



NATIONAL NUCLEAR SECURITY ADMINISTRATION

Fiscal Year 2006

PERFORMANCE EVALUATION REPORT

OF

SANDIA CORPORATION

For the Management and Operation of

SANDIA NATIONAL LABORATORIES

Contract No. DE-AC04-94-AL85000

November 28, 2006

**NNSA FY06 PERFORMANCE EVALUATION REPORT (PER)
OF SANDIA NATIONAL LABORATORIES
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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 2006 (FY06) 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 FY06 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. NNSA noted continued excellence in the business areas and improvements in operational areas such as Safety Basis documentation, Safeguards and Security, and Emergency Management; however, consistent performance in all Operational programs was not achieved.

PERFORMANCE OBJECTIVES

MISSION PERFORMANCE

Defense Programs (DP)

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:

- Successful restart and operation of the Sandia Pulsed Reactor (SPR) so that testing for the W-76-1 was completed on-time, Qualification Alternatives for the Sandia Pulsed Reactor (QASPR) testing was completed, and SPR was operated for 159 days without a safety or security incident.
- The Sandia Red Storm team turned a machine with problems that delayed its acceptance into a powerful tool for stockpile stewardship. Sandia provided critical computing cycles to Los Alamos National Laboratory (LANL) that assisted them in meeting their W76 Life Extension Program (LEP) milestone. Red Storm has moved up to number six on the TOP500 list.

- Sandia's Neutron Generator Center became the first center within the Nuclear Weapons Complex to win the prestigious Shingo award for its excellence in manufacturing. The Shingo Prize is considered to be the "Nobel prize" in business, grounded in lean enterprise management leading to world-class and globally competitive business.
- Successful completion of 132 of 134 NNSA Level II milestones.
- Sandia returned approximately \$100M in FY08 through FY12 funding as a part of the Sandia recommended reduction in scope of a proposed B61 LEP.
- Streamlined the W76 surveillance requirements that resulted in a reduction of Pantex Plant's surveillance backlog.
- Developed the first modernized system tester for the W88, on schedule and within budget.
- Sandia successfully carried out three equations of state (EOS) experiments with plutonium before shutting down the Z facility for refurbishment.
- Worked to develop a new supplier for Joint Test Assembly (JTA) transmitters, which involved successfully submitting approximately 10 transmitters through Sandia and SSO acceptance.

Although Sandia demonstrated overall success in their DP assignments, there are areas in which performance could be improved. The three major issues noted by NNSA during FY06 that prevented Sandia from achieving total success are: (1) the significant cost growth related to the Sandia designed W76 LEP at the Kansas City Plant (KCP); (2) Sandia's lack of an effective Supplier Management System even though this deficiency was noted during three separate NNSA Quality Assurance Surveys during FY06; and (3) Not delivering the SRM for the B61 program on time, due to Spin Rocket Motor (SRM) acceptance test failures.

Science and Technology (S&T) Programs

Sandia's science and technology programs are regarded as Outstanding as evidenced by the results of external peer reviews. Performance significantly exceeded the standards in all areas evaluated and examples of their outstanding performance are presented below.

- Sandia's performance in Computational and Information Science and pulsed power is outstanding, with unique capabilities in supercomputers to include Red Storm and Thunderbird as well as simulation capabilities i.e., ALEGRA-HEDP (high energy density physics) for Z applications
- Sandia provided critical support to the Department of Homeland Security (DHS) in a number of areas. Highlights of this support included: (1) assessing and providing information on potential damages to public and private infrastructure as a result of Katrina and other hurricanes as they would impact the continental U.S;

(2) in concert with the Homeland Security Council at the White House, Sandia provided an assessment of economic consequences from avian influenza; and (3) Sandia completed an all hazard assessments process that will provide impact information for both naturally occurring and terrorism events.

- Operation Safe Commerce Phase III: In Operation Safe Commerce Phase III, Sandia led an effort to demonstrate end-to-end secure trade lane. This effort resulted in creating and demonstrating a system for radiation and explosive scanning of un-stuffed cargo and empty containers to ensure security and safety of these containers as they are prepared and shipped to U.S. ports of entry.
- As part of the DOE Energy Security initiatives, Sandia evaluated the geological and geomechanical suitability of nine Strategic Petroleum Reserve expansion sites in Texas, Louisiana and Mississippi; kicked off Phase II of the DOE Southwest Carbon Sequestration Partnership; and continued to make significant progress on four Natural Gas and Oil Technology Partnership projects.
- Sandia was selected as the lead laboratory for the Yucca Mountain Project repository science. Sandia successfully transitioned postclosure and performance confirmation work scope from the existing Management and Operations contractor at Yucca Mountain.
- Sandia's Computer Science Research Foundation (CSRF) received a very favorable external program review, significant recognition of its work, coupled with four patents and nine additional patents pending during this evaluation period.

Defense Nuclear Nonproliferation (DNN) Programs

Sandia's overall performance in DNN programs exceeded expectations and was rated as Outstanding. Significant accomplishments included an R&D 100 Award presented to Sandia and Russia as a team for a project on high-temperature batteries executed under the Initiatives for Proliferation Prevention (IPP)/International Science and Technology Center (ISTC) programs.

Sandia, through the Regional Radiological Security Partnership with Australia, leveraged the Radiological Threat Reduction (RTR) work in the Southeast Asian region, taking advantage of Australia's technical expertise and existing relationships with its neighboring countries. Sandia is now working with Indonesia, Vietnam, Philippines, Cambodia and Thailand to improve the security of their radioactive sources.

Another notable accomplishment was Sandia's outstanding work that resulted in the establishment of contracts with Russian vendors to provide the necessary security upgrade systems to the Bratislava sites under budget.

Opportunities for improvement have been identified for Sandia. NNSA-HQs notes continued problems, such as appealing to Congress or senior officials for support of particular projects, failing to respect foreign or State Department sensibilities in certain

international settings, and failing to keep HQs advised of ongoing activities such as negotiations with foreign entities.

OPERATIONS PERFORMANCE

Sandia's operational performance has improved and is rated as Good for FY06. Performance significantly exceeded the standards in many areas evaluated and notable accomplishments as well as opportunities for improvement in Operational areas are presented below:

- Sandia provided management emphasis and needed resources to ensure safety basis requirements are being met. Sandia has proactively worked with SSO to address issues identified during specific safety basis document reviews so as to minimize impacts on schedule.
- Sandia accomplished 96 percent of the SNL planning (10/5/1) one-year milestones which reduced mission and operational risk.
- Sandia provided support to NNSA and DOE in addressing cyber security vulnerabilities to include leading NNSA in the development of the Cyber Security Project Team Report and associated recommendations.
- Sandia's project management surpassed the expected levels of performance as evidenced by the effective management of several large projects, Exterior Communications Infrastructure Modernization (ECIM), Test Capabilities Revitalization (TCR) Phase I, Heat Systems Modernization, Center for Integrated Nanotechnologies (CINT), Microsystem and Engineering Sciences Application (MESA) and National Infrastructure Simulation & Analysis Center (NISAC) that resulted in significant time and cost savings.
- NA-70 validated Sandia's implementation of the 2003 Design Basis Threat and determined that Sandia has successfully achieved fully compliant implementation.
- Achievement of third party certifications such as International Organization for Standardization (ISO) certification or recertification in the following areas Subcontracting Purchasing System, Sandia/CA Environmental Management System, Telecommunications Delivery and Infrastructure Services, as well as benchmarking of the General & Administrative the Sandia business rules, and the Integrated Laboratory Management System (ILMS).
- Sandia has continuously improved the ILMS and its many underlying processes, procedures, and tools resulting in another step toward a fully implemented Contractor Assurance System.
- Sandia achieved an overall score of Outstanding on their Objectives Matrices in the areas of procurement, property management, and information technology.

- Sandia effectively developed and executed their FY06 Safeguards and Security (S&S) Annual Operating Plan.

Opportunities for improvement in operational support areas include; (1) implementing 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 procedures and processes, and (3) improving corrective action plan and performance indicators development and implementation. Additionally, Sandia needs to improve management of their environmental programs and permits as there were three externally levied regulatory violations and nine reportable environmental events to outside agencies. Finally, the SSO Self-Assessment and the Chief of Defense Nuclear Safety review identified that Sandia “needs improvement” in the areas of Fire Protection, Maintenance, and Conduct of Operations. SNL senior management needs to provide continued focus on these areas to ensure improvements/upgrades are implemented to meet expectations.

PERFORMANCE INCENTIVES

Sandia’s overall performance associated with the PIs was Good.

Under PI-1, *Special Nuclear Material Removal*, Sandia made significant progress in the removal of Special Nuclear Material (SNM) from SNL in FY06. Sandia met four of the five performance targets for FY06. This effort required Sandia to successfully coordinate a wide variety of actions among SNL and other DOE and NNSA sites, and external entities. Early in the SNM removal planning process, Sandia did not execute a critical step for the termination of safeguards and was not able to complete the offsite shipment of MP1 and MP2 during FY06. However, Sandia worked with SSO, NNSA-HQs, and the receiving site to obtain the termination. Sandia also proactively scheduled another material movement while awaiting the termination.

Performance Incentive 2, *Systemically and Continuously Improve the Management and Execution of the Safeguards and Security(S&S) Program at Sandia*, for FY06 was designed to evaluate Sandia’s ability to systematically and continuously improve the management and execution of the S&S program, resulting in a sustained, effective S&S program. Sandia demonstrated success in this area through the use of the “S&S Dashboard,” which is a multi-layered management tool that is used to reflect near-real time performance data against specific metrics identified for various elements within the overall Sandia S&S program. Sandia further demonstrated strength in this area by rigorously conducting an assessment of classified operations at its cleared subcontractor facilities and involved the responsible line organizations in the process.

Sandia is commended for their performance under PI-3, *Small Business Utilization*. Sandia exceeded the proposed FY06 Small Business goal of 47 percent by approximately 6.1 percent without hampering the accomplishment of mission objectives.

The total procurement spend (excluding foreign and affiliate procurements) for FY06 was \$936,891,530. Of this amount, small businesses were awarded 53.1 percent or \$497,946,014.

Under PI-4, *Demonstrate Integrated Safety Management System Implementation*, Sandia made progress in several important areas such as line self-assessment, meeting Safety Basis Improvement Plan (SBIP) milestones, and rolling out the Environmental Management System. However, improvement is still required in work planning and control, environmental compliance, and developing Integrated Safety Management (ISM) related systems.

Performance Incentive 5, *Emergency Management*, was designed to evaluate Sandia's ability to develop and implement an emergency management system that supports the National Incident Management System (NIMS) and meets the requirements of the DOE comprehensive emergency management system. Sandia was able to demonstrate improvement in the specific elements of its Emergency Management Program that were measured in this Performance Incentive by meeting the outlined commitments and goals. However, continued improvement is still needed in emergency management in order for this program to meet NNSA requirements and expectations. The 2006 audit by the Office of Performance Assessment and Assurance showed that progress is being made and resulted in far fewer and less severe findings than in the past along with instances of effective performance.

For Performance Incentive 6, *NA-10 Multi-Site*, eight of nine measures related to "Getting the Job Done" were met with some NWC difficulties on W-76 LEP support and B-61 rates. NA-12 has assessed this performance as Outstanding with a score of 92.

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 the 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.

For ATI-1, *Achieve Cost Efficiencies*, Sandia was successful in streamlining processes to recover approximately \$1.6M in existing Facilities Infrastructure Replacement Program (FIRP) projects to fund other higher priority FIRP projects. Sandia failed to demonstrate unit cost efficiencies for neutron generators (NG) during FY06 due to lower yields for the NG subassembly, although they did improve other processes to achieve savings in cycle time. NNSA observed that cost savings were the result of implementing sound business practices and not a result of tailored or altered DOE/NNSA requirements.

For the third year of implementation of ATI-2, *Execute a Contractor Multi-year Vision (MYV) to Improve Management and Performance*, Sandia was successful in maturing the corporate processes that will drive the needed results to attain the MYV over time. Sandia achieved 100 percent of the 28 MYV-related milestones, revised the Strategic Plan development methodology, and published a new Strategic Plan. Additionally, there was significant involvement by the parent corporation, Lockheed Martin, in the areas of safety, security, governance, project management, finance, and human resources. Sandia also demonstrated excellent use of Lean Six Sigma to improve processes in several organizations with tangible results.

Finally, with regard to ATI-3, *Increase Effectiveness as a Corporate Player in the Nuclear Weapons Complex*, Sandia significantly exceeded the standard of performance in all areas. Examples of exemplary performance include Sandia support for the:

- NWC transformation activities (e.g., responsive infrastructure);
- Complex 2030;
- Reliable Replacement Warhead (RRW) deployment strategies;
- Pantex Throughput Improvement Plan;
- More efficient Joint Test Assemblies (JTA) (e.g., design of the W88 JTA); and
- National Z Program (e.g., usage rates exceeded expectations).

Sandia may be considered for an extension of 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 the ATIs.

NNSA acknowledges that Sandia achieved the majority of the targets for ATI-1, *Achieve Cost Efficiencies*, ATI-2, *Execute a Contractor Multi-Year Vision*, and ATI-3, *Increase Effectiveness as a Corporate Player in the Nuclear Weapons Complex*.

Exhibit 1
SCORING OF FY06 PERFORMANCE
Sandia Corporation

ELEMENT	RATING	SCORE
Mission Performance Group:		
PO 1 Defense Programs <i>(Stockpile & Conduct Surveillance)</i>	Outstanding	92
PO 2 Defense Programs <i>(Methodologies, Plans, & Tools for Certification)</i>	Outstanding	96
PO 3 Defense Programs <i>(Lifetime Extension & Options for Future Arsenal)</i>	Outstanding	90
PO 4 Defense Programs <i>(Flexible & Responsive Infrastructure)</i>	Outstanding	94
PO 5 <i>(Reserved to maintain consistency with the FY04 and FY05 PEP/PER)</i>	N/A	N/A
PO 6 Science & Technology	Outstanding	94
PO 7 Defense Nuclear Non-Proliferation	Outstanding	92
Overall Mission –	Outstanding	93
Operations Performance Group:		
PO 8 Business and Operational Support <i>(Secure, Safe, Environmentally Sound Operations & Infrastructure to Support Mission Objectives)</i>	Good	85
PO 9 Laboratory Workforce Management: Renew the Workforce	Outstanding	93
PO 10 Foreign Intelligence Collections & Espionage	Outstanding	95
PO 11 Contractor Assurance System	Good	84
Overall Operations	Good	86
Total Performance Objective (PO) Score	Outstanding	90
Performance Incentives (PI)		
PI 1 Special Nuclear Material Removal	Good	85
PI 2 Safeguards and Security Program	Good	88
PI 3 Small Business Utilization	Outstanding	100
PI 4 Integrated Safety Management System Implementation	Satisfactory	79
PI 5 Emergency Management	Outstanding	90
PI 6 NA-10 Multi-Site Performance Measure	Outstanding	92
PI Aggregate Rating and Score	Good	87
Amount of Incentive Fee Awarded	\$24,306,799	
Award Term Incentives (ATI)		
ATI-1 Achieve Cost Efficiencies	Pass	
ATI-2 Multiyear Vision to Improve Performance	Pass	
ATI-3 Corporate Player in NWC	Pass	

The FY 2006 Performance Objectives Group weighting is based upon the final scores achieved in Operations in FY 2006. Sandia scored a 86 in Operations, which falls within the range of 83 and 87, resulting in a Mission weight of 60 and an Operations weight of 40. This variable weighting factor was pre-determined and agreed to by both parties in the FY06 PEP.

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.)

Adjectival Rating	Numerical Score
Outstanding	92

Summary of Performance

Sandia significantly exceeded the standard of performance by being above the 95 percent completion level for Level II milestones. Sandia had 45 Level II milestones and had one item red and one item not scored. With the one red item, Sandia had 43 out of 44 completions, which means the completion rate is 98 percent. Sandia's performance on the item that is red had to do with the B61 Spin Rocket Motor (SRM) design issues that led to a recovery plan that is late and significantly impacts expected lead times at the Pantex Plant.

Significant Accomplishments

Sandia's responsibilities for non-nuclear components in all current and retired nuclear weapon systems are significant. Accomplishments include;

- ✓ Work to streamline W76 surveillance requirements that resulted in Pantex's ability to work off surveillance backlogs.
- ✓ The Inter-Continental Ballistic Missile (ICBM) activities relating to SS-21 and the surveillance programs for the W78 and W87 had significantly exceeded performance standards that contributed meeting surveillance requirements.
- ✓ W78 Neutron Generator (NG) development and pre-production efforts were well done.
- ✓ W87 Safety, Enhanced Reentry Vehicle (SERV) activities.
- ✓ Alt 363 design and coordination with the Air Force and Kansas City Plant production, Sandia demonstrated outstanding performance in the areas related to the Pantex Throughput Improvement Plan (PTIP) and SS-21 programs.
- ✓ Work to develop a new supplier for Joint Test Assembly (JTA) Transmitters in FY06 involved successfully submitting approximately 10 Transmitters through Sandia and SSO acceptance. This work is not normally done by Sandia. In this case, long-standing quality/acceptance problems at the Production Agency's original vendor prompted the Product Realization Team (PRT) to consider other options. The option chosen was to procure the transmitters from another vendor. This work is significant in that Sandia was able to quickly utilize a commercial supplier and deliver the product in a short time where a long time supplier was unable to produce acceptable product. Sandia worked with Sandia site Office (SSO) to ensure quality acceptance requirements were met, schedules maintained, and costs minimized.

Opportunity for Improvement

- ✓ Sandia's performance in the non-delivery of the SRM for the B61 on-time is a significant weakness. Designs were changed and recovery has been difficult. Two failures of the initial Process Prove-In (PPI) Lot 1 hardware caused delays in identifying the root cause. The impact of these design changes is that SSO was asked by NNSA HQs to identify a path to conditionally accept SRMs in parallel with review of QA paperwork and lot acceptance testing. The intent was to minimize the impacts to the Pantex Plant lead times. Sandia is expected per the Development & Production (D&P) Manual to deliver the SRM 90 days ahead of schedule not including processing time to the Pantex Site. Although, in FY06 Sandia was not late with the Alt 358 First Production Unit (FPU), Sandia has not been able to recover to the normal lead times expected by the D&P Manual on shipments to the Pantex Plant.
- ✓ In addition, Sandia's QC-1 performance requires improvement. Recurring issues with implementation of a Supplier Management System have been documented in three Quality Assurance System (QAS) surveys and Sandia has not provided an acceptable corrective action to address this recurring problem.
- ✓ Sandia also should improve the Annual Assessment Reports by including discussion on Quantification of Margins and Uncertainties (QMU) for each system.
- ✓ In addition, Sandia should improve in the area of producing and providing status of high-priority Significant Findings Investigation (SFI) reports.

Performance Measure 1.1

Meet the delivery requirements established by the P&PD with particular emphasis on meeting established joint DoD and NNSA commitments in accordance with the Directive Schedule. (Level 1 Milestone #332) 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. (Level 1 Milestone #334 in the Milestone Reporting Tool (MRT))

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 Maintenance, and Stockpile Evaluation.	Outstanding	Agree	NNSA overall agrees with the self-assessment that Sandia provided for this performance measure. However, for the red Level II milestone associated with the SRMs, Sandia should have paid more attention with the vendor Alliant Tech Systems. Also, there is one QC-1 issue throughout FY06 that should have received the attention of Sandia management, but did not.

Other Considerations

None

PERFORMANCE OBJECTIVE 2 – DEFENSE PROGRAMS

Performance Objective #2 . Develop methodologies, plans and tools for certification. (PO derived from NA-10 Top Priorities List – Priority 3, 4, and 8.)

Adjectival Rating	Numerical Score
Outstanding	96

Summary of Performance

Sandia's overall performance (Sandia successfully completed all 39 Level II milestones during FY06) has been outstanding in many areas. The most noteworthy items are: Sandia's performance in the area of multi-state surety response exceeded expectations both in time and technology readiness, Sandia delivered the first modernized system tester (W88) on schedule and within budget and has streamlined the budget process and issue resolution process in Engineering Campaigns. While the overall program has been successful, the most significant challenge for Sandia is to complete construction and commissioning of the new Z Refurbishment (ZR) facility on cost and schedule, and to have it perform reliably with the desired level of reproducibility.

Significant Accomplishments

- ✓ In spite of delaying the general availability of the Red Storm platform due to some infrastructure shortages, Sandia provided critical computing cycles to LANL that assisted them in meeting their W76 Life Extension Program (LEP) milestone. Sandia's ability and desire to support the important mission needs of the complex was exemplary. In addition, Sandia computer operations division's support to the headquarters in responding to the OMB Exhibit 300 submissions greatly exceeded expectations. Further, Sandia excelled in their Verification and Validation of models and codes.
- ✓ Sandia's work in materials is noteworthy. In addition to Sandia's work on Beryllium properties, Sandia successfully carried out three equations of state (EOS) experiments with plutonium before shutting down the Z facility for refurbishment.
- ✓ Sandia has done excellent work for the National Ignition Campaign, such as measuring Beryllium properties and studying the effect of fill tubes on the target.
- ✓ Sandia chose an advance form of ECM rather than continue with the development of Liga. Doing this saved \$5-6M in the development of LIGA and an associated \$20M+ in construction costs.
- ✓ The Sandia Pulsed Reactor (SPR) testing required in the W76-1 LEP qualification and Qualification Alternative for the Sandia Pulsed Reactor (QASPR) testing was conducted in an outstanding manner. The Sandia Pulsed Reactor (SPR) testing campaign officially began on January 18, 2006 (6 days ahead of schedule). Operating efficiencies were achieved during the testing campaign so that additional QASPR and reactor characterization tests were achieved. W76-1 testing was completed in five fewer days

than originally planned. QASPR accomplished 15 days of additional testing and 3 additional days of reactor characterization were achieved. All the testing was performed in a safe and secure manner with no incident during the testing campaign. Sandia fully met its commitment to NNSA to cease all SPR testing by September 30, 2006.

- ✓ Sandia has performed in an outstanding manner by delivering the first modernized system tester (W88) on schedule and within budget.

Opportunity for Improvement

- ✓ Sandia needs to aggressively pursue code capability improvements in their non-commercial performance codes, and to tackle high-level issues limiting the fidelity of the engineering models. Code support, usage, and contractor management are strong, but significant code improvements are lacking when performance in this area is compared to previous years.
- ✓ Sandia (Z experimental program) needs to improve the secondary assessment coordination with LANL since several Z experiments were conducted in secondary assessment with a data return that had a high cost/benefit ratio.
- ✓ Sandia, in collaboration with LLNL, LANL, National Security Technologies, LLC (NSTec), and the Laboratory for Laser Energetics (LLE), documented a national calibration plan for High Energy Density (HED) diagnostics but Sandia will need to execute its portion of the plan in FY07.

Performance Measure 2.1

Provide predictive simulation and modeling tools, supported by necessary computing resources, to maintain long-term stewardship of the stockpile. (Ties to Level 1 Milestone #'s 342, 349, 359 in MRT)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.1.1 Meet Level II Milestones associated with Advanced Scientific Computing (ASC).	Outstanding	Agree	Following a year of technical challenges delivering Red Storm capabilities to the complex in FY05, Sandia's performance noticeably improved in FY06. With minor exceptions, the Red Storm team turned a machine with problems that delayed its acceptance into a powerful tool for stockpile stewardship. Communications from Sandia personnel to the Advanced Scientific Computing (ASC) program with respect to project management activities and status updates could be better by empowering people on working groups with authority to make commitments and the responsibility to keep appropriate leadership informed.

Performance Measure 2.2

Continue work that will complete the first ZR stewardship experiment in 2008 (Ties to Level 1 Milestone #351 in MRT) and support beginning integrated ignition experiments on the National Ignition Facility. (Ties to Level 1 Milestone #360 in MRT)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.2.1 Meet Level 2 Milestones associated with Inertial Confinement Fusion Ignition and High Yield (ICF) Campaign.	Outstanding	Agree	<p>The pulsed power program at Sandia has had an outstanding year. In addition to completing all milestones, they have had other significant accomplishments. A thorough review of the program was conducted in April by an external review group. Among the findings of the review panel are:</p> <ul style="list-style-type: none"> ✓ “The Panel finds that there have been extraordinary scientific and technical achievements that advance National Security interests.” ✓ “The pulsed power research activities that were reviewed are now solidly at the ‘World Class’ level of quality.” <p>Sandia also developed an integrated execution plan for the core diagnostics for the new Z Refurbishment (ZR). As a third accomplishment, Sandia completed calculations with their three-dimensional radiation magnetohydrodynamics code (ALEGRA) to model the dynamic hohlraum environment on Z/ZR.</p> <p>Generally Sandia has done an excellent job of preparations toward completing first stewardship experiments on ZR.</p>

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	<p>For the Engineering Campaign, Sandia supports work under all four subprograms: Enhanced Surety (C5), Weapons Systems Engineering Assessment Technology (C6), Nuclear Survivability (C7), and Enhanced Surveillance (C8). In general, Sandia should include all weapon system Program Manager’s (PM) in the future QASPR reviews. The W76 weapon PM participated in the Customer</p>

			<p>Requirements Review earlier this year. PMs from other relevant SLBM and ICBM weapons systems should have been present as well.</p> <p><i>Enhanced Surety (C5)</i></p> <p>Sandia demonstrated multi-state surety response on a dynamic platform in cooperation with another sponsoring NNSA organization. Sandia provided a weapon-sized fire-set (including the laser) for a prototypical device using direct optical initiation (DOI) at Los Alamos. This was a joint milestone for both laboratories and the Kansas City Plant. The milestone was a key activity to demonstrate the technical maturity of DOI as a candidate for use by a future stockpile system. This milestone demonstrated conventional machining techniques necessary to fabricate more sophisticated strong-link designs.</p> <p><i>Weapons Systems Engineering Assessment Technology (C6)</i></p> <p>Sandia demonstrated that the Thermal Test Complex is Qualification Ready to support Abnormal Thermal Environment qualification of W76-1 and W80-3. In support of the W76-1, Sandia conducted experiments and data collection. Sandia also conducted experiments for model validation of temperature dependent thermal conductivity of Micro-Electro-Mechanical (MEM) materials.</p> <p><i>Nuclear Survivability (C7)</i></p> <p>The QASPR management conducted the Customer Requirements Review in May with representatives from the Department of Defense (DoD) and members of the NWC. The review helped ensure that the customer needs will be addressed in the project. Total dose testing and Annular Core Research Reactor (ACRR) testing was completed. Sandia met all goals for this testing.</p> <p><i>Enhanced Surveillance (C8)</i></p> <p>The Weapon Evaluation Test Laboratory (WETL) modernization replaces the current system testers with updated testers with a modular design (four testers for entire stockpile) with the ability to record performance data in order to establish trends. The W88 System Tester is the first unit to be modernized. In preparation for the W80-3 Life Extension Program (LEP), Sandia completed numerous material and component aging assessments to impact reuse and selection decisions. Even though the W80 LEP was shutdown during FY06, Sandia completed and documented their aging studies. Sandia's focus for these materials and components during FY06 was</p>
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			with the B61. Sandia planned to develop and demonstrate embedded evaluation technologies to support the sustainable stockpile of the future to include LEPs or the Reliable Replacement Warhead (RRW).
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Other Considerations

Sandia must continue to aim for important contributions to National Ignition Campaign. (PM 2.2)

PERFORMANCE OBJECTIVE 3 – DEFENSE PROGRAMS

Performance Objective #3. 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 & 5)

Adjectival Rating	Numerical Score
Outstanding	90

Summary of Performance

Sandia significantly exceeded the standard of performance by being above the 95 percent completion level for Level II milestones. Sandia had 38 milestones of which 11 were delayed or canceled leaving 27 scoreable milestones that were completed on or ahead of schedule. The resulting completion rate is 100 percent. Although all milestones were accomplished as required, for one multi-site milestone there was significant costs growth at the Kansas City Plant (KCP) relating to the Sandia designed and KCP produced components for the W76 Life Extension Program (LEP) (approximately a \$38M shortfall at KCP). The shared responsibility for this cost growth is the issue and is driving the NNSA scoring for this performance objective. NNSA has assessed a score of 90 to this performance objective to balance Sandia's contribution to the significant KCP cost overrun issues against their outstanding performance in the other milestones associated with this PO. Additionally, Sandia returned approximately \$100M in FY08 through FY12 funding as part of Sandia's B61 recommendation to reduce the scope of a proposed LEP. Sandia provided this recommendation as a way to focus on the most immediate needs of the B61, in recognition of the constrained funding in the complex, and to allow any Reliable Replacement Warhead (RRW)-2 studies to be completed as those studies could further develop a more comprehensive LEP proposal.

Significant Accomplishments

Sandia's responsibilities for non-nuclear components in all refurbishments are to extend the life of the stockpile and to conduct research and development activities to support LEPs are extensive. Accomplishments that have been achieved during this fiscal year include:

- ✓ Exceptional support at the test range for the B61 Alt 357 relating to accommodating test schedules despite hardware arriving late from other agencies
- ✓ W76-1 activities supporting ground and flight testing
- ✓ Outstanding support of W80-3 activities including ground and flight test support

Opportunity for Improvement

Sandia's performance offers several opportunities for improvement. These include:

- ✓ B61 Alt 357 equipment at the Aerial Cable Facility (ACF) failed to record all necessary channels

Sandia as Production Realization Team (PRT) lead for the W76-1 should have taken a more proactive role in understanding cost issues at KCP. Both Sandia and Honeywell could have more proactively managed and understood these issues. There is a NNSA study group working to determine the root cause and corrective action for the cost issues. The results of this study should identify changes that will need to be incorporated into the corrective action(s) implemented by Sandia and Honeywell beginning in FY07 which will be reviewed as part of the FY07 Performance Evaluation Plan (PEP).

Performance Measure 3.1

Conduct authorized refurbishments to extend the life and/or maintain the reliability and functionality of the nuclear weapons stockpile. (Ties to Level 1 Milestones #'s 344, 345, 347, 348, 352, 361 in MRT)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.1.1 Meet Level II Milestones associated with LEPs and Refurbishments.	Outstanding	Agree	<p>NNSA agrees with the self-assessment rating but does not fully agree that the Sandia Performance Evaluation and Assurance Report (PEAR) goes far enough to explain that the communication on costs should have been worked earlier and more thorough between Honeywell and Sandia.</p> <p>Although the design requirements for electromechanical components of the Arming Fusing and Firing (AF&F) (firing subsystem, intent and trajectory stronglinks, and launch accelerometer) have not significantly changed, changes both in the products as well as in production process between Process Prove-In (PPI) and Qualification Engineering (QE) lot have been identified. These changes have incurred additional risk to the W76-1 and did not contribute significantly to the large overall cost increase of the W76-1 program. Although Sandia did make some changes to the intent stronglink to improve performance against shock vulnerability, those specific modifications were minor and the associated unit costs were not significant. The major costs drivers for these mechanical components are attributed to: (1) the procurement plan for large quantity purchases was eliminated and material costs increased; (2) a labor rate increase; (3) material costs increased due to change in vendors with little experience; (4) low production yield at some vendors, possibly due in part to the tight tolerance and complexity of these parts; (5) prior acceptance of poor vendor performance now being unacceptable, therefore full impact of design requirements on some parts are just now becoming apparent to vendors.</p>

			<p>causing vendors to modify the production process to some extent; (6) poor and inadequate cost estimation performed either by the vendors or product realization teams or both; and (7) a lack of reliable, qualified vendor base for high-precision mechanical parts.</p> <p>Sandia has met all of their internal cost targets for the W76-1. In addition, there has been significant cost growth at the KCP related to components designed by Sandia. This cost growth at KCP has required NNSA to take extraordinary actions to maintain the schedule commitments to the DoD. The NNSA W76 Program Manager believes that Sandia as the design agency and PRT lead that sets requirements for these components, shares significantly in the fact that there as been significant unexpected cost growth in the production of the W76-1 LEP at the KCP.</p> <p>Sandia should have been more involved with the KCP to ensure that changes to the product and production processes continue to reduce costs and improve yield. The Sandia product realization teams are responsible for ensuring that production agencies clearly understand the design requirements levied on these electromechanical components and the full impacts they have on vendors and on the production process. The impact of this issue of cost control between Honeywell and Sandia is of such large significance that other NNSA work will have to be delayed or cancelled. The follow-on corrective actions will need to be aggressively worked by Sandia.</p>
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Performance Measure 3.2

Conduct R&D activities necessary to support 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. (Ties to Level 1 Milestone #339 in MRT)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.2.1 Meet Level II Milestones associated with Stockpile R&D that includes options for future warhead concepts.	Outstanding	Agree	NNSA agrees with the data provided in the Sandia PEAR regarding their performance in this performance measure.

Other Considerations

Sandia returned approximately \$100M in FY08 through FY12 money as part of a Sandia B61 recommendation to reduce the scope of a proposed LEP. Sandia provided this recommendation as a way to focus on the most immediate needs of the B61, in recognition of the constrained funding in the complex and to allow any Reliable Replacement Warhead-2 studies to be completed as those studies could further develop a more comprehensive LEP proposal.

PERFORMANCE OBJECTIVE 4 – DEFENSE PROGRAMS

Performance Objective #4. Contribute to the implementation of a flexible and responsive infrastructure. (PO derived from NA-10 Top Priorities List – Priority 7, 9 & 11)

Adjectival Rating	Numerical Score
Outstanding	94

Summary of Performance

Sandia's overall performance has been outstanding (completed all 19 Level II milestones) in many areas but the most noteworthy items are: Sandia was noted for (1) their outstanding leadership role with the success of the Laser Engineered Net Shaping (LENS) Investment Project Team(IPT) and TestWorks Team, (2) Sandia completed the demonstration of small neutron generator (NG) technologies ahead of schedule, (3) Sandia supported of the modeling effort of the potting processes for deployment in W76 processes and (4) Sandia significantly contributed to implementation of a responsive and sustainable Nuclear Weapons Complex (NWC) infrastructure by being a consistent high performer in roadmap and metric activities. While Sandia's overall performance has been outstanding, the most significant challenge for Sandia is to complete the Z Refurbishment (ZR) project within the Total Project Cost (TPC) and the scheduled project completion date (CD-4).

Significant Accomplishments

- ✓ Sandia's leadership of multi-site technology development teams has been outstanding as demonstrated by the success and results produced by the LENS Technology IPT and inaugural TestWorks Team. The TestWorks manager and multi-site, cross-functional team of experts have done an outstanding job. The TestWorks team has met their TestWorks project objective, and has substantially achieved the milestones for FY06. The team's support of the Readiness Campaign team effort has also been outstanding as they have embraced the program's business processes and responded quickly to needs at other sites to ensure the Nuclear Weapon Complex goals are supported. (Areas of Excellence for Performance Measure 4.2.1)
- ✓ Sandia completed the demonstration of small NG technologies ahead of schedule. With the exception of brazing techniques, all met or exceeded design requirements and will contribute to improved NG production. (Areas of Excellence for Performance Measure 4.2.1)
- ✓ In support of the modeling effort of the potting processes, Sandia has been supportive of both physical trials-based Designs of Experiment being conducted at Los Alamos National Laboratory (LANL) and two planned implementations of the potting process

improvements, one at Kansas City Plant (KCP) and one at Pantex, for deployment in W-76 processes. (Areas of Excellence for Performance Measure 4.2.1)

- ✓ Sandia has contributed to the implementation of a responsive and sustainable NWC infrastructure in an outstanding manner. Sandia has been a reliable and consistently high performer in both the roadmap and metrics activities, adding value to the process as well as the product. Sandia has led the development of the metrics. (Areas of Excellence for Performance Measure 4.3)
- ✓ The Sandia Pulsed Reactor (SPR)-III restart was completed ahead of schedule. SPR-III operated for 159 days in support of W76-1 and Qualification Alternative to Sandia Pulsed Reactor (QASPR) without a safety or security incident. (Areas of Excellence for Performance Measure 4.1.1)
- ✓ Z Refurbishment (ZR) project: A significant accomplishment this year includes the dismantlement of the Z machine and favorable progress on the Z tank's structural modifications. (Areas of Excellence for Performance Measure 4.1.1)

Opportunity for Improvement

- ✓ Small Neutron Generator Work: Brazing technology needs additional refining to improve yields. Although cancellation of the W80 Life Extension Program has deferred further work on this process technology, understanding brazing to improve yield will be important to the next use weapon.
- ✓ ZR project: The project management reserve is almost completely allocated due to increased costs. The project team is working to mitigate impacts to keep the project within the TPC and the scheduled project completion date (CD-4).

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. (Ties to Level 1 Milestones #332, 333, and #355 in MRT)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.1.1 Meet Level II Milestones associated with RTBF.	Outstanding	Agree	<i>Facility Operations and Maintenance:</i> The normalized availability of Sandia RTBF mission-essential facilities was very close to 100 percent for the fiscal year. Regarding facility maintenance, NNSA's direction to cease funding at Tonopah Test Range (TTR) in FY08 resulted in designating TTR facilities as non-mission essential for the purpose of reducing deferred maintenance. This action shifted \$26M of deferred maintenance from the mission essential reduction goal. In addition, Sandia plans to accelerate the demolition of Building 807. For FY06,

			<p>Sandia spent 106 percent of the planned maintenance funding as reported through the Maintenance IFI Crosscut quarterly plans, which represents 2.21 percent of Sandia's Mission Essential replacement plant value. The current Facilities Condition Index (FCI) at the end of FY06 is 7.24 percent against the goal of 8 percent, and Sandia is on track to achieve the NNSA corporate deferred maintenance goal, with an estimated Facility Condition Index (FCI) of 4.26 percent by FY09.</p> <p>Sandia management and senior staff have been actively involved in the implementation of the national Work Breakdown Structure for RTBF and participating in detailed activity based cost baseline activities for Z Operations and the Tech Area V facilities.</p> <p>An assessment of the risks associated with cessation of testing at TTR has been ongoing. Sandia management is continuing to work transition issues, testing logistics are being evaluated, and initial geological studies at White Sands are being conducted.</p> <p>Installation of hardware and subsystems on ZR will be accomplished primarily by the existing Z Operations crew. Extensive modifications to the Z tank structure and new work platforms are being accomplished by a commercial company.</p> <p><i>Construction:</i> The Test Capabilities Revitalization (TCR) project (TCR Phase 1) was completed on time and slightly under budget. Installation of hardware and subsystems on Z will be accomplished primarily by the existing Z Operations crew. Extensive modifications to the Z tank structure and new work platforms will be accomplished by a commercial company. The Exterior Communications Infrastructure Modernization project has successfully completed construction activities this fiscal year, and the MESA project is well ahead of baseline schedule.</p> <p><i>ES&H:(Milestones 1774 & 1775 related to PAA & 851 are covered in PO8 and PI4.)</i> For nuclear safety, there were no Price Anderson Act Amendments (PAAA) Noncompliance Tracking System Reports resulting from operation of the Sandia TA-V Nuclear Facilities.</p> <p>Regarding planning for 10 CFR 851 rule implementation, Sandia has provided quarterly progress updates to NNSA and informal monthly</p>
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			<p>status briefings.</p> <p>Sandia received a Notice of Violation from the City of Albuquerque related to the boilers at the MESA Facility. A total of \$20K in fines was assessed for violating New Source Performance Standards requirements. Sandia failed to request a permit for construction of the MESA CUB boilers during project design due to a misinterpretation of permit requirements.</p>
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Performance Measure 4.2

Ensure modern production capabilities and capacity are available on time scales paced by requirements to carry out the LEPs and to support projected stockpile requirements. (PM derived from NA-10 Top Priorities List-Priority 11)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.2.1 Meet Level II Milestones associated with the Readiness Campaign.	Outstanding	Agree	<ul style="list-style-type: none"> ✓ Sandia efforts for this performance target included: tritium production capability, process technologies, process engineering, and manufacturing and fabrication capability development. Sandia provided key supporting analysis for the design selection efforts for tritium-producing rods. Sandia's contribution aided NNSA in ensuring rods were delivered to Tennessee Valley Authority (TVA) in time for the next irradiation cycle. ✓ Sandia completed the demonstration of small neutron generator (NG) technologies. The activities supporting the W88 Joint Test Assembly – 2 (JTA2) represent the first inaugural TestWorks project. ✓ Sandia is the lead, and it consists of a multi-site team including KCP and Pantex. This is the 1st year of a 2 1/2 year project to substantially overhaul our Nuclear Weapons Complex processes for non-nuclear design/development-through-flight of a JTA. In the area of manufacturing and fabrication capability development, Sandia is contributing mainly to the ASC-related modeling support focused on the potting processes in question. ✓ Sandia led a multi-site team in support for the LENS technology investment project. ✓ Sandia had a small role in the multi-site

			Technology Investment project for secure wireless applications. The NWC Unified Wireless Guidance Document, which Sandia contributed substantially to, is in final draft awaiting the Federal Project Coordinators final acceptance and approval.
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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 multiple programs. (Examples Level II 506)	Outstanding	Agree	Sandia has provided support of the Responsive Infrastructure Roadmap and metrics in the way of planning activities and participating in an extensive meeting held in January 2006.

Other Considerations

None.

PERFORMANCE OBJECTIVE 6 – SCIENCE & TECHNOLOGY

Performance Objective #6. Enhance and nurture a strong science base in support of NNSA strategic objectives. Develop and execute a relevant and sound Homeland Security program that is responsive to the needs of the Department of Homeland Security (DHS) and the Nation.

Adjectival Rating	Numerical Score
Outstanding	94

Summary of Performance

A comprehensive evaluation of this Performance Objective was conducted with input from both external and internal DOE/NNSA sources.

Select program/functional areas were evaluated for FY06, including four performance measures:

- 6.1 – DOE NNSA Research Foundations
- 6.2 – DOE non-NNSA Programs
- 6.3 – Institutional Programs – Homeland Security
- 6.4 – Institutional Programs – Technology Partnerships

Evaluation of the first two performance measures is based on a standardized set of targets related to quality of science, programmatic performance, relevance to national need, and performance in the operation of major facilities. In the case of the Institutional Programs, assessment is based on programmatic performance for U.S. Department of Homeland Security (DHS), and project execution and management for Technology Partnerships activities.

6.1 – Sandia Research Foundations

Computation and Information Science

NNSA programs such as Stockpile Stewardship depend on high performance computing and simulation capabilities. Sandia performance in Computational and Information Science is outstanding, highlighting unique capabilities with supercomputers like Red Storm and Thunderbird as well as simulation capabilities like ALEGRA-HEDP (high energy density physics) for Z applications.

Pulsed Power

Pulsed power also plays a significant role in stockpile stewardship. Sandia's performance in pulsed power is outstanding with ongoing support of NNSA campaigns like science, engineering, Inertial Confinement Fusion (ICF), Advanced Simulation and Computing, Readiness in Technical Base and Facilities, and Directed Stockpile Work. The pulsed power capabilities at Sandia are unique as many of the experiments conducted are by visiting scientists from Los Alamos National

Laboratory (LANL) and Lawrence Livermore National Laboratory (LLNL).

6.2 – DOE Science and Technology Programs (non-NNSA)

Office of Fossil Energy (FE)

Sandia's support for FE sponsored programs is outstanding, specifically in areas including the Strategic Petroleum Reserve, Solid Oxide Fuel Cells (SOFC), Carbon Sequestration, Natural Gas and Oil Recovery, and Coal Combustion Science. Sandia has consistently met milestone targets and has been successful in new tasks such as the expansion work for Strategic Petroleum Reserve.

Office of Environmental Programs (EM)

Sandia's role in support of the Waste Isolation Pilot Plant (WIPP) project continues to be outstanding, primarily as the scientific and technical advisor to the DOE for permanent disposal of transuranic waste generated by defense programs. In this capacity, Sandia continues to oversee the maintenance and further development of the WIPP performance assessment system and quality assurance programs.

Office of Civilian Radioactive Waste Management (OCRWM)

Sandia's role in supporting the development and integration of repository science efforts for the DOE OCRWM Yucca Mountain Project (YMP) is outstanding. Sandia's recent selection by the Secretary of Energy (January 2006) to be the Lead Laboratory for repository science is a reflection of the confidence held by the science community regarding Sandia's technical expertise in geological repository design for disposal of high-level radioactive waste.

6.3 – Homeland Security

Sandia's Homeland Security and Defense programs continue to make significant contributions to strengthening both our homeland and overall national security. Sandia's performance in homeland security programs is outstanding and remains responsive to adapting its strategic management units and business areas as the DHS struggles to both stabilize as the lead homeland security agency and thereby respond to national interests and events. Sandia's notable accomplishments for this past year are primarily focused on natural disasters brought forth by the 2005 hurricane season (e.g., Hurricane Katrina), continued emphasis on the detection of nuclear materials or weapons, and increased focus on securing our Nation's borders from illegal immigration.

6.4 – Technology Partnerships (TP)

Sandia continues to demonstrate consistent outstanding performance in TP as evidenced by several technology outcomes and strengthening of partnerships. Sandia does an outstanding job of defining measures for evaluation of performance in the area of TP. The evaluation in the area of non-federal technology partnerships includes program management, intellectual property management, benefits to the public, agency and lab; and administering the TP program effectively and efficiently. NNSA participated in the SNL program review of non-federal partnerships program during this evaluation period.

Significant Accomplishments

✓ Sandia Research Foundations

- Computation and Information Science

Sandia's Computer Science Research Foundation (CSRF) is highly regarded by the Computer Information Systems (CIS) community as evidenced by a very favorable external program review, significant recognition of its work, coupled with four patents and nine additional patents pending during this evaluation period. Sandia's success is also highlighted by Red Storm moving up to number six on the TOP500 list.

- Pulsed Power

External review of the Pulsed Power Sciences Program provided a very favorable review of Sandia's contributions to the Science and Engineering Campaigns (SC and EC) and on pulsed power technologies development (PPTD) and operations of facilities. Results of the review highlighted Sandia's accomplishments in materials dynamics, high-energy radiation sources for weapons effects, and advanced radiography. In addition, Sandia's pulsed power activities are regarded as "...solidly at the 'world-class' level of quality" and, in the last two years since Sandia's last external review, progress in ICF and SC and EC has been regarded as significant.

✓ DOE Science and Technology Programs (non-NNSA)

- Office of Fossil Energy (FE)

As part of DOE Energy Security initiatives, Sandia evaluated the geological and geomechanical suitability of nine Strategic Petroleum Reserve expansion sites in Texas, Louisiana and Mississippi; kicked off Phase II of the DOE Southwest Carbon Sequestration Partnership; and continues to make significant progress on four Natural Gas and Oil TP projects.

- Office of Environmental Programs (EM)

The Environmental Protection Agency's (EPA) recertification of the WIPP is commendable as well as the results of the Carlsbad Field Office audit of Sandia's Quality Assurance program. The Quality Assurance program for WIPP continues to meet all expectations, is well implemented, and effective.

- Office of Civilian Radioactive Waste Management (OCRWM)

Sandia's successful effort to transition postclosure and performance confirmation workscope from the existing Management & Operations contractor at Yucca Mountain to Sandia was an accomplishment of the highest order. This transition was effectively accomplished in four months, due in large part to the Sandia management team and corporate approach which Sandia brought to bear on the challenge. Other notable accomplishments include: (1) participation in the completion of the total system performance assessment (TSPA) which will provide the system-level computational modeling capability for estimating repository performance for one-million years; (2) development of a suitable conceptual and computational model for infiltration at Yucca Mountain that provides quantitative estimates of the fraction of precipitation on the land

surface that enters bedrock below the soil; and (3) ongoing technical support and leadership in the areas of field chemistry and saturated zone flow and transport, both of which are essential to determining overall site performance and suitability.

✓ **Homeland Security**

Sandia has achieved significant programmatic accomplishments in the areas of Chemical /Biological Program, Defense Nuclear Detection Program and Infrastructure Protection Program. Select accomplishments included: (1) prototype of Third Generation Autonomous Biodetection System (BioBriefcase); (2) prototype and establishment of initial operational capability for the first generation BioWatch situational awareness system; (3) prototype system and process for rapid restoration of transportation systems; (4) deployment of Rapidly Deployable Chemical Detection System (RDCDS) for warning of release of chemical agents at National Security Special Events (NSSEs); (5) completion of Biological risk assessment, in cooperation with other labs and institutions, used to respond to White House request for prioritization of threats; (6) testing of nuclear detection technologies and systems for ultimate integration in Domestic Nuclear Detection Office's (DNDO) domestic nuclear architecture; (7) completion of study for global defensive architecture; (8) completion of assessments for pre and post hurricane analysis; and, (9) completion of analysis for societal impacts, through infrastructure, of avian influenza/pandemic influenza.

✓ **Technology Partnerships**

Numerous awards given to Sandia are evidence of confidence in Sandia's strong technology partnerships, whereby the collaborations and quality of research and the importance of partnerships is evident. During this evaluation period, Sandia has received numerous awards including: (1) six R&D 100 awards. Five of these were awarded jointly to a team comprised of an industry partner and Sandia; (2) four Federal Laboratory Consortium (FLC) National Excellence in Technology Transfer Awards and five FLC Mid-Continent Awards; and (3) The U.S. Department of Commerce awarded Sandia Science and Technology Park (SS&TP) the distinguished Excellence in Economic Development Award in 2005.

Opportunity for Improvement

As part of SSO's oversight responsibility, SSO needs to report programmatic progress and accomplishments to NNSA HQ on a periodic basis. Hence, Sandia's programmatic organizations should increase reporting of significant accomplishments, including periodic project highlights to the SSO Office of Programs. Programmatic interests should include Nuclear Weapons, Integrated Technologies, and Systems and Laboratory Transformation strategic management groups. This information will enable both SSO and Sandia to be better prepared to respond to Congressional inquires and requests for information from multiple constituents.

As part of an ongoing effort by Sandia to improve communications with SSO, Sandia should seek opportunities for enhancing communications between SSO and Sandia programmatic organizations, including more timely notification of visits.

Performance Measure 6.1

Science & Technology Programmatic - Performance of DOE NNSA Research Foundations

1. Computational and Information Sciences
2. Pulsed Power

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.1.1 Quality of science, technology and engineering Evidence: Review results from technical advisory panels, Awards, patents and significant technical publications.	Outstanding	Agree	<p><i>Computation and Information Science</i> An external review of the Computer Science Research Foundation was held in June 2006. The review committee was impressed with the excellence of work and the good integration with CIS, and collaboration with external customers. The review committee highlighted the success of the Red Storm supercomputer and the ALEGRA-HEDP simulations which are important science activities for NNSA.</p> <p><i>Pulsed Power</i> An external review of the Pulsed Power Sciences Program was held in April 2006. According to the committee, the reviewed activities are now solidly at the 'world class' level. Sandia collaborates with many external organizations and Work For Others (WFO) customers. Sandia personnel have received numerous fellowships and awards with various professional societies.</p>
6.1.2 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	<p><i>Computation and Information Science</i> Red Storm moved to number six on the TOP500 supercomputers in the world which gives the NNSA an essential capability in the nuclear weapons program.</p> <p><i>Pulsed Power</i> The external review committee noted to NNSA that the program management is generally excellent. All program milestones were met.</p>
6.1.3 Relevance to national needs and agency mission Evidence: Impact of technical achievements on Laboratory.	Outstanding	Agree	<p><i>Computation and Information Science</i> The Computer Science Research Foundation supports NNSA missions in computer science, computational science, and mathematics capabilities. Examples include the Qualification Alternatives for the Sandia Pulsed Reactor and ALEGRA-HEDP shock physics code.</p> <p><i>Pulsed Power</i> The Pulsed Power program supports many of the</p>

			campaigns of the NNSA Stockpile Stewardship Program including ICF, Science, Engineering, Advanced Simulation and Computing, Readiness in Technical Bases and Facilities, and Directed Stockpile Work. Many of the capabilities that support NNSA missions are only found at Sandia.
6.1.4 Performance in the technical development and operations of major facilities (where applicable).	Outstanding	Agree	<i>Pulsed Power</i> During FY2006, the Z facility completed 199 shots before shutting down for refurbishment in July 2006. Without the shutdown, the Z facility was on pace to do 240 shots, which was much higher than the number of shots in the previous two years. The facility is accommodating more LANL and LLNL experiments. Currently, the demand for shots surpasses the current capability. However Sandia is taking steps to increase the number of shots per year.

Performance Measure 6.2

Science & Technology Programmatic - Performance of DOE non-NNSA Programs

1. Office of Fossil Energy (FE)
2. Office of Environmental Management (EM)
3. Office of Civilian Radioactive Waste Management (OCRM)

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.2.1 Quality of science, technology and engineering Evidence: Review results from technical advisory panels, Awards, patents and significant technical publications.	Outstanding	Agree	<p><i>Office of Fossil Energy</i> Sandia received an R&D 100 Award for development of the HTSS10V fluoride batter. For Strategic Petroleum Reserve, Sandia continues to provide technical guidance on site issues such as gas regain, deliverability of oil, cavern stability etc. to ensure the availability of oil when required. For the Southwest Regional Carbon Sequestration Partnerships, Sandia developed a "String of Pearls" model to guide development of regional pipeline, storage locations, and power plan locations. For the SOFC, their work performance has been consistently good with respect to prior evaluations.</p> <p><i>Office of Environmental Management</i> All conceptual models implemented in performance assessments must be peer reviewed and the results must be documented and provided with compliance documentation as part of permit recertification. Positive reviews substantiate that the technical positions taken by Sandia in the various complex models implemented in performance assessment of</p>

			<p>WIPP are valid and appropriate for use in performance predictions of WIPP. In addition, the CBFO performs Quality Assurance audits which concluded that Sandia's QA program for WIPP remains satisfactorily implemented and effective.</p> <p><i>Office of Civilian Radioactive Waste Management</i> During this evaluation period, Sandia managed to issue various scientific reports, conference papers, journal articles and other significant publications.</p> <p>Sandia's individual and corporate contributions to the TSPA and its underlying technical bases have been outstanding. Especially noteworthy have been the technical leadership provided in the fields of near field chemistry and saturated zone flow and transport.</p>
<p>6.2.2 Programmatic performance, management and planning 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 Fossil Energy</i> For the Strategic Petroleum Reserve, Sandia has met 99 percent of the milestones even though the statement of work was expanded because of the the Strategic Petroleum Reserve expansion effort. Sandia is a lead organization for both the Carbon Sequestration program and the Natural Gas and Oil Technology Partnership. Sandia continues to meet all milestones for SOFC and Natural Gas and Oil Recovery Partnership.</p> <p><i>Office of Environmental Management</i> Sandia continues to perform in an exemplary manner in their role as scientific advisor for designation of the WIPP project in site selection and characterization, experimental studies to understand the interaction of transuranic waste and the disposal environment, transportation of radioactive actinides, and performance assessment modeling of the repository for the 10,000-year regulatory time frame.</p> <p><i>Office of Civilian Radioactive Waste Management</i> The transition of Lead Lab responsibilities for postclosure workscope was executed by Sandia in a flawless fashion. The DOE Lead Lab Transition Readiness Review noted no findings associated with the transition.</p> <p>DOE determined that an existing model for infiltration, developed by another participating organization, was not credible for use in the repository licensing process. As a result, Sandia was charged with developing a new conceptual and computational model for infiltration. Although the Sandia investigators have worked hard on the model, this work activity has been less than satisfactory. The work was originally scheduled to be completed in March 2006 and of this date in October 2006, final</p>

			<p>results are still not available and errors continue to be found in the new model. This has resulted in delays to other activities that rely on the infiltration model. Other investigators have been forced to use preliminary data and conduct at risk work in parallel. It is recognized that Sandia inherited many issues and problems associated with the infiltration model, but it is a fact that many down-stream users are dependent on the output of the Sandia-led infiltration model.</p> <p>Taken in the aggregate, even given the negative performance noted above, Sandia's performance in this target is judged as "Good." This rating does not have significant impact on overall performance measure or target ratings.</p>
<p>6.2.3 Relevance to national needs and agency mission Evidence: Impact of technical achievements on Laboratory.</p>	Outstanding	Agree	<p><i>Office of Fossil Energy</i> SPR is a national asset which must be ready to serve the nation in the event of an emergency. Sandia's contribution to carbon sequestration also provides the nation with an important option.</p> <p><i>Office of Environmental Management</i> Sandia's contribution to achieving U.S. Environmental Protection Agency (EPA) recertification in March 2006, which ultimately allows WIPP to remain open and operational, is commendable. The WIPP project is regarded as the 'cornerstone' of DOE's Waste Management Program and Sandia's expertise in technical and scientific analysis provides the ability to demonstrate that WIPP will continue to safely isolate transuranic waste from the human environment for thousands of years.</p> <p><i>Office of Civilian Radioactive Waste Management</i> The Yucca Mountain Repository is a key element of the Nation's strategy for achieving Energy Security. Progress on the Yucca Mountain repository has a great influence on the societal and financial acceptance of a growth in the nuclear power capability of our nation. Sandia management and staff have worked tirelessly to ensure that all constituencies are aware that Sandia is bringing the best science and technological capacities, personnel and approaches to bear on the problem. Sandia has also worked diligently to ensure that its science and technology contributions are effectively integrated with other repository participants.</p>
<p>6.2.4 Performance in the technical development and operations of major facilities (where applicable).</p>	N/A	Agree	<p>There are no major facilities operated by Sandia sponsored by OCRWM.</p> <p><i>Office of Fossil Energy</i> N/A</p>

			Office of Environmental Management N/A
			Office of Civilian Radioactive Waste Management N/A

Performance Measure 6.3

Institutional Programmatic – Performance of DHS Science & Technology, Infrastructure Protection, Operation Safe Commerce Programs, and other program initiatives funded by DHS.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.3.1 Support the DHS S&T Chem/Bio Program and the DHS Domestic Nuclear Detection Office Rad/Nuc Program activities as defined in their Statements of Work.	Outstanding	Agree	<p>Despite funding uncertainties and organizational changes within DHS, Sandia continues to offer exemplary homeland defense and security technologies and services for our nation. Sandia's S&T Chem/Bio Program continues to make excellent progress in the areas of threat and risk assessments, facilities protection, detection technologies, and response and recovery. All milestones in statements of work were completed in support of DHS DNDO. Noteworthy accomplishments included further development of nuclear detection systems to help determine how radiation detection technologies will ultimately be integrated into DHS domestic nuclear architecture. In coordination with LLNL, Sandia completed first phase of DNDO architecture studies to define global defense architecture for nuclear detection.</p> <p>Sandia's collective accomplishments in the rad/nuc countermeasures program for DHS DNDO was significant, including the development of better defined objectives, administrative and operational procedures.</p> <p>Sandia has provided excellent technical sensor, detection and risk studies to support the DHS Bio Knowledge Center program. Sandia has also supported DNDO with physics and science subject matter experts on explosive lethality issues. Additionally, Sandia supported rad/nuke detection efforts by providing prototype designs and working units that are deployable to field units. As a result, Sandia contributions through studies and reachback support have had a significant affect on domestic security in the U.S.</p> <p>Excellent performance on Indoor Systems Study and Facility Restoration Demonstration. The Systems Study was robust, smartly-designed, and well-</p>

			executed. Results are instructive and provide useful guidance to Chemical Countermeasures portfolio. The Facility Restoration Demonstration is well-managed and performance and execution are outstanding despite funding glitches.
6.3.2 Support the DHS Preparedness Directorate's Infrastructure Protection (IP) Program activities as defined in the IP interagency agreement.	Outstanding	Agree	<p>Sandia supports a number of programs in overall physical protection, consequence, and vulnerability of systems. Of note is Sandia's primary Infrastructure Protection (IP) program that is captured in the National Infrastructure Simulation and Analysis Center (NISAC), a joint laboratory program between Sandia and LANL. Sandia performed in an outstanding manner when called upon to respond to natural disasters. Sandia remained very active this past year by providing pre and post event analysis for the 2005 and 2006 hurricane seasons and participated in a national preparedness effort regarding the potential of an avian influenza outbreak. The IP program has been reviewed by several DHS IP Directorate officials resulting in positive reviews.</p> <p>Noteworthy accomplishments include; (1) assessment of the accuracy of the Hurricane Katrina predictions; (2) completion of preliminary all-hazards assessment of all U.S. infrastructures; (3) initiation of an analysis to understand the societal impacts, through infrastructure, of avian influenza/pandemic influenza; (4) performance of a pre-hurricane season swath analysis of six serious hurricanes from Houston through New York/New Jersey; (5) better understanding of other phenomena on U.S. infrastructure impacts; and (6) risk studies to the national rail system. Incidentally, Sandia's expertise in these areas is directly being used by the Federal Emergency Management Agency (FEMA), to support the states possibly affected to prepare for incidence, and have had an overall significant impact on investment and policy decisions involving infrastructure protection.</p>
6.3.3 Support the DHS Preparedness Directorate's Operation Safe Commerce Program activities as defined in the Statement of Work with the Los Angeles / Long Beach Port Authority.	Outstanding	Agree	Sandia partnership with the U.S. Coast Guard and port authorities in several states has been essential to the successful execution of the Operation Safe Commerce (OSC) program in accordance with NNSA (NA-23) and DHS Preparedness Directorate objectives. Specifically, Sandia's lead role as technical advisor and project manager for the OSC program has allowed it to leverage expertise and resources from federal and state agencies to improve protection of commercial maritime shipments from threats of terrorist attack, illegal immigration, and contraband smuggling, while minimizing economic and operational impacts on the maritime

			<p>transportation system.</p> <p>Sandia has also made major contributions within the OSC Working Group including security solutions in; (1) verifying the integrity of empty containers; (2) verifying the integrity of cargos stuffed into containers; (3) maintaining and/or monitoring the integrity of the containers and cargos throughout supply chains; and (4) verifying and maintaining the integrity of supply chain management information and information systems.</p> <p>Sandia has worked diligently in coordination with DHS officials representing OSC and Office of Domestic Preparedness (ODP), to work closely with Ports of Los Angeles and Long Beach. Overall, several accomplishments have been achieved as evidenced by internal reviews.</p>
<p>6.3.4 Support the other DHS activities defined in interagency agreements not addressed by 6.3.1, 6.3.2, and 6.3.3.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Activities for DHS not addressed in 6.3.1, 6.3.2, or 6.3.3 include other projects sponsored by DHS Science and Technology Directorate (S&T) that may not be related to major program areas. It is important to point out that Sandia has programs funded by the DHS S&T in a variety of areas, including Critical Infrastructure Protection, Threat Assessment, Explosives, Countermeasures Test Bed, and Emergency Preparedness. Based upon internal reviews, Sandia has accomplished major milestones and project deliverables have been met.</p> <p>Noteworthy accomplishments included a 2006 external review of Sandia's portfolio of Critical Infrastructure Protection (CIP) projects as related to Decision Support Systems (DSS), which resulted in a very favorable review. An excerpt from the review report stated that "...CIP-DSS is an appropriate, well-designed, and potentially highly relevant risk-informed tool for providing insights to policy makers with responsibility for making decisions related to the nation's Critical Infrastructure."</p> <p>To date, the new NISAC facility (governed by an Interagency Agreement) and its program have proven successful.</p>

Performance Measure 6.4

Institutional Programmatic - Project Execution and Management of Technology Partnerships Activities

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
6.4.1 Programmatic management performance	Outstanding	Agree	<p>Sandia's TP Program is regarded as a model program within the NNSA. Despite Sandia's growing project portfolio, Sandia manages to administer multiple projects in an outstanding manner. Sandia continues to attract TP business in a variety of program areas that are contributing to the enhancement a stronger science and technology base for Sandia.</p> <p>Sandia addressed all recommendations identified by NNSA in the last FY04 program review/performance evaluation of this area. Cooperative Research And Development Agreement (CRADA) and Non Federal Entities (NFE) support a broad spectrum of Sandia Strategic Management Units (SMU). Sandia continues to have the largest volume of partnership activity within DOE and NNSA.</p>
6.4.2 Benefit to the public, DOE/NNSA, and the laboratory	Outstanding	Agree	<p>The profound benefits and outcomes of Sandia's TP programs are highlighted in Sandia's Annual Partnership's Report and are very impressive.</p> <p>All Sandia's SMU's business plans and many corporate milestones reflect satisfying the requirement of a comprehensive TP program as critical to mission success. Sandia's metrics continue to show repeat customers and willingness by partner's to invest and reinvest through collaborations with Sandia.</p> <p>TP initiatives impacted State of New Mexico in collaboration with several small businesses, Sandia Science and Technology Park partners, etc. Top 10 industry partners are repeat customers and are moving towards umbrella CRADAs which indicates a longer working relationship with Sandia. CRADA Project Accomplishment Summaries indicate mission benefits with 100 percent of all CRADAs.</p>
6.4.3 Performance in protecting and managing intellectual property	Outstanding	Agree	<p>Sandia's commitment to protection and management of intellectual property is evident in both Licensing and Strategic Intellectual Property Management programs.</p> <p>There were no identified issues in regard to intellectual property or patent infringements during this evaluation period.</p>

6.4.4 Programmatic administration performance	Outstanding	Agree	Sandia's policy/procedural file documentation and self assessment file review of CRADAs and NFEs resulted in a 99.6 percent compliance. Sandia supported a smooth transition of functions from NNSA HQ to SSO. Assessment of internal and external customer's satisfaction was high. Sandia has been very cooperative to address new program requirements, NNSA inquiries, and needs of multiple constituents.
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Other Considerations

Overall, Sandia maintains a very strong science and technology base that is responsive to mission needs. Sandia's science and technology programs are regarded as outstanding (supported by external peer review results) and significantly exceed the standards of performance in all areas evaluated, coupled with very noteworthy results as described in both accomplishment and performance target sections.

Sandia's ongoing commitment to strengthening our Nation's science, technology and engineering posture is commendable. Recent changes in both DOE/NNSA and Sandia organizations have not impacted programs and Sandia's cooperation in responding to growing constituent needs is exemplary.

PERFORMANCE OBJECTIVE 7 - DEFENSE NUCLEAR NON-PROLIFERATION (DNN) (NA-20)

Performance Objective #7. Develop and execute a sound and relevant nonproliferation program basis.

Adjectival Rating	Numerical Score
Outstanding	92

Summary of Performance

Sandia has met most, but not all, of its performance objectives for NA-20, and we are satisfied that Sandia has taken effective measures to make improvements in noted areas of deficiency. In a few cases Sandia has met requirements and its deficiencies have not negatively affected performance (Satisfactory). In many cases the Lab has exceeded established performance standards, but improvement is still needed (Good). In a few cases, Sandia has significantly exceeded the standards of performance and we can find no areas where performance is in need of improvement.

Significant Accomplishments

Outstanding rating is based on (1) the very demanding technology associated with Sandia's research and development work; (2) the many very significant successes in the Material, Protection, Control and Accountancy (MPC&A) program, which have an extremely high political profile (associated as they are with the Presidential-level Bratislava Summit initiatives), and; (3) the personal efforts of several Sandia staff members.

Opportunity for Improvement

Sandia must do a better job in a few areas. First, Sandia needs to keep HQs better informed of its foreign activities, especially in areas that might result in new international agreements (e.g., Memorandum of Understanding, Memorandum of Agreement, Letter of Intent) and events with a political or public relations aspect (e.g., press releases or newsletters). Secondly, Sandia must cease activities related to the shopping of project proposals to senior officials or Congress, especially where HQs has already indicated its lack of support. Finally, Sandia needs to improve the quality of their self-assessment.

Performance Measure 7.1

Giving consideration to the SNL self-assessment and the related independent peer reviews, performance of the Nuclear Nonproliferation activities will be evaluated for the NA-20 programs listed below. Nonproliferation Research and Engineering (NA-22) Program

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
7.1.1 Support the NN2001 Proliferation Detection Program activities as outlined in the specific NNSA NA-22 work authorization statements and lifecycle plans for FY06.	Outstanding	Agree	
7.1.2 Support the NN2003 Space-Based Nuclear Explosion Monitoring Program activities as outlined in the specific NNSA NA-22 work authorization statements and lifecycle plans for FY06.	Outstanding	Qualified Agreement	NNSA has found Sandia's performance to be to be "marginally" Outstanding. Sandia rightly acknowledges a number of "performance challenges" this past year, and it made several process improvements to strengthen its management, quality control, communications, and record-keeping. The U.S. Government has asked Sandia to meet challenging new performance standards in a highly-constrained space system, and Sandia is striving to develop a technology that is extremely demanding and ambitious. Sandia met schedule and budget requirements as negotiated with NA-22 and is making good progress toward the goal of developing a highly-sophisticated space component that could be the single most advanced piece of technology in orbit, once it is successfully created and deployed.
7.1.3 Support the NN2003 Ground-Based Nuclear Explosion Monitoring Program activities as outlined in the	Outstanding	Agree	

specific NNSA NA-22 work authorization statements and lifecycle plans for FY06.			
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Performance Measure 7.2

International Activities Programs For all programs, Sandia will provide qualified staff, timely reporting, and excellent project management in support of the NA-20 programs. [Includes the Office of Global Threat Reduction Program (NA-21), Office of Nuclear Risk Reduction (NA-23), Nonproliferation and International Security (NA-24) Program, International Material Protection and Cooperation (NA-25) Program and Office of Fissile Materials Disposition (NA-26).

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
7.2.1 Implement International Radiological Dispersal Device (RDD) threat reduction activities to include performance of dispersal testing, provision of a test bed for assessing theft scenarios, provision of technical experts to participate in assessments and related Program activities worldwide, e.g., regulatory support, Regional Partnership activities, training, and technical assistance in Program implementation and design.	Outstanding	Agree	
7.2.2 Provide consultative and logistical support for	N/A	N/A	N/A

repatriation of Russian-origin High Enriched Uranium from research reactors.			
7.2.3 Provide technical assistance for physical protection work for the BN-350 Spent Fuel Disposition Project.	Outstanding	Agree	
7.2.4 Provide technical assistance for physical protection upgrades at research reactor facilities.	Outstanding	Agree	
7.2.5 Support the International Emergency Management and Cooperation (IEMC) program in the development and conduct of emergency management training courses related to the nuclear fuel cycle. Assist in the development of table top scenarios to foster training.	Outstanding	Agree	
7.2.6 Carry out analysis, training, and technical collaborations as well as support policymaking and negotiations regarding various arms control and nonproliferation regimes toward addressing regional	Outstanding	Disagree	NNSA rates Sandia's performance as Good for this performance target. NNSA-HQs notes continued problems, such as appealing to Congress or senior officials for support of particular projects, failing to respect foreign or State Department sensibilities in certain international settings, and failing to keep HQs advised of ongoing activities such as negotiations with foreign entities. On a more positive note, Sandia assisted NA-24 in meeting some important goals this past year. Factual correction: There is an inaccuracy on page

security and multilateral affairs.			97 of the Lab's self-assessment, where it states that the 2 nd Annual Radiation Measurements Cross Calibration workshop was held at the CMC-Amman; in fact, it was co-hosted by the Supreme Council for the Environment and Natural Resources of Qatar in Doha.
7.2.7 Support IAEA Safeguards efforts toward international safeguards cooperation and support IAEA physical protection training.	Outstanding	Agree	<p>In the area of International Nuclear Security and Physical Protection, Sandia both met and exceeded performance measures.</p> <p>In addition to stated performance measures, Sandia's support with respect to NA-24's Safeguards Cooperation and Permanent Coordinating Group (PCG), has been excellent, thanks to the extraordinary efforts by individuals within Sandia. Noteworthy efforts have been in providing leadership in the area of physical protection. Communications with NA-243 is noted as excellent. Sandia was also indispensable in remedying some of the management problems noted elsewhere in this NNSA assessment.</p>
7.2.8 Support and carry out Russian Transition Initiatives commercialization efforts including the Global Initiatives for Proliferation Prevention (GIPP) Program. Regarding the GIPP, SNL will comply in all respects with "IPP General Program Guidance of March 2002," as amended; SNL will comply in all respects with applicable GIPP project approval letters; SNL procurement offices will positively support GIPP program by timely and results-oriented preparation and execution of IPP-related subcontracts with institutes and other facilities in the former Soviet Union countries; and SNL	Outstanding	Disagree	<p>NNSA rates Sandia's performance as Good for this performance target. Sandia's FY06 performance on NA-24 tasks and projects met most, but not all, performance targets. There are cases for which Sandia has failed to meet deadlines for deliverables, including a Global Initiatives for Proliferation Prevention (GIPP) project that has been delayed now for more than eight months. HQ also notes other problems with Sandia, referred to above in Section 7.2.6, that have been corrected over the past year, but were avoidable initially. However, HQ agrees that SNL has improved its program management and is now in compliance with GIPP General Program Guidance and the provisions of the program's project approval letters.</p>

<p>technology transfer offices will positively support GIPP program by timely and results-oriented preparation and execution of IPP-related Cooperative Research and Development Agreements in parallel with the GIPP project approval process.</p>			
<p>7.2.9 Provide technical support in the area of nuclear transparency measures for the Warhead Safety and Security Exchange Agreement and Future Initiatives in Warhead and Fissile Material Transparency.</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>7.2.10 Provide technical support for the Highly Enriched Uranium (HEU) Transparency Implementation Program. Support includes: Procurement, handling, and disposal of radioactive sources in Russia for the U. S. Blend Down Monitoring Systems at three facilities in Russia (specifically -- provide replacement radioactive sources to systems at these</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Note that the PEAR needs to be edited to change "Zheleznogorsk" to "Zelenogorsk."</p>

<p>three facilities); technical support and training on tags and seals used by U. S. experts during monitoring visits to Russian facilities; technical support for data analysis; and providing qualified experts to participate in at least 4 monitoring visits to Russian facilities.</p>			
<p>7.2.11 Provide qualified staff to work in the area of materials protection, control and accounting, and be able to travel to Russia. Develop quality statements of work that direct the Russians to install risk reducing upgrades that follow DOE Headquarters requirements and the material protection control and accountability (MPC&A) Guidelines. Staffs shall provide support to DOE Headquarters staff in a timely manner when processing assignments as well as tracking the financial status of active contracts. Successfully execute National Infrastructure and Sustainability activities.</p>	<p>Outstanding</p>	<p>Agree</p>	

7.2.12 Support international MPC&A cooperation at Russian Ministry of Defense Nuclear Warhead Sites.	Outstanding	Agree	
7.2.13 Support and carry out work for Second Line of Defense activities.	Outstanding	Disagree	<p>NNSA rates Sandia's performance as Good for this performance target. Sandia provides the Second Line of Defense (SLD) Program with site prioritization modeling, design, communications and vulnerability assessment expertise for installations around the world. Sandia developed and maintains a model to assist in Megaports site prioritization. If required, Sandia visits sites, analyzes them, and writes design requirements documents describing the proper location of monitors to ensure all pathways through a site are covered by radiation detection systems. Sandia also leads the drafting of communications design requirements, and reviews contractor-developed communications solutions to ensure all requirements are met. In Russia, Sandia performs vulnerability assessments to attempt to gauge the cost effectiveness of proposed installations. Sandia also assists with site surveys and observing acceptance testing in Russia.</p> <p>There were some difficulties last year in terms of communication with the NNSA Program Office, budget forecasting and allocation of personnel. NNSA believes that Sandia has or is correcting these issues and we expect things to go more smoothly in FY07.</p>
7.2.14 Provide technical support for monitoring and inspection activities in support of the US/RF Plutonium Management and Disposition Agreement.	N/A	N/A	N/A

Other Considerations
None

PERFORMANCE OBJECTIVE 8 – BUSINESS AND OPERATIONAL SUPPORT

Performance Objective #8 - Sandia will manage and operate 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.

Adjectival Rating	Numerical Score
Good	85

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.

Sandia's accomplishments, performance, and efforts during the performance period are recognized as strengths for their continuing focus for 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 awards; and (6) management involvement.

Notwithstanding these exhibited areas of strength, there remains a number of areas of significant concern associated with: (1) inconsistent management follow through or attention; (2) inadequately developed and implemented processes and procedures; and (3) recurring and systemic problems, to include inadequate corrective action plan (CAP) development and implementation. It is noted that Sandia's performance in these problematic areas did improve during this year with increased management involvement.

NNSA rates Sandia's FY06 performance for PO 8 as Good with a numeric score of 85. The adjectival rating agrees with Sandia's self-rating. Sandia exceeded the standard of performance although for the need for improvement in performance was identified in several areas.

Performance Measure 8.1. *Business and operational functions are integrated into all work activities throughout Sandia to maintain secure, safe, environmentally sound, effective and efficient operations and support mission objectives.* Sandia exceeded the standard of performance by deploying integrated business and operational processes throughout its infrastructure in support of mission and other work activities related to this measure. Sandia has

made progress with line ownership of processes and mission integration. However, Sandia needs to improve the integration of project management into security and integrating environmental, safety and health (ES&H) processes into the smaller, more routine projects and work, which comprises the majority of the work done at Sandia. Additionally, the finding closure rate needs to be improved.

Performance Measure 8.2. *Business and operational functions are continuously improved to obtain efficiencies and effectiveness.* Sandia exceeded the standard of performance by continuously improving functions in order to be more efficient/effective with planning processes that resolved critical mission risks and in areas like safety basis and early notification of problems. However, continuous improvement is needed in the areas of Safeguards and Security, project management, and implementing an institutionalized work control process.

Performance Measure 8.3. *Sandia will use best practices, goals, and metrics to achieve improvements in high-risk business and operational functions, while balancing risk and resources.* Sandia exceeded the standard of performance by using a systematic risk analysis process to identify and prioritize operational risks and writing Implementation Plans to address best practices identified through benchmarking. Expectations were exceeded in the benchmarking efforts for two new high risk areas identified during the year. However, Sandia needs to improve implementation plan development and analyses of major "un-anticipated" risks.

Significant Accomplishments

Presented below are areas in which Sandia's performance has significantly exceeded NNSA expectations.

1. System integration to support mission:

- ✓ The successful restart of the Sandia Pulsed Reactor (SPR) III one week ahead of schedule demonstrated a coordinated effort across multiple Sandia organizations and with SSO. Additionally, Sandia successfully completed all scheduled testing to support the W76 and Quality Alternatives for the Sandia Pulsed Reactor (QASPR) programs through safe SPR III operations by September 30, 2006.
- ✓ Sandia effectively coordinated with various organizations regarding the Z Machine Isentropic Compression Experiment during the planning of the experiment. Sandia managed and adequately closed out approximately 70 findings that originated from a Management Self Assessment, Sandia corporate readiness review, and SSO limited scope readiness review. Two experiments took place in third quarter FY06 and both were performed in a safe, methodical manner.
- ✓ Sandia utilized the correct processes/tools to effectively and adequately address all Pre-Start Findings identified during the Sandia MESA MicroFab Readiness Assessment in a timely manner. The responsiveness of Sandia in developing and tracking the corrective actions to closure, including preparation of the associated evidence packages, is notable. Also, Sandia performed a thorough Readiness Assessment for the Startup of the MESA MicroFab Facility (adequate depth and breadth). The Readiness Assessment integrated all the proper subject-matter experts to ensure that the planned operations are performed

in an effective, efficient, safe and environmentally sound manner.

- ✓ The SSO Self-Assessment and Chief Defense Nuclear Safety (CDNS) review resulted in thirteen of eighteen functional areas receiving a grade of "Meets Expectations." Sandia has made significant improvements in the areas of Safety Basis, Startup and Restart, and Conduct of Engineering (Cognizant System Engineer Program).

2. Sandia demonstrated proactive stewardship of facilities and infrastructure. Details regarding how they have achieved this level of performance are presented below.

- ✓ Sandia's project management has exceeded the expected levels of performance for the majority of the projects by: (1) successfully submitted a high quality Ten-Year Site Plan (TYSP) that was approved by NNSA Headquarters; (2) making adjustments to the Exterior Communications Infrastructure Modernization (ECIM) that resulted in this project being scheduled to complete significantly ahead of schedule and significantly under budget; (3) obtaining a CD-4A for the Center for Integrated Nanotechnologies (CINT) which allowed Sandia and LANL to start facility operations at both new facilities; (4) accomplishing the Heat Systems Modernization CD-2 package by \$1.1M under budget; (5) used a tailored Project Management approach to complete a Department of Homeland Security Project in three and one-half years less than a typical DOE Order 413.3 line item process which saved time and money; (6) completed the Environmental Restoration (ER) Project completed all scheduled fieldwork even though this required numerous interactions with regulatory authorities and the Conditional CD-4 package; (7) the Test Capabilities Revitalization (TCR) Phase I project overall success was recognized by being designated as Project of the Year by the Rio Grande Chapter of the Project Management Institute; and (8) the MESA project continues to be ahead of schedule and below budget.
- ✓ Every dollar spent on elimination of deferred maintenance (DM) yielded over 100 percent corresponding reduction in DM and maintenance funds were costed within FY06.

3. Effective day to day business management:

- ✓ Sandia worked an extremely time sensitive action which enabled NNSA and Sandia to take advantage of a considerable price reduction for the purchase of Entrust software site license and maintenance.
- ✓ Sandia successfully developed and managed to an approved 2006 Safeguards and Security (S&S) Annual Operating Plan. Sandia has also applied lessons learned to the AOP and continues to improve and enhance the document and its applicability.
- ✓ SSO conducted surveys at the Sandia remote sites and classified subcontractor facilities listed below, which resulted in these facilities receiving a rating of Satisfactory: Sandia Kauai, Sandia Minnesota; Sandia Washington DC, and Pacific Scientific, AZ.
- ✓ Notifications from Government Relations on significant interactions were predominantly provided on a timely basis, with only occasional late notices. The process appears to be well implemented and instances of late notices are on the decline. The addition of a phone call for last minute notices has been a valuable enhancement to the process. The only area for process improvement is on the education of employees on the government relations reporting requirements.

4. Overcoming operational obstacles:

- ✓ Sandia's timeliness of closing occurrence report corrective actions from internal safety incidents has been very good with a timely closure percentage of over 90 percent.
- ✓ NA-70 validated Sandia's implementation of the 2003 Design Basis Threat and determined that Sandia has successfully achieved fully compliant implementation.
- ✓ Sandia has made substantial progress related to the implementation of safety basis programs by developing guidance that will enhance the implementation of safety basis processes in critical areas. In FY06, Sandia completed development of the Safety Analysis and Risk Assessment Handbook a major revision to the Sandia Unreviewed Safety Question Procedure, Implementation Validation Review process plan, Safety Analyst Training and Qualification Program Plan, safety basis lessons learned database, revisions to the Sandia ES&H Manual supplemental on safety basis preparation and review, and internal program support documents.
- ✓ Sandia conducted a Six Sigma activity for the revision of the Sandia USQ procedure and recently completed the first periodic USQ process sampling and review activity in an effort to improve the use of the USQ process.

5. Pursuit of benchmarking/certifications/awards.

- ✓ Sandia's Subcontract Purchasing System received ISO9001 re-certification.
- ✓ Sandia was awarded the White House Closing the Circle award for their Environmentally Preferable Purchasing program.
- ✓ Achieving ISO 9001 registration in Telecommunications Delivery and Infrastructure Services.
- ✓ Sandia California achieved ISO-14001 certification of their Environmental Management System.
- ✓ Sandia has exceeded our expectations by performing an excellent benchmarking effort on the General & Administrative costs through the Hackett Group analysis and of their business rules through discussions with three best in class companies; Pacific Northwest Laboratory, Nevada Test Site, and IBM.

6. Management involvement:

- ✓ Sandia has continued to provide management emphasis and needed resources to ensure safety basis requirements are being met. Sandia has proactively worked with SSO to address issues identified during specific safety basis document reviews so as to minimize impacts on schedule.
- ✓ Sandia accomplished 96 percent of the planning (10/5/1) one-year milestones which reduced mission and operational risk.
- ✓ Sandia continues to provide support to NNSA and DOE in addressing cyber security vulnerabilities to include leading NNSA in the development of the Cyber Security Project Team Report and associated recommendations.

Opportunity for Improvement

1. Inconsistent management follow-through and attention:

- ✓ SSO highlighted issues and concerns associated with Sandia's self-identified deficiencies

related to the management of the Security Systems Replacement Project (SSRP). This important S&S activity was not subjected to formal project management practices and procedures and was being managed in a less than effective manner. In spite all of the many actions taken by Sandia to correct this problem and the improvements that have been made, SSO remains concerned with the overall progress Sandia has made to date in moving this important project forward with the appropriate level of work control and formal project management.

- ✓ Sandia was not able to meet all of the performance expectations required for maintaining a satisfactory level of performance in all S&S topical elements during this performance period. Some less-than satisfactory topical ratings were assigned and some repeat findings were identified during SSO inspection activities.
- ✓ The SNL Weapons Engineering Program's lack of support for the TCR Phase 2 Project, despite COR direction is a significant concern. The delay in responding to the COR direction caused the project to miss critical budget deadlines making improvements much more challenging. This non-responsiveness has significantly increased the probability of another one year slip in the start of construction. While the SNL program may have felt they had received conflicting direction from NNSA-HQ, formal direction was issued by the COR and is expected to be implemented.
- ✓ SSO identified a program management issue associated with Sandia's retention, recruiting and hiring philosophy for S&S professionals during the second quarter of the performance period. Sandia promptly took action to address the opportunity for improvement by moving it into the S&S Issues Management System for tracking and resolution. SSO still has not seen demonstrable evidence that Sandia has resolved this area of concern and there is no evidence that any formal measures have been adopted and put in place to ensure the retention, recruiting and hiring philosophy for S&S professionals is improved.
- ✓ Sandia Corporation has not directed their subcontractors to establish a pre-employment investigations (PEI) process. It has been determined that that subcontractor applicants are being referred to administrative review, prior to a clearance being granted.
- ✓ Energy usage increased in a year where the President asked all agencies to conserve energy. Additionally, water usage increased by approximately 100M gallons, removing all the gains made in the last 12 years.

2. Inadequately developed and implemented procedures and processes:

- ✓ Sandia's management of their environmental programs and permits needs improvement.
 - There was a release to the environment from two underground holding tanks that are part of the Liquid Waste Disposal System (LWDS) for the Sandia Engineering Reactor (SER).
 - In January 2006, Sandia self identified that significant dirt/earth had been moved at the Thunder Range Site, without getting appropriate approvals and permits to include NEPA and NPDES.
 - Sandia missed the deadline for the completion of the Safe Drinking Water Protection Program Plan (SDWPP) even though SSO provided an extension to the end of the fiscal year.

- Sandia received a Notice of Violation (NOV) from the City of Albuquerque related to the boilers at the MESA Facility. A total of \$20K in fines was assessed for violating New Source Performance Standards requirements. Sandia failed to request a permit for construction of the MESA Central Utility Building boilers during project design. This is the second year in which Sandia has received an NOV from the City of Albuquerque related to noncompliance with air permits
 - There were three externally levied regulatory violations and 9 reportable environmental events to outside agencies. These events are examples of not operating within environmental requirements, and the terms and conditions of the contract.
- ✓ Sandia's needs to formalize their process in order to maintain scope, cost and schedule on General Plant Projects (GPP). There were two design/build projects (1090 and 770) that have exceeded cost and/or schedule. This process needs to include a well defined and developed scope and should be reflected clearly within the contractual documents. The process needs to include roles and responsibilities with respect to contract changes between Sandia and the Prime Contractor.
 - ✓ Sandia California performed an assessment of their cost estimating process and developed a path forward for improvement to their process. However, the assessment did not address a process for using contingency and contingency management which needs to be addressed through the potential use of a tailored earned value approach. There was a GPP (Arroyo Bridge Structure Repair) in California that improperly used contingency with little formality.
 - ✓ Sandia needs to improve their internal controls to prevent segmentation and augmentation on GPP. There were two projects (Chilled Water Line and Building 751) that had to be stopped by NNSA to prevent segmentation and augmentation.
 - ✓ Sandia needs to develop adequate Line Item Critical Decision (CD) 1, 3, and 4 processes that guide Project Managers in producing quality and repeatable documents. For both the Weapons Evaluation Test Laboratory (WETL) and CINT projects, Sandia needed NNSA guidance to develop quality CD-4 documents and the NNSA assessment found CD1 and 3 processes needed improvements.
 - ✓ Sandia needs a process to better integrate Project Management and Environmental Programs. The following are examples of poor integration: a wastewater discharge permit from the City has not been obtained for CINT, requiring less than optimal alternative measures to stay in compliance. In addition, In March SSO discovered that the water use as defined in the facility Environmental Assessment (EA) was inconsistent with a waste water permit request received by SSO. Upon further evaluation, the data provided to SSO for analysis for the EA was 2.7 Million Gallons per Year (MGY) of total water use, and the actual use will be 10.6MGY. The Supplement Analysis for the Site-Wide Environmental Impact Statement is in process, and this information will be added into the analysis. If the Supplemental Analysis had not been in process, a revised EA would have been required and the facility would not have been able to start on schedule.
 - ✓ The SSO Self-Assessment and the CDNS review identified that SNL "needs improvement" in the areas of Fire Protection, Maintenance, and Conduct of Operations. SSO agrees with the SNL PEAR conclusion that the SNL Fire Protection program was allowed to lapse into a state of neglect due to inadequate staffing. SNL senior management needs to

provide continued focus on these areas to ensure improvements/upgrades are implemented to meet expectations.

- ✓ While SSO notes improvements in safety basis processes and documents, improvement is needed in some elements particularly the implementation and integration of safety basis processes and guidance into the final safety basis document deliverables. Sandia made substantial improvements in the independent review process and progress in improving the quality of the safety basis documents over the last year. However, several safety basis upgrades have required rework, particularly the hazard analysis and Technical Safety Requirements (TSR). Recent SSO and Sandia reviews identified issues where Sandia line management did not perform USQ screens and determinations in accordance with the Sandia USQ procedure. Additional management attention to implementation of safety basis procedures and processes is required.

3. Recurring systematic problems – inadequate corrective action plan (CAP) development and implementation:

- ✓ NNSA noted numerous problems with respect to corrective action plan development, implementation, validation and closure. Examples are presented below.
 - During the annual surveys of Sandia S&S programs at all sites, three repeat findings were given.
 - There have been 65 external audit findings that have come due for closure; 50 were submitted on-time, 29 of those have been closed, 21 of those have not been closed; and 15 were closed late or are still open past their due date.
 - Sandia submitted numerous S&S, ES&H, and Gamma Irradiation Facility corrective actions milestones late and evidence packages were rejected by SSO due to substandard quality. Sandia's ES&H Office of Independent Oversight and Performance Assurance (OA) evidence packages have not been consistently submitted in timely manner, have required SSO support for acceptable completion, and need improvement in verification of the effectiveness of final corrective actions.
- ✓ Sandia made efforts throughout the year to implement the OOPS process to improve the early notification score for occurrence reports. Although efforts were made, the early notification rate for occurrence reports did not improve. The second quarter, the early notification rate was excellent at 94 percent; however it was not maintained and the early notification rate subsequently dropped to 84 percent during the last two quarters. Sandia spent a large amount of time and effort on OOPS but did not effectively take action to address other aspects of occurrence reporting such as timely categorization.

Performance Measure 8.1

Business and operational functions are integrated into all work activities throughout Sandia to maintain secure, safe, environmentally sound, effective and efficient operations and support mission objectives.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
8.1.1 Sandia balances the priorities of business and operational programs to ensure mission, cost, scope and schedule are not adversely affected. Mission critical tests and other mission-relevant activities receive business and operational support to uniformly achieve mission success per project plans.	Outstanding	Agree	<p>NNSA agrees with Sandia's outstanding rating with respect to balancing priorities in support of mission critical test. Sandia's performance in balancing priorities to restart and operate SPR in a safe and secure manner during FY06 is considered outstanding.</p> <p>Sandia teamed with SSO to develop a forecast process (for Management Review of Moderate and High Risk Nuclear Weapons (NW) Mission Tests). The purpose of the process was to allow the Nuclear Weapons Strategic Management Unit (NWSMU) management to identify and integrate (where appropriate) line, indirect organizational roles with specific test requirement responsibilities. As the process unfolds, Sandia briefs SSO on the contents of the NW Mission Test Forecast tool. In addition, Sandia periodically checks with SSO to determine if there are additional activities that SSO has identified to be included in the Forecast Tool. The Sandia NW Mission Test Forecast tool helps to ensure adequate business and operational support to achieve mission success. While the Forecast tool is used to monitor high-risk mission tests, an opportunity exists to review other lower hazard activities.</p>
8.1.2 Sandia ensures that operations are performed in an effective, efficient, secure, safe, environmentally sound manner by deploying appropriate processes, tools, and accountability through line organizations.	Good	Agree	<p>In the 3rd quarter of FY06 SSO highlighted issues and concerns associated with Sandia's self-identified deficiencies related to the management of the SSRP. This important S&S project had not been subjected to formal project management practices and procedures and was being managed in a less than effective manner. SSO directed Sandia to develop a fully resource loaded project plan to include well-defined scope, cost and schedule attributes and institute sound project management controls within thirty-days; however, Sandia requested and was granted an extension until November 15, 2006, to have the plan submitted to SSO. At the same time, Sandia made the decision to suspend SSRP project activities other than those directly related to establishing an appropriate project management team, development of a formal project plan and work controls and activities specifically tied to the corrective actions for findings related to the current security system. The project will not be fully restarted until SSO approves</p>

			<p>the project plan.</p> <p>Since the 3rd quarter, Sandia has taken action to recover the SSRP to include restructuring the responsible S&S organization and adding certified project management professionals to the project team. Additionally, the Sandia S&S staff, working with the SSO project management staff has verified the funding strategies employed for this complex, multi-phase project both internal to Sandia as well as receiving approval from the NNSA Chief Financial Officer.</p> <p>Sandia also has recognized the need for and has initiated actions to resolve issues and concerns associated with the previously reported OA findings regarding the performance of the system in the near term and is on schedule with associated corrective action milestones.</p>
<p>8.1.3 Sandia performs business and operational functions in accordance with the terms and conditions and other guidance provided within the scope of the contract. In those cases where Sandia is not in compliance with the terms and conditions of the contract, they will formally request a variance, and/or propose an alternate standard to be used.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA has rated Sandia's performance for this performance target as Good. During the FY06 Sandia's performance exceeded the standard of performance. Operational support to critical operations and mission was accomplished at a high level. Sandia achieved overall ratings of Outstanding on their objectives matrices in the following areas: Property Management, Procurement, and Information Technology. However improvement is still required in some programs which accounts for the difference between Sandia's and NNSA's ratings for this performance target. Details regarding areas requiring improvement are presented below.</p> <p>NNSA recognizes that Sandia has made significant progress in addressing longstanding vulnerabilities in the functional area of fire protection, In the PEAR, Sandia states that the "fire protection program was allowed to lapse into a state of neglect due to inadequate staffing." NNSA concurs with that assessment, but also finds that there were inadequate procedural controls in place, and in some instances, inattention to detail. NNSA does recognize that Sandia has put forth considerable effort to address fire protection issues during FY06, but the program still requires management attention.</p> <p>Sandia demonstrated improved implementation of ES&H requirements for major projects and tests, however, for smaller, more routine projects and work, which makes up the majority of Sandia work, there is less formal integration of ES&H requirements and in some cases the integration does not occur.</p> <p>NNSA does not agree with the PEAR write-up as it</p>

			<p>pertains to execution of the ER Project. During FY06 259 of the 265 Gold Chart targets were completed, whereas the PEAR states that "All...except one are complete." The Outstanding criteria for the ER Project was that 264 of 265 Gold Chart targets were to be completed, and final controls for the ER sites were to be identified and agreed to by the New Mexico Environment Department (NMED) by the end of FY06. This did not occur. Additionally, routine Earned Value Management System data packages experienced delays or missed deadlines.</p> <p>Sandia did not provide benchmark information on its Energy Management Sustainable Design Program. Sandia found that this activity was taking a much larger effort than expected and subsequently made this a performance measure for FY07. Sandia did not share lessons learned in the energy management sustainable design area with other NNSA offices as the lessons learned were not presented at the Energy 2006 conference.</p> <p>NNSA rated Sandia's performance in the area of Finance and Budget in nine topical areas, with the topical area scores varying from Satisfactory to Outstanding. The overall score assessed was Good.</p>
<p>8.1.4 Sandia addresses and resolves findings and deficiencies from internal and/or external audits by developing and implementing effective corrective actions. In response to adverse events, Sandia will determine the causes and implement effective corrective actions to prevent reoccurrence.</p>	<p>Good</p>	<p>Disagree</p>	<p>NNSA rates this performance target as Satisfactory. Sandia's PEAR submission contained errors in the information provided on audit finding closure rates. The information presented in the NNSA PER is a result of SSO analysis and revised data obtained from Sandia subsequent to the PEAR submission. There were 75 internal audit findings issued this year, 40 were scheduled for closure by this date (35 are not due for closure). Thirty-four findings were closed on-time and six were closed late (or are still open, past their due date). Thus, the current, on-time closure rate for internal audit findings is 85 percent. External audit findings had a minimum closure rate of 45 percent and maximum closure rate of 77 percent.</p> <p>Sandia continues to submit closure packages that are inadequate, late, and require significant SSO staff work to justify closure.</p> <p>During FY06, SNL S&S has closed (and SSO validated) corrective action packages for 75 findings across all three major sites and KTech.</p> <p><i>Emergency Management</i> In FY06, Sandia/NM completed 50 corrective action milestones. This number represents all of the milestones due in FY06. Of the 50 evidence</p>

			<p>packages submitted, 11 were returned by SSO for additional information or clarification. In FY06, Sandia/NM closed seven of the ten findings assessed by OA in FY 2005. Sandia also closed one finding from the SSO assessment conducted in FY 2005; two findings remain open and are due to be closed in November 2006. Sandia/CA submitted on time the evidence package for one of the two findings assessed by SSO in FY 2005, due for closure in September 2006. SSO did not conduct an assessment of Tonopah Test Range (TTR) in FY06.</p> <p><i>Safeguards and Security</i> During this FY, SNL S&S has closed, and SSO has validated, corrective action packages for 75 findings across all 3 major Sandia facilities and KTech: 21 of the 46 findings closed for SNL/NM were findings resulting from OA inspections.</p>
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Performance Measure 8.2			
Business and operational functions are continuously improved to obtain efficiencies and effectiveness.			
Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
8.2.1 Sandia will provide early notification to NNSA/Sandia Site Office (SSO) in the event of problems within business and operational areas that may affect mission success, NNSA reputation, or adversely affect protection of the worker, public, environment or national security assets, including timely notification of occurrences.	Good	Agree	<p>SSO agrees with the target summary as presented in the PEAR. Notifications from Government Relations on significant interactions were mostly timely, with only occasional late notices.</p> <p>With respect to occurrence notifications, the OOPS process has improved early notifications. For the 3rd quarter, occurrences were categorized in a timely manner only 65 percent of the time. Sandia provided notification to SSO of occurrence notifications 84 percent of the time (87/103). During FY06, the timeliness of notifications varied from a low of 76 percent (Quarter 1) to a high of 95 percent (Quarter 2), and during the last two quarters of FY06, Sandia averaged an 84 percent.</p>
8.2.2 Sandia ensures the development and implementation of institutional work	Satisfactory	Agree	NNSA agrees with Sandia's self-assessment rating of Satisfactory. Sandia has not implemented an institutional work planning and control system (process) that ensures adherence to a set of comprehensive work requirements and consistent

<p>control processes as defined in the DOE Integrated Safety Management System management functions and guiding principles.</p>			<p>implementation across the institution. Work planning and control is an area that needs immediate Sandia management attention, as is evident from the SSO/Sandia assessment of Integrated Safety Management Systems (ISMS) implementation into work planning/control. The ES&H Manual does not adequately address work control requirements that are a current focus of NNSA and the Defense Nuclear Facilities Safety Board (DNFSB). A well defined, corporate work control process is essential in that it provides a foundation and mechanism for implementation of all ES&H program requirements.</p>
<p>8.2.3 Maintain satisfactory levels of project management performance as defined by projects meeting cost, schedule and performance targets unless circumstances beyond the control of Sandia results in cost overruns and/or delays.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates this Performance Target as Good. NNSA's rating is primarily based on Sandia's failure to complete all projects within cost and schedule targets. The cause of this is a number of processes that need improvement and/or proper implementation. These processes include management of GPP to ensure that scope, cost and schedule are maintained and that issues pertaining to potential segmentation of projects are avoided. For example; Sandia's needs to formalize their process in order to maintain scope, cost and schedule on GPP. There were two design/build projects (1090 and 770) that have exceeded cost and/or schedule. This process needs to include a well defined and developed scope and should be reflected clearly within the contractual documents. The process needs to include roles and responsibilities with respect to contract changes between Sandia and the Prime Contractor. Sandia California performed an assessment of their cost estimating process and developed a path forward for improvement to their process. However, the assessment did not address a process for using contingency and contingency management which needs to be addressed through the potential use of a tailored earned value approach. There was a GPP (Arroyo Bridge Structure Repair) in California that improperly used contingency with little formality.</p> <p>Sandia needs to improve their internal controls to prevent segmentation and augmentation on GPP. There were two projects (Chilled Water Line and Building 751) that had to be stopped by NNSA to prevent segmentation and augmentation.</p> <p>Sandia needs to develop adequate Line Item Critical Decision (CD) 1, 3, and 4 processes that guide Project Managers in producing quality and repeatable documents. For both the WETL and CINT projects, Sandia needed NNSA guidance to develop quality CD-4 documents and the NNSA assessment found CD1 and 3 processes needed improvements.</p>

<p>8.2.4 Maintain satisfactory levels of performance as defined by DOE Order 470.1 for all S&S topical elements.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates this performance measure as Good. NNSA is in agreement with the content of the Sandia PEAR for 4 of the 5 targets associated with this performance measure. The NNSA disagrees with Sandia's assessment regarding Target 2 under this measure. It should be noted that one explanation for this difference is based on the fact that the NNSA survey activities of Sandia New Mexico concluded after Sandia submitted its PEAR. A discussion regarding the details is provided below. Performance data supporting the NNSA score was gathered through SSO S&S oversight activities to include formal periodic and continuous S&S program evaluations.</p> <p>Sandia successfully developed and managed to an approved 2006 Safeguards and Security (S&S) AOP. Sandia has also effectively applied lessons learned to the AOP and continues to improve and enhance the document and its applicability.</p> <p>SSO conducted surveys at the Sandia remote sites and classified subcontractor facilities listed below, which resulted in these facilities receiving a rating of Satisfactory: Sandia Kauai, Sandia Minnesota,; Sandia Washington DC, and Pacific Scientific, AZ.</p> <p>NA-70 validated Sandia's implementation of the 2003 Design Basis Threat and determined that Sandia has successfully achieved fully compliant implementation.</p> <p>Annual S&S surveys were completed at the three primary Sandia sites during this performance period with the following results.</p> <p>Sandia TTR: The 2005 SSO survey at TTR was conducted in the first quarter (November 2005) of this performance period and resulted in less-than-satisfactory ratings in the topics of Program Management and Protection Program Operations. A composite rating of Marginal was assigned. The ratings and associated impact of the findings that drove these ratings to be less-than-satisfactory required that Sandia implement an S&S-specific recovery plan in order to be able to continue to meet the assigned mission and test schedule for TTR. The recovery plan included a series of accelerated and closely monitored corrective actions that had to be completed and verified by Sandia prior to the next scheduled classified SNM operation at TTR. Sandia security and the responsible line organization, with heavy involvement from SSO S&S, worked through the elements of the recovery plan in a manner that allowed SSO S&S to validate corrective measures</p>
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		<p>and provide formal authorization to conduct the test as scheduled May 2006. While there was no interruption to facility operations due to the security issues identified that resulted in a delay in meeting programmatic milestones, it was clearly a "near-miss."</p> <p>Sandia California: A limited scope review of the Sandia California S&S program was conducted by SSO in the third quarter (July 2006) of the performance period and resulted in a continued composite rating of Satisfactory. There were no major issues or concerns identified during this survey activity.</p> <p>Sandia New Mexico: The results of the 2006 SSO Safeguards and Security Survey of Sandia New Mexico indicate room for improvement in several of the eight topical and 55 subtopical elements. While the composite rating assigned to the Sandia S&S program remains Satisfactory, SSO identified and reported 45 findings during the performance period. Of the 45, two were determined to be repeat (administrative/compliance) findings and several were attributed to less-than-adequate program management in some subtopical elements. While the results of the survey did not identify any serious protection issues that compromised Sandia's implementation of the Design Basis Threat or any risk-associated attribute of the Site Safeguards and Security Plan (SSSP), there are some leading indications that S&S performance is beginning to degrade in some elements that could eventually lead to serious security conditions if not attended to.</p> <p>In summary, taking into full consideration that some topical and subtopical elements were rated less-than-satisfactory, the presence of deficiencies and opportunities for improvement in S&S project management and some repeat findings, i.e., Friend-or-Foe identification, human reliability program, etc., were identified, Sandia has been able to maintain an overall Satisfactory level of performance commensurate with the protection requirements at each of the primary sites. In addition, some Sandia subcontractor facilities were also issued less-than-satisfactory ratings during SSO S&S inspections conducted during the performance period.</p> <p>Additional S&S performance data: Late in the fourth quarter there were numerous security-related events that occurred that were indicative of several instances of a failure to follow established practices and procedures, mainly involving protective force</p>
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			<p>operations. While none of the incidents represented a serious protection issue, SSO does view each of the incidents to be serious, and in some cases, required immediate interim corrective measures. In one case, Sandia Protective Force procedures associated with fitness for duty assessments were not followed and resulted in a Security Police Officer suspected of being intoxicated being issued a firearm at the start of his assigned shift. As part of the same incident, the required human reliability program notification requirements were not followed. In three separate incidents, Sandia Protective Force personnel did not follow established C-5 Gate safety practices and procedures related to protective barriers at TA-V. Each incident resulted in damage to the vehicles and minor injury to the occupants.</p> <p>These events represent a familiar trend in Protective Force behavior that could lead to severe program management issues. SSO recognizes that Sandia management is reacting to these events and is hopeful that S&S management will be able to use these events as leading indicators in a manner that will identify operations or program deficiencies that can be addressed before they culminate in any kind of failure that results in diminished protection system effectiveness.</p> <p>Program Management: SSO identified a program management issue associated with Sandia's retention, recruiting and hiring philosophy for S&S professionals during the second quarter of the performance period. Sandia promptly took action to address the opportunity for improvement by moving it into the S&S Issues Management System for tracking and resolution. SSO still has not seen demonstrable evidence that Sandia has resolved this area of concern and there is no evidence that any formal measures have been adopted and put in place to ensure the retention, recruiting and hiring philosophy for S&S professionals is improved.</p> <p>Sandia Corporation has not directed their subcontractors to establish a pre-employment investigations (PEI) process. It has been determined that subcontractor applicants are being referred to administrative review, prior to a clearance being granted.</p>
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8.2.5 Sandia continues to improve safety basis processes and products resulting in submitting quality documents for SSO approval in a timely manner, while meeting annual update requirements.	Good	Agree	
8.2.6 Sandia utilizes its planning (10/5/1) process to address and resolve critical operational and mission issues. Accomplishing the FY06 one year milestones addresses critical operational needs and reduces mission and operational risk.	Outstanding	Agree	

Performance Measure 8.3			
Sandia will use best practices, goals, and metrics to achieve improvements in high-risk business and operational functions, while balancing risk and resources.			
Performance Target	Sandia Self-Assessment Rating	SSO Agreement	Comments
8.3.1 Identify and prioritize operational risks and update last year's implementation plans by October 2005. Identify accepted standards and best practices for those new high-risk areas by January 2006. Develop	Outstanding	Agree	

implementation plans with metrics and targets to achieve accepted standards and best practices by February 2006 for the new high-risks areas.			
8.3.2 Successfully achieve FY06 goals, targets, and milestones in this year's and last year's updated implementation plans and the mission is not adversely affected by the missed targets.	Outstanding	Disagree	NNSA agrees with the target summary presented in the PEAR, but has rated this performance target as Good. This rating is based on the fact that some of the milestones were met based on revised implementation plans. The rating was lowered due to a poor planning process as described in the Opportunities for Improvement section above.
8.3.3 Unanticipated programmatic risks that are identified during the year are analyzed, mitigation plans developed, and implemented in a timely and quality manner.	Outstanding	Disagree	NNSA has rated this performance target as Good. NNSA agrees with the summary of performance as presented in the PEAR. However, NNSA has rated this performance target as good based on the fact that Sandia failed to analyze major unanticipated risks, such as, the risk associated with issues raised by the Occurrence Reporting/Lessons Learned assurance team relating to a number of adverse ES&H performance trends.

Other Considerations

None.

PERFORMANCE OBJECTIVE 9 – LABORATORY WORKFORCE MANAGEMENT

Performance Objective #9. Continue to renew the workforce by attracting, developing, and retaining the next generation of excellent personnel to serve the nation’s security needs.

Adjectival Rating	Numerical Score
Outstanding	93

Summary of Performance

Sandia has performed Outstanding in managing its workforce as they continue to enhance the methods and strategies for attracting, developing and retaining a competent staff. They earned Outstanding under the 3 performance measures and in 7 out of 11 performance targets.

Significant Accomplishments

- ✓ Sandia’s data collection for the true amount spent on education and learning was a significant accomplishment given that multiple data sources had to be queried and much of the information had to be collected manually.
- ✓ Sandia had a very successful recruiting event referred to as the Sandia Engineering Expo (SEE) which resulted in Sandia exceeding its offer to acceptance goals for the event by 16 percent. While the overall offer to acceptance ratio is down from the previous year, this event epitomized the proactive actions Sandia takes to ensure the pipeline is filled with qualified talent.
- ✓ Sandia has made great strides in developing strategies for filling the pipeline with talent. For instance, they identified key criteria for critical positions and are now “data mapping” to assist in identifying areas relevant to Sandia’s future technical needs. They established a database that identifies key and regional schools’ ranking against strategic criteria which will be used for future collaboration with universities.

Opportunity for Improvement

Target: 9.2.3: Although Sandia developed the framework for an overarching talent management program which shows promise; they did not fully meet established performance expectations. Expectations required completion of a pilot program and assessment thereof. (Reference: Performance Measure 9.2, *Development: Fill the laboratory pipeline with appropriate candidates by formalizing personnel growth opportunities*; Target: 9.2.3, *Develop, deliver and evaluate an integrated lab-wide leadership development program that is institutionalized as the core leadership program within the Laboratories.*)

Performance Measure 9.1

Attraction: Recruit qualified talent to meet the identified needs of the Laboratories.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
9.1.1 Meet "Objectives Matrix" targets relevant to attraction (e.g., "acceptance ratio," "minority recruitment improvement," and "GPA.")	Good	Agree	
9.1.2 Meet the established target goals (i.e., percentage goals) for considering pipeline talent in hiring actions.	Outstanding	Agree	

Performance Measure 9.2

Development: Fill the laboratory pipeline with appropriate candidates by formalizing personnel growth opportunities.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
9.2.1 Complete the FY06 project deliverables contained within the Learning Environment Plan.	Outstanding	Agree	Sandia placed a significant amount of attention and effort toward the completion of the Learning Environment Plan. The results of their efforts should enable Sandia to better serve their employees' training needs while ensuring costs are consistent with industry trends.
9.2.2 Evaluate Sandia's Learning investment with respect to overall percent of payroll invested in corporate education, development and training.	Outstanding	Agree	

9.2.3 Develop, deliver and evaluate an integrated lab-wide leadership development program that is institutionalized as the core leadership program within the laboratories.	Satisfactory	Agree	Sandia developed a program early in the fiscal year; however, it wasn't adopted by the leadership team until later in the fiscal year. This resulted in the delay of the implementation of the program.
9.2.4 Demonstrate that the investment in lab-wide training is value added.	Outstanding	Agree	
9.2.5 Meet the objectives matrix targets relevant to development (e.g., percentage of payroll invested in CEDT and number of completions for career and professional development programs.)	Outstanding	Agree	

Performance Measure 9.3

Retention: Plan assignments of current personnel so that nuclear weapons design, development and test experience is maintained and passed on to their future replacements while balancing the movement of staff to other areas within the context of SNL growth and mission space.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
9.3.1 Expand emerging operational knowledge by delivering a breadth of value-added engineering professional development forums (as demonstrated by feedback obtained from the forums) to meet the needs of the nuclear weapons community and other national security arenas (Technology	Outstanding	Agree	

Symposiums, Nuclear Explosives Safety Study Group).			
9.3.2 Provide broad perspective knowledge and skills based Nuclear Weapons educational programs aimed at enabling the next generation of engineers to better serve our growing and expanding national security needs as demonstrated by feedback obtained from the programs (Weapons Intern Program & Nuclear Weapons New Hire Orientation Program curriculum based programs, Nuclear Weapon Component System (NWCS) & NW101 On-Line Classes, Nuclear Surety and Safety Training (NST) & Nuclear Explosive Safety Training (NSTE) Classes).	Outstanding	Disagree	NNSA rates Sandia's performance at Good. Sandia was not Outstanding, as they did not seek NNSA HQ input regarding the training programs that Sandia developed to include Weapons Intern Program.
9.3.3 Create a dynamic learning curricula roadmap and pilot it to Sandia system engineers with the expected result that the roadmap is institutionalized as a key tool for the future.	Good	Agree	
9.3.4 Meet the objectives matrix targets relevant to retention (e.g., compensation to market, benefit cost, regrettable losses).	Outstanding	Agree	

Other Considerations

Sandia has hired a Deputy to the Vice President for Human Resources and Administration that should enable Sandia to provide better focus on performance and the development of more meaningful performance metrics .

PERFORMANCE OBJECTIVE 10 - FOREIGN INTELLIGENCE COLLECTIONS & ESPIONAGE

Performance Objective #10. 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	Numerical Score
Outstanding	95

Summary of Performance

NNSA has determined that the Sandia Counterintelligence (CI) program has exceeded the performance expectations under the four target areas for this objective for FY06.

(b)(7)(e)

CI Information and Technologies Program

Sandia CI submitted a total of five cyber-specific IIRs during this performance period.

Overall, it was determined that the Sandia CI office is well-run and exceeds the performance expectations for an Outstanding rating.

Significant Accomplishments

(b)(7)(e)

Opportunity for Improvement

None.

Performance Measure 10.1

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
10.1.1 Counterintelligence Training and Awareness Program - Provide 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	

<p>10.1.2 Counterintelligence Investigations Program - Implement and manage an effective counterintelligence investigations program that addresses the latest specific threats through the investigation and assessment of any suspicious activities that may occur during contacts between NNSA employees and persons from sensitive countries or international terrorist organizations.</p>	<p>Outstanding</p>	<p>Agree</p>	
<p>10.1.3 Counterintelligence Information and Technologies Program - Implement and manage a counterintelligence information and special technologies program capable of identifying and mitigating cyber-based threats against NNSA.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>(b)(7)(e)</p>
<p>10.1.4 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</p>	<p>Outstanding</p>	<p>Agree</p>	<p>(b)(7)(e)</p>

of Homeland Security, and other elements of the U.S. intelligence community.			
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Other Considerations
None.

PERFORMANCE OBJECTIVE 11 – CONTRACTOR ASSURANCE SYSTEM

Performance Objective #11 – Provide evidence of the effectiveness, compliance and institutionalization of the Sandia Contractor Assurance System.

Adjectival Rating	Numerical Score
Good	84

Summary of Performance

Sandia has implemented a Contractor Assurance System (CAS) through their Integrated Laboratory Management System (ILMS). This is Sandia's third year of implementing and operating under the ILMS. The framework of Sandia's ILMS is responsive to the primary requirements presented in clause H-3, *Contractor Assurance System*, of the contract. Significant improvement was made in several areas during FY06. These areas include: improvements to the Sandia Issues Management System, Corrective Action Tracking System, and the Enterprise Risk Management System; launch of a new strategic planning process; and implementation of a new program to drive line self-assessments throughout Sandia. However, the delay in issuing the new strategic plan resulted in a delay in the data analysis and management review of most Sandia Strategic Management Units and Divisions risk assessments into October 2006, which is outside of the period of performance. Posting to the ILMS Web site of the evidence was also delayed into October/November. Additionally, although a new program to drive line self-assessments was launched, Sandia has determined and NNSA agrees that improvement is needed in the rigor and robustness of the self-assessment program in order for the self-assessments to be able to predict future performance. Additionally, corrective actions were not always effective or enduring. Sandia has identified the need to improve their corrective action development and tracking and implementation. Furthermore, Sandia has identified corrective actions and is tracking completion of these through their Corporate Issues Management System and Corrective Action Tracking System. The ILMS has matured but continuous improvement is required in order for Sandia to self-identify and correct problems before they become systemic. Consistent implementation of ILMS and its associated systems is needed in order for both Sandia to realize the improvements in operations and performance that can stem from this system, and enable NNSA to be successful in its redesign of its oversight of Sandia programs and operations.

Significant Accomplishments

- ✓ Sandia has continuously improved the ILMS and its many underlying processes, procedures, and tools. Improvements that have been made during FY06 are presented below:

- Refinement of the Enterprise Risk Management System through the issuance of CPR 001.3.13, *Enterprise Risk Management*, which has been implemented in all but one of Sandia's Strategic Management Units and Divisions (Integrated Enabling Services);
- Updating of the ILMS Corporate Policy Statement Requirement No: CPSR001.3 to codify many of the changes that have been made to this system during the past year and better define the roles and responsibilities for ILMS implementation;
- Redesign of the Sandia Strategic Planning process;
- Improvement in the Sandia Corporate Issues Management Process to provide clear guidance to the Issues Management Board (a review of the Issues Tracking report reveals that corrective actions to significant issues were being tracked);
- Revision of the Sandia CPR 001.3.10, *Corporate Self-Assessment Process*, to specify corporate-directed self-assessment requirements;
- Revision of the Sandia CPR 001.3.11, *Corporate Corrective Action Process* to clarify roles and responsibilities for corrective actions as well as identifying and tracking corrective actions;
- Updates to the Corporate Comparison Activity Process, through a revision to CPR 001.3.12 to include a comparison activity form to assist line-organizations in capturing data from comparison activities;
- Sandia has moved from approximately 18 corrective action tracking systems to the corporate Corrective Action Tracking System tool. This is not only a cost-effective measure but it also provides Sandia and NNSA with a better tool to track and trend actions taken to correct identified deficiencies;
- ✓ Sandia leadership involvement in assessing Sandia-wide performance has been demonstrated through the annual performance assessment as well as the Quarterly Performance Reviews by the Laboratory Leadership Team (LLT).
- ✓ Completion of significant benchmarking activities to drive improvement in processes, procedures and systems include: (1) the completion of the Hackett Group Benchmark Study of 45 discrete General and Administrative functions; (2) a comparison study of ILMS to other industry management systems to include IBM, Pacific Northwest National Laboratories, Bechtel Nevada, and Lockheed Martin Corporation; (3) a comparison of the Sandia Performance Evaluation Plan processes and procedures with other U.S. Department of Energy laboratories and facilities; and (4) use of expert panels/review teams to improve Red Storm operations.

Opportunity for Improvement

- ✓ Although Sandia's ILMS Corporate Policy Statement Requirement (CPSR) No. CPSR001.3 requires annual risk assessments. SSO was not provided with evidence by which we could validate the completion of risk assessments by most Sandia divisions and strategic management units during FY06. The delay in performing the risk assessments was a result of the redesign of the Sandia Strategic Planning Process. Posting to the ILMS website of the evidence was also delayed into October/November

which was not within the period of performance.

- ✓ The Sandia self-assessment program is not providing Sandia or NNSA with reliable data that provides insight into the health of Sandia programs. With the implementation of the Policy Area Self-Assessment (PASA) program, Sandia implemented a self-assessment program that directed line organizations to perform self-assessments using provided checklists. Although literally thousands of self-assessments were performed, the quality of the self-assessments and associated checklists need to be improved. Improvements need to be made in analyzing the data that stems from the self-assessments (e.g., tracking and trending) and from that data identifying corrective actions to address systemic problems.
- ✓ Corrective actions need to be implemented in a timely manner as well as validated to ensure that they provide enduring solutions. Sandia has acknowledged that improvement in these areas is needed and is working to continuously improve these processes.
- ✓ There remains wide variability in the robustness of Sandia performance indicators. While there are organizations that have both leading and lagging performance indicators, some organizations still do not have any performance indicators and others are in need of improvement. Performance indicators are required by the ILMS CPSR; for instance, several of the Sandia Policy Areas cited performance indicators that were not measurable or did not exist.
- ✓ Performance data is not always being shared with NNSA in a timely manner. Sandia has determined that ILMS performance data and requirements will be posted on the ILMS website which is located on the Sandia Restricted Network (SRN). In reviewing the data that was presented in the Sandia Performance Evaluation and Assessment Report (PEAR), NNSA found data that would be helpful in providing insight as to the health of Sandia programs. However, this data was not posted to the ILMS. Additionally, it is apparent that portions of the ILMS website are not being updated on a routine basis. For example, the "What's New" link has no data posted after August 2, 2006. Timely communication of performance data is critical to NNSA altering the manner in which oversight is being performed.

Performance Measure 11.1

Institutionalize the Integrated Laboratory Management System (ILMS) and demonstrate continuous improvement of processes and tools.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
11.1.1 Sandia Contractor Assurance System (CAS) provides data and information to NNSA to enable NNSA oversight to	Good	Agree	NNSA continues to have problems in accessing some of Sandia's performance data. This problem appears to be stemming from two issues: (1) performance data is not being posted in a timely manner; and/or (2) Sandia authors did not contemplate NNSA usage of this data when the web-file share document was developed. Some access problems have been further exacerbated by the remote access that SSO

<p>focus on evaluating systems and performance rather than transactions.</p> <p>11.1.1.1 Improve the tools that provide electronic access to assurance information, e.g., subscription service.</p> <p>11.1.1.2 Demonstrate how SSO has been provided with notification of and access to assurance and performance data throughout the year.</p>			<p>must use to access the Sandia Restricted Network. Additionally, immediately after all of SSO was trained on how to access performance data in the Assurance Information System, Sandia completely redesigned their website.</p> <p>Sandia has improved many of the tools on ILMS to include the Issues Management System, Corrective Action Tracking System, and Issue Management and Quality Improvement Process (IMQIP). Additionally, individuals with access to the Sandia SRN can subscribe to updates to the ILMS. Sandia did add a "What's New" link to the ILMS website. However, this feature is only useful if it is updated and maintained. No new items have been added to the "What's New" link since August 2, 2006.</p>
<p>11.1.2 Demonstrate how Sandia is compliant with the CAS provisions of the contract.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates Sandia's performance at Good.</p> <p>Sandia mapped out H-3 clause requirements to CAS requirements and provided a letter to SSO on how execution would work, and the Board of Directors (BoD) has approved Sandia's CAS. With the update to the system description as presented in the Sandia CPSR, the BoD will have to approve these changes. The Governance Committee of the BoD has recommended approval of the updated CPSR; and, based on this recommendation, the CPSR revision was released prior to year-end.</p> <p>Sandia continues to have a problem with rigorous risk-based credible self-assessments and identifying negative performance or compliance trends before they become significant issues.</p>
<p>11.1.3 Demonstrate how Sandia is effectively managing issues as evidenced by issue identification, tracking, resolution, and escalation to management.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates Sandia's performance at Good.</p> <p>Sandia has made improvements to the Corporate Issues Management Process, i.e., issues that are identified are sent to the Corporate Issues Management Board to determine if they should be managed via the Corporate Issues Management process and status is tracked until closure. However, it is not evident what happens to those issues that are not elevated. The system may be known by Sandia management but it is not evident that the system is used by all management.</p>

Performance Measure 11.2

Demonstrate that implementing ILMS results in improved laboratory management.			
Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>11.2.1 Demonstrate measurable improvements, e.g., cost, schedule, performance, productivity, and/or assurance, resulting from comparison studies, benchmarking, and/or assessments.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates Sandia's performance at Good.</p> <p>Sandia has performed many comparison studies that have or will result in improvement in: (1) cost (Hackett); (2) performance (Red Storm expert panel reviews, Combustion Research Facility Advisory Committee, Purchasing Training comparison study); and (3) assurance (ILMS comparison study and business rules comparison study). However, Sandia continues to include many items in the PEAR, such as attendance at conferences and informal information exchanges that do not drive measurable improvements in corporate performance. For example, one study presented cited an anticipated improvement of beneficial relationships. Additionally, sharing of the results of comparison studies needs to be improved. Personal interviews of Sandia managers during performance validation and researching data on the Sandia SRN indicates that a significant portion of the comparison studies and self-assessments conducted are not centrally posted nor accurately measured for corporate improvements.</p>
<p>11.2.2 Demonstrate that Sandia self assessments comply with all applicable requirements and are robust, rigorous, risk-based, and effective, as demonstrated through; independent assessments, performance metrics, and a reduction in externally identified findings and repeat findings.</p> <p>11.2.2.1 Issues and corrective action requirements are</p>	<p>Good</p>	<p>Disagree</p>	<p>NNSA rates Sandia's performance at Satisfactory.</p> <p>Sandia has made significant progress in developing and implementing a corporate-driven self-assessment program. As part of this effort, each line-organization will implement risk-based self-assessment programs in ES&H in FY07. Institutional assessments will be on an as needed basis. The evidence provided by Sandia in the PEAR and data presented on the PASA web page indicates that thousands of self-assessments were performed during FY06. However, there is no indication as to how this data has been synthesized in a manner that can be used to improve performance, and therefore it is unclear to NNSA as to how these self-assessments are being used to improve Sandia performance. Additionally, as this is the first year of implementation of the PASA, Sandia is unable, at this point in time, to demonstrate that the self-assessments are rigorous, risk-based, and effective as demonstrated through independent assessments and a decrease in the number of externally identified and repeat findings.</p> <p>Sandia has also acknowledged, and NNSA agrees,</p>

<p>implemented and appropriate follow-up, trending, and tracking occurs; resulting in improved Sandia performance.</p> <p>11.2.2.2 Self-assessments are being used to improve performance at all levels and throughout Sandia organizations and facilities.</p> <p>11.2.2.3 SSO is provided with formal status reports by May 31, 2006 and August 31, 2006, that delineate how self-assessments are being used throughout SNL to improve performance. The report will include an overall summary of performance, a summary of key strengths and opportunities for improvement that have been identified through the SMU, policy area, and division self-assessments; and identify significant areas of non-compliance and how those areas of non-compliance are being addressed through corrective action.</p>			<p>that improvement in the timely development and implementation of robust corrective actions is required. Currently, corrective actions do not provide enduring solutions to identified problems. However, improvement in the Corrective Action Tracking System and elimination of many other tracking systems will enable Sandia to provide for appropriate follow-up, trending and tracking of corrective actions, which should result in improved Sandia performance.</p> <p>A significant improvement this year is that self-assessments are being performed throughout Sandia. With the implementation of the PASA program, self-assessments are being performed by both policy and line-organizations.</p> <p>Sandia provided SSO with formal status reports as required. The status reports addressed all required elements and acknowledged that continuous improvement is required in order for the self-assessments to meet Sandia performance expectations.</p>
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<p>11.2.3 Demonstrate that key performance metrics and/or indicators are developed for key systems and programs and are used to manage the laboratory, e.g., they are reviewed by executive management, drive actions, and produce improvements.</p>	<p>Good</p>	<p>Agree</p>	<p>There remains wide variability in the robustness of and use of performance indicators by Sandia. Where there are organizations that have both leading and lagging performance indicators, many organizations still do not have a comprehensive set of leading and lagging performance indicators. Performance indicators are required by the ILMS CPSR. For instance, several of the Sandia Policy Areas cited performance indicators that were not measurable or did not exist. However, Sandia has developed key metrics in some of the Operations and Policy areas such as finance, human resources, procurement, property, and ES&H. Many of the performance metrics at the operational level are linked to the Vital Few (leading and lagging indicators) that are reviewed quarterly by LLT. Some of these metrics are posted on ILMS, but others are not. The corrective actions on any adverse issues or findings from those metrics are being tracked in the Corporate Issues Management site on ILMS. Focused improvement is needed in the development of performance indicators.</p>
<p>11.2.4 In accordance with the Sandia Strategic Planning Five-Year goal for Laboratory transformation, develop a plan that presents the strategy and path for certifying the SNL management system(s). Implement those applicable elements during FY06. The plan will address: Scope of certification – e.g., the laboratory management system (ILMS) versus sub-systems (ISMS, ISSM, EMS). Timing of certification activities Selection of certification standard(s) e.g. ISO, VPP, Responsible Care. Engagement of</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia has met all targets and is on schedule to achieve ISO 9001 certification of the ILMS by FY09.</p>

consulting firms Use of comparison studies.			
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Other Considerations
None.

PERFORMANCE INCENTIVE 1 – SPECIAL NUCLEAR MATERIAL REMOVAL

Performance Incentive #1 – Special Nuclear Material (SNM) Removal

Adjectival Rating	Numerical Score
Good	85

Summary of Performance

Sandia made significant progress in the removal of Special Nuclear Material (SNM) from SNL in FY06. Sandia met four of the five performance targets for FY06. This effort required Sandia to successfully coordinate a wide variety of actions among SNL and other DOE and NNSA sites, and external entities. Early in the SNL removal planning process, Sandia did not execute a critical step for the completion of a termination of safeguards and was not able to complete the offsite shipment of Moten Pool (MP)1 and MP2 during FY06. However, Sandia worked with SSO, NNSA-HQs, and the receiving site to obtain the termination. Sandia also proactively scheduled another material movement while awaiting the termination. Sandia is leading the Nuclear Weapons Complex (NWC) in the SNM de-inventory effort as processes are created for the first time.

Significant Accomplishments

- ✓ Sandia successfully removed two [Molten Pool Experimental Scrap and Highly Enriched Uranium (HEU) calibration standards] of the three materials scheduled for FY06.
- ✓ In anticipation of shipping the sodium debris bed material in FY07, Sandia developed a Safety Assessment Report Packaging (SARP) for the Nuclear Assurance Corporation (NAC) Light Weight Targets (LWT) cask/canister system. Completing this task puts Sandia ahead of schedule for the shipment of the material.
- ✓ Y-12 has been contracted by Sandia to develop a SARP for the DT23 containers that will be used to ship Sandia Pulsed Reactor (SPR) fuel off-site in FY07.
- ✓ SSO and Sandia have teamed in this project to aggressively resolve challenging issues.
- ✓ Sandia is the first in the NWC in removing SNM and is providing lesson learned to others in the complex.

Opportunity for Improvement

- ✓ Sandia must ensure that all aspects associated with disposition of material are addressed to prevent delays in critical schedule activities. In particular, Sandia should ensure that all necessary stakeholders (i.e. NNSA/Sandia Subject Matter Experts (SMEs), other government entities, other sites, and all other stakeholders) and activities (i.e. termination of safeguards, and safety basis) are integrated into the overall project plan.

Performance Measure 1.1

Implement the overall plan for SNM at SNL for disposition and removal of the groups of SNM material identified below that roll up to Category I/II security levels. Sandia recognizes that this plan has risk, but Sandia is being challenged by NNSA to achieve this schedule.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.1.1 The Molten Pool Experiment Scrap material will be processed for sorting, characterization, and repackaging in Department of Transportation-compliant containers. Final characterization review will confirm that the material meets NTS acceptance criteria.	Outstanding	Agree	Sandia received the Termination of Safeguards and successfully shipped offsite the Molten Pool Experimental Scrap material on September 26, 2006.
1.1.2 The MP-1 and MP-2 packages will be removed from the Dense Pack storage location and processed individually.	Satisfactory	Agree	Sandia initially failed to identify the need to obtain termination of safeguards for both Molten Pool and MP-1 and MP-2 packages. By the time Sandia acquired the termination of safeguards for the affected materials, Sandia was only able to complete the offsite shipment of Molten Pool in the fiscal year as required. Sandia did not begin processing MP-1 and -2 in FY06 because of changes in MC&A policy that had the potential to require moving additional material into the TA-V PIDAS. This and lack of a definitive disposition path caused a six-month slip in beginning processing of this material. There has been an additional three month slip in moving the material to Radioactive Mixed Waste Management Facility (RMWMF) because of other work activities scheduled at the RMWMF. Sandia is anticipating that one can in the MP-2 package may contain mixed waste. This will not be confirmed until the material is removed from storage and characterized. Sandia anticipated needing a special disposition path for this material, and ensured that the Nevada Test Site (NTS) mixed waste site was included in the NTS Vulnerability Assessment (VA). NTS/RWMC can accept this material if it is determined to be mixed

			waste.
1.1.3 HEU calibration standards will be shipped directly to Y-12 CMSO for final disposition.	Outstanding	Agree	The material was successfully shipped to Y-12 for final disposition on September 11, 2006.
1.1.4 Sandia will contract with Idaho National Laboratory (INL) to determine the processing issues and associated costs for treatment of the Sodium Debris Bed Materials. If agreement is reached with the concurrence of NNSA/SSO and HQ, Sandia will work with INL on a disposition schedule and a transfer of ownership and shipment will be arranged between Sandia and INL. Although direct shipment of the Sodium Debris Bed materials to INL is the preferred path, Sandia will develop and submit a project plan for interim staging of Sodium Debris Bed Materials, SPR fuel plates, and Plutonium (Pu) sources at NTS/DAF until final disposition of these materials is determined.	Outstanding	Agree	Sandia contracted with Idaho National Laboratory (INL) for performance of this target in April 2006. INL is in the process of determining issues and costs associated with the treatment of the Sodium Debris Bed. Sandia has met with INL and the work is progressing on schedule with no setbacks at this time.
1.1.5 A revised project plan will be submitted to SSO by end of 2Q FY06.	Outstanding	Agree	Sandia submitted a revised project plan on March 2006.

Other Considerations

None.

PERFORMANCE INCENTIVE 2 – SAFEGUARDS AND SECURITY PROGRAMS

Performance Incentive #2. Systematically and continuously improve the management and execution of the Safeguards & Security (S&S) program at Sandia resulting in a sustained, effective S&S program.

Adjectival Rating	Numerical Score
Good	88

Summary of Performance

NNSA has determined that Sandia S&S has successfully met most of the performance expectations for the four evaluated areas for this incentive for FY2006. Sandia's performance under this incentive was evaluated taking into consideration the following: (1) performance assurance activities (i.e., self-assessments) that covered all S&S topics and subtopics; (2) discovery of significant or repeat finding; (3) implementation of S&S assurance activities at the line organization level; and (4) implementation of HSPD-12.

It was determined that Sandia's performance assurance activities, particularly S&S self-assessments, were based on a good approach and technically sound deployment. However, in some cases, the results of these assurance activities were not as effective as desired. The Calendar Year 2006 Self-Assessment schedule was evaluated and it did address each of the required topics and subtopics. At the conclusion of the performance period, several assessment activities were scheduled but had not yet been completed. Some scheduling difficulties associated with the combined assessment efforts between Organization 4200 and Organization 12870 were also observed.

Sandia has experienced several issues in various elements of the S&S program that have been detected during SSO oversight activities to includes inspections that indicate a degradation in performance in some elements of the program that have not been detected by Sandia's internal performance assurance mechanisms, i.e., self-assessments. During several SSO oversight and survey activities throughout the performance period, significant findings, and in a couple of cases, repeat findings, were identified subsequent to Sandia self-assessment activities in the same program elements. The most notable instance involved the SSO S&S Survey of TTR which resulted in several rating impacting findings and the need for a recovery plan to ensure deficiencies were corrected at TTR prior to the next scheduled SNM operation.

Sandia was successful in expanding its S&S assurance activities to include line operations and activities to include vault-type rooms, temporary limited areas, and classified subcontractor operations. Most (97 percent through the third quarter) of the scheduled line assessment activities were completed on time.

During this performance period Sandia was able to implement each of the requirements under the current limited implementation guidance for Homeland Security Presidential Directive (HSPD)-12. Sandia successfully piloted the use of 1100 SMART Cards and 400 2-factor authentication tokens as part of this element. Sandia has also made appropriate modifications to affected systems to facilitate limited scope implementation of PIV-1 as directed by DOE Headquarters and continues to pursue the implementation of Shared Service Provider stations expected to come on line in early 2007.

Sandia has also provided the SSO with evidence packages for the completion of action plans associated with five of the twelve Management System Standards (MSS) for S&S. The evidence packages for the remainder of the open MSS's are due to SSO in either October or December 2006. All action plan milestones, at the conclusion of the performance period were either on schedule or in some cases ahead of schedule for completion.

Overall, it was determined that Sandia's S&S performance assurance practices and processes are being implemented and managed in a manner that meets performance expectations for a Good rating.

Significant Accomplishments

- ✓ The assessment of Reinhold Industries by S&S Assurance Department resulted in a line-directed stand down of classified operations until all deficiencies are addressed by Reinhold. The survey report identified eight findings, two Opportunities for Improvement, and one "strength". This action, as a result of a S&S self-assessment activity, demonstrates the early stages of change in the overall performance assurance process.
- ✓ Sandia's Corporate Process Requirement No: CPR400.3.20, *Safeguards and Security (S&S) Line Self-Assessment*" was developed on August 1, 2006. This document conveys requirements and guidance associated with planning, conducting, and follow-up of S&S-related line self-assessments, and is consistent with requirements in S&S-related DOE directives and CPR001.3.10, *Corporate Self-Assessment Process*. This is considered a significant accomplishment since it represents the first time that a CPR has been developed, approved, and implemented in a manner that focuses on continuous improvement in S&S at the line organization level.

Opportunity for Improvement

- ✓ Lack of Timeliness of Reports and Corrective Action: For assessment reports issued during the survey period, the number of days from the date the self-assessment concluded until the date of approval of the report ranged from 1 to 186 working days, with an average of 52 working days. An area of concern was that pertinent data, both findings and opportunity for improvements (OFIs), were not communicated in a timeframe that allowed them to be addressed in a timely and effective manner.
- ✓ Sandia must improve their ability, through strong performance assurance activities and program management activities, to use program performance data to identify leading

indicators and trends so that potential issues and concerns associated with S&S performance can be remediated before they result in a security breach or an interruption to facility operations that results in a delay in meeting programmatic milestones.

Performance Measure 2.1

Sandia's S&S Self-Assessment program provides both Sandia management and SSO with critical information allowing them to determine the status of S&S performance and compliance against applicable S&S program order requirements. Additionally, the Self-Assessment program will provide data regarding the effectiveness and sustainability of completed corrective actions.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>2.1.1 S&S sub-topical self-assessments will be completed per the negotiated annual schedule. The scope will be developed by Sandia and negotiated with SSO based on emerging issues, risks, and line implementation data. The scope of the self-assessment will also include an assessment of the sustainability of corrective actions for findings closed during the assessment period.</p>	<p>Outstanding</p>	<p>Disagree</p>	<p>NNSA rates Sandia's performance at Good.</p> <p>Schedule: NNSA's observation regarding the calendar year 2006 Sandia self-assessment schedule was that a complete and comprehensive scheduling document was prepared and used by Sandia S&S. The Sandia S&S self-assessment program is operated on a calendar year schedule. At the end of this performance period, only three quarters of data were available (January through September 2006).</p> <p>During the performance period, Sandia began integrating performance and compliance assessments driven by Organization 12870 into the S&S organizations self-assessment schedule.</p> <p>To date, using data provided by Sandia, NNSA has determined that at SNL/NM, 22 scheduled activities that formed multiple self-assessments have been completed. According to the data, only six reports have been completed. The completed reports cover: barriers and delay mechanisms; nuclear material accountability; S&S awareness program; unclassified foreign visits and assignments; human reliability program and physical security. NNSA understands several other reports are pending for self-assessment activities previously completed. NNSA also understands that there are approximately ten self-assessments that are due to be completed by the end of this calendar year and are primarily in the topics of Program Management and Support and Protective Force.</p> <p>Timeliness of Reports and Corrective Action: For assessment reports issued during the survey period, the number of days from the date the self assessment concluded until the date of approval of the report ranged from 1 working day to 186 working days, with an average of 52 working days. An area</p>

			<p>of concern was how pertinent data, both findings and OFIs, had not been communicated in a timeframe that allowed them to be addressed in a timely and effective manner.</p> <p>Sustainability: Sandia's performance assurance process for S&S includes an attribute that requires periodic testing of corrective actions for previously closed findings on a random and sampling basis. A review of Sandia's performance in this element revealed that this important attribute of the assurance process only occurred three times during the performance period. The retests covered HRP removals, Protective Force security keys, and security badges at the Tonopah Test Range.</p>
2.1.2 Sandia will refine its self-assessment program to focus on development and implementation of self-assessment tools. The line will use the tools to assess their performance of corporate security program requirements.	Outstanding	Agree	<p>Line self-assessments covering the following areas were completed in August 2006: Management – 12 assessments; MC&A – 1 assessment; Temporary Limited Areas – 1 assessment; vault type rooms - 1 assessment; and Cyber (Cyber Security System Officer review) – 43 assessments. The appropriate self-assessment tools were utilized. A completion rate of 97 percent was noted for the end of the third quarter. The Sandia self-assessment schedule is based on a calendar year; therefore, the results for the fourth quarter are not available.</p>
2.1.3 Effectiveness of Sandia's self-assessments will be evaluated to determine the identification of leading indicators of potential failures throughout the subtopics/topics of the overall S&S program.	Outstanding	Disagree	<p>NNSA rates Sandia's performance at Good for this target based on the data presented below.</p> <p>The results and overall effectiveness of the Sandia S&S self-assessment program were evaluated and while significant improvement has been made, there is still more work to be done in this important program element. Sandia is struggling with the prospect of identifying and effectively using appropriate leading indicators.</p> <p>At the time of the NNSA survey of the self-assessment program, five previously identified findings associated with the self-assessment program itself were identified as open. NNSA is in the process of validating evidence packages and corrective actions for two of the five findings. The open findings included:</p> <p>Finding No: SSO2003-SNL-NM-CMPC-008 Finding Description: Sandia-NM's self-assessments for several years were ineffective in identifying a significant deficiency in the protection of Secret Restricted Data (SRD) classified parts in non-</p>

			<p>standard storage.</p> <p>Finding No: SSO2005-SNL-NM-CMPC-001 Finding Description: Sandia-NM Classified Matter Protection and Controls (CMPC) self-assessments have been ineffective in identifying a number of significant deficiencies in the control of classified matter.</p> <p>Finding No: 03DEC05-AL-501-SSPS-PM.1-002 Finding Description: Sandia has not ensured that an effective self-assessment program has been fully developed and implemented for the S&S programs at SNL/NM.</p> <p>Finding No: 03MAY03-AL-0501-SPEC-PM.7-001 Finding Description: Sandia's S&S self-assessment program does not include line implementation, therefore, does not meet the requirement of DOE Order 470.1 which requires that the self-assessment "include a review of all applicable DOE F 5634.1 topical and sub-topical areas of the facility's S&S program/system."</p> <p>Finding No: SSO2003-SNL/NM-PPM-001 Finding Description: Sandia-NM has not established a self-assessment program with all the elements required to support its use as an organizational management feedback tool as observations are also used in lieu of findings.</p> <p>Additionally, the following finding was assessed during the NNSA survey:</p> <p>Finding No: 06SEP30-SSO-501-SSPS-PMS.7-001 Finding Description: The S&S Self-Assessment Program is being negatively affected by use of Department 12870 in performing audits; Department 12870's duplication in audit efforts, and failure to adhere to audit schedules and resulting deliverables has negatively affected Sandia's S&S Self-Assessment Program and other programs within the S&S Center.</p> <p>NNSA took into consideration the timing of the Sandia-directed, self-assessment activities in areas also surveyed by NNSA during the performance period. NNSA further considered whether the assessment was conducted by the S&S Organization or Department 12870. NNSA considered the six completed self-assessment activities mentioned above in a simple analysis. The results of this analysis revealed that in three of the six assessments, which were completed in advance of</p>
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			the survey activities in the same topics/subtopics, the NNSA ratings were lower due to more significant deficiencies being discovered by NNSA. Additionally, the results of the surveys conducted by NNSA at remote sites and subcontractor facilities are also indicative of the need for improvement.
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Performance Measure 2.2

Sandia will demonstrate continuous improvement of the S&S Program through the use (by both the program owners and S&S Assurance) of metrics gathering, evaluation of the measures, identification of acceptable quality levels, corresponding statistical sampling plans, corresponding control charts for key subtopical program areas, and identification of leading and lagging indicators.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.2.1 During FY06, Sandia will: begin line implementation of defined program improvements and/or process changes identified during FY05 analysis of data and trends; and introduce to the line the established set of measures related to their implementation of security policies and processes.	Outstanding	Agree	
2.2.2 During FY06, Sandia will work with program owners and the line to establish acceptable quality levels (AQLs), corresponding statistical sampling plans, and control charts for key subtopical program areas.	Good	Agree	Sandia's initial goal for this performance period was to establish AQLs for all topical/sub-topical areas. After working with line managers during the second and third quarters, Sandia determined that the appropriate means for measuring success was to identify Acceptable Performance Levels (APLs). In the third Quarter, Sandia embarked on the development of APLs and by the end of the fourth Quarter, 80 percent of APLs had been developed. Under Performance Measure 2.2, Sandia noted that although the APLs are not 100 percent complete, all managers have completed measures within their respective departments and are tracking performance. In addition, the design of the S&S dashboard measures a cumulative rating of each subtopical area from eight different criteria; one of which is metrics. If APLs are not developed, the rating for the metrics criteria is downgraded, and

			<p>each subtopic that receives an orange or red rating shows up on a special "key issue" screen and is also required to identify what is being done to address the situation. So in effect, each subtopical area is identified as having insufficient performance if they have an orange or red rating determined from eight different criteria.</p> <p>Reviewing Sandia's performance for meeting this criterion during FY06 indicates that this process has been affected by:</p> <ul style="list-style-type: none"> • line managers' inability to meet the initial completion date of March 17, 2006 for developing AQLs; • the change to the number and distribution of topical and subtopical areas that hindered progress in development of metrics-associated management tools; and • the limited availability of historical data (line self-assessments) control charts for all topical/subtopical areas that could not be completed.
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Performance Measure 2.3

Sandia will work with the NNSA, DOE, and other Federal Agencies to develop solutions to meet the technical and policy requirements of the Homeland Security Presidential Directive-12 (HSPD-12). The Cyber Security group will provide Sandia's Principle Investigator (PI) to coordinate both the cyber and physical security aspects of the directive effectively...

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.3.1 Sandia will be an early adopter of the cards and technology being considered to support HSPD-12. The existing efforts and lessons learned from the Integrated Cyber Security Initiative (ICSI) will be leveraged as much as reasonably possible.	Outstanding	Agree	
2.3.2 Initialize a coordinated effort between the PI, Sandia's badge	Outstanding	Agree	Sandia has fully implemented current Personal Identity Verification (PIV)-1 requirements. Each new employee, consultant, and subcontractor (as of October 27, 2005) who will be processed for a DOE

<p>office, and other affected departments to ensure Sandia's compliance with (PIV-I) defined in the Federal Information Processing Standard – 201 (FIPS-201). This standard was generated as a result of HSPD-12.</p>			<p>access authorization is required to meet PIV-1 requirements.</p> <p>Validation of the practices and processes for implementation of PIV-1 requirements occurs on a weekly basis when the NNSA Service Center provides reports of "favorable HPSPD-12" submissions.</p>
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Performance Measure 2.4

Management Systems Standards (MSS) Execution – Perform effective implementation of MSS.			
Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>2.4.1 Sandia will meet all milestones and deliverables specified in the Management Systems Standard (MSS) action plans.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia has demonstrated its ability in this area by continuing to make progress towards completing milestones within the defined schedules. Sandia has completed seven MSSs (MSS: 0, 2, 4, 5, 7, 8, & 12). The remaining MSSs (MSS: 1, 3, 6, 9, & 10) are ahead of schedule and are at least 90 percent complete. Sandia has submitted five of the completed action plans to SSO for validation and is in the process of compiling evidence files for the remaining completed action plans</p> <p>The MSS closure process being utilized was developed in the third quarter. Sandia's continued progress in meeting its objectives of the action plans is evidenced by a recent Inspector General audit which concluded: "Based on Sandia's continuing efforts to complete corrective actions, as well as the results of recently completed OA and SSO reviews of Sandia's progress, we are not making recommendations at this time." Overall, Sandia is on or ahead of schedule for completing the activities associated with the MSS action plans that remain incomplete at this time.</p>

Other Considerations

None.

PERFORMANCE INCENTIVE 3 – SMALL BUSINESS UTILIZATION

Performance Incentive #3. Exceed the Sandia goal for Small Business utilization in FY06 without jeopardizing mission objectives.

Adjectival Rating	Numerical Score
Outstanding	100

Summary of Performance

Sandia is commended for their performance under PI-3. They worked aggressively to increase their small business utilization with no impact to mission objectives. This was accomplished through successful communications which heightened awareness of the value and importance that the small business plays in Sandia's mission as well as our economy. Sandia exceeded the proposed FY06 Small Business goal of 47 percent by approximately 6.1 percent without hampering the accomplishment of mission objectives for FY06. Preliminary data indicates that Sandia may have the highest small business achievement in the NNSA complex.

Significant Accomplishments

Sandia was diligent in reviewing their procurement methods and procedures to look for process improvements that would enable them to increase the amount that is awarded to small businesses. The total procurement spend (excluding foreign and affiliate procurements) for FY06 was \$936,891,530. Of this amount, small businesses were awarded 53.1 percent or \$497,946,014, which exceeded the overall goal of 47 percent.

Opportunity for Improvement

Sandia's small business achievement is notable. However, although not required for this Performance Incentive, it is noted that Sandia did not meet goals for all small business subcategories in FY06.

Performance Measure 3.1

Sandia will exceed the FY06 Small Business utilization goal. The amount of the fee awarded will be tied to the amount by which Sandia is able to exceed the goal. Sandia will provide a comprehensive end-of-year report that identifies the efforts taken to develop new opportunities.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.1.1 The percentage of small business utilization at the end of FY06 shall be greater than 47%.	Outstanding	Agree	

Other Considerations

None.

PERFORMANCE INCENTIVE 4 – INTEGRATED SAFETY MANAGEMENT SYSTEM IMPLEMENTATION

Performance Incentive #4 . Demonstrate Integrated Safety Management System (ISMS) Implementation

Adjectival Rating	Numerical Score
Satisfactory	79

Summary of Performance

NNSA's overall rating for this Performance Incentive that measures Sandia's progress in *Demonstrating Continuous Improvement in the Integrated Safety Management System* is Satisfactory. While Sandia has made progress in several important areas such as implementing line self-assessment, meeting Safety Basis Improvement Plan (SBIP) milestones, and rolling out the Environmental Management System (EMS), there is significant room for improvement in areas such as improving work planning and control, complying with environmental requirements, and developing Integrated Safety Management (ISM) related systems for improving operational performance.

Sandia met 89 percent of Best-in-Complex Integrated Safety Management System (ISMS) milestones, nearly all SBIP milestones, and greater than 80 percent of the emergency management planning milestones. As identified as an accomplishment below, this year Sandia management has become more engaged in efforts to improve Environmental, Safety, and Health (ES&H) performance. However, as identified as an opportunity for improvement below, there is a need for better focus, clarity, and inclusion of all critical Best-in-Complex related ISMS activities. Also, the Behavioral Based Safety (BBS) program was not implemented in all divisions as originally scheduled.

Sandia continued to improve their Occupational Safety and Health Administration (OSHA) total recordable case rate (TRCR) this year, which is satisfactory based on the established performance criteria. The predicted injury rate for FY06 is 2.5, which is still well above the DOE average of approximately 1.5. This equates to injuring 2.5 out of every 100 workers at Sandia for the year, i.e. requiring doctor's treatment of the injury. While there has been recent improvement in the injury rate, continued management emphasis is needed to prevent injuries (and illnesses).

In conclusion, Sandia will have to make continued significant improvements in the areas of work control, environmental compliance, injury rate reductions, and developing an ISMS related systems, such as effective performance measures, lessons learned, and benchmarking programs, in order to improve their ES&H performance ratings above the Satisfactory level.

Significant Accomplishments

- ✓ Sandia Senior Management has become more engaged this year in improving the Laboratory's ES&H performance. Several examples of increased emphasis on ES&H this year include: Emphasizing safety performance and issues at laboratory leadership meetings, reporting to the Laboratory Director for injuries, issuing the Laboratory Director's ES&H Weekly Report, and involving the line in key ES&H initiatives.
- ✓ There were a total of 30 (level II or equivalent) Safety Basis (SB) documents/activities scheduled in the SBIP for FY06. Sandia completed 26 of these documents/activities for an 87 percent complete of scheduled FY06 SB items. This effort is considered a significant accomplishment when compared to the FY05 efforts in SB.
- ✓ Sandia/CA achieved ISO 14001 certification for their environmental management system which is considered a noteworthy accomplishment.
- ✓ Although in FY06 Sandia received two wastewater violations, Sandia is to be commended on the corrective actions taken to reduce the risk of future violations at Micro-Electronics Development Laboratory. These corrective actions included changes in operational practices as well as physical controls such as installation of berms and new auto dialer alarms.
- ✓ Sandia exceeded expectations in the area of writing environmental program plans. These documents were written in an effort to get programs better documented. The plans describe such things as the program itself, its drivers, the roles and responsibilities, needed resources, budget, targets and planned activities to achieve the targets.
- ✓ Sandia's radiation protection program has proactively implemented work control and self-assessment improvements which greatly enhance the work planning and programmatic health of the program.

Opportunity for Improvement

- ✓ There is a need for Sandia to improve visibility, emphasis, clarity, and communication of Best-in-Complex ISMS projects and other initiatives. The Best-in-Complex Plan was updated this year, but not until June. There is still a need to ensure that the plan includes a logical roadmap, including milestones for all critical ES&H initiatives. Improved communication of the elements of the plan and progress on plan milestones is also needed.
- ✓ While Sandia is continuing to improve their OSHA TRCR, which is predicted to be 2.5 for the fiscal year, the rate is still well above the DOE average of approximately 1.5. (Note to reader, final rate will be inserted)
- ✓ Injury rates for the security/protective force organization are high and could be stressed further by new requirements for fitness. Sandia action, not limited to implementing BBS, may be required if performance is to improve and not deteriorate.

- ✓ NNSA has concerns regarding the lack of environmental planning in the following two primary areas: Long Term Stewardship (LTS) and resource planning.
- ✓ Since early FY03 Sandia has been preparing for the completion of Environmental Restoration (ER) Project activities and the transition of LTS responsibilities from the ER Project to the Sandia Corporate Environmental Organizations. Sandia's lack of planning and failure to properly budget in FY06 for this transition resulted in a year delay of this transfer. On the positive side, Sandia completed a Long Term Environmental Stewardship Program Plan that should provide the framework for a successful transfer by the end of FY07.
- ✓ Several Subject Matter Experts in the area of Air, Water and National Environmental Policy Act (NEPA) have moved, or retired, are planning to retire in FY07, or are eligible for retirement. Sandia is one level deep with extensive experience and corporate knowledge in these environmental compliance functional areas. There appears to be no planning for replacement of these resources. When resources are replaced, NNSA is very concerned that Sandia employees are being replaced by contractors that are unable to adequately represent Sandia in interactions with NNSA and regulators.
- ✓ Work planning and control through the Integrated Work Plan has not been updated (since August 2005) or implemented, nor have Office of Performance Assurance and Assessment (OA) related deliverables been met as originally scheduled (OA CAP #1, Actions 4, 5, and 6). Areas of work planning that need improvement include:
 - Work planning and control processes not fully developed and implemented institutionally.
 - Technical work documents do not adequately analyze hazards and controls at the work activity level.
 - Worker participation/input in the work planning process.
 - Flowdown of requirements to subcontracts.
 - Weaknesses in analyzing hazards leading to lack attention on appropriate controls and has contributed to various occurrences.
- ✓ Other ISMS related opportunities for improvement include:
 - The performance measures/indicators program needs to be improved (e.g., lack of leading indicators).
 - The effectiveness of the use of benchmarking to improve ES&H programs needs to be improved. Poor implementation of ideas or corrective actions.
 - Lack of an effective lessons learned program. Communication of lessons learned needs improvement.
 - Explosives storage deficiencies as identified by the Office of Inspector General during FY06.
 - Need to develop and provide training on occurrence reporting categorization, timeliness of categorization, and corrective action development, in particular for the line organizations.
 - Analysis of safety deficiencies was not broad enough, and should not be limited to only

what is specifically required by DOE directives, but should be based on industry best practices.

Performance Measure 4.1

Sandia will ensure that they continue progress towards the Best-in-Complex/Class via measurable performance milestones. The performance targets provide annual measurement toward the long term implementation of safety and environmental programs.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
4.1.1 Sandia will meet the Best-In-Complex commitments for FY06. In addition, SNL will also accelerate selected FY07 commitments for completion.	Good	Agree	NNSA agrees with the Sandia target summary and rating of good, as 89 percent of the FY06 BIC milestones were met.
..... 4.1.1.a Integrate emergency planning with offsite communities.	Outstanding	Agree 4.1.1.a. NNSA agrees with the SNL target summary and rating of outstanding, as greater than 80 percent of the action plan milestones were met.
..... 4.1.1.b Implement new hire training course.	Good	Agree 4.1.1.b. NNSA agrees with the target summary and rating of good. Sandia made good progress, by training over 1400 new employees. However, NNSA still has concerns ensuring consistent, timely completion of NEO200.
..... 4.1.1.c Complete SBIP documents per Management Plan	Outstanding	Disagree 4.1.1.c. Based on the rating criteria established in the SSO validation plan and the data extracted for the appropriate SBIP Level II milestones, the percent complete of plan milestones for supporting Safety Basis documents is 87 percent complete, for a rating of Good.
4.1.1.d BBS process implemented in remaining divisions	Satisfactory	Agree	NNSA agrees with the Sandia target summary and rating.
4.1.2 By implementing best in complex ISMS activities, Sandia continues to improve their OSHA recordable injury rate on an annual basis. Current goal for CY06 is a TRCR of 2.2.	Good	Agree	NNSA rates this target Good based on the data presented below. The PEP states "Sandia continues to improve" The DOE Computerized Accident Incident Reporting and Recordkeeping System (CAIRS) rates for the last few calendar years were 3.7 in 2001, 4.0 in 2002, 3.1 in 2003, 2.7 in 2004 and 2.5 in 2005. Sandia is <u>currently</u> at 2.5 for the 3 rd quarter of CY06 and is

			<p><u>projecting</u> they will achieve a rate of 2.2 for CY06. The performance recorded thus far has not <i>exceeded</i> the standard of performance (definition of Good). However, Sandia is <u>projecting</u> it will meet the standard.</p> <p>The PEAR (page 187) states, "In the SNL/SSO Performance Standards agreement for the FY06 PEP, the scoring criterion for this target is: Good: • > 2.2 < 2.4. It is difficult to predict what the TRCR rate will be at the end of December 2006, therefore, Sandia prefers to score this target as Good. It is noted, however, that if the present trend continues, the target of 2.2 should be met."</p> <p>Conclusion: Year-to-date performance through September, shows Sandia is at a TRCR of 2.5. If they repeat the much improved performance for the third quarter that averaged a TRCR of 1.8, they should meet the Good criteria of • > 2.2 < 2.4.</p>
<p>4.1.3 Sandia will develop and implement a test module integral to ESH100, which is a mandated training requirement for all employees and has an annual retraining frequency. The test will focus on evaluating employees' knowledge of ISMS principles and be deployed by April 2006. The results of the testing will be used as a baseline for establishing improvement metrics in out years. A status report will be provided at the end of FY06.</p>	Outstanding	Agree	<p>NNSA agrees with the Sandia target summary and rating.</p> <p>Several NNSA Facility Representatives have completed this course, which includes a short exam after each module. They found it to contain the necessary ISMS principles. One detail of the course is that it does capture the concept of change of work scope and the re-evaluation of the hazards. The course is of a good length of time and appears to capture the attention of the student.</p>
<p>4.1.4 With regard to ES&H Self-Assessments, Sandia will:</p> <p>Communicate to the divisions the required topics and schedule for FY06 Line ES&H Self-Assessments;</p>	Good	Agree	<p>NNSA agrees with the target summary and rating.</p> <p>Sandia has made major advancements in the development and implementation of a corporate self-assessment program. They have done a good job of communicating management commitment to the program and providing needed training to the workforce. However, the program has still not reached a point where it is adequately rolling up data and developing issues and insights from the data. This is the critical area of the program and is still</p>

<p>Perform the self-assessments using a standardized process (e.g., approach, timeliness, and appropriate number of self-assessments);</p> <p>Refine its self-assessment program to focus on development and implementation of self-assessment tools; and</p> <p>Demonstrate its self-assessment effectiveness.</p>			<p>under development. Additionally, the program has been in direct response to several DOE OA repeat findings, and strong direction from NNSA and therefore, cannot be considered proactive or timely.</p>
<p>4.1.5 Sandia shall not exceed one "confirmed" externally levied regulatory violation in FY06 and no more than four environmental events requiring reporting to outside agencies that have adverse impact on the environment.</p>	<p>Satisfactory</p>	<p>Disagree</p>	<p>The intent of this metric was to have only one "confirmed" externally levied regulatory violation and no more than four environmental events requiring reporting to outside agencies that have an adverse impact on the environment. In FY06, there were three externally levied regulatory violations and more than one violation makes this target unsatisfactory.</p> <p>In addition to the three violations, there were a total of nine reportable events to outside agencies. At SNL/NM there were eight reportable releases to the environment (ground surface) in accordance with the state of New Mexico Environment Department (NMED) regulation "Environmental Protection Water Quality Ground and Surface Water Protection" section 20.6.2.12.03 Notification of discharge which states "...in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life" There were three oil releases, one wastewater release, and four water related releases. The four water related releases were reported because they either exceeded groundwater standards or contained corrosion inhibitors which discharged to a storm drain, which is considered waters of the U.S. One of the water releases, which first occurred in November 2005 at the Sandia Engineering Reactor Tanks has not been corrected and is still releasing water to the environment that exceeds groundwater standards. This event could still possibly result in another violation and cost millions to correct. At SNL/TTR there was an 88 gallon oil related release that occurred in June 2006, where a closure plan still needs to be submitted to the state.</p>

PERFORMANCE INCENTIVE 5 – EMERGENCY MANAGEMENT

Performance Incentive #5 . Sandia will develop and implement an emergency management system that supports the National Incident Management System (NIMS) and meets the requirements of the DOE comprehensive emergency management system.

Adjectival Rating	Numerical Score
Outstanding	90

Summary of Performance

This particular incentive was developed for the specific purpose of ensuring that appropriate management support was applied to this failing program in a manner that would restore a satisfactory level of compliance and performance to the most broken elements in the shortest and most realistic timeframe possible. The measures under this incentive are very narrow in scope and very specific in purpose and do not take into account Sandia's performance in the overall Emergency Management Program. Sandia was able to demonstrate improvement in these specific elements of its Emergency Management Program by meeting the commitments and goals outlined in this Performance Incentive. While improvements have been made in many elements of the program and the performance trend appears favorable, many of the corrections and improvements are very recent and have not been proven over time. However, Sandia's emergency management program still requires improvement in order to meet NNSA's performance expectations.

Sandia submitted an Emergency Management Program Project Plan in the first quarter of the performance period and continued to use it as a primary management tool throughout the year. NNSA was able to validate that Sandia completed all milestones contained in the plan that were scheduled for completion in FY06. Sandia also met its commitments described in the Emergency Management Staffing Plan to include the training of three newly assigned Emergency Directors as part of the Emergency Response Organization. Most importantly, however, was the effort put forth in ensuring that the approved corrective action milestones for the findings identified in previous Office of Independent Oversight and Performance Assurance (OA) inspections were completed in accordance with approved plans.

Significant Accomplishments

- ✓ Sandia worked cooperatively and proactively with NNSA to develop the corrective action plans to address the findings assessed by SP-43 in the May 2006 assessment. Only eight new findings were identified and none resulted in lowered ratings for the elements reviewed. In fact, the rating related to procedures had been previously identified as a significant weakness and was upgraded to effective performance. The overall trend from

the results of the re-inspection showed a favorable trend toward satisfactory performance in all elements reviewed. Appropriate interim corrective measures were implemented to address the immediate needs of the emergency response organization to ensure safe mitigation of SNL emergency events.

- ✓ Integration with Kirtland Air Force Base (KAFB) was improved by conducting joint training, drills and exercises, and progress is being made toward ensuring an effective, efficient and integrated response.
- ✓ Sandia made significant strides in implementing DOE requirements for an effective Emergency Public Information (EPI) Program. An appropriately located Joint Information Center has been designated and equipped; appropriate personnel have been trained and placed on the emergency public information Emergency Response Organization (ERO); and the EPI plans, procedures and checklists have been tested in various forms of drills and exercises. In addition, NNSA and Sandia have jointly developed a draft Memorandum of Agreement with the City of Albuquerque for use of City facilities to facilitate the Sandia emergency public information response.

Opportunity for Improvement

Despite numerous changes and enhancements to existing practices and procedures, Sandia needs to remain focused on making their self-assessment, lessons learned, and continuous feedback and improvement processes as effective as possible by continuing to manage and execute program activities outlined in the Emergency Management Program Improvement Plan.

Performance Measure 5.1

Sandia completes its planned activities to achieve an emergency management program that is effective, efficient, and compliant with DOE Order 151.1 by demonstrating its ability to respond to and mitigate emergencies.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
5.1.1 Submit the Emergency Management project plan to the Sandia Site Office by November 1, 2005.	Good	Agree	Sandia provided the required documentation to NNSA eight days late. NNSA's review of the document resulted in relatively few and minor comments and feedback which was appropriately acted upon by Sandia. NNSA recognizes that due to the tight schedule resulting from the accelerated re-inspection date, the original plan was put together quickly and as thoroughly as possible considering the time constraints being imposed by NNSA. The original version of the plan did not take into consideration all of the different activities needing improvement. It was quickly overcome by events that caused the need for a re-baselining to ensure the entire program was considered during the recovery process and not just those elements pointed out as needing improvement during the inspections. It is

			<p>important to note that Sandia preserved the originally established due date for FY06 milestones in the revised plan and schedule. None of these dates were extended beyond their original commitments. Sandia was able to continue to work against the plan and schedule while simultaneously revising them to address all of the corrective actions necessary to (1) demonstrate marked improvement during the re-inspection and (2) expand its scope to ensure the entire program was considered over a longer period of time.</p> <p>Sandia has also begun to provide NNSA management with quarterly progress reports regarding the status of the overall plan and schedule.</p>
5.1.2 Complete the FY06 elements of the Emergency Management project plan.	Outstanding	Agree	<p>During the fourth quarter, NNSA met with Sandia representatives to discuss the status of the milestones in the emergency Management Plan that were scheduled to be completed during FY2006. Due to the re-baselining and revisions to this plan, NNSA was concerned that appropriate change controls had not been established and implemented and that key milestones would not be completed on time. Sandia provided a spreadsheet and discussion of each of the 38 milestones being tracked and its status relative to this measure. Only a couple of milestones were identified as late (yellow) but had already been reviewed internally and plans for catching them up by the end of the FY were in place.</p>
5.1.3 Complete the FY06 actions of the Emergency Management Staffing Plan.	Outstanding	Agree	<p>Sandia completed all of the actions identified in the Emergency Management Staffing Plan that were due by the end of the fiscal year.</p>
5.1.4 Complete the FY06 milestones from the Office of Emergency Management Oversight (OA-30) inspection corrective action plan.	Outstanding	Agree	<p>Sandia met its FY06 Corrective Action Plan (CAP) milestones schedule. The total number of CAP milestones reflected as late in the DOE Corrective Action Tracking System for the last quarter of this fiscal year was zero. Overall the CAPs for the OA findings were completed in a quality manner and on time. Formal and effective change control practices were implemented and followed.</p>
5.1.5 Complete training of three new Emergency Directors and ensure they are qualified for assignment to the weekly duty roster.	Outstanding	Agree	<p>Sandia successfully met this measure. At the conclusion of FY06, Sandia has a total of ten trained and qualified emergency Directors. In addition, to address concerns expressed by NNSA during the third quarter of this performance period, Sandia provided a documented approach for ensuring that a fully trained and qualified ERO is maintained at all times. The letter resulted in a Temporary Order</p>

			<p>which explicitly outlined the expectations for volunteers participating in the Sandia ERO. This activity has not been in place long enough for NNSA to determine its effectiveness; however, it is viewed as a step in the right direction.</p>
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Other Considerations

None.

PERFORMANCE INCENTIVE 6 –NA-10 MULTISITE PERFORMANCE MEASURE

Performance Incentive #6. NA-10 Multi-Site Performance Measure

Adjectival Rating	Numerical Score
Outstanding	92

Summary of Performance

The multi-site performance measure represented a significant opportunity for teamwork, shared risk and success. It was an extraordinary achievement to modify four approved Contractor Performance Evaluation Plans (CPEP) to incorporate shared tasking and a common performance objective and measure. From the management perspective, for the Management and Operating Contractors this was outstanding support. (It should be noted in parallel that Site Office support was critical to reopening the CPEPs and finalizing the added multi-site measure.)

In terms of performance against mission, there has been a lot of progress. Specifically, in terms of the elements of the multi-site, we note the following:

W56: Complete W56 “spinner” Nuclear Explosive Change Evaluation and begin dismantlement of W56 “spinner” units by July 30, 2006. Evaluation and all units completed before requirement date.

B61: Complete all preparations necessary for BWXT Pantex to declare readiness for NNSA Readiness Assessment by May 31, 2006 for the B61 Alt357. Achieve B61 Alt357 First Production Unit (FPU) by June 30, 2006. Achieve FY2006 B61 Alt357 refurbishment quantities by September 30, 2006. Complete SS-21 and obtain Nuclear Explosive Operations authorization for D&I and Dismantlement activities by June 30, 2006. Preparation for readiness, SS-21 and NEO authorization and FPU completed on time; 66% of goal quantities completed by requirement date (goal not met due to lack of parts from a non-multi-site plant).

W76: W76-1 SS-21 assembly tool design completed by April 30, 2006. Fully support all activities required for meeting September 2007 W76-1 FPU. Tool design and FPU activities completed by requirement date.

W80: Complete disassembly tool design by September 30, 2006. Submit draft weapon response rules for complete D&I by September 30, 2006. Designs completed and rules received by requirement date.

W87: Complete SS-21 and obtain Nuclear Explosive Operations authorization by June 30, 2006.

SS-21 and authorization completed by requirement date.

W88: Achieve Bay operations authorization by August 16, 2006. Completed by requirement date.

One of the underlying objectives for this multi-site was to increase and improve the design agency and production agency senior management interaction. The Senior Management Team for the Pantex Throughput Improvement Plan is an example of the outstanding success for this aspect.

Another objective for this pilot was to demonstrate that a shared risk/shared reward multisite performance measure could be an effective tool for the NNSA. The success was apparent early enough to enable an expanded set of complex wide multi-site measures for FY 2007. Therefore, for this aspect as well the outcome supports an outstanding rating.

This was not an easy task or process. There was a learning curve in negotiation, performance, and communication. Shared risk drove a need to expand communication and deepen trust. From the NNSA perspective, while more of a subjective evaluation, there have been positive improvements at various staff levels, not just at the Senior Management Team.

This multi-site has supported not only the immediate needs of the stockpile but longer term priorities, including responsive infrastructure, RRW, and Complex 2030. In particular, risk acceptance, based upon sound technical judgment, rather than risk avoidance has been advanced by the success of the multi-site effort as well as other, separate activities.

Based upon the above specific and general comments, the Office of Defense Programs assesses the common performance of LANL, LLNL, SNL, and BWXT Pantex as Outstanding with a numerical score of 92.

Significant Accomplishments

- ✓ All targets were completed as required by this Multi-Site Performance Incentive.

Opportunity for Improvement

None.

Performance Measure 6.1

Sandia Corporation must perform with Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and the Pantex Plant as an integrated Multi-Site Team, with Sandia, where appropriate, as the system integrator (facilitator), to support NA-10 performance measures for FY06.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
<p>6.1.1 W56: Complete W56 "spinner" Nuclear Explosive Change Evaluation and begin dismantlement of W56 "spinner" units by July 30, 2006.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>The Tri-Lab provided support.</p>
<p>6.1.2 B61: Complete all preparations necessary for BWXT Pantex to declare readiness for NNSA Readiness Assessment by May 31, 2006, for the B-61 ALT 357. Achieve B61 ALT 357 First Production Unit (FPU) by June 30, 2006. Achieve FY 2006 B61 ALT 357 refurbishment quantities by September 30, 2006. Complete SS-21 and obtain Nuclear Explosive Operations authorization for D&I and Dismantlement activities by June 30, 2006.</p>	<p>Outstanding</p>	<p>Agree</p>	<p>Sandia provided an on-site presence at Pantex throughout the Readiness Assessment.</p>

6.1.3 W76: W76-1 SS-21 assembly tool design completed by April 30, 2006. Fully support all activities required for meeting September 2007 W76-1 FPU.	Outstanding	Agree	Sandia worked directly to provide options to include Sandia providing some fabrication of tooling.
6.1.4 W80: Complete disassembly tool design by September 30, 2006. Submit draft weapon response rules for complete D&I by September 30, 2006.	Outstanding	Agree	Sandia systems and others provided needed support.
6.1.5 W87: Complete SS-21 and obtain Nuclear Explosive Operations authorization by June 30, 2006.	Outstanding	Agree	Sandia reviewed procedures, supported evaluations, readiness assessments, walk-downs, drawing releases, Hazard Analysis Report development, and Nuclear Explosives Safety Study (NESS) review support.
6.1.6 W88: Achieve Bay operations authorization by August 16, 2006.	Outstanding	Agree	Sandia supported operations by developing the basis and supporting rationale justifying the NESS extension.

Other Considerations

None.

AWARD TERM INCENTIVE 1 – ACHIEVE COST EFFICIENCIES

Award Term Incentive #1 – Achieve Cost Efficiencies

Adjectival Rating	Numerical Score
Pass	N/A

Summary of Performance

Overall, Sandia completed two out of four of their performance targets. While Sandia is striving to improve on efficiencies and processes, Sandia was not able to demonstrate unit cost efficiencies for neutron generators (NG) during FY06 due to lower yields for the NG subassembly nor have they embraced the goal of contract clause H-6, Standards Management.

Significant Accomplishments

- ✓ Sandia was successful in streamlining processes to recover approximately \$1.6M in existing Facilities Infrastructure Replacement Program (FIRP) projects to fund other higher priority FIRP projects to accomplish FIRP goals.

Opportunity for Improvement

- ✓ Sandia needs to continue to monitor and improve NG yield performance to achieve unit cost efficiencies.
- ✓ Sandia has not yet embraced the goal of contract clause H-6, Standards Management, to tailor standards in an effort to improve performance where cost effective.

Performance Measure 1.1

Extent of process improvements resulting in cost efficiencies

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.1.1 Improve Neutron Generator unit cost.	Satisfactory	Not Pass	<p>While Sandia has improved on other processes to achieve savings in cycle time and reduction in process steps (in areas really not related to NG unit costs), Sandia was not able to demonstrate an improvement in NG unit cost this fiscal year. Sandia did complete a value stream in NG and testers but the cost has not been demonstrated</p> <p>The reduction in Oracle yield for the NG subassembly was largely responsible for Sandia's inability to meet NG cost reduction goal in FY06. Over the past several years there have been losses associated with processing anomalies and encapsulation voids that</p>

			<p>resulted in lowering the Oracle yield. Sandia Production is correcting the issues that have led to this yield reduction. Operators in the encapsulation area modified the fit of the pour assembly and since that time (~9 months) Sandia has seen a dramatic reduction in rejections due to voids. Sandia Production stopped the line in September 2006 and held mistake proofing events in the three areas with the highest scrap rates. These were: (1) Ceramic power supplies, where a fixture was redesigned to eliminate a yield problem; (2) Mold disassembly, where the process is being made more visible through the use of job aids and a visual work instruction; and (3) Inspection, where concentricity problems are being addressed through redesign of the mold base and new tooling for measuring concentricity. Four additional windows for mistake proofing events have been scheduled in FY07 for the NG Subassembly Production area.</p>
1.1.2 Effectiveness and efficiencies resulting from alternatives to DOE directives and other DOE requirements.	Outstanding	Not Pass	<p>Sandia's PEAR states that they have achieved cost efficiencies through process improvements in the physical security area. However, the process improvements and cost savings are not a result from achieving efficiencies from DOE requirements or directives. Rather the cost savings and improvements are good business sense that Sandia implemented.</p> <p>From the FY05 PER, NNSA noted that Sandia did not embrace the potential of this target and did not pass. Sandia has not actively submitted to NNSA alternatives to directives and other DOE requirements during FY06. The H-6 clause in the Sandia contract promotes tailoring of standards with the goal of improving performance where cost effective.</p>

Performance Measure 1.2			
Extent of unfunded requirements accomplished within DOE budget.			
Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
1.2.1 Completion of planned work and meaningful un-funded requirements (program and/or indirect)	Outstanding	Pass	<p>Due to severe cuts in the FIRP FY06 budget, Sandia's Recapitalization program was cut by \$11M. Sandia reviewed all existing FIRP projects at Sandia and was able to recover approximately \$1.6M from those existing projects and applied the funds to three high priority projects. In doing so, Sandia was able to partially meet the FY06 FIRP goals for deferred maintenance buy down and footprint reduction for the Nuclear Weapons Complex.</p>

performed within FY06 budget approved by NA-10.			
1.2.2 Other important aspects of laboratory operations (e.g., indirect funded) are not compromised.	Outstanding	Pass	

Other Considerations

None.

AWARD TERM INCENTIVE 2 – MULTIYEAR VISION TO IMPROVE PERFORMANCE

Award Term Incentive #2 . Execute the Multi-Year Vision to improve management and performance.

Adjectival Rating	Numerical Score
Pass	N/A

Summary of Performance

Sandia has made significant progress in revising the Multi-Year Vision (MYV) and the Strategic Plan as a result of their improved strategic planning process. The MYV also links to Laboratory Transformation objectives. Performance and results were clearly demonstrated from Sandia, the parent corporation and external organizations.

Significant Accomplishments

- ✓ Sandia revised the Multi-Year Vision (MYV).
- ✓ Sandia achieved 100 percent of the 28 MYV-related milestones.
- ✓ Sandia achieved 96 percent of the non-MYV related milestones.
- ✓ Sandia revised and published the Strategic Plan.
- ✓ Sandia demonstrated involvement by Lockheed Martin in the areas of safety, security, governance, project management, finance and human resources, etc.
- ✓ Sandia demonstrated excellent use of Lean Six Sigma in various organizations with tangible results.

Opportunity for Improvement

None.

Performance Measure 2.1

Notable improvements in laboratory management and performance that resulted from implementing the Multi-Year Vision and corporate parent contributions. Evaluate and update the Multi-Year Vision to reflect changing conditions and priorities.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
2.1.1 Execute a strategic planning process to ensure	Outstanding	Pass	Sandia's Strategic Plan (10-5-1) has been revised and uses the new taxonomy of objective, goal, and milestone. This new taxonomy removes the artificial

the Multi-Year Vision is reflected in the Lab's Strategic Plan (10-5-1).			timelines that were imposed by the 10-5-1 terminology, and will make the strategic plan and annual business operating plan more viable tools for both Sandia and NNSA.
2.1.2 Revise the Multi-Year Vision to reflect changing conditions and priorities.	Outstanding	Pass	
2.1.3 Demonstrate corporate contributions that resulted in notable management and performance improvements.	Outstanding	Pass	Parent Corporation contributions have been evident in many areas to include governance, environmental safety and health, and safeguards and security. NNSA believes that the contributions of the Parent Corporation in the operations of Sandia National Laboratories have improved site operations and adherence to applicable requirements.
2.1.4 Implement a Multi-Year Vision that results in notable management and performance improvements.	Outstanding	Pass	Performance improvements were clearly described with excellent contributions from Lean Six Sigma.

Other Considerations

None.

AWARD TERM INCENTIVE 3 – CORPORATE PLAYER IN THE NUCLEAR WEAPONS COMPLEX

Award Term Incentive #3. Increase Effectiveness as a Corporate Player in the Nuclear Weapons Complex (NWC).

Adjectival Rating	Numerical Score
Pass	N/A

Summary of Performance

Sandia has significantly exceeded the standard of performance.

Significant Accomplishments

The Significant Accomplishments include:

- ✓ Readiness in Technical Base and Facilities (RTBF) elevated to a developed and deployed web based system to track all mission essential facilities.
- ✓ Sandia delivered support to enable the Defense Program Office of Transformation to move forward with the Complex 2030 vision.
- ✓ Sandia exceeded expectations on the usage of the National program for Z
- ✓ Sandia continues to improve the Milestone Reporting Tool (MRT).
- ✓ Sandia provides cyber security support to DOE/HQ, NNSA/HQ and the NNSA Service Center
- ✓ Sandia provides support to the Office of Transformation on the NA-10 science program
- ✓ Sandia participated in the Stockpile Transformation Program that outlines the strategy for deploying the Reliable Replacement Warhead.
- ✓ Sandia actively supported the Pantex Throughput Improvement Plan.
- ✓ Sandia fully implemented a Commercial off the Shelf (COTS) component test data tracker with automated flow for participants to include Sandia, Kansas City Plant (KCP) and third party test houses.
- ✓ Sandia provided Primary Standards Laboratory activities through out the weapons complex.
- ✓ Sandia completed Stage 2 activities for the defect free manufacturing and assembly project.
- ✓ Sandia supported the Test Works effort for the Joint Test Assembly design of the W88.
- ✓ Sandia supported responsive infrastructure activities.
- ✓ Sandia supported technical business practices for the weapons complex.

Opportunity for Improvement

- ✓ The Opportunity for Improvement identified in these areas has to do with Sandia's opportunity to do more on the W76-1 cost issues at the KCP. This issue is fully explained in Performance Objective-3.

Performance Measure 3.1

Support NNSA in effective management of the NWC.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.1.1 Support for NNSA activities to deploy tools to the Nuclear Weapons Complex (NWC) that will enable more effective enterprise management.	Outstanding	Pass	Sandia activities involved the RTBF and Z-machine performance excellence.
3.1.2 Support NWC integration of Campaigns and Directed Stockpile Work (DSW).	Outstanding	Pass	Sandia activities involved Integrated Studies and Support Group (ISSG) activities support on Mission Essential facilities, Office of Transformation, technical business practices, new versions of the MRT, governance and cyber security actions.
3.1.3 Optimize use of Z facility to meet priorities of the national Stockpile Stewardship Program, and conduct a review with management-level participation representing internal and external customers. Incorporate review output into future Z/ZR planning. Complete Tier 1 and Tier 2 milestones and additional accomplishments as negotiated with NA-16.	Outstanding	Pass	Sandia activities involved Z-machines operational excellence in the number of shots completed in excess of expectations.

Performance Measure 3.2

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

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.2.1 Facilitate strategic planning activities for NA-10 and identify strategic issues and trends impacting the NWC.	Outstanding	Pass	Sandia activities were focused on ISSG support for NA-10 in areas to include but not limited to: Strategic Management Retreat, Office of Transformation Science Program, stockpile transformation program, and complex 2030.
3.2.2 Develop processes that enable multi-site performance in support of Safety/Hazard analysis with Pantex (as described in the Integrated Weapon Activity Plan (IWAP)), Lawrence Livermore National Laboratory (LLNL) and Los Alamos National Laboratory (LANL).	Outstanding	Pass	Some of Sandia's activities include value stream analysis (VSA) with Pantex for Hazard Analysis Report, activities supporting the Pantex Throughput report, and several VSAs for weapons system operations at Pantex.

Performance Measure 3.3

Document quality measurements to ensure consistent implementation of nuclear weapons activities across the NWC.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.3.1 Sandia and Kansas City Plant (KCP) collaborate to develop and implement a process to assess and qualify Commercial Off-	Outstanding	Pass	Sandia activities included COTS qualification with KCP.

the-Shelf components in support of program needs.			
3.3.2 Contributions to the NWC that improve cross-site coordination and performance (e.g., Primary Standards Lab)	Outstanding	Pass	Sandia activities included Primary Standards Laboratory to the weapons complex and value streams with Pantex.

Performance Measure 3.4

Identify opportunities that develop complex-wide improvements of weapon design capability analysis, costs and impact on NNSA plants.

Performance Target	Sandia Self-Assessment Rating	NNSA Agreement	Comments
3.4.1 Support creation and validation of Integrated Priority Lists process	Outstanding	Pass	Sandia was involved in activities related to ISSG review of the Integrated Priority Lists (IPL) and developing linkages between Directed Stockpile Work (DSW) and RTBF.
3.4.2 Working with LANL and PX, support the Technical Investment Project on Defect Free Manufacturing and Assembly	Outstanding	Pass	Sandia was involved in activities related to Stage 2 of the project.
3.4.3 Support the ADAPT Test Works effort for W88JTA Design Development.	Outstanding	Pass	Sandia's activities related to the team of Sandia, KCP, and Pantex for the W88 JTA.

Performance Measure 3.5

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
<p>3.5.1. Participate and actively contribute to the establishment of NNSA plans and actions to implement a responsive Nuclear Weapons Complex infrastructure. In addition, create a roadmap by March 2006 for site-specific actions to improve responsiveness that identifies goals, timelines, and site-specific action timelines with links to the Headquarters responsive infrastructure plan.</p>	Outstanding	Pass	Sandia activities related to ISSG support to NA-10 for life cycle cost model, 2030 Vision, VSAs at Pantex and the January Process.
<p>3.5.2 Develop site-specific, quantified, and objectively-measured indices that indicate current status for each the following:</p> <ul style="list-style-type: none"> Site Product Delivery Responsiveness and Quality Site Capability/Capacity Site Cost Efficiency <p>Draft indices are to be proposed by January 2006 and evaluated during</p>	Outstanding	Pass	Sandia activities included support to the metrics meeting held in December 2005.

			<p>NNSA considers the majority of the nine events as having an unfavorable impact since they released pollutants to the environment in such quantity or of such chemical nature that both Sandia and SSO believed they met the regulators definition as reportable. In addition the reason why environmental events were added to the performance criteria was to help drive down the number of reportable releases to the environment since in the last several years there has been no notable downward trend in the reduction of reportable releases. Further the FY07 PEP 8.4.19 has identified as a lagging indicator that "an environmental event, incident or notice of violation may indicate systematic deficiencies related to compliance of environmental requirements" and therefore these events should be considered and efforts taken to reduce the number of releases.</p>
<p>4.1.6 Sandia will conduct an ES&H Programmatic assessment of the ISMS program (DOE Order 450.5) in FY06. This assessment will include, but not limited to, evaluating the integration of Environmental Management System (EMS) into ISMS and analyzing Work Controls elements, self-assessment data and resulting actions. In addition, the Integrated Work Plan Project, utilizing a phased implementation, will meet established project milestones.</p>	Satisfactory	Agree	<p>NNSA agrees with the target summary and rating.</p> <p>Sandia completed the ES&H programmatic assessment of the ISMS program on schedule. The results indicate Sandia concerns regarding the current development and implementation of the Integrated Work Plan (IWP) process, EMS being integrated into the ESH200 training, the lack of an effective hazard aggregation rollup process, and lack of Sandia corporate tools to support application of the work planning and control elements. The assessment indicated many concerns exist with the IWP program status, deliverables, and implementation schedule. Integration of IWP across the laboratory is behind schedule.</p>
<p>4.1.7 Sandia will conduct an annual review of EMS to ensure compliance to DOE Order 450.1 and to identify areas for improvement. Corporate and division aspects and impacts will be reviewed, progress</p>	Outstanding	Disagree	<p>NNSA rates this target at Good based on the data presented below.</p> <p>Based on the performance target Sandia has met the intent of the criteria. A review of the EMS was conducted and areas for improvement were identified. Aspects/impacts were reviewed, progress towards meeting the goals and targets were assessed and new goals and targets were developed by 9/30/06.</p>

<p>toward meeting goals and targets will be assessed and new fiscal year goals and targets will be developed by September 30, 2006.</p>			<p>Based on the program assessment there is room for improvement. For instance, the assessment identified one issue and several observations. The issue identified was that the commitment to EMS varies among divisions. As part of continual improvement the results of the assessment were included in the updated EMS program manual.</p> <p>Sandia exceeded in the area of writing environmental program plans. These documents were written in an effort to get programs better documented. The plans describe such things as the program itself, its drivers, the roles and responsibilities, needed resources, budget, targets and planned activities to achieve the targets.</p>
<p>4.1.8 Sandia will implement work controls to minimize the occurrence of serious near miss events that have potential for fatality or significant injury. Within one week of the event Sandia Senior Management will brief SSO.</p>	<p>Satisfactory</p>	<p>Disagree</p>	<p>NNSA rates this target at unsatisfactory based on the data presented below.</p> <p>The entire year, Sandia has been slow to improve work controls needed to improve near miss occurrence reports. Sandia started to take action only when prompted by NNSA. For example, some Sandia line managers have a lack of understanding on the proper categorization of abnormal events as required by the DOE manual where each category needs to be considered and included. It appears that Sandia does not provide training to this level of detail.</p> <p>For FY06, NNSA has counted 12 serious near misses using the definition proposed by Sandia and agreed to by NNSA.</p> <p>Sandia previously established a chart of work control elements that are tied to occurrence reporting causal code factors. Certain work control elements were shown on the chart to be of concern such as pre-job briefings. NNSA had to prompt Sandia to maintain this chart on a regular basis to determine the status of work elements. In addition, it is unknown what action, if any, was taken by Sandia to address the work control elements of concern.</p> <p>NNSA also had to prompt Sandia later in FY06 to determine the definitions for near miss and serious near miss.</p>

Other Considerations

None.

remainder of year to establish final indices and FY2006 baseline values for future comparisons.			
3.5.3 Working with other NNSA sites, support implementation of one or more administrative or technical business practice improvements that can be applied uniformly across the Nuclear Weapons Complex to enhance responsiveness. Near-term actions in the NNSA Responsive Infrastructure Plan provide suggested topics.	Outstanding	Pass	Sandia activities involved technical business practice support to the complex.

Other Considerations

None.

ACRONYM LIST

ACRR	Annular Core Research Reactor	CPSR	Corporate Policy Statement Requirement
ACF	Aerial Cable Facility	CRADA	Cooperative Research and Development Activities
AF&F	Arming Fuzing and Firing	CSRF	Computer Science Research Foundation
ALEGRA	Arbitrary Lagrangian Eulerian/General Research Applications	DHS	Department of Homeland Security
AOP	Annual Operating Plan	DM	Deferred Maintenance
APLs	Acceptable Performance Levels	DNDO	Domestic Nuclear Defense Organization
AQLs	acceptable quality levels	DNSFB	Defense Nuclear Facilities Safety Board
ASC	Advanced Scientific Computing	DoD	Department of Defense
BBS	Behavioral Based Safety	DOE	Department of Energy
BoD	Board of Directors	DOI	direct optical ignition
CA	California	DSS	Decision Support System
CAIRS	Computerized Accident Reporting and Recordkeeping System	D&P	Development & Production
CAP	Corrective Action Plan	DSW	Directed Stockpile Work
CARDS	Counterintelligence Analytical Research Data System	EA	Environmental Assessment
CAS	Contractor Assurance System	EC	Engineering Campaigns
CDNS	Chief Defense Nuclear Safety	ECIM	Exterior Communications Infrastructure Modernization
CEDT	Corporate Education Development & Training	EM	Office of Environmental Management
CI	Counterintelligence Program	EMS	Environmental Management System
CINT	Center for Integrated Nanotechnologies	EOS	equation-of-state
CIP	Critical Infrastructure Protection	EPA	Environmental Protection Agency
CIS	Computer Information Systems	EPI	Emergency Public Information
CMPC	Classified Matter Protection and Controls	ER	Environmental Restoration
COTS	Commercial-Off-The-Shelf	ERO	Emergency Response Organization
CPR	Corporate Process Requirement	ES&H	Environment, Safety, and Health
		FCI	Facility Condition Index
		FDR	Final Design Review
		FE	Office of Fossil Energy
		FEMA	Federal Emergency Management Agency

FIRP	Facilities Infrastructure Replacement Program	LANL	Los Alamos National Laboratory
FPU	First Production Unit	LENS	Laser Engineered Net Shaping
FY	Fiscal Year	LEP	Life Extension Program
GIIP	Global Initiatives for Proliferation Prevention	LLE	Laboratory for Laser Energetics
GPP	General Plant Project	LLNL	Lawrence Livermore National Laboratory
HED	High Energy Density	LLT	Laboratory Leadership Team
HEDP	high energy density physics	LTS	Long-Term Stewardship
HEU	Highly Enriched Uranium	LWDS	Liquid Waste Disposal System
HSPD	Homeland Security Presidential Directive	LWT	Light Weight Targets
ICF	Inertial Confinement Fusion	MESA	Microsystem and Engineering Sciences Application
IIR	Intelligence Information Reports	MGY	million gallons per year
ILMS	Integrated Laboratory Management System	MP	Molten Pool
ISM	Integrated Safety Management	MPC&A	Material Protection, Control, and Accountancy
IMQIP	Issue Management and Quality Improvement Process	MRT	Milestone Reporting Tool
IP	Infrastructure Protection	MSS	Management Systems Standards
IPP	Initiatives for Proliferation Prevention	MYV	Multi-Year Vision for Management Excellence
IPT	Investment Project Team	NAC	Nuclear Assurance Corporation
ISMS	Integrated Safety Management System	NEPA	National Environmental Policy Act
ISO	International Organization for Standardization	NFE	Non Federal Entities
ISSG	Integrated Studies and Support Group	NG	Neutron Generator
ISTC	International Science and Technology Centers	NIMS	National Incident Management System
ISTP	Information and Special Technologies Program	NISAC	National Infrastructure Simulation & Analysis Center
IWAP	Integrated Weapon Activity Plan	NMED	New Mexico Environment Department
IWP	Integrated Work Plan	NNSA	National Nuclear Security Administration
JTA	Joint Test Assembly	NSSEs	National Security Special Events
KAFB	Kirtland Air Force Base		
KCP	Kansas City Plant		

NSTec	National Securities Technologies	QASPR	Qualification Alternatives for the Sandia Pulsed Reactor
NW	Nuclear Weapons	QE	Qualification engineering quantity, margins, and uncertainties
NWC	Nuclear Weapons Complex	QMU	
NWSMU	Nuclear Weapons Strategic Management Unit	RDCDS	Rapidly Deployable Chemical Detection System
OA	Office of Independent Oversight and Performance Assurance	RMWMF	Radioactive Mixed Waste Management Facility
OCRWM	Office of Civilian Radioactive Waste Management	RTR	Radiological Threat Reduction
ODP	Office of Domestic Preparedness	RRW	Reliable Replacement Warhead
OOPS	Sandia's early notification score for occurrence reports system	RTBF	Readiness in Technical Base and Facilities
OSC	Operation Safe Commerce	S&S	Safeguards and Security
OSHA	Occupational Safety and Health Administration	S&T	Science and Technology
PAAA	Price Anderson Act Amendment	SARP	Safety Assessment Report Packaging
PASA	Policy Area Self-Assessments	SB	Safety Basis
PCG	Permanent Coordinating Group	SBIP	Safety Basis Improvement Project
PEI	Pre-employment Investigations	SDWPP	Safe Drinking Water Protection Program Plan
PEP	Performance Evaluation Plan	SEE	Sandia Engineering Expo
PER	Performance Evaluation Report	SER	Sandia Engineering Reactor
PI	Performance Incentive	SERV	Safety Enhanced Reentry Vehicle
PI	Personal Information	SLD	Second Line of Defense
PIV	Personal Information Verification	SME	Subject Matter Expert
PM	Program Manager	SMU	Strategic Management Unit
POs	Performance Objectives	SNL	Sandia National Laboratories
PPTD	pulsed power technologies development	SOFC	Solid Oxide Fuel Cells
PRT	Product Realization Team	SPR	Sandia Pulsed Reactor
PTIP	Pantex Throughput Improvement Plan	SRD	Secret Restricted Data
		SRM	Spin Rocket Motor
		SRN	Sandia Restricted Network
		SSO	Sandia Site Office
		SSRP	Security Systems Replacement Project

SS&TP	Sandia Science & Technology Park
TCR	Test Capabilities Revitalization
TP	Technical Partnership
TPC	Total Project Cost
TRCR	Total Recordable Case Rate
TRU	Transuranic
TSPA	Total System Performance Assessment
TSR	Technical Safety Requirements
TTR	Tonopah Test Range
TVA	Tennessee Valley Authority
TYSP	Ten Year Site Plan
U.S.	United States
WETL	Weapons Evaluation Test Laboratory
WIPP	Waste Isolation Pilot Plant
YMP	Yucca Mountain Project
ZR	Z Refurbishment