysis. Sandia also has not fully communicated internally the importance of reporting Near Misses. NOTES and Occurrence reports are repeatedly not categorized as Near Misses when they should be or it takes encouragement from NNSA to properly report them.</p>
<p>8.4.12 Lessons Learned (Leading)</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia has processed more than 140 Lessons learned from numerous sources since January 2007.</p>

SNL will be measured against timeliness of milestone completion in accordance with the ES&H Lessons Learned Implementation Plan (DOE 0210.2)			
8.4.13 Work Control (Leading) SNL's target for work control is to significantly reduce occurrences by focusing on improving the 22 elements of work control as identified through causal analysis.	Outstanding	Disagree	NNSA rates Sandia's performance as Satisfactory for this target. NNSA recognizes there have been improvements in the rate of reportable events that resulted in a reduced number of WPC caused incidents being reported. However, the target (and scoring criteria) was significantly modified in FY2007 to additionally recognize that the Sandia development and implementation of effective WPC per the CAP for Finding #1 of 2005 OA, was the desired outcome. Sandia did not address this additional scoring criteria when self assessing their performance for this target.
8.4.14 Number of Late Occurrence Reports (Lagging). SNL's target is to meet the DOE reporting requirements of each phase of the occurrence reporting process such that no process such that no phases (categorization, written notification, final report) are late. DOE M231.1-2 requires that Occurrence Reports to be submitted on time for the following areas	Good	Agree	Throughout the year, Sandia has shown significant difficulty categorizing abnormal events within the time limits as specified by the DOE Manual. For a couple of quarters, timely categorization only occurred in the high 60 th percentile range (Unsatisfactory). The overall score for timely categorization for the year resulted in 72 percent timely categorized events (Satisfactory). Sandia made marginal attempts to improve this area by sending out notices to those divisions that had an untimely categorization. The reason a "Good" score is that timely written notifications and timely final reports were noted as outstanding. More aggressive efforts need to be placed on timely categorization in FY2008.
8.4.15 Causal Analysis and Trending of ES&H-Related Events (Lagging) Causal analysis on all SNL ES&H-related events will	Good	Disagree	NNSA rates Sandia's performance as Satisfactory for this target. The SNL PEAR states that only 60.9 percent of injury/illness incidents had causal analysis. Sandia reports their percentage for all causal analysis for all data sets was 74.1% during the January through August timeframe. This number is below the required 80 percent to achieve a rating of Good.

<p>be conducted using a graded approach.</p>			<p>The SNL PEAR states that the System Integration Technical Support (SITS) was implemented on August 1, 2007 which requires Sandia management to perform and document causal analysis.</p> <p>The discrepancy between the scores is due to the limited documentation of the effectiveness of SITS.</p> <p>In addition, the process that Sandia shared with NNSA at the beginning of FY2007 which would require Sandia to perform trending on all data in the Data Warehouse has yet to be effectively implemented. The PEAR also is silent on trending of events. The Quarterly Performance Analysis, required by DOE M 232.1-2, <i>Occurrence Reporting and Processing of Operations Information</i> has not included any data from the Data Warehouse and has actually reduced the areas in which performance analysis is being performed to determine if there are trends that should be reported as a Recurring Occurrence Report.</p>												
<p>8.4.16 Total Recordable Case Rate (TRCR) (Lagging) SNL will meet the TRCR goal.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>TRC/DART has met the goal of 1.7. The rating is due to the consistent decreasing trends. Statistics below show significant improvement (54 percent reduction from 2003 to 2007)</p> <table border="1"> <thead> <tr> <th colspan="2"><u>TRC DART</u></th> </tr> </thead> <tbody> <tr> <td>3.7</td> <td>2003</td> </tr> <tr> <td>2.8</td> <td>2004</td> </tr> <tr> <td>2.5</td> <td>2005</td> </tr> <tr> <td>2.7</td> <td>2006</td> </tr> <tr> <td>1.7</td> <td>2007</td> </tr> </tbody> </table> <p>While Sandia rates were much improved recently, they remain higher than the DOE average and it will take additional improvements to match the "best in class" performance. Opportunities for curtailing the number of incidents and severity of incidents must be identified if Sandia is to match DOE rates and approach best in class performance. If Sandia's Safety Incident Tracking System (SITs) is to be effective, Sandia must insure that managers are trained in root cause analysis techniques and methods.</p>	<u>TRC DART</u>		3.7	2003	2.8	2004	2.5	2005	2.7	2006	1.7	2007
<u>TRC DART</u>															
3.7	2003														
2.8	2004														
2.5	2005														
2.7	2006														
1.7	2007														
<p>8.4.17 Days Away/Restricted/Transferred Case Rate (DART) (Lagging)</p>	<p>Outstanding</p>	<p>Agree</p>	<p>DART rates have been consistently reduced over the last few years. DART rates reduced by 43.7 percent from 2003 to 2007.</p> <table border="1"> <thead> <tr> <th colspan="2"><u>DART</u></th> </tr> </thead> <tbody> <tr> <td>1.4</td> <td>2003</td> </tr> <tr> <td>1.0</td> <td>2004</td> </tr> </tbody> </table>	<u>DART</u>		1.4	2003	1.0	2004						
<u>DART</u>															
1.4	2003														
1.0	2004														

			0.9 2005 1.2 2006 0.79 2007
<p>8.4.18 Long Term Environmental Stewardship (LTES) and Long Term Stewardship (LTS) (Leading)</p> <p>SNL will establish an integrated Corporate LTES/LTS program that includes an environmental baseline and post-operation assessments and life-cycle cost mechanism for ongoing or new operations; including the management of any future identified legacy contamination that was not included in the ER Project (including new contamination created by a change in regulatory requirements).</p>	Outstanding	Agree	<p>The Long-Term Environmental Stewardship (LTES) Program did an excellent job in meeting all of their target objectives and deliverables in the establishment of an integrated program with the Long Term Stewardship (LTS) Program that includes the development of a strategic plan for life-cycle costs for ongoing and new operations. The LTS program met all of the NA/56 and Government Performance and Reporting Act (GRPA) and NNSA milestones and NA/56 deliverables.</p>
<p>8.4.19 Environmental Compliance (Lagging)</p> <p>An environmental event, incident or notice of violation may indicate systematic deficiencies related to compliance of environmental requirements.</p>	Outstanding	Disagree	<p>NNSA rates Sandia's performance as Good for this target. On November 2, 2006, Sandia/NNSA received a notice of violation (NOV) from the New Mexico Environmental Department which stemmed from the May 2005 and November 2005 no-notice audits. The violations outline five areas of non-compliance and an assessed fine of \$41,150. The areas cited in the NOV include open containers, waste at or near the point of generation, failure to label hazardous waste and failure to obtain a permit for waste stored longer than 90 days. Due to the lack of timeliness for receipt of these findings from NMED this finding is not included in the NNSA review of Performance Objective 8 for 2007.</p> <p>On June 19, 2007, SNL/CA received a NOV from the City of Livermore's Water Resources Department,</p>

			<p>stating that Sandia had notified the them on March 29, 2007, about a copper discharge to SNL/CA's sanitary sewer outfall. The letter from the City of Livermore required no further action and no fine was levied.</p> <p>On September 6, 2007, Sandia received a NOV from NMED resulting from a FY2007 NMED Audit. Findings included failure to close two hazardous waste containers at Building 897 (BES-supported facility), and failure to sign and date the original manifest upon receipt of a hazardous waste shipment at Building 959 (RTBF-supported facility). The fine levied was \$4,504.00, and the violations were corrected in October 2006. The findings of open containers in this inspection are repeat findings from previous inspections.</p>
<p>8.4.20 Environmental Reporting (Releases to the environment) (Lagging)</p> <p>Develop a documented process for which environmental releases are formalized and analyzed. Develop compliance deliverable database for tracking dates and requirements. Track and trend releases and deliverables on a quarterly basis using an existing system or by developing a new one specifically for this task.</p>	Outstanding	Agree	<p>For non-reportable quantity releases, Sandia reported to NNSA within the eight business hour time requirement (spills) and within the required time frames to outside regulators. Spills that occurred resulted in no impact to human health or the environment.</p> <p>For reportable quantity (RQ) releases, Sandia reported to NNSA and the appropriate outside agencies within the two business hour time requirement.</p> <p>There was one RQ release (Sodium Hydroxide) this Fiscal Year that resulted in no impact to human health or the environment.</p> <p>Sandia developed a compliance deliverable database for tracking dates and requirements and has been in use since the Second Quarter of FY2007. Sandia uses the data produced from this database to provide monthly reports to NNSA and in the trending analysis.</p>

<p>8.4.21 Environmental Reporting (Compliance Deliverables) (Lagging)</p> <p>Develop compliance deliverable database for tracking dates and requirements. Evaluate timeliness of deliverables on a monthly basis using an existing system or by developing a new one specifically for this task.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia developed and implemented a compliance deliverable database for tracking dates and requirements in the Second Quarter of this fiscal year. Dates of deliverables from that database are reported quarterly to NNSA. Greater than 98 percent of the deliverables were on time. In addition, Sandia is implementing a permitting tracking database for all outside agency issued permits. The database will show real-time compliance with permit conditions and allows NNSA access. Thirteen air permits have been put into the database with implementation in FY2008.</p>
<p>8.4.22 Personnel Safety Related Facility Work Requests (FWRs) (Leading)</p> <p>Sandia's Facilities Management and Operations Center (FMOC) will respond and mitigate all personnel safety related FWRs within one day.</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>8.4.23 Lessons Learned (Lagging)</p> <p>Submission of lessons learned is required for Significance Category 2 and above Occurrence Reports. Sandia will submit required lessons learned to the DOE Lessons Learned Database in a timely manner.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia has submitted lessons learned for the five Significance Category 2 and higher Occurrences to the DOE Lessons Learned Database within the required timeframes.</p>

Performance Measure 8.5

Safety Basis: Sandia's hazard category (HC)-2 & 3 nuclear facilities and high-hazard industrial facilities have developed compliant safety basis (SB) documentation.

Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
<p>8.5.1 HC-2 & 3 nuclear facilities and high-hazard industrial facilities SB documents will be developed in accordance with DOE directives and regulatory standards to ensure adequate approval bases exist for timely approval via safety evaluation reports (SERs) with minimum conditions of approval (COAs).</p> <p>COAs (Ref. DOE-STD-1104) can be for: (1) Additional commitments to which facility management must adhere beyond those already documented in the SB, (2) Compensatory measures, or (3) Alterations of stated commitments; and must have a defined completion date.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA has rated Sandia's performance as Good for this target. Sandia has improved the conduct of safety basis document development and related process quality over the last year. Based on a thorough technical review, the NNSA Safety Basis Review teams recommended approval of five new or upgraded safety basis documents and four Documented Safety Analysis (DSA) annual updates for the nuclear facilities with no pre-start Conditions of Approval (COAs). There were fewer than 20 significant NNSA review comments on 8 of the safety basis documents. The Nuclear Material Storage Facility (NMSF) DSA scope was evolving throughout the DSA development due to the unique nature of the operations, yet Sandia was able to complete a DSA that met all expectations with no COAs for Sandia and met an extremely aggressive schedule that was less than one-half of the normal timeframe. However, there were 17 significant NNSA review comments on the Gamma Irradiation Facility (GIF) safety basis upgrade and the final GIF submittal had many quality issues that took a long time to resolve. In addition, the Evaluation of the Safety of the Situation for the GIF Cell 3 Potentially Inadequate Safety Analysis (PISA) did not follow the format prescribed by the Sandia Unreviewed Safety Question (USQ) Procedure. Fire Hazard Analysis (FHAs) were not developed in time to fully support DSA development for the Manzano Nuclear Facilities (MNF) and the Annular Core Research Reactor.</p> <p>NNSA continues to note improvements in safety basis processes and documents but improvement is needed in some elements e.g., quality and consistency between DSA chapters and Technical Safety Requirements (TSRs), integration of FHA into the safety basis, application of the USQ process and the Sandia independent internal review process and comment resolution.</p> <p>NNSA has identified issues with USQ Screening at SNL's nuclear facilities. The NNSA 2nd Quarter FY2007 USQ Assessment had a Repeat Finding concerning inadequate USQ Screens. NNSA has</p>

			<p>also identified issues with Sandia's causal analysis and CAP development processes used to address the problems with inadequate USQ Screens. In addition, Sandia did not submit a timely CAP for the NNSA 2nd Quarter FY2007 USQ Assessment Finding. In several instances the independent internal review process was not completed prior to submittal of the safety basis documentation to NNSA. These safety basis reviews generally involved significant lessons learned but Sandia has not fully evaluated these reviews to identify and implement needed actions. A Sandia review of the effectiveness of Non-compliance Tracking System 2005-003 corrective actions, dated December 2006, concluded that the use of lessons learned to improve the quality of safety basis related documents is only partially effective and identified a recommendation to review safety basis products with significant lessons learned to evaluate potential changes to the integrated safety basis processes.</p> <p>Sandia is out of compliance with DOE O 420.2B, by failing to implement an Unreviewed Safety Issue (USI) process at the HERMES III Facility.</p>
<p>8.5.2 All HC-2 & 3 nuclear facilities SB documents/activities (Level II Milestones) will be completed per the Safety Basis Improvement Project (SBIP) Management Plan.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA has rated Sandia's performance as Good for this target. With the exception of the "Readiness to Proceed" letter for the Logistical Nuclear Operations startup, the remaining 17 milestones were completed on schedule. The Implementation Plan for the GIF DSA and TSRs was submitted to NNSA on schedule but did not provide sufficient technical justification for the extended schedule for implementation. Subsequently NNSA directed that the plan be revised and resubmitted. Therefore 17/18 or 94 percent of the milestones were met on schedule.</p> <p>The Safety Basis Improvement Project (SBIP) Management Plan milestones are based on the assumption that an independent review has been completed and all comments have been resolved prior to submitting the documents to NNSA. In several instances, safety basis documents have been submitted to NNSA without completion of the Sandia independent internal review or resolution of the review comments contrary to Sandia requirements.</p>

Performance Measure 8.6

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

Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
<p>8.6.1 Facility Availability: All HC-2 & 3 nuclear facilities are available to support Sandia's programmatic commitments.</p> <p>The availability of these facilities to perform their function is an excellent overall integrated measure of the performance of Sandia's Nuclear Operations. The availability shall be calculated as the ratio of the number of days planned for programmatic operations to the number of days that the facility operated in support of programmatic commitments (Similar to RTBF availability).</p>	Outstanding	Agree	Sandia maintained the nuclear facilities at a level to support 100 percent of the Nuclear Weapons Program Requirements.
<p>8.6.2 Regulatory Compliance: Ensure that safety management programs for the operational HC-2 & 3 nuclear facilities are compliant as determined during programmatic assessments, readiness assessments, and operational</p>	Outstanding	Disagree	NNSA has rated Sandia's performance as Good for this target. Sandia's success with the deinventory of Special Nuclear Material in FY2007 demonstrates their ability to plan and conduct work in a safe and effective manner. Sandia safely placed the Sandia Pulsed Reactor (SPR) into the In-Ground Storage Vault (IGSV) then later retrieved, disassembled, packaged for shipment and successfully shipped the SPR material. Sandia successfully packaged and shipped Melt Progression (MP) I and II, highly enriched uranium material and highly enriched uranium calibration standards. Sandia also removed the Sodium Debris items from their storage location,

<p>readiness reviews. Sandia manages/operates the nuclear facilities in accordance with the appropriate DOE regulations and orders.</p>			<p>and containerized them in preparation for shipment. These activities required a well coordinated effort involving personnel from the disciplines of operations, security, criticality safety, hoisting and rigging and packaging and transportation. These accomplishments demonstrate Sandia's ability to plan and conduct work in a safe manner.</p> <p>The Nuclear Criticality Safety Program made significant improvements in FY2007 from FY2006. The program has ramped up to support new requirements and new Sandia needs. The program fully supported the SNM De-Inventory program with all analyses on schedule with quality documents. NNSA assessments of the program and facilities showed few issues.</p> <p>Sandia made good progress at the Manzano Nuclear Facilities (MNF) with waste and material inventory reduction this fiscal year. Sandia removed over 10 percent of their inventory of material/waste containers from the MNF. These containers included combustible wood and polyethylene.</p> <p>Although Sandia continues to make progress on its Cognizant System Engineer (CSE) program, not all aspects of DOE O 420.1B, <i>Facility Safety</i> are fully implemented. Additional management attention is needed to achieve compliance with key elements of the program (e.g., self-assessments, system health reports, and system design descriptions).</p> <p>TA-V has elements of an expert-based Safety Software Quality Assurance (SSQA) program, but has not achieved full implementation of the new Sandia Corporate Process Requirement (CPR) for SSQA as required by DOE O 414.1C, <i>Quality Assurance</i>.</p> <p>Sandia's first Management Self Assessment (MSA) activity for Logistic Nuclear Operations (LNO) did not adequately identify issues that were subsequently identified by the Contractor Operational Readiness Review (CORR). This prevented deinventory of Special Nuclear Material from the Nuclear Material Storage Facility (NMSF) in FY2007.</p>
---	--	--	--

Other Considerations

Performance Measure 8.4: In addition to the specific 23 targets under PO8.4, areas of concern to NNSA this past year included: (1) the accuracy of the Chemical Information System (CIS); (2) the Sandia Electrical and LOTO safety programs; (3) execution /integration of Industrial Facility Safety Basis (with CIS/ with Primary Hazard Screenings, etc); (4) the Sandia Fire Protection program and staffing; and (5) the lack of quality in the Sandia ES&H Self Assessments.

1. Chemical Inventory System (CIS). The accuracy of CIS became paramount as it was the repository of data employed by Sandia for effectively identifying inventories which approached thresholds of concern to emergency management consequence planning. NNSA began the year concerned that a verification/validation of Sandia processes failed when inaccuracies in inventory of concern to consequence planners was exposed. Sandia corrective actions to improve administrative controls and line organization roles and responsibility were a focus for NNSA oversight in FY2007. Sandia improvements are noted but there is an apparent need to refine the criteria that has led to the selection of consequence planning thresholds and the selection of containers to be tracked to 100 percent accuracy.

2. Electrical and LOTO Safety. NNSA agrees with Sandia that there is an improving long term trend in these programs. However, the Sandia rates for electrical safety incidents remain amongst the highest within NNSA. NNSA is encouraged by the Sandia proposals and recent response (e.g. the improvement plan managed by the Electrical Safety Committee) but results and effectiveness are yet to be determined.

3. Execution/Integration of Industrial Facility Safety Basis (IFSB) (with CIS/ with Primary Hazard Screenings). NNSA is concerned that Sandia has not fully met expectations since the NNSA delegated authority for Sandia approval for industrial facilities and operations of a Moderate or lower hazard classification. Sandia has yet to produce an IFSB manual, to provide needed direction and implementation guidance, including assurance that periodic reviews confirm the adequacy and effective implementation of selected controls and assurance of timely identification and formal documentation of significant changes. There are weaknesses in the line organization use of and integration of tools employed by Sandia (such as CIS information and Primary Hazard Screenings) which provide questionable outputs.

4. Fire Protection. Improvement is needed in the Sandia fire protection program and staffing. Sandia Fire Protection Engineering staffing was below the complement required by Sandia's staffing study and over the last year Sandia has lost three more fire protection engineers. Sandia did not insure a coordinated formal review for validation and closure of actions from the Internal Audit, Fire Protection Program Self-Assessment, NNSA Assessment, and Chief Defense of Nuclear Safety (CDNS) audit. The Manzano Nuclear Facility (MNF) and the Annular Core Research Reactor Facility (ACRRF) fire hazard analyses were not completed before the DSAs for these nuclear facilities were approved. Sandia needs to update its Baseline Needs Assessment (BNA) to reflect increased Kirtland Air Force Base (KAFB) fire department response times.

5. ES&H Self-Assessments Quality. The Laboratory Enterprise Self Assessment Database (LESA)'s FAST TRACK is intended to facilitate use of LESA. However, it appears to be adversely affecting the quality/comprehensiveness of the data entered by users. The majority of the assessments do not use checklists/evaluation criteria. Despite the LESA definitions being clearly defined (Observation, Finding, etc); the issues are not being properly categorized. Deficiencies that are clearly Findings (e.g. Resource Conservation and Recovery Act (RCRA) violations) are being categorized as observations, such that there is no causal analysis performed or formal tracking to closure. The lack of appropriate documentation of issues/deficiencies has even broader implications, since there is not enough information for Price Anderson Amendment Act (PAAA) applicability to be evaluated. A LESA query identified that none of the FY2007 assessments identified that there was a PAAA impact. The number of issues (findings, observations) identified is very low. A LESA query was conducted for FY2007, which showed a total of 1,630 total Assessments entered into LESA. However, only 27 of those (less than 2 percent of the Self-Assessments) identified one or more Findings, and only 5 of those (less than .05 percent) identified a Significant Finding. A LESA query was performed for the time window specified in the PEAR, June 14, 2007 through September 6, 2007, and it identified only 390 assessments conducted during that timeframe, not the 855 specified in the PEAR. Of those 390, only 3 (less than 1 percent) identified a Finding. Sandia stated in the PEAR that LESA is "the single tool that Sandia uses to document, collect and analyze self-assessment data." However, NNSA has observed inconsistent use of LESA, which adversely impacts any tracking/trending results that may be obtained from LESA. The definition of what is a self-assessment and what types of activities are entered into LESA doesn't seem to be understood and/or consistently applied. Some Sandia organizations enter numerous minor activities, while others only enter the formal scheduled/planned self-assessments, and have their own facility/organization specific data bases for their other walkthroughs. Although approximately 800 SNL Managers took ESH 200, Safety Management, the PEAR reflects that there were only 109 users of LESA, which demonstrates that it is not a widely recognized/utilized system.

PERFORMANCE OBJECTIVE 9 – COUNTERINTELLIGENCE

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.

Adjectival Rating
Outstanding

Numerical Score
99

Summary of Performance

NNSA working with the designated COR located in the Office of Counterintelligence has determined that the Sandia Counterintelligence (CI) program has continued to successfully exceed the performance expectations for the four target areas for this objective in FY2007.

CI Training and Awareness Program

(b)(7)(e)

(b)(7)(e) Due to tailored briefings to selected individuals the actual number briefed was significantly higher than the CI Office's serviced population and the goal to brief being 90 percent. The awareness training emphasized the "Insider Threat." (b)(7)(e)

(b)(7)(e)

(b)(7)(e) The CI Office has done an outstanding job of getting the word out to all Sandians about the "Insider Threat" with survey results that prove success. (b)(7)(e)

(b)(7)(e)

(b)(7)(e) CI briefings are provided to new hires, recently cleared and the annual refresher to facility personnel. (b)(7)(e)

(b)(7)(e)

(b)(7)(e) The web site for the Sandia CI Offices is comprehensive and well designed to be both interesting and user friendly. It details foreign travel requirements by using on-line bulletins. Guest speakers at one location are video linked to a local auditorium and posted on the web site.

CI investigations Program

The Sandia CI investigations adhered to guidelines in the CI Procedural Guidelines Document dated December 21, 2004. All reports were determined to have been prepared and disseminated on time to the appropriate customer. (b)(7)(e)

(b)(7)(e)

(b)(7)(e)

CI Analysis

(b)(7)(e)

CI Information and Technologies Program

The Cyber Technical Expert (TE) provides tailored CI/Cyber Technology cyber briefings to computer security and system administrators and is currently actively participating on at least seven cyber-related committees.

(b)(7)(e)

(b)(7)(e)

Overall NNSA, in conjunction with input from the CI COR, has determined that the Sandia CI office is well-run and meets the performance expectations for an Outstanding rating.

Significant Accomplishments

The CI Office did an outstanding job in supporting the Counterintelligence Evaluations Program and the transition to the new CI Evaluations Regulation.

(b)(7)(e)

(b)(7)(e)

Opportunity for Improvement

(b)(7)(e)

(b)(7)(e)

Performance Measure 9.1

Implement an effective counterintelligence program to ensure that NNSA personnel, information and activities are provided the available counterintelligence services that will assist in protecting them from intelligence and espionage related threats.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
9.1.1 Counterintelligence Training and Awareness Program - Provide a counterintelligence 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	
9.1.2 Counterintelligence Investigations Program - Implement and manage an effective counterintelligence investigations program that	Outstanding	Agree	

addresses the latest specific threats through the investigation and assessment of any suspicious activities that may occur during contacts between NNSA employees and persons from sensitive countries or international terrorist organizations.			
9.1.3 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	
9.1.4 Counterintelligence Analysis Program - Provide a counterintelligence analysis program capability that can effectively analyze, compile and provide appropriate threat information to senior leadership in the NNSA, Department of Homeland Security, and other elements of the U.S. intelligence community.	Outstanding	Agree	(b)(7)(e)

Other Considerations

None

PERFORMANCE INCENTIVE 1 – MULTI-SITE PERFORMANCE INCENTIVE.

Sandia will be an active participant in multi-site activities to promote the strategic goals of the Nuclear Weapons Council and NNSA.

Adjectival Rating
Outstanding

Numerical Score
92

Summary of Performance

The Nuclear Weapons Complex accomplished 12 out of 13 of the Multi-Sites measures. The one Multi-Site measure that was not met is described below and relates to completing the full target for the W76-1 FPU.

Significant Accomplishments

The Nuclear Weapons Complex met all targets associated with (1) delivering Limited Life Components (LLCs); (2) eliminating the backlog of surveillance units; (3) accelerating dismantlements, (4) delivering on the B61-7 FPU, (5) certifying the W88 with a new pit and manufacturing ten new pits, (6) extracting tritium, (7) supporting the science basis for warhead design, assessment and certification by applying new facilities and infrastructure, (8) transforming from a life extension program to a RRW strategy, (9) transforming the nuclear weapons infrastructure to take Responsive Infrastructure from concept to reality, (10) nuclear materials consolidation, (11) information resources management, and (12) implement an NNSA supply chain management center.

Opportunity for Improvement

The Nuclear Weapons Complex will need to improve on meeting the full targets of the W76-1 FPU after September 30, 2007.

Performance Measure 1.1

Sandia Corporation must perform with Lawrence Livermore National Laboratory, Los Alamos National Laboratory, the Pantex Plant, and (others within the Nuclear Weapons Complex (NWC) as an integrated Multi-Site Team), with Sandia, where appropriate, as the system integrator (facilitator), to support NA-10 vision 2030 and multi-site incentives.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.1.1 Continue to deliver products for the DoD (i.e. Limited life components, reliability assessments). (NA Top 10, Target 1)	Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)	Agree that NWC Team met requirements	All scheduled shipments were met. This target was completed by September 30, 2007.

<p>1.1.2 Eliminate the backlog of surveillance units by Sep 2007 consistent with the enhanced evaluation strategy (except the W84 and W88). (NA Top 10, Target 2)</p>	<p>Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)</p>	<p>Agree that NWC Team met requirements</p>	<p>D&Is have met the FY2007 goals. This target was completed by September 30, 2007.</p>
<p>1.1.3 Accelerate the dismantlement of retired weapons, 49 percent increase from FY2006 to FY2007. (NA Top 10, Target 3)</p>	<p>Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)</p>	<p>Agree that NWC Team met requirements</p>	<p>Sandia met the annual target number of dismantlements. This target was completed by September 30, 2007.</p>
<p>1.1.4 Deliver the B61-11 First Production Unit (FPU) by Jan 2007. (NA Top 10, Target 4)</p>	<p>Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)</p>	<p>Agree that NWC Team met requirements</p>	<p>The B61-11 ALT 357 FPU was delivered. This target was completed by January 31, 2007.</p> <p>The B61-11 MAR was issued. This target was completed by September 30, 2007.</p>
<p>1.1.5 Deliver the W76-1 FPU by September 2007. (NA Top 10, Target 5)</p>	<p>Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)</p>	<p>Disagree that the Complex met the Full Target</p>	<p>The NNSA Complex reported good progress with engineering and production qualification activities associated with W76-1. The Sandia qualification and certification work is also progressing on schedule to support the FPU. The production plants are either in production of major components or on schedule to component production and delivery to Pantex in support of the September 30, 2007, FPU. However, a critical issue emerged with the special material at Y-12; test data have shown that the material is not performing as expected. LANL and Y-12 are evaluating the test results and are aggressively working to resolve this issue through the development and implementation of risk mitigation strategies.</p> <p>Full Target will be completed after September 30, 2007.</p>
<p>1.1.6 Support the science basis for warhead design, assessment and certification by completing and applying Microsystems and Engineering Science</p>	<p>Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)</p>	<p>Agree that NWC Team met requirements</p>	<p>MESA - The project is on schedule and performs below the approved budget. Cumulative percent cost of work completed at the end of July 2007 is 95 percent, with Performance Indices of: CPI=1.02 and SPI of 0.99. This target was completed by September 30, 2007.</p> <p>DARHT - - Cumulative percentage of progress towards completing the Dual-Axis Radiographic Hydrotest Facility (DARHT) 2nd Axis to provide data</p>

<p>Applications (MESA), Dual Axis Radiographic Hydrodynamic Facility (DARHT) and National Ignition Facility (NIF) within their respective FY2007 deliverables. (NA Top 10, Target 8)</p>			<p>required to certify the safety and reliability of the U.S. nuclear weapons stockpile (Long-term Outcome). Cumulative percentage of work completed at the end of Aug 2007 is 95 percent. Goal is 80 percent by the end of FY2007. This target was completed by September 30, 2007.</p> <ul style="list-style-type: none"> • Progress towards the 2010 ignition attempt is on schedule. The National Ignition Campaign (NIC) component of this incentive is on track for both Earned Value Management (EVM) metrics and ignition ablator characterization. • This target was completed by September 30, 2007. • The ASC Purple Machine is currently in the General Availability phase for production-level stockpile computing. • This target was completed by September 30, 2007. • Pit lifetime studies were completed by September 2006, and the JASONS reviewed this report in November 2006. <p>This target was completed by September 30, 2007.</p>
<p>1.1.7 Transform from a Life Extension Program to a Reliable Replacement Warhead (RRW) stockpile strategy (RRW to the Nuclear Weapons Council (NWC) by Nov 2006). (NA Top 10, Target 9)</p>	<p>Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)</p>	<p>Agree</p>	<p>On November 30, 2006, the NWC determined that RRW is feasible as a strategy for sustaining the Nation's nuclear stockpile for the long term without underground nuclear testing. The NWC decided to proceed with a Phase 2A design definition and cost study for the design selected for first application on SLBMs. The NWC decided to proceed with a Phase 1 concept study of possible replacement warheads for air-delivery systems.</p> <p>This target was completed by September 30, 2007.</p>
<p>1.1.8 Transform the nuclear weapons infrastructure to take Responsive Infrastructure from concept to reality (Implement actions identified in the Complex 2030 Preferred Infrastructure Planning Scenario and the Transformation Strategy Implementation</p>	<p>Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)</p>	<p>Agree</p>	<p>The System Integration Technical Support (SITS) organization is fully staffed and is actively rotating personnel from all sites. SITS has engaged tools and capabilities of LLNL's Enterprise Modeling Group and the SRS's System Engineering Group.</p> <p>This target was completed by September 30, 2007.</p> <p>A revised Safety Basis Academy Plan was submitted to NNSA on March 16, 2007. NNSA commented in April 2007, and LANL revised the plan in May 2007.</p> <p>All FY2007 classes have been completed.</p> <p>This target was completed by September 30, 2007.</p>

Plan. (NA Top 10, Target 10)			
1.1.9 Certify the W88 with a new pit and manufacturing 10 W88 pits in 2007.	NA (Sandia said NA since they do not participate on this multi-site)	Agree that Complex met target	<p>Criteria change was approved by Martin Schoenbauer, NA-10, September 6, 2007, Baseline Change Proposal (BCP) Form.</p> <p>Status: The first LANL manufactured diamond stamped pit was delivered to Pantex in June. Five (5) other pits have since been diamond stamped and at Pantex before September 30, 2007. Two (2) other pits have been accepted through the LANL Weapons Quality organization and three (3) other pits will be through LANL Weapons Quality organization by the end of September for a total of eleven (11) pits manufactured and through LANL Weapons Quality organization during FY2007.</p> <p>This target was completed by September 30, 2007.</p>
1.1.10 Extract Tritium for use in the stockpile by September 2007.	NA (Sandia said NA since they do not participate on this multi-site)	Agree that Complex met target	<p>Completed first extraction in January 2007. We have extracted tritium and it is available in current inventories at Savannah River Site (SRS).</p> <p>This target was completed by September 30, 2007.</p>

Performance Measure 1.2

Sandia must support Nuclear Materials Consolidation in consolidating Special Nuclear Materials (SNM) within the nuclear weapons complex.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.2.1 Consolidate special nuclear materials (SNM) within the nuclear weapons complex. Complete all scheduled shipments consistent with the TA-18 closure plan. Complete removal of all Category I/II material from Sandia except Sodium Debris Bed material. (NA10 - Complete Transformation Activities, Target 1)	Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)	Agree (NNSA agrees that the multi-site target is completed)	<p>The last FY2007 shipment of SNM from SNL was completed on September 27, 2007. With the exception of the Sodium Debris Material, all Category I/II SNM has been removed from SNL, completing this Target. The other two elements of this Target were completed previously: (1) shipment of material from LLNL to LANL in October 2006, and (2) completion of the TA-18 relocation project earlier in September 2007. A Baseline Change Proposal (BCP) was approved by NA-10 to replace the SPR material (which was scheduled for shipment this FY) with an exception for the Sodium Debris Bed material.</p> <p>Although Sandia was successful in removing a majority of their SNM material, Sandia did not apply adequate corporate resources to have a successful NMSF CORR.</p> <p>This target was completed by September 30, 2007.</p>

Performance Measure 1.3

Supply Chain Management - Sandia must support the implementation of an NNSA supply chain management center.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>1.3.1 Upon establishment and implementation of the NNSA Supply Chain Management Center (SCMC) the sites shall work as an enterprise to:</p> <p>Sign the SCMC Business Process Overview Memorandum of Understanding.</p> <p>Leverage the work of the ICPT with each site participating on one ICPT team to identify commodity candidates, and from those candidates set forth two new strategic complex-wide programs. This includes the development of the procurement strategy, the acquisition plan, and the cost savings methodology.</p> <p>Conduct a total of three e-sourcing events with requirements submitted by three individual sites.</p>	<p>Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)</p>	<p>Agree that NWC Team met requirements</p>	<p>The SCMC multi-site target has been successfully completed by September 30, 2007.</p>

Performance Measure 1.4

Information Resources Management: The Nuclear Weapons Complex will establish an M&O multi-site, inter-disciplinary IPT to rationalize coordinate and consolidate site information technology infrastructure across the nuclear weapons complex to accomplish cost savings and cost avoidances.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.4.1 At the end of FY2007, the IPT will provide a strategic plan for implementing appropriate coordination and consolidation activities. This plan must be signed by all 8 M&Os.	Outstanding (Sandia is grading their performance for their part of the Multi-Site Team)	Agree that NWC Team met requirements	SNL served as the IPT Chairperson and assembled a team that conferred with NA-13 and NA-65 regarding expectations for this Multi-Site, Multi-Year IRM Plan. A Multi-Site IRM Plan (signed by all eight NNSA M&O contractors) was presented that is responsive to the nuclear weapons complex Enterprise IRM needs. The NNSA-CIO has approved this Multi-Site Strategic Plan. All eight NNSA sites will baseline both direct and indirect funds when FY2008 appropriations are received in order to achieve planned IRM milestones for FY2008. This target was completed by September 30, 2007.

Other Considerations

None.

PERFORMANCE INCENTIVE 2 – NUCLEAR WEAPONS.

Missions Stretch Goals to Increase Effectiveness as a Leading Institutional Contributor to the Nuclear Weapons Complex (NWC).

Adjectival Rating
Outstanding

Numerical Score
95

Summary of Performance

The mission stretch goals covered a wide range of activities at Sandia that provided programmatic and technical contributions to NNSA programs, site operations, contractor assurance, integration of the NWC and transformation of the NWC.

Significant Accomplishments

Sandia had the following PI-2 accomplishments that were beyond performance target requirements:

1. Sandia successfully completed environmental tests of the MC4700 AF&F under an aggressive schedule and the units shipped ahead of requirements even while needed test capabilities were being transferred into the WETL and the national stockpile evaluation program was being transformed.
2. Qualification of electronics to radiation environment requirements: QASPR completed numerous computational and experimental tasks and received positive program reviews, while the Enhanced Surveillance Campaign fielded an embedded evaluation test bed that was demonstrated at WETL.
3. Sandia's NIC target was an earned value performance Cost Performance Index (CPI) and Schedule Performance Index (SPI) of greater than 0.95. For the target physics, systems engineering and x-ray blast shield tasks, the combined SPI total achieved was 0.98 and the combined CPI total achieved was 1.05.
4. Sandia removed a total of 46,304 GSF of excess space, exceeding the RTBF stretch goal by over a factor of two.
5. A Sandia/KCP collaboration led to the implementation of a Commercial Off the Shelf (COTS) Insertion Process for the W76-1 LEP for an estimated cost savings of \$35M while significantly exceeding parts acceptance goals.
7. Nonproliferation – Sandia provided support for three major facilities with weapons useable materials covering more than six buildings, exceeding the stretch goal of three buildings.
8. Nonproliferation – Sandia completed 12 physical training courses, exceeding the stretch goal of eight.

Opportunity for Improvement

None.

Performance Measure 2.1

Meet the Directed Stockpile Work (DSW) Stretch Goals.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.1.1 Complete scheduled work required to close Significant Finding Investigations.	Outstanding	Agree	
2.1.2 Complete B 61-11 Alt 357 FPU and Alt 359 FPU ahead of planned schedule, and complete B 61-7 Alt 358 FPU ahead of planned schedule.	Outstanding	Agree	
2.1.3 Provide technical support to resolved unplanned PX Authorization Basis needs as approved by the Federal Program Manager, to enable on-schedule completion of the FY07 authorization basis projects, per the negotiated scope and schedule approved by the Federal Program Manager. By this and other means, Sandia will work with Pantex to plan and executive work so as to avoid unplanned activities to the maximum extent possible.	Outstanding	Agree	
2.1.4 Provide integration support for the Reliable Replacement Warhead Federal Program Manager on specified schedule.	Outstanding	Agree	

<p>2.1.5 Provide non-LEP Engineering Evaluations, Engineering Releases and other technical documentation on schedule and within budget.</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>2.1.6 Fully support all SS-21 plan requirements. Provide technical support to resolve unplanned PX Authorization Basis needs, as approved by the Federal Program Manager, to ensure on-schedule completion of the FY07 SS-21 projects, per negotiated scope and schedule approved by the Federal Program Manager.</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>2.1.7 Complete environmental testing (E-tests) at Weapons Evaluation Test Laboratory (WETL) for the MC4700 Armed, Fuzed & Firing (AF&F) and return the applicable unit to PZX shipping within 60 days of receipt of the required number of units at WETL.</p>	<p>Outstanding</p>	<p>Agree</p>	

Performance Measure 2.2

Meet the Campaign Stretch Goals.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.2.1 Develop approaches to meet stockpile needs such as the testing of electronics to radiation environment requirements including evaluations of techniques such as Qualification Alternative for the Sandia Pulsed Reactor (QASPR) and customized sensors to provide data during weapon lifetimes. (NA11 Stretch, PO4, Target 5) (NA11 Stretch, PO6, Target 3)	Outstanding	Agree	
2.2.2 Complete the single FY07 SNL National Ignition Campaign (INIC) milestone that is under SNL control more than 30 days ahead of schedule. (NA16, PM NIC).	Outstanding	Agree	
2.2.3 SNL NIC earned value performance Cost Performance Index (CPI) and Schedule Performance Index (SPI) are greater than .95 (NA16, PM NIC)	Outstanding	Agree	
2.2.4 Ten percent of established SNL non-NIC milestones are completed more than 30 days ahead of schedule. (NA16, PM NIC).	Outstanding	Agree	

2.2.5 Confirm current and voltage reproducibility of Z Refurbishment (ZR) to within +/- 3 percent deviation.	Unsatisfactory	Agree	
--	----------------	-------	--

Performance Measure 2.3

Meet the RTBF Stretch Goals.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.3.1 Sandia will eliminate excess NNSA space and achieve a footprint reduction equal to funded FY07 Facilities and Infrastructure and Recapitalization Program (FIRP) objectives (NA17 Base/Stretch, PO4, PM 4.1)	Outstanding	Agree	

Performance Measure 2.4

NNSA in effective management of the NWC.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.4.1 Support for NNSA activities to deploy tools for the Nuclear Weapons Complex (NWC) that will enable more effective enterprise management. (NA10.1 Stretch, Target 1) (NA12 Stretch, PM1).	Outstanding	Agree	

Performance Measure 2.5

Identify, assess and assist in resolution of risk affecting the NWC.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.5.1 Facilitate strategic planning activities for NA-10 and identify strategic issues and trends impacting the NWC. (NA16, PM NIC)	Outstanding	Agree	
2.5.2 Develop processes that enable multi-site execution in support of the Pantex Throughput Improvement Plan (PTIP).	Outstanding	Agree	

Performance Measure 2.6

Develop, document, and implement quality measures and standards to ensure consistent implementation of nuclear weapons activities and to improve cross-site coordination and performance throughout the NWC.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.6.1 Sandia and Kansas City Plant (KCP) will collaborate to develop and implement a process to assess and qualify Commercial Off-the-Shelf components in support of programs needs.	Outstanding	Agree	

Performance Measure 2.7

Help identify opportunities to develop complex-wide improvements in weapon design approaches and capabilities, operational costs reduction, and other positive impacts on NWC operations.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.7.1 Support creation and validation of Integrated Priority Lists process. (NA12 Stretch, PM1)	Outstanding	Agree	

Performance Measure 2.8

Contribute to implementation of a responsive and sustainable Nuclear Weapons Complex infrastructure necessary to guarantee the Nation's nuclear security in a dynamic and uncertain threat environment.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.8.1 Participate and actively contribute to the establishment of NNSA plans and actions to implement a responsive Nuclear Weapons Complex Infrastructure (NA10.1 Stretch, Target 1)	Outstanding	Agree	

Performance Measure 2.9

Meet Safeguards and Security Stretch Goals.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.9.1 Implement a formal risk management program governing all activities in the site security program.	Outstanding	Agree	Sandia significantly exceeded the performance expectations for this target. During a 4th quarter comprehensive NNSA Risk-Based Oversight verification of the Sandia implementation of ILMS within the S&S organization, NNSA was able to determine that Sandia S&S had effectively addressed and formalized their internal practices and procedures related to risk management. The Sandia S&S Assurance Program ensures that risks are identified and mitigated; risk-based self-assessments are conducted; results are analyzed and corrective actions, when necessary, are developed and implemented.

Performance Measure 2.10

Defense Non-Nuclear Proliferation Stretch goals: Evaluation of the stretch goals in this section will consider the availability of sufficient funding needed to complete such additional work.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.10.1 Complete vulnerability assessments for 10 radiological sites (two more than the base goal in PO-6). (Global Threat Reduction NA-21).	Not Assessed	Not Assessed	SNL was not funded to complete vulnerability studies beyond the base goal.
2.10.2 Provide support for securing three buildings with weapons usable material based on approved project scope (one more than the base goal in PO-6). (Weapons Material Protection NA-25).	Outstanding	Agree	

2.10.3 Conduct 8 physical protection training courses (two more than the base goal in PO-6) (Global Threat Reduction NA-21)	Outstanding	Agree	
2.10.4 Develop approach with LANL to reduce total GBD size, weight and power requirements for GPS Block III system, where GPS IIF is the threshold and GPS IIR is the goal. (Nuclear Explosion Monitoring Space Based Systems NA-22)	Outstanding	Agree	

Other Considerations

None.

PERFORMANCE INCENTIVE 3 - PROCESS EFFICIENCY TRANSFORMATION

Establish enduring SNL practices for assessing and achieving efficiency and effectiveness of core SNL business and operating processes that are comparable to world class performers in Sandia's peer group.

Adjectival Rating
Good

Numerical Score
88

Summary of Performance

Sandia's accomplishments, performance, and efforts during the performance period were commendable. It's very challenging to change culture, develop, and install end-to-end business and operating processes to achieve cost efficiencies. To this end, Sandia made progress towards the Process Efficiency Transformation Project (PETP) Plan implementation. The process was more difficult to implement than anticipated and Sandia realized that cost savings would not be able to be realized from process improvements in FY2007. Through the "Just Do It" initiative, Sandia identified short term solutions and cost efficiencies which resulted in cost savings or avoidance exceeding the \$15M target.

Significant Accomplishments

Sandia has exceptional performance in this area. Sandia has exceeded the targeted \$15M in cost savings/avoidance for FY2007. Sandia devoted substantial effort, identified several efficiency areas, and implemented numerous "just do it" steps to achieve the current year savings.

Opportunity for Improvement

The objective of PI-3 was to develop enduring practices for assessing and achieving efficiency of core Sandia business and operating processes. While the cost savings target was achieved, it was with short term solutions and not through the establishment and implementation of enduring practices as was intended. Sandia has made progress, but the schedule slip in FY2007 for development and implementation of enduring streamlined processes could impact the achievement of future projected savings.

Sandia needs to do a better job of supporting, documenting, and validating the cost savings claimed. While many of the savings or cost avoidances were apparent, some of the claimed savings were based on estimates, and some were appreciably less than claimed. Additionally, Sandia was generally unable to identify where or how these savings were redistributed.

Performance Measure 3.1

Develop 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
3.1.1 Sandia develops and institutionalizes practices for managing key end-to-end business processes. Sandia will develop a multi-year project plan with business process goals and measurable tasks by October 30, 2006.	Good	Agree	<p>Sandia made significant progress towards the PETP Plan implementation. Enterprise end-to-end process model continues to mature based on the work of the ITS revenue stream and SMU Point of Contacts.</p> <p>NNSA realizes that this is an on-going, live process that presents significant difficulties. However, there have been timeline changes and implementation of the PETP is behind schedule.</p>
3.1.2 Sandia will provide SSO with a quarterly project report that summarizes progress on the goals and tasks.	Outstanding	Agree	

Performance Measure 3.2

Achieve SNL-wide business and operational efficiencies that annually offset the projected FY2007 to FY2012 standard labor rate cost increases that are caused by increased benefits costs.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.2.1 Sandia will identify and implement improvement initiatives that result in demonstrated cost efficiencies. For each cost efficiency or streamlining project identified, Sandia will develop and implement a project plan with	Good	Agree	<p>Sandia had exceptional performance in this area. Sandia appears to have significantly exceeded the targeted \$15M in cost savings for FY2007. Sandia devoted substantial effort, identified several efficiency areas, and implemented numerous "just do it" steps to achieve the current year savings.</p> <p>NNSA was unable to validate that Sandia had achieved \$26M in cost avoidance in FY2007. However, through our independent validation efforts we were able to confirm that Sandia did significantly exceed the \$15M targeted savings identified by implementing short-term solutions. During the validation we found instances where the cost</p>

measurable tasks and efficiency goals identified by October 30, 2006.			avoidance was considerably less than the amount claimed. For instance Sandia claimed that they achieved a \$1M in savings from stream lining actions taken associated with people moves. NNSA was able to validate that \$130K was achieved in cost savings. Additionally, Sandia claimed \$500K in savings by changing the corporate rules for what types of training could be taken (i.e., personal development). However, NNSA found that this change in training will not be implemented until FY2008.
3.2.2 Sandia will provide SSO with quarterly reports that status each project and the amount of cost savings realized.	Outstanding	Agree	
3.2.3 For key SNL-wide processes, achieve targeted effectiveness and efficiency performance by FY10 as measured by a Hackett benchmark. SNL will provide SSO with the listing of processes and targeted effectiveness and efficiency performance measures that will be accomplished in FY07 by October 30, 2006.	Good	Agree	Implementation of the Process Efficiency Transformation Project (PETP) has been more difficult than expected. The overall intent was to use the Hackett Benchmark and redefine processes which would result in the targeted savings. Sandia's schedule has slipped and they are not as far along as they had intended. They did make significant progress in the fourth quarter to catch up with their schedule, but overall are still behind. The schedule slips will affect future cost savings if corrective action is not taken to abate schedule slippage. Sandia could progress in FY2008, have everything implemented by FY2010, and still meet the annual targeted savings.

Other Considerations

None.

PERFORMANCE INCENTIVE 4 – EMERGENCY MANAGEMENT

Strengthen the SNL emergency management program through continuous program improvement and sustained performance in the areas of emergency planning, emergency preparedness, emergency response and readiness assurance.

Adjectival Rating
Outstanding

Numerical Score
94

Summary of Performance

NNSA agrees with the Sandia assessment score of Outstanding regarding this performance incentive. Only 2 of the 14 performance targets were scored less than Outstanding and both of those were scored as Good. The information presented in the PEAR for this Performance Incentive (PI) is representative of the conditions observed by NNSA during assessment and oversight activities at Sandia sites in New Mexico and California as well as the Tonopah Test Range (TTR).

This particular PI consisted of 5 distinct performance measures and 14 performance targets. The performance measures were designed to address the following aspects of the Sandia emergency management program: Emergency Planning (4.1); Emergency Preparedness (4.2); Emergency Public Information (4.3); Emergency Response (4.4) and Readiness Assurance (4.5).

Sandia, with few exceptions, has continued to implement corrective actions as approved and also has made program enhancements which have continued to move this program forward and into a more mature state than was observed during the last major inspection. While making significant headway in most of the program elements and activities, Sandia has struggled to achieve desired results in a few areas. During the identification and development of emergency preparedness hazard assessments (EPHAs) Sandia discovered an error in the correction factor being used to develop all screening threshold levels for hazard surveys. This error has resulted in the need to revisit the affected EPHAs and ultimately could potentially result in the need for new EPHAs. Sandia also underestimated the level of effort associated with some of the FY2007 milestones in the Emergency Management Improvement Project Plan (EMIPP) and as a result was able to complete most but not all of their commitments.

Significant Accomplishments

In response to past issues and concerns regarding the training and qualifications of the Sandia Emergency Management Incident Commanders (IC), Sandia has developed and implemented a certification program for this critical Emergency Response position. Each of the incumbent ICs was required to participate in the program in an attempt to ensure the current cadre of ICs was appropriately trained and qualified. Sandia also hired 3 new IC during this performance period

and these individuals also went through the certification process. While this process was not embraced by some of the individuals who had to go through it, NNSA does believe the process is a valuable tool for ensuring that personnel in the capacity of IC are fully equipped with the training, knowledge, skills and ability necessary to quickly and correctly assess and respond to the myriad of events that could take place throughout SNL.

Opportunity for Improvement

Sandia needs to complete their efforts for ensuring the necessary hazard-related information and response plans are in place for Sandia operations and activities that exist outside of Sandia's jurisdiction as soon as practical. An example of one of these facilities/operations is Sandia's Advanced Material Laboratory located on the University of New Mexico campus.

Performance Measure 4.1

Emergency Planning

Sandia's management of the Emergency Management Program emergency planning activities will result in the timely implementation of applicable directive requirements and other regulations, the effective management and use of internal systems and processes that support emergency planning, and thorough preparation and approval of emergency management planning documentation.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.1.1 Implement the applicable requirements identified within DOE Order 151.1C in accordance with the schedule established in the SNL-approved Emergency Management Improvement Project Plan. Implementation will occur during the Quarterly Status Reports. [<i>Emergency Planning</i>](NA40, PO 40.2 PIP)	Outstanding	Agree	Applicable DOE Order 151.1C, <i>Emergency Management</i> requirements have been implemented by the established due dates reflected in Sandia's Emergency Management Improvement Project Plan (EMIPP).
4.1.2 Utilize the SNL Chemical Information System to monitor changes in non-radioactive hazardous materials inventory to react within 30 days to any detected increase	Outstanding	Agree	Sandia has effectively used the Chemical Information System (CIS) to monitor changes in non-radiological hazardous materials inventory to react within thirty-days to any detected increases above established screening threshold levels. Over the course of seven months, Sandia successfully detected and reported seven instances. All seven required a notification and the requisite notifications were made within the

above SNL-established screening threshold levels. [Emergency Planning]			30-day timeframe prescribed in the local Standard Operating Guide (SOG).
4.1.3 Develop and submit for approval the recently-updated SNL hazards survey and any resulting emergency preparedness hazards assessments (EPHA). Hazard Survey – 9/30/06 New EPHAs – 6/30/07 [Emergency Planning]	Good	Agree	Despite a strong effort to complete the appropriate EPHAs for affected facilities and activities, Sandia was not able to develop and submit for approval updated EPHAs as planned. After several months and significant effort conducting screenings and hazards assessments, Sandia recognized and self-identified an error in a correction factor being used to develop all screening threshold levels for hazard surveys. The ability and willingness on Sandia's part to self-identify this type of issue within the SNL program is indicative of an effective internal continuous improvement process. This error has had significant impact on many of the completed EPHAs so much so that some interim re-screenings have indicated the potential need for several new EPHAs at both the New Mexico and California sites. Sandia is working to resolve all of the issues and concerns associated with the screening process with an emphasis on the error related to the correction factor.

Performance Measure 4.2

Emergency Preparedness

Sandia will demonstrate its preparedness for emergency events through the designation and establishment of an appropriately located, adequately equipped, and fully operational alternate emergency operations center; through ongoing training and the execution of effective drills and exercises; and a formal continuous improvement process based upon the results of performance assurance activities.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.2.1 Develop and execute a project plan that results in the official designation, equipping and testing of a suitable location to be used as a functional alternate emergency operations center by the dates specified in the current approved corrective action plans or in accordance with mutually-agreed upon, revised dates. Project Plan – 1 st Quarter FY07, Quarterly status reports [Emergency Preparedness]	Outstanding	Agree	The approved project plan for the official alternate Emergency Operations Center (EOC) was completed in accordance with established scope, and schedule as well as commitments in related corrective action plans. The alternate EOC location has been successfully performance tested multiple times during the performance period.
4.2.2 Develop, submit and execute drill and exercise packages in accordance with the SNL Drill/Exercise Guide and with established timelines	Outstanding	Agree	Drill and exercise packages have continued to improve throughout the performance period. The packages are comprehensive, well-organized and are being submitted on time with one exception which required change control approval from NNSA.

and an SNL-approved schedule. Drill and Exercise Schedule – 10/1/07, Quarterly status reports [Emergency Preparedness]			
4.2.3 Effectively evaluate and formally disposition the performance results of drills, exercises and real events using post event hot washes, critiques and the established lessons learned and feedback and continuous improvement processes. [Emergency Preparedness]	Outstanding	Agree	Sandia has established formalized and well documented practices and procedures for capturing and evaluating the performance results (strengths and deficiencies) of each of its drill and exercise activities; however, while NNSA agrees with Sandia's rating, it should be noted that the report for the FY2007 annual exercise noted concerns with NNSA regarding Sandia's prioritization of Opportunities for Improvement (OFIs). After a review of the FY2007 SNL/NM annual exercise report, NNSA had concerns with the approach and methodology Sandia applied for prioritizing the reported OFIs. At this point, NNSA views this as a single data point which is not representative of other performance testing or oversight activities completed throughout the performance period.
4.2.4 Complete scheduled FY 2007 training programs for the Sandia Emergency Response Organization (ERO). [Emergency Preparedness]	Outstanding	Agree	Sandia has been able to maintain adequate levels of trained and qualified staffing for the Emergency Response Organization (ERO) positions.

Performance Measure 4.3

Sandia will work with the NNSA to clearly define the roles and responsibilities pertaining to the Emergency Public Information Program associated with public affairs activities performed at the Emergency Operations Center (EOC), and the Joint Information Center (JIC), to ensure a fully compliant and performance-based deployment during emergency events.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>4.3.1 Sandia (Public Relations and Communications Center and Emergency Management), working closely with SSO, will clarify and formally document the roles and responsibilities for establishing viable JIC operations as required by the DOE/NNSA. The documentation will also address administrative, equipment, funding, staffing and logistics requirements. Documentation – 11/30/06 [Emergency Preparedness]</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia, working closely with NNSA, has been able to clarify and formalize roles and responsibilities pertaining to Joint Information Center (JIC) operations. Previous issues and concerns regarding administrative support, equipment, funding, staffing, and logistical requirements associated with JIC operations have been resolved.</p>
<p>4.3.2 Sandia (Public Relations and Communications Center and Emergency Management), working with SSO, will establish a plan, budget (to include funding sources),</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Several drills and exercise activities have been conducted that have successfully incorporated different attributes of the overall Emergency Public Information practices and procedures. Results have been favorable.</p>

and schedule to equip, maintain and periodically test an appropriately located primary JIC and an alternate JIC. Plan, budget, and schedule – 4/30/07 [Emergency Preparedness]			
4.3.3 Sandia (Public Relations and Communications Center and Emergency Management), working with SSO and Kirtland Air Force Base personnel, will establish, formalize and performance test the practices and procedures necessary to facilitate access onto and off of the base during periods of heightened security in order to be able to appropriately deploy in response to emergency events. Establish and test procedure – 2 nd Quarter FY07 [Emergency Preparedness]	Outstanding	Agree	Several drills and exercise activities have been conducted that have successfully incorporated different attributes of the overall Emergency Public Information practices and procedures. Results have been favorable.

Performance Measure 4.4

Emergency Response

Sandia's management of its Emergency Management Program response activities will result in the implementation and deployment of time-urgent response actions necessary to minimize or prevent unacceptable consequences to emergency responders, workers and the public.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.4.1 Demonstrate effective response capability during drills, exercises and real events to	Outstanding	Agree	While NNSA agrees with this score, the following issue was raised during the FY2007 annual emergency management exercise at SNL/NM. Although the Consequence Assessment Team (CAT) had information regarding the ground contamination zone early in the exercise, this information was not

<p>include emergency response, mitigation actions, consequence assessment, categorization and classification of emergency events, the proper use of Protective Action Plans, Emergency Action Levels, Protective Actions, and Protective Action Recommendations and the implementation of termination and recovery activities through the evaluation of drill/exercise objectives. [Emergency Response]</p>			<p>provided to the EOC primary room because the information was not driving CAT actions. NNSA was concerned that potential ground contamination did not drive appropriate response activities during the exercise. NNSA acknowledges that DOE Order 151.1C, Emergency Management and local procedures do not require Emergency Action Levels for ground contamination events; however, NNSA considers this an unacceptable risk to the health and safety of workers, the public and the environment that should be addressed by Sandia in an expeditious manner.</p> <p>NNSA views this as a single data point that requires corrective action but does not consider it representative of other performance testing activities completed throughout the performance period.</p>
---	--	--	---

Performance Measure 4.5

Readiness Assurance

Sandia will establish a self-assessment program that provides Sandia management and NNSA with critical information allowing them to determine the status of Emergency Management 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.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>4.5.1 Establish a formal self assessment program that meets or exceeds the DOE Order 151.1C requirements. A management-approved self assessment schedule will be developed by Sandia based upon emerging</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia has established a formalized self-assessment process for Emergency Management that is risk-based and addresses emerging issues. Sandia has implemented SOG 06-1502, <i>Conducting Management Assessments</i>, as part of the corrective action for resolving the FY2005 OIO Finding #8. All twenty of the officially scheduled self-assessment activities have been completed. The assessments resulted in the identification 59 OFIs which are all being tracked and monitored in the Sandia Action</p>

issues, risks, and implementation data and the schedule will be approved during the first quarter of FY2007. Schedule – 10/15/06 <i>[Readiness Assurance Response]</i>			Tracking System. Sandia also completed a contractor assurance system (CAS)-based self-assessment activity in the fourth quarter of the performance period, the results of which were used by NNSA in determining the level CAS implementation by the Emergency Management organization.
4.5.2 Complete FY2007 Emergency Management Improvement Project Plan (EMIPP) milestones in accordance with estimated completion dates identified (or in accordance with approved, revised dates) within the approved plan. <i>[Readiness Assurance]</i>	Good	Agree	Sandia was able to complete approximately 80 percent (45/56) of the EMIPP milestones scheduled for completion during this performance period. The shortfall can be attributed to the fact that Sandia underestimated the level of effort associated with some of the subtasks associated with these milestones. NNSA will continue to work with Sandia to ensure the remaining actions are appropriately tracked through a timely completion.
4.5.3 Complete all corrective action plan milestones for opportunities for improvement (OFI) resulting from internal and external evaluations in accordance with estimated completion dates identified within approved corrective action plans or in accordance with approved, revised dates. <i>[Readiness Assurance]</i>	Outstanding	Agree	For SNL/NM, two OIO corrective action plans remain open at this time. The corrective action milestones indicated in the corrective action plan are on schedule and the other corrective action plan has one milestone (verification) being reported as late. Not all corrective plan milestones from the NNSA assessment of the TTR emergency management program in January 2007 have been completed in accordance with corrective action plan estimated completion dates. Some of the corrective action milestones have been adversely impacted by the error discovered in the screening process used to develop EPHAs mentioned above. As a result and based upon the FY2007 4th quarter TTR CAP status report, three milestones due by the end of FY2007 have slipped two months so that re-screening of hazardous materials can be completed and the hazards survey updated accordingly. This will result in some FY2008 milestones also slipping.

Other Considerations

None.

PERFORMANCE INCENTIVE 5 – DISPOSE NUCLEAR MATERIAL

Sandia develops and executes an integrated plan that provides for the effective disposition of special and no defined use (NDU) nuclear materials at SNL. Sandia will not be held accountable for issues that are beyond their control to include DOE concurrence and cooperation on cross-site issues.

Adjectival Rating
Outstanding

Numerical Score
90

Summary of Performance

While Sandia addressed all inventory items in FY2007, Sandia was successful in removing all but the Sodium Debris material and ten items stored at the Nuclear Material Storage Facility (NMSF). The inability to ship Sodium Debris was primarily due to Idaho National Laboratory not being ready to receive the material. Sandia's inability to access the items at the NMSF was due to an unsuccessful Hazard Category 3 (HC3T)/NMSF Contract Operational Readiness Review (CORR). The formality and rigor required for operating a nuclear activity was not fully understood by the Sandians assigned to work on the HC3T/NMSF. While the formality and rigor are clearly understood by Sandians who work at other Sandia nuclear facilities, Sandia did not apply the corporate resources needed to have a successful NMSF CORR.

Significant Accomplishments

The work planning that went into the Melt Progression (MP)-1 & -2 repackaging was outstanding. It resulted in significantly lower dose to the workers than calculated and all scheduled items were shipped off-site on schedule.

Opportunity for Improvement

Future planning for operations of HC3T On-site transportation and the Nuclear Material Storage Facility (NMSF) should be a complete, integrated approach from a Sandia perspective to ensure that the correct resources are applied to the operations and that future operations meet the Sandia needs.

Performance Measure 5.1

Sandia develops and executes an integrated, resource loaded plan that presents a clear path forward for the effective and efficient disposition of all nuclear materials with no defined use.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.1.1 Sandia will develop and execute an integrated nuclear material project plan with measurable tasks that includes planning, preparation, and disposition of any special and NDU that was not covered in the 2006 de-inventory plan. Plan will be delivered to SSO March 31, 2007. <i>Planning</i> (NA40, PO 40.2 PIP)	Outstanding	Agree	Rev 0 of the Nuclear Material Disposition Plan was delivered to NNSA on March 31, 2007. NNSA reviewed the plan and found the update to the SNM de-inventory project as adequate. Phase II of the plan is a good start but the implementation of the concepts of a dedicated organization, thorough identification of the material for disposition, scheduling and funding are critical to the success of Phase II.
5.1.2 Sandia will remove the following items in Fiscal Year 2007 - MP 1 and 2, Plutonium (Pu) and HEU sources, Sandia Pulse Reactor (SPR) II and III plates and Sodium Debris Bed material.	Good	Agree	While the risks associated with the removal of the material were noted in Sandia's 2006 plan and the issue with the sodium debris material was out of Sandia's control, it is evident that Sandia did not apply the appropriate corporate resources to have a successful HC3T/NMSF CORR.
5.1.3 Sandia will demonstrate disposition of the nuclear materials in accordance with the milestones presented in the nuclear material disposition plan.	Good	Agree	While the risks associated with the removal of the material were noted in Sandia's 2006 plan and the issue with the sodium debris material was out of Sandia's control, it is evident that Sandia did not apply the appropriate corporate resources to have a successful HC3T/NMSF CORR.

Performance Measure 5.2

Sandia must work closely with other NNSA and DOE sites to accomplish the SNM disposition objectives.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.2.1 Sandia will provide all necessary information to the Y-12 facility to support certification of the DPP-2 container for transportation of Pu and HEU sources by end of March 2007, and will coordinate contractual issues for performing this work at Y-12.	Outstanding	Agree	Sandia was dependent on LANL's process to achieve certification on the DPP-2 container. When LANL delayed their submittal, this impacted Sandia's schedule for a March 2007 certification date. Certification was given in April 2007.
5.2.2 Sandia will provide all necessary information to Y-12 to support certification of the DT-23 container by end of July for shipping SPR fuel, and will coordinate contractual issues for performing this work at Y-12.	Outstanding	Agree	While Sandia did provide all the necessary information to the Y-12 facility to support certification of the DT-23 container for transportation of highly enriched uranium sources, the NNSA intervened on Sandia's behalf to have Y12 resume work on the project (Sandia had provided funding to Y12 but Y12 did not give an accurate estimate to Sandia – Y12 stopped work for six weeks). As a result of the six week schedule slip, Sandia could not get the certification needed by July 2007. Certification of the container was achieved in September 2007.
5.2.3 Sandia will work with NAC, Argonne National Laboratory (ANL) and EM-60 to ensure that certified containers for transportation of Sodium Debris Bed material are available by end of May 2007. Sandia will coordinate with Idaho National Laboratory (INL) to ensure that: (1) a feasibility study is	Outstanding	Disagree	NNSA disagrees with Sandia's rating of Outstanding. NNSA rates Sandia as Good in this area. Sandia made several material shipments in FY 2007, thus reducing the inventory of Security Category I and II material. Due to Sandia issues with the contractor ORR on NMSF, receiver site technical issues, and programmatic issues, some of the materials were not shipped according to the FY 2007 plan.

<p>completed to determine treatment process parameters, and (2) an A&E study is performed to provide a better cost estimate for scaling up process and treating material. These studies are to be completed by August 2007. Sodium Debris Bed material will be shipped to INL when DOE resolves issues with funding treatment at INL. SSO will negotiate to ensure DOE concurrence and cooperation with cross-site issues.</p>			
<p>5.2.4 Sandia will provide all necessary information to Savannah River Site to support potential shipment of future materials.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Due to legal issues at Savannah River Site, Sandia shipped the SPR II control rods (6M container) to LANL in the interim. In addition, available SPR II fuel plates (DT23 container) were shipped to the NTS/DAF (in the interim).</p>
<p>5.2.5 Sandia will work closely with Nevada Test Site (NTS)/Device Assembly Facility (DAF) to complete all activities to accept SPR fuel for interim storage. NTS/DAF will complete required safety basis documentation and work documents needed to accept and store materials by end of FY07.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia was successful in shipping available SPR III fuel plates (DT23 container) to NTS/DAF.</p>

Other Considerations

None.

AWARD TERM INCENTIVE 1 - PARENT CONTRIBUTIONS AND SANDIA REACHBACK.

The Parent Organization provides measurable contribution to improvement in site management and performance and Sandia effectively reaches back to the Parent Organization for support.

Adjectival Rating
Pass

Numerical Score
N/A

Summary of Performance

Sandia achieved full performance for this Award Term Incentive by demonstrating numerous contributions from their Parent Corporation that resulted in measurable performance improvement.

Significant Accomplishments

Sandia implemented a project plan to identify opportunities for Parent Contributions and Sandia Reachback that utilized the Integrated Laboratory Management System (ILMS), importance criteria to prioritize and rank opportunities to improve site management and performance consistent with the Model Contract implementation and developed supporting performance measures.

Opportunity for Improvement

None.

Performance Measure 1.1

Demonstrate parent contributions and Sandia's use of the private-sector expertise of its parent organization to improve contractor performance that results in measurable site management and performance improvements.

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	NNSA was impressed with the depth and breadth of the opportunities being worked across the institution by the parent organization.

<p>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.</p>	<p>Outstanding</p>	<p>Pass</p>	<p>NNSA was impressed with the depth and breadth of the opportunities being worked across the institution by Sandia.</p>
--	--------------------	-------------	--

Other Considerations

None.

AWARD TERM INCENTIVE 2 – STRATEGIC RELATIONSHIPS

Establish Strategic Relationships with the DOE and other Federal Agencies that are complementary to the Nuclear Weapons Program.

Adjectival Rating
Pass

Numerical Score

Summary of Performance

Sandia has worked diligently to establish strategic relationships with DOE and other Federal agencies that have proven to both complement and enhance DOE/NNSA goals and objectives.

Overall, Sandia's performance in establishing strategic relationships is Outstanding. Sandia's efforts towards enhancing or building strategic relationships were successful; with concentrations in those entities that support Center for Integrated Nanotechnologies (CINT), Microsystems and Engineering Sciences Applications (MESA), High Performance Computing (HPC), National Nanotechnology Enterprise Development Center (NNEDC), other Federal agencies, and DOE.

Significant Accomplishments

Several notable accomplishments were made by Sandia during this evaluation period including: (1) assessment and identification of potential partnerships throughout FY2007, (2) securing investments for long-term research in the areas of CINT, MESA, NNEDC, HPC, other Federal agencies, and DOE programs, (3) development of Work for Others (WFO) strategy that will ultimately improve NNSA WFO program management, and (4) enhancing relations with various DOE program offices and sponsors.

Sandia's efforts to improve strategic relations are focused on accomplishing the primary objective of securing sustained, longer-term research funding and infrastructure support.

Opportunity for Improvement

This Award Term Incentive will not be evaluated in FY2008; however, Sandia is highly encouraged to continue its endeavors to both foster and further enhance strategic relations.

Sandia is encouraged to continue assessment and identification of potential strategic partnerships with the ultimate goal of securing sustained partnership investment, strategic technology development, capabilities, and infrastructure support.

Performance Measure 2.1

Demonstrate substantive activities/results from customers outside the NNSA that enhance Nuclear Weapons competencies and integrated capabilities and complement the Nuclear Weapons mission.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.1.1 Perform activities that support CINT, MESA, HPC and critical nuclear weapon facilities and capabilities.	Outstanding	Pass	Evidence of outstanding performance in this measure includes (1) the Memorandum of Understanding signed between DTRA and SNL related to work activities in CINT; (2) a capital investment by Sandia's DSA SMU was made to help leverage capital equipment for MESA; (3) NNEDC is providing the platform for increased nanotechnology related collaborations; and, (4) further development of HPC capabilities with various partners.

Performance Measure 2.2

Develop and establish strategic relationships with other Federal Agencies that will directly benefit and complement NNSA's mission and augment support for infrastructure and Science and Technology.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.2.1 Develop a set of recommendations for building strategic relationships with other Federal Agencies. The recommendations will consider the pros and cons of alternative strategic relationship models and approaches for funding laboratory infrastructure. Options regarding strategic relationship models will be discussed with SSO throughout the year.	Outstanding	Pass	A partnership blueprint was developed resulting from an assessment of potential partnerships. The results of the assessment identified potential partnerships to pursue, including Department of Defense, Department of Homeland Security and other Intelligence Agencies.

Performance Measure 2.3

Develop and establish strategic relationships across the DOE that will directly benefit and complement NNSA's mission and augment support for infrastructure and Science and Technology.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.3.1 Continue to develop strategic relationships across the DOE that enable core laboratory capabilities and infrastructure required to support the national security mission. Strategic relationships are defined by "key" customer contacts and engagement within DOE (including, but not limited to, SSO).	Outstanding	Pass	Sandia enhanced relationships with DOE organizations such as EE, NE, OCRWM, and SC.

Other Considerations

Sandia's ongoing efforts in building Strategic Relations are evident by the diversified portfolio of projects performed under Strategic Partnerships, including Work for Others (other Federal agencies) and DOE sponsored work activities. Building Strategic Relations is not always accomplished in short periods, but rather is a process that takes several months and sometimes years to achieve. Sandia's credibility within the science, technology and engineering communities has contributed towards a successful year of enhancing strategic relations with the Department of Energy, Department of Homeland Security, Department of Defense and other Federal Agencies.

NNSA regards Sandia's leadership and contributions in the development of the DOE/NNSA WFO Complex Transformation activities as outstanding.

AWARD TERM INCENTIVE 3 – COMPLETE FOUR PILOT PROJECTS AND THE REMAINING SSO/SNL RETREAT PROJECTS.

Using the principles underlying the model contract, provide data on how the four pilots and remaining concept papers result in specific improvements in the effectiveness and efficiency of Sandia National Laboratories and provide lessons learned for management improvements at SNL and potentially across the Nuclear Weapons Complex.

Adjectival Rating
Pass

Numerical Score

Summary of Performance

Sandia met the intent of the four Pilot Projects and the remaining Concept Papers to demonstrate implementation of the Model Contract and provide lessons learned that could be used institutionally at Sandia to complete implementation of the NNSA Pilot Model Contract. The process improvements at SNL can be shared with the NNSA Complex.

Significant Accomplishments

In all areas including NNSA delegation of Critical Decision (CD) – 1 and CD – 3 (pending HQ approval), Foreign Travel, Fleet Services, Personal Property Management and Procurement, Sandia has demonstrated improvements to management performance and effectiveness resulting in gains in operational efficiency and significant savings that are being redirected to mission and operational priorities.

Opportunity for Improvement

Continuous improvement and implementation of the SNL Contractor Assurance System, the Integrated Laboratory Management System.

Performance Measure 3.1

Facilities: Demonstrate how Sandia has accepted formal contractual accountability and responsibility in accordance with the intent of the model contract.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.1.1 Sandia works with SSO to develop and execute a Pilot Program in Facilities to demonstrate that performance	Outstanding	Pass	Sandia submitted a final package to the Site Office requesting that authority for Critical Decisions (CDs) 1 and 3 on selected FMOC line item projects (<\$100M) be delegated to Sandia. NNSA concurred that Sandia is ready to assume responsibility for authorizing CD-1 and 3 on selected projects. Sandia and NNSA are awaiting concurrence from NNSA/HQ. Overall, Sandia's Contractor Assurance System

<p>expectations can be met while placing greater reliance on Sandia's assurance processes and creating opportunities for NNSA/SSO to streamline oversight.</p>			<p>(CAS) provides a "Medium" level of assurance in Facilities oversight.</p> <p>There is room for continued improvement with respect to CAS implementation.</p> <p>NNSA reviewed Sandia's submittal of other proposed exemptions of DOE Order requirements in Facilities. Sandia has provided a solid effort. However, this proposal lacked a description of the Sandia controls that would replace those NNSA currently uses</p>
--	--	--	---

Performance Measure 3.2

Foreign Travel: Demonstrate how Sandia has improved the Foreign Travel Process in accordance with the intent of the model contract.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>3.2.1 Sandia works with NNSA to hold a Value Stream Mapping Event and to generate a project plan to implement the process improvement results of this VSM on the Foreign Travel Process. SNL will meet all SNL milestones/metrics provided in the Project Plan and provide SSO with quarterly updates regarding its progress against the milestones/metrics in the Project Plan.</p>	<p>Outstanding</p>	<p>Pass</p>	

Performance Measure 3.3

Fleet Management: Demonstrate how Sandia has accepted formal contractual accountability and responsibility in accordance with the intent of the model contract.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.3.1 Sandia will work with SSO to seek approval of the Transportation Study. Upon approval Sandia will timely and effectively implement the plan and provide SSO with measurement of progress against milestones.	Outstanding	Pass	

Performance Measure 3.4

Property Management: Demonstrate how Sandia has accepted formal contractual accountability and responsibility in accordance with the intent of the model contract.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.4.1 Sandia develops and implements a plan for making the property management program more effective and field efficient by: (1) using an inventory find rate of 98 percent; (2) increasing the equipment threshold from \$5K to \$7.5K; and (3) using the net book value to identify which assets	Outstanding	Pass	

<p>are required to be inventoried. Sandia will clearly define how the success of these initiatives will be measured and provides measurement results to SSO in accordance with the plans.</p>			
<p>3.4.2 Sandia works with SSO to develop and execute a Pilot Program in Property Management to demonstrate that performance expectations can be met while placing greater reliance on Sandia's assurance processes and creating opportunities for NNSA/SSO to streamline oversight.</p>	<p>Outstanding</p>	<p>Pass</p>	

Performance Measure 3.5

Procurement: Demonstrate how Sandia has accepted formal contractual accountability and responsibility in accordance with the intent of the model contract.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.5.1 Sandia works with SSO to develop and execute a Pilot Program in Procurement to demonstrate that performance expectations can be met while placing greater reliance on Sandia's assurance processes and creating opportunities for NNSA/SSO to streamline oversight.	Outstanding	Pass	

Other Considerations

None.

ACRONYM LIST

ACREM	Accountable Classified Removable Electronic Media	CAS	Contractor Assurance System
ACRRF	Annular Core Research Reactor Facility	CASA	Common Adaptable System Architecture
AF&F	Arming Fuzing and Firing	CAT	Consequence Assessment Team
ANL	Argonne National Laboratory	CBP	Customs and Border Protection
AOP	Annual Operating Plan	CD	Critical Decision
AP	Additional Protocol	CDNS	Chief Defense of Nuclear Safety
ARCS	Airborne Radiological debris Collection System	CFO	Chief Technology Officer
ARS	Advanced Radar System	CI	Counterintelligence
ASC	Advanced Scientific Computing	CIMB	Corporate Issues Management Board
ASCR	Advanced Scientific Computing Research	CINT	Center for Integrated Nanotechnologies
ASI	Advances Safeguards Initiative	CIPDSS	Critical Infrastructure Protection Decision Support System
ASIC	Application Specific Integrated Circuits	CIS	Computer Information Systems
ATI	Award Term Incentive	CMC	Cooperative Monitoring Center
BBS	Behavioral Based Safety	CME	Component and Material Evaluation
BCC	Baseline Change Control	CMI	Corrective Measure Implementation
BCCR	Baseline Change Proposal Request	CMS	Code Management System
BCP	Baseline Change Proposal	CO	Carbon Monoxide
BDA	Optical Burst Analyzer	COA	Conditions of Approval
BDP	Optical Burst Processor	CONOPS	Concept of Operations
BDV	Burst Detector Verification	COR	Contracting Officer Representative
BDY	Optical Burst Detector	CORR	Contract Operational Readiness Review
BER	Biological and Environmental Research	COTS	Commercial Off-The-Shelf
BES	Basic Energy Sciences	CPI	Cost Performance Index
BIA	Business Impact Analysis	CPR	Corporate Process Requirement
BWC	Biological Weapons Convention	CRF	Combustion Research Facility
BWIC	Biological Warning and Incident Characterization	CSA	Canned Sub-Assembly
CA	California		
CAC	Corrective Action Complete		
CAP	Corrective Action Plan		

CSE	Cognizant System Engineer	ESC	Enhanced Surveillance Campaign
CSI	Container Security Initiative	ESI	Electrical Severity Index
CT	Counterterrorism	EVM	Earned Value Management
CXD	Combined X-ray Dosimeter	F&I	Facility and Infrastructure
DAF	Device Assembly Facility	FBI	Federal Bureau of Investigations
DARHF	Dual Axis Radiographic Hydrodynamic Facility	FCI	Facility Condition Index
DARPA	Defense Advanced Research Projects Agency	FCVT	Freedom Car and Vehicle Technologies
DART	Days Away and Restricted Duty Case Rate	FEMA	Federal Emergency Management Agency
DBT	Design Basis Threat	FIRP	Facilities Infrastructure Replacement Program
DHS	Department of Homeland Security	FMOO	Facilities Management and Operations Center
DM	Deferred Maintenance	FPU	First Production Unit
DNDO	Domestic Nuclear Defense Organization	FTE	Full-Time Equivalent
DNI	Director National Intelligence	FWR	Facility Work Request
DNN	Defense Nuclear Nonproliferation	FY	Fiscal Year
DoD	Department of Defense	GBD	Global Burst Detector
DOE	Department of Energy	GFE	Government Furnished Equipment
DP	Defense Program	GIPP	Global Initiatives for Proliferation Prevention
DSW	Directed Stockpile Work	GNEP	Global Nuclear Energy Partnership
DTRA	Defense Threat Reduction Agency	GSF	Gross Square Footage
EAB	External Advisory Boards	HC	Hazard Category
ECIM	Exterior Communications Infrastructure Modernization	HCCI	Homogeneous Charge Compression Ignition
EERE	Energy Efficiency and Renewable Energy	HERMES	High Energy Radiation Megavolt Electron Source
EMIPP	Emergency Management Improvement Project Plan	HEU	Highly Enriched Uranium
EMS	Environmental Management System	HPC	High Performance Computing
EOC	Emergency Operations Center	HQ	Headquarters
EPHA	Emergency Preparedness Hazard Assessment	HR	Human Resources
ER	Environmental Restoration	HSM	Heating System Modernization
ERO	Emergency Response Organization	IAEA	International Atomic Energy Agency
ES&H	Environment, Safety, and Health	IC	Incident Commander
		ICD	Intelligence Collection Directive
		ICF	Inertial Confinement Fusion

IGD	Infrastructure/ Geophysical Division	LNO	Logistic Nuclear Operations
IGGP	Institutional General Plant Project	LOTO	Lock-Out-Tag-Out
IIR	Intelligence Information Reports	LTC	Low-Temperature Combustion
ILMS	Integrated Laboratory Management System	LTES	Long-Term Environmental Stewardship
INL	Idaho National Laboratory	LTMMP	Long-term Maintenance and Monitoring Plan
INSRP	Interagency Nuclear Safety Review Panel	LTS	Long-Term Stewardship Management and Operation
IPPAS	International Physical Protection Advisory Service	M&O	
IPPE	Institute for Physics and Power Engineering	MARS	Mars Science Laboratory
IPT	Integrated Project Team	MESA	Microsystem and Engineering Sciences Application
IRP	Independent Review Panel	MNF	Manzano Nuclear Facility
IRSRA	Iraq Radioactive Source Regulatory Authority	MP	Molten Pool
ISL	Intent Stronglink	MPC&A	Material Protection, Control, and Accountancy
ISMS	Integrated Safety Management System	MWL	Mixed Waste Landfill
ISO	International Organization for Standardization	NAC	Nuclear Assurance Corporation
JCEL	Joint Computational Engineering Lab	NAM	National Atomic Museum
JIC	Joint Information Center	NAPS	NNSA Policy Letters
JPC	Joint Performance Council	NDA	National Defense Authorization Act
JPRT	Joint Performance Review Team	NE	Nuclear Energy
JTA	Joint Test Assembly	NEMRE	Nuclear Explosion Monitoring research & Engineering
KAFB	Kirtland Air Force Base	NEPA	National Environmental Policy Act
KB	Knowledge Base	NHI	Nuclear Hydrogen Initiative
KCP	Kansas City Plant	NIC	National Ignition Campaign
LAC	Lightning Arrestor Cable	NIF	National Ignition Facility
LANL	Los Alamos National Laboratory	NISAC	National Infrastructure Simulation & Analysis Center
LEP	Life Extension Program	NMED	New Mexico Environment Department
LESA	Laboratory Enterprise Self Assessment	NMSF	Nuclear Materials Storage Facility
LDRD	Laboratory Directed Research & Development	NMSU	New Master Substation Utility
LEO	Life Extension Option		
LLC	Limited Life Component		
LLNL	Lawrence Livermore National Laboratory		

NNEDC	National Nanotechnology Enterprise Development Center	PRIDE	Product Realization Integrated Digital Enterprise
NNSA	National Nuclear Security Administration	PRT	Product Realization Team
NOD	Notice of Disapproval	PSAR	Preliminary Safety Analysis Report
NOTE	Non-Occurrence Trackable Event	PTIP	Pantex Throughput Improvement Plan
NOV	Notice of Violation	Pu	Plutonium
NOx	Nitrogen Oxides	PX	Pantex
NRC	Nuclear Regulatory Commission	QASPR	Qualification Alternatives for the Sandia Pulsed Reactor
NWC	Nuclear Weapons Complex	QE	Qualification Evaluation
OCL	Obligation Control Level	QER	Qualification Engineering Release
OCRWM	Office of Civilian Radioactive Waste Management	QMU	Quantity, Margins, and Uncertainties
OEA	Occupational Exposure Assessment	QT	Qualification Test
OFA	Other Federal Agencies	RBOP	Risk Based Oversight Procedure
OFI	Opportunities for Improvement	RCRA	Resource Conservation and Recovery Act
OIO	Office of Independent Oversight	RIK	Replacement in Kind
P&PD	Production & Planning Directive	RMI	Requirements Modernization Initiative
PA	Project Authorization	RQ	Reportable Quantity
PAAA	Price Anderson Act Amendment	RRW	Reliable Replacement Warhead
PCard	Procurement Card	RTBF	Readiness in Technical Base and Facilities
PCCI	Premixed Charge Compression Ignition	R&D	Research & Development
PEAR	Performance Evaluation and Assurance Report	S&S	Safeguards and Security
PEP	Performance Evaluation Plan	S&T	Science and Technology
PER	Performance Evaluation Report	SAE	Society of Automotive Engineers
PETP	Process Efficiency Transformation Project	SAGSAT	Strategic Advisory Group Stockpile Assessment Team
PI	Performance Incentive	SAP	Sampling and Analysis Plan
PO	Performance Objective	SAR	Synthetic Aperture Radar
POC	Point of Contact	SARB	Self-Assessment Review Board
POG	Project Officer Group	SB	Safety Basis
PREP	Preliminary Real Estate Plan	SBA	Small Business Administration

SBIP	Safety Basis Improvement Project	TBRT	Technical Basis Requirements Team
SC	Office of Science	TCR	Test Capabilities Revitalization
SCIO	Senior Counterintelligence Officer's Meeting	TE	Technical Expert
SCMC	Supply Chain Management Center	TPBAR	Tritium Producing Burnable Absorber Rods
SCWE	Safety Conscious Work Environment	TRCR	Total Recordable Case Rate
SER	Safety Evaluation Report	TSL	Trajectory Stronglink
SFI	Significant Finding Investigation	TSR	Technical Safety Requirements
SITs	Safety Incident Tracking System	TTR	Tonopah Test Range
SITS	System Integration Technical Support	TWP	Technical Work Plan
SLD	Second Line of Defense	TYSP	Ten Year Site Plan
SME	Subject Matter Expert	UHC	Unburned Hydrocarbons
SMTS	Senior Management Technical Staff	UR	Uranium
SMU	Strategic Management Unit	USB	Universal Serial Bus
SNEM	Space Nuclear Explosion Monitoring	USGB	US Green Building Council
SNL	Sandia National Laboratories	USI	Unreviewed Safety Issue
SNM	Special Nuclear Material	USQ	Unreviewed Safety Question
SOG	Standard Operating Guide	WETL	Weapons Evaluation Test Laboratory
SoS	System of Systems	WFO	Work For Others
SPEIS	Supplemental Programmatic Environmental Impact Statements	WG	Working Group
SPR	Sandia Pulsed Reactor	WIPP	Waste Isolation Pilot Plant
SRM	Spin Rocket Motor	WMD	Weapons of Mass Destruction
SRS	Savannah River Site	WPC	Work Planning and Control
SS-21	Seamless Safety for the 21st Century	WQA	Weapons Quality Assurance
SSO	Sandia Site Office	WSSX	Warhead Safety and Security Exchange
SSQA	Safety Software Quality Assurance	YMP	Yucca Mountain Project
SSRP	Security Systems Replacement Project	ZR	Z Refurbishment
ST&E	Science, Technology & Engineering		
STARS	Strategic Target Systems		
SWMU	Solid Waste Management Unit		