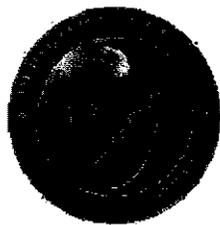


FY 2005 Performance Evaluation Report
of
Southeastern Universities Research Association, Inc. (SURA)
Contract No. DE-AC05-84ER40150

Thomas Jefferson National Accelerator Facility
Site Office (TJSO)

U. S. Department of Energy

January 4, 2006



Background

The Department of Energy (DOE) extended its contract with the Southeastern Universities Research Association, Inc. (SURA) for the management and operation of the Thomas Jefferson National Accelerator Facility (otherwise known as Jefferson Lab) through September 30, 2005. The contract extension continued the Department's and SURA's implementation of a Performance-Based Management Contract (PBMC). This approach focuses primarily on outcomes and results as demonstrated by performance measures rather than compliance with processes and procedures.

The Department's memorandum, "Performance-Based Management," dated May 12, 2003, reiterated and emphasized its full commitment and encouraged Department officials to be fully and actively involved in the implementation of a results-driven, performance-based approach to management. Performance-based management includes the following guiding principles: (1) performance objectives are established in partnership with affected organizations and are directly aligned to the DOE strategic goals; (2) resource decisions and budget decisions are tied to results; (3) primary reliance is placed upon self-assessments, with "for cause" reviews conducted only as needed; and (4) results are used for management information, establishing accountability and driving long-term improvements.

In addition, the Department's Memorandum, "Principles for Office of Science Laboratory Contracts," dated April 30, 2003, stated its expectation that Office of Science (SC) contracts be based on six principles: (1) line management accountability (through a single Federal official) for Laboratory performance with a strong focus on mission success and with authority to integrate administrative and operations requirements into program missions; (2) primary reliance on Federal, State and local laws, regulations, and national standards to establish contractor requirements and performance criteria, while minimizing the use of DOE Orders and directives as a mechanism for placing administrative and operational requirements on the contractor; (3) Laboratory contractors use of external, nationally recognized experts to carry out independent risk and vulnerability studies, validate and certify that the contractor management systems meet the applicable laws or regulations, and to verify best-in-class contractor practices; (4) Laboratory contractors adoption of contract-based, best-in-class management principles and an integrated management system, achievement of formal external certification of their management systems, and use of DOE directives in cases where there is a unique departmental function without an industrial process counterpart; (5) contractor development of a compelling vision for the five-year duration of the contract and a work plan to accomplish it; and (6) in addition to financially-based incentives and related performance objectives and metrics, the Department will consider novel, non-financial incentives to promote improved contractor performance and accountability.

The SURA contract for management of the Jefferson Lab and DOE's contract management are aligned with the principles outlined above. Specifically, Clause H.32 of the PBMC requires: (1) DOE to utilize a performance based management system for Laboratory oversight; (2) the contractor to conduct an on-going self-assessment in accordance with the performance metrics in Appendix B (See Attachment 1 for a copy of SURA's Fiscal Year (FY) Self-Assessment); and (3) DOE to perform a written assessment of the contractor's performance based on the DOE appraisal program and DOE's evaluation of the contractor's self-assessment.

Included in Appendix B of the PBMC are the negotiated Performance Metrics that were used to evaluate SURA's performance in FY 2005. The negotiated FY 2005 Jefferson Lab Performance Metrics are built around a set of "key indicators," which track the six critical categories or areas of performance: Outstanding Science and Technology (S&T); Corporate Citizenship; Quality Performance in Environment, Health and Safety (EH&S); Business and Administrative Practices; Responsible Institutional Management; and Project Management. The Appendix B evaluation plan also includes a set of "secondary indicators," which monitor the Laboratory's performance in a more detailed way and extend the validity of each of the key indicators.

As a means of incorporating the results of the contractor's self-assessment along with other inputs in the overall evaluation of SURA's performance, DOE and SURA agreed that the Department would develop an independent Annual Evaluation/Overlay Performance Report. This report for FY 2005 provides an evaluation of contractor performance and captures the highlights of the DOE Site Office observations/reviews, results of DOE appraisals, as well as other important information (including mitigating factors or events that may be outside the control of the contractor).

Executive Summary

The TJSO FY 2005 Performance Evaluation of SURA is based upon a combination of Contract Performance Measures; Results of Peer Reviews; Site Office assessments, walkthroughs, and observations; and input from representatives of the Office of Science Nuclear Physics Program and others.

The performance measures defined in Appendix B of the contract yielded an adjectival rating of "TBD" in six categories with an overall weighted Laboratory rating of "Outstanding." The breakdown by category and performance measures (counting peer review results as performance measures) shows the following profile:

<u>Category</u>	<u>Rating</u>
Outstanding Science & Technology	Outstanding
Corporate Citizenship	Outstanding
Quality Performance in EH&S	Outstanding
Business & Administrative Practices	Outstanding
Responsible Institutional Management	Outstanding
Project Management	Outstanding
OVERALL RATING	Outstanding

Some of the significant achievements during FY 2005 were:

- Important progress in improving worker and supervisory safety awareness through several SURA management initiatives. This emphasis improved the Lab safety culture by a broad range of activities.
- FY 2005 Science and Technology (S&T) Peer Review rating of "Outstanding."
- The Laboratory has consistently delivered physics over 100% of the goal every year and Hall availability exceeded expectations.
- Construction milestones for the CEBAF Center Addition being completed on cost and on schedule.
- JLab's efforts in conducting an internal, independent review of the 12 GeV Upgrade Project in support of Critical Decision 1, and a subsequent "Lehman" review that concluded, "All of the requirements for Critical Decision 1 (CD-1) approval have been completed."
- The S&T Peer Review panel also noted how well the Theory Program at the Laboratory was growing in effectiveness and how well aligned the Theory Program was with the experimental program at the Laboratory.

- Institutional Management Peer Review rating of “Outstanding.”
- The Laboratory successfully achieved Certification and Accreditation in the Cyber Security area on July 1, 2005. The Cyber Security peer review team rated the Laboratory as “Outstanding.”
- The Free Electron Laser’s (FEL) advancements that have set the stage for achieving higher power goals in the coming years.

Some of the challenges facing the Laboratory in FY 2006 are to:

- Continue to enhance worker safety at JLab. Ensure that the principles of Integrated Safety Management (ISM) are implemented across the site. Apply the necessary cultural and organizational changes needed to achieve a safe work environment for all JLab employees and visitors.
- Move forward with the 12 GeV, CEBAF Center Addition and FEL Upgrade, with particular attention to meeting technical, cost and schedule baselines and key milestones, while satisfying National Environmental Policy Act (NEPA) requirements.
- Assess for applicability and implement DOE security initiatives, including non-classified computer (cyber) security, foreign visits and assignments, travel, and export controls.
- Investigate efficiency initiatives to improve productively, and to contain and, where possible, reduce costs.

1.0 Outstanding Science and Technology (720 points)

Science and Technology Peer Review

The Department of Energy (DOE) Office of Nuclear Physics (NP) conducted an Annual Science and Technology (S&T) Peer Review of the Thomas Jefferson National Accelerator Facility (Jefferson Lab). The review was held at the Jefferson Lab from August 30 through September 1, 2005. Based upon this review and the rating of outstanding by the Office of Science and other factors, the Laboratory received an "Outstanding" rating for FY 2005.

The S&T Peer Review is an in-depth review, which examines all supported research and development activities carried out by the Jefferson Lab, as well as facility operations in support of these activities. The relationship with the users, activities of the Program Advisory Committee (PAC), and plans for the future scientific program and technological upgrades are also included as part of this review.

The primary goal of Jefferson Lab is to carry out a high quality nuclear physics experimental program that addresses the fundamental question concerning the internal quark structure of the nucleon and its effect in nuclei. The Continuous Electron Beam Accelerator Facility (CEBAF) produces a high current, highly polarized, electron beam with a 100% duty factor that can be simultaneously delivered to the three experimental halls A, B, and C. These halls contain extensive spectrometer and detector equipment that support the experimental nuclear physics program. In addition, Jefferson Lab has received mission need (CD-0) approval to double CEBAF's energy to 12 GeV. Jefferson Lab has five areas of technical core competency: superconducting radio frequency cavities (SRF); intense polarized electron beam; energy recovery linacs (ERLs); high-power free electron laser (FEL); and cryogenic facilities. Jefferson Lab is playing a lead role in developing next generation SRF accelerator cavities for the Nation and is the only national SRF cavity manufacturing facility. Non-Nuclear Physics related programs include a FEL program, with possible projected uses ranging from research in SRF technology to materials research. The existing FEL facility has been upgraded to produce 10 kW in the infrared and 1 kW in the ultraviolet. There is a good synergism between the CEBAF and the FEL, with effective sharing of expertise and clear benefits to both facilities.

The Peer Review panel concluded that the quality and productivity of the research program is to be outstanding. Some recent results are: new limits on the Ω^+ pentaquark that invalidate earlier results and challenge the validity of data from other laboratories world-wide; new data of sufficient precision to detect a non-zero contribution of strange quarks; to the electromagnetic structure of the nucleon; and new results that indicate that perturbative Quantum Chromodynamics (QCD) together with a mathematical technique called operator product expansion, appears to work down to much lower scattering energies than previously thought. The experimental backlog continues to exceed four years for Halls A and C. There was a concern expressed by the S&T Peer Review panel that the plan to reduce the backlog does not appear to have been entirely effective. This concern has been raised by previous S&T Peer Reviews.

The planned experimental program is well-aligned with the goals of the NP program.

Jefferson Lab is responsible for eight of the ten Office of Science (SC) milestones in Hadronic physics. The experimental milestones are on track for completion with the possible exception of two milestones in 2009 and 2012 that rely on additional theoretical effort for completion such as would be provided by the Excited Baryon Analysis Center (EBAC). Plans for developing computing capabilities at Jefferson Lab for Lattice Quantum Chromodynamics (LQCD) Computing, although well-defined, were not placed in context of planned DOE investments at Jefferson Lab, and other laboratories for related capabilities. A plan for implementing the Excited Baryon Analysis Center (EBAC) was presented and endorsed by the panel. The laboratory should work with the Office of Nuclear Physics to define paths forward for its implementation.

The recent DOE 12 GeV science review strongly endorsed the proposed program for the 12 GeV upgrade which would poise Jefferson Lab to continue its role as the world center for Hadron physics research using electrons, particularly in the study of the nature of confinement. The Laboratory has just successfully completed a "Lehman" review of its 12 GeV Upgrade Project and is prepared to proceed to the next stage of the project. The Laboratory discussed how it would transition the 6 GeV research program to 12 GeV when the project is implemented, and the reviewers considered the plan appropriate. Laboratory management appears to have done an outstanding job in positioning the Lab for the 12 GeV Upgrade and developing its technical core competencies.

The Accelerator Operations reported slightly over 100% of scheduled beam hours delivered with an efficiency of about 84% at the time of the review and anticipates meeting its research obligations. The reviewers were impressed with the Accelerator Division's efforts to minimize downtime using a systematic database to track failures of the facility. The Laboratory has a plan in place to refurbish cryostats to reduce the largest contributor due to "RF trips" of the accelerator. The reviewers were also impressed with the role of the Center for Advanced Studies of Accelerators (CASA) in improving the present facility and conducting research in accelerator R&D. The Laboratory management has developed a Work for Others Program including other DOE programs and the Department of Defense.

The Jefferson Lab User Group appears effective as a mechanism of communication with the Laboratory. The user community is generally satisfied. However, the users expressed a desire to have a larger role in Jefferson Lab decisions that may affect their work. This may be especially important concerning the transition from 6 GeV to 12 GeV operations.

Based on the results of the August 2005 Science and Technology Peer Review, the 2005 SC On-site Review, feedback from users and the sponsoring Program Offices, and direct observations, the SC-TJSO agrees with the overall rating of "Outstanding."

Reliable Experimental and Accelerator Operations

The Laboratory's performance providing reliable experimental and accelerator operations exceeded expectations in most areas. The performance measures focus on five quantitative metrics:

- Delivered Physics Research Operations;
- Accelerator Downtime;
- Experimental Equipment Availability;
- Effectiveness of the Scheduling Process; and
- Overall Operations Effectiveness.

Quantitative evaluation of the five indicators for this area resulted in 198.9 points awarded out of a possible 200 points, with an overall rating of "Outstanding" for FY 2005. Throughout the year, SC-TJSO has performed oversight and monitored the daily, weekly, bi-weekly and monthly reporting of data by Accelerator Operations and the Experimental Halls that is used to compute performance for each of these five metrics.

In addition to the quantitative results, there were several notable achievements in relation to the FY 2005 performance:

- Halls A, B and C safely and efficiently reconfigured, commissioned and conducted numerous challenging experiments (e.g., DVCS, BigBite, Hypernuclear, HAPPEX, Primex, eg3, BoNus, g8, HKS) throughout the year.
- Accelerator Operations performance in providing up to 5.78 GeV of highly polarized (85% polarization) beam for physics in up to three halls simultaneously.
- Accelerator Operations does an excellent job in planning, coordination and preparation to ensure up-coming Scheduled Accelerator Down (SAD) activities are conducted safely and efficiently, with minimal impact to the resumption of operations and the experimental program.
- Accelerator Operations continues to evaluate opportunities for improving efficiency in operations. As an example, it was determined that accelerator steering magnet's power supplies can be turned off when not in use, saving energy usage.
- Continued the effective utilization of the Center for Advanced Studies of Accelerators (CASA) in addressing improvements to accelerator operations is notable. CASA provided technical expertise throughout the year to ensure optimum accelerator performance.

SC-TJSO concurs with the Jefferson Lab's self-assessment and with the overall rating of "Outstanding" for the Reliable Experimental and Accelerator Operations area in FY 2005. The Laboratory is commended for the extraordinary efforts and accomplishments.

Production of Scientific and Technical Manpower

Performance measures for this area focus on Jefferson Lab education and training efforts to provide for our nation's future scientific/technical work force. The Site Office and the Laboratory's performance assessment once again resulted in an "Outstanding" rating for FY 2005. As expected, the significant drop-off in number of advanced degrees awarded by minority institutions that occurred last year, did not continue into this year and it appears that there are a very large number of students currently "in the pipeline."

This high quality program encourages students' continued involvement in Jefferson Lab activities thereby providing an excellent opportunity for the students' growth, a substantial contribution to the Laboratory's output and potential future benefit to the entire scientific community. Site Office casual discussions with students that occur during facility walkthroughs and at Laboratory special events have indicated that their experiences at Jefferson Lab are very positive. This is first hand confirmation of what the quantitative measures indicate.

Efforts not directly contributing to the performance measure scores also continue to go well. Student seminars on subjects where the Laboratory has unique expertise continue to generate significant interest. Periodic seminars held throughout the year conducted by undergraduate and graduate students have also continued to be popular with the students. This is an excellent opportunity for students to develop their presentation skills and network as well as share information and ideas. The continued participation in this activity illustrates how much students feel this is a beneficial experience. Providing a comfortable environment in the Residence Facility for graduate student meetings, access to computer terminals and recreational activities also significantly contributes to the quality of the students' experiences at Jefferson Lab. Activities to welcome and integrate new students into the student community are also commendable.

The Site Office concurs with the overall rating of "Outstanding" for the Production of Scientific and Technical Manpower performance measures based on the performance towards the goals set for this area and the continued positive feedback from the diverse student community at the Laboratory. The measures for this area provide a reasonable assessment of overall performance and they should be maintained for FY 2006. Efforts to continually improve this very important program are highly endorsed.

2.0 Corporate Citizenship (75 Points)

This performance category measures the degree to which the Laboratory's mission-related competencies serve the public and national interest and is divided into the following two sections: (1) Public Outreach and Improved Scientific Literacy, and (2) Technology Transfer.

Public Outreach and Improved Scientific Literacy

Based on performance data, results of independent reviews and Site Office assessments, an overall rating of “Outstanding” is merited for this performance category. The Laboratory is commended for its “best-in-class” educational outreach program.

The Laboratory has special assets and capabilities that can add value to the public beyond its defined scientific research mission, specifically in the areas of improved scientific literacy and education. At the same time, as a publicly funded institution, Jefferson Lab has a particular obligation to be a “good neighbor” in the community as it conducts business and to keep the public informed on the operational aspects of the Laboratory and plans for the future. Furthermore, the Laboratory must actively solicit and take into account the views of the community in carrying out its activities. This performance category measures the extent to which the Laboratory is successful in addressing these opportunities and obligations.

SURA and Jefferson Lab have long recognized the importance of reaching out to the many diverse elements of the public for the purpose of education and discussing the value of scientific research generally and on the particular significance of the research being conducted at Jefferson Lab. Again, in FY 2005, the Laboratory conducted an effective public outreach program to inform and educate the public, and to solicit its support for stronger scientific research programs at all levels. This program included facility tours for the public, and industry and government officials; talks by Laboratory managers and staff to civic, community and professional organizations; exhibits and participation in public events; a very popular biennial open house (over 9,000 local citizens attended) and effective use of the print media. In addition, an exciting Education web page provides a popular and valuable resource for students and teachers alike. The Jefferson Lab Education web page continues to be a valuable resource for teachers and students.

Also in the area of science education, the Laboratory continued to place special emphasis on its K-12 program and particularly on the Becoming Enthusiastic About Math and Science (BEAMS) program. These programs target “at risk” young students with activities that are designed to educate them and stimulate their interest in science and math, and the Laboratory has served more than 13,000 students this year and provided in-service activities to more than 2,600 teachers. As an overall outside metric that documents the success of the BEAMS program, the students that attended the BEAMS program during their 6th, 7th, and 8th grade years improved their Virginia Standards of Learning Test Scores in the areas of science and math. The Laboratory has also designed and implemented excellent in-service programs to further develop teacher capabilities to instruct math and science in the classroom. The Laboratory continues to implement its educational “Teacher Academy for Physical Sciences” program for science teachers. During the summer of 2005, 17 middle school science teachers participated in a four-week basic refresher course in physics taught by physics professionals including staff scientists. In addition, members of the Laboratory staff continue to be engaged in various regional business and educational partnerships.

Beyond its significant involvement with the public in science education, the Laboratory has worked cooperatively with regional, state and local groups, and elected officials on economic

development issues, educational improvement initiatives and community improvement opportunities. The Laboratory Director, the Chief Technology Officer and a number of other managers and staff represent Jefferson Lab on important government and community councils and boards. They provide open channels of communication to allow the public to raise questions and resolve issues. The Laboratory is widely recognized for its excellent contributions to the work of these bodies.

The Laboratory continued to be sensitive to its Department of Energy relationship and consistently gave appropriate credit and recognition to the Department and the Office of Science in press releases and in other public forums. The Laboratory Public Information Officer meets regularly with the Site Office regarding upcoming media efforts and coordinates significant events with the DOE Public Information Office. Customer feedback data from members of the public demonstrated high levels of satisfaction with their interactions with the Laboratory.

Technology Transfer

This performance category measures the degree to which key technologies related to Jefferson Lab's primary scientific mission are disseminated to industry. Performance is measured by the amount of non-DOE investments into Jefferson Lab initiatives, intellectual property generation and the level of customer satisfaction. Based on the results of the key indicator and the secondary indicators, Jefferson Lab achieved an "Outstanding" rating for FY 2005.

Without any direct DOE funding for technology transfer in FY 2005, Jefferson Lab continued to have an active and beneficial technology transfer program based on collaborative efforts with other partners. The total amount of "funds-in" to Jefferson Lab because of technology transfer activities was about 14.2% of the Laboratory's operating budget. The Laboratory accomplished several noteworthy objectives/milestones during the fiscal year in the area of technology transfer:

- **Free Electron Laser (FEL) Program.** Under a broad collaboration, the Department of Energy and SURA are partnering with the Department of the Defense, the Commonwealth of Virginia and the Laser Processing Consortium to design, construct, commission, and operate an infrared Free Electron Laser. This facility will support Department of Defense efforts to investigate the potential utility of high-energy laser devices and provide valuable information to Jefferson Lab and the industrial partners regarding potential industry applications of intense laser light. Construction of the initial facility was successfully completed on September 30, 1997.

In FY 2004, the Laboratory successfully completed and commissioned the infrared FEL Upgrade project with the achievement of its goal of 10,000 watts of continuous wave power. In addition, the Laboratory continued to make excellent progress on the 1-kilowatt ultraviolet upgrade project with the Air Force Research Laboratory. The UV upgrade project was scheduled to be completed in FY 2006 but due to lack of funding, it has slipped into FY 2007. The Laboratory also began construction of a terahertz (THz) beamline to the FEL facility for the U.S. Department of the Army. This project will be operational in late 2006 and the U.S. Army is investigating the application of a high power THz imaging for land mine detection. Excellent progress is being made on this project as well.

The Laboratory continues to play a key role in successfully managing this program by: (1) continuing to operate, test and upgrade the FEL facility for the U.S. Department of the Navy and the U.S. Department of the Air Force; (2) adding a terahertz (THz) beam line to the FEL facility for the U.S. Department of the Army; (3) continuing to work with federal, state and local governments for support; (4) maintaining excellent working relationships with the U.S. Department of the Navy, U.S. Department of the Air Force, U.S. Department of the Army, and Office of Science; (5) utilizing the Jefferson Lab Industrial Advisory Board, the Laser Processing Consortium and the Maritime Technical Advisory Committee (MTAC) to conduct technical and business planning for the FEL project; (6) developing and implementing a “user program” for the FEL facility; (7) working on many fronts to obtain funding for operating the FEL; and (8) working with the Site Office and Office of Nuclear Physics to accommodate potential future Department of Defense plans for the development of high energy lasers in support of national defense and homeland security initiatives/ requirements.

- Advanced Technology and Economic Development. The Laboratory continues to be an active member in various community organizations concerned with advanced technology and economic development, such as the Virginia Research and Technology Advisory Council, Virginia Nanotechnology Committee, Hampton Roads Partnership (Executive/Technology Committees), Jefferson Center for Research and Technology Committee, The United Way of Virginia, Corporate Volunteer Council, the Cooperating Hampton Roads Organization for Minorities in Engineering, the Newport News Environmental Commission, the Newport News Chamber of Commerce Business and Education Council, the Virginia Emergency Management Committee, the Tidewater Minority Purchasing Council and the Hampton Roads Research Partnership. Through these interactions with the local community, the Laboratory has a strong sense of the community and is better able to proactively deal with issues that could impact the community.

Another major achievement that has continued is the Laboratory’s partnership with state and local governments, and academia. Jefferson Lab has successfully partnered with the City of Newport News, the Commonwealth of Virginia and various universities to launch an applied research park around Jefferson Lab and to build the Applied Research Center (ARC) building adjacent to the Laboratory site. The long term relationship dates back to May 4, 1998, when the ARC building was dedicated by the City of Newport News and tenants from Christopher Newport University, the College of William and Mary, Old Dominion University, Norfolk State University, and Jefferson Lab moved into the building. The ARC building houses researchers interested in exploring technologies related to Jefferson Lab’s research. In addition, the ARC universities led by ODU competed and won a five year grant from the National Science Foundation (NSF) to establish a Center for Lasers and Advanced Manufacturing in the ARC building. Note that this is the third year of this grant in this successful partnering arrangement.

As it relates to the Department’s lease for office and Laboratory space in the ARC building, the Laboratory and the Site Office have a “one-of-a-kind” agreement with the city Economic Development Authority (EDA) to provide EH&S advisory services and operation and maintenance services to the EDA on a cost reimbursement basis. Under this agreement, the

Laboratory advises the EDA and the EDA applies Jefferson Lab EH&S standards in the ARC building, which provides a “seamless” site EH&S working environment. This arrangement gives the Laboratory effective oversight of activities in the ARC building without the cost or liability of being the building owner or manager. This agreement allows the DOE and the Laboratory to continue its partnership with the City, the Commonwealth of Virginia and local universities, which has been a contributing factor to the success of the Laboratory. This was the eight year for the Laboratory to provide these services for the EDA and the Laboratory has successfully performed these “unique” services while maintaining effective oversight of activities in the ARC building. The city, the Commonwealth of Virginia, local ARC universities, and the Laboratory are to be commended for their partnerships and for making the ARC a success.

- Intellectual Property Generation. In FY 2005, the Laboratory exceeded its intellectual property performance goal, successfully executed five patent applications and was awarded four patents and seven licensing agreements that relate directly to Jefferson Lab’s core competencies. An excellent example of transferring Laboratory technology to the private sector for commercialization is the Laboratory’s collaboration with Dilon Technologies medical imaging equipment. Under a license awarded to Dilon Technologies, the Laboratory transferred the gamma camera technology “know-how” and relevant technical information for conversion into a commercial product that will be used as a medical device for use in scintimammography procedures for breast cancer detection. In FY 2005, Dilon Technologies has successfully secured Food and Drug Administration (FDA) approval and is successfully manufacturing scintimammography equipment. Dilon has sold more than forty-five of these unique devices in their first eighteen months of sales and the licenses of related intellectual property are currently under negotiations for other biomedical applications. Also, a modified version of Jefferson Lab’s compact gamma camera has been adapted for small imaging which is useful for drug testing developed under a partnership with The Oak Ridge National Laboratory (ORNL) and John Hopkins University. The Laboratory is in the final negotiations with licensing this gamma camera technology to CTI, Inc for the first commercial version of this instrument. In addition, the Laboratory continues to participate in DOE’s Small Business Innovative Research (SBIR) Program and there were two active Cooperative Research and Development Agreements (CRADAs) in FY 2005.

Based on performance data, results of independent reviews, and Site Office assessments, an overall rating of “Outstanding” is merited for this performance category.

3.0 Environment, Health and Safety (150 Points)

The performance measures for this category are intended to provide an overall assessment of the Laboratory’s Environment, Health and Safety Program. In FY 2005, there are three “key indicators” that broadly measure the Laboratory’s performance and four “secondary indicators” that provide more detailed validity of the “key indicators.” The Site Office agrees with the Laboratory’s rating of “Outstanding” for Environment, Health and Safety performance.

As identified in the Lab's Self-Assessment, the EH&S Program has made numerous cultural changes in FY 2005. The Lab established a Directors Safety Council; hired a full time Associate Director for Environment, Health and Safety who reports directly to the Lab Director and has membership on the Director's Council; conducted a cultural survey to identify needs for improvement; established a Worker's Safety Committee with direct feedback to the Director; established a Senior Safety Advisory Committee reporting to the Director; and formed a centralized EH&S organization. All of these initiatives have made marked improvements to the safety culture at the Lab and is evident by several of the EH&S key indicators.

For FY 2005 the Office of Science benchmarked its laboratories using U.S. Department of Labor statistics for research firms (SIC classification 873). The benchmarking used the Total Recordable Case (TRC) rate and Days Away, Restricted or Transferred (DART) rate for the top 25% of the firms as the metric. These two "key indicators" were allocated 50 possible points each. Environmental exceedences was the third "key indicator" and assigned 20 possible points.

As documented in the Lab's Self-Assessment, the TRC rate of 0.5 compared very favorably with the SC goal of 1.1 for FY 2005, yielding a score of "Outstanding." The Lab's DART rate performance of 0.1 compared similarly well relative to SC's DART goal of 0.5, likewise yielding a score of "Outstanding." The Laboratory experienced only one DART case in all of FY 2005. The Laboratory not only achieved the FY 2005 Office of Science safety target, but also met the FY 2007 target. This is a remarkable achievement considering that the Laboratory had some of the highest DART and TRC rates in 2004. Jefferson Lab made considerable improvement in this area which is a direct result of several FY 2005 safety initiatives. Examples of such initiatives include executing an effective campaign to highlight importance of timely injury reporting and medical evaluation, as well as the actions during inclement weather conditions which showed management's commitment to address vulnerabilities identified by prior slip and fall incidents.

The Lab received National Safety Council notification in September of three awards for excellent safety performance over the last year. The three safety excellence awards include: *Safety Excellence Achievement Award; Perfect Record Award; and Million Hours Worked Award.*

A significant amount of progress was made during the year on electrical safety initiatives with credit given to the Laboratory's in-house development of voltage verification units and the decision to require the Laboratory Director approval for manipulative work on energized electrical systems.

Sustained Laboratory attention will be needed to ensure that the principles of Integrated Safety Management are implemented across the site to promote a safe work environment and safe work practices. The Site Office notes that SURA and the Laboratory Director have made the safety performance at the Laboratory a higher priority and have sought assistance from within the organization as well from recognized safety experts for program improvements.

The Lab worked aggressively to meet the expectations of the Environmental Management System (EMS) in preparation for self-declaration. Several Laboratory staff members have worked very hard to develop this system and bring teams together to address the requirements

needed to complete the FY 2005 EMS requirements, and are to be commended. The integration of EMS into the current ISM culture should be an area for improvement over the next year. Several shortcomings identified through Site Office assessments, walkthroughs, surveillances, etc., requiring Laboratory attention include Site Office concerns or Lab self-identified concerns:

- Implementation of Integrated Safety Management (ISM) principles across the site. The ISM still requires improvements to ensure all of the guiding principles are engrained at all levels of the Laboratory. Although initial steps were implemented in this area through the initiation of Management Self-Assessments, additional work in this area is clearly needed.
- As identified in DOE's FY 2004 performance evaluation report and FY 2005 mid-year review, diverse operating practices continue to exist between and within the Lab's three divisions. Where work conditions and hazards are not fundamentally different, the conditions and hazards should be reviewed with the goal of establishing and enforcing common operational safety practices.
- The timeliness of the disposition and closeout of safety related actions needs improvement, ensuring that the results from safety related review teams are addressed in an expedited fashion. Examples include:
 - Follow-up report on SC-3 ORPS event submitted beyond 45-day turn-around specified in the DOE Order.
 - NFPA 70E Electrical Safety corrective actions did not all meet the imposed SC suspense date or self-defined closure date.
- Continued maturation of the self-assessment program is needed. The Quality Assurance Program must be reviewed to ensure that the program meets the needs of the Laboratory and fulfills the expectations of DOE.
- Although a corrective action tracking systems (CATS) was established over the past year, the Site Office believes that a confirmation step should be added to the CATS system to ensure that corrective actions are implemented and suitable to mitigate the hazard.

There were no environmental exceedences for the fiscal year, so the third "key indicator" yielded a score of "Outstanding." In addition, the Laboratory won the Hampton Roads Sanitation District's (HRSD) Gold Award in 2005 for having no administrative or technical violations for their Industrial Wastewater Permit requirements. The Lab was recognized by HRSD for pollution prevention initiatives for the Test Lab's Acid Neutralization System. Accidental spills did not show signs of trends or commonalities to forecast intervention strategies. The timeliness of periodic environmental reports to the Site Office still needs improvement. Many reports are submitted "just in time" to meet regulatory deadlines and require expedited handling and mailing to ensure submission dates with regulators are met. Improvement in this area is needed.

All "secondary indicators" were scored "Outstanding" in accordance with the established metric criteria; however, the Site Office's mid-year performance comments were not fully addressed by

the Lab, as there is the need to provide a level of detail necessary to support the Lab's self-assessment and DOE's independent evaluation. It is important that the Laboratory provide details to support metric related performance to support the Laboratory's self-assessment and to facilitate the Site Office's ability to gauge the level of effort in which the metrics are dependant. The secondary indicator, Reportable Radiation Exposure, yielded a score of "Outstanding" and was assigned all 6 points. No adverse trends apparent in worker dose, although the complexity and exposure risk of radiation work remained largely unchanged from last year. TJSO conducted an Operational Awareness assessment of the Radiation Safety Program in FY 2005 which revealed an effective Radiation Safety Program.

The secondary indicator, Hazardous Substance Exposure, was assigned all 6 points, yielding a score of "Outstanding." This score reflects the absence of occupational exposures to hazardous substance in excess of the ORPS threshold in FY 2005. Through TJSO Operational Awareness activities, it is evident that the Lab's Industrial Hygiene staff is involved in work hazard characterization. The third secondary indicator, Affirmative Procurement, was assigned all 8 points, yielding a score of "Outstanding." The Lab successfully met the metric requirement. The Lab is unable to present definitive information on this metric as the database that captures this information at DOE is down due to technical problems. However, a score of >80% was assigned to the Laboratory's efforts at the time of last entry. Additional entries that are anticipated to be made will adjust this score to over 90% and will justify the yielded score of "Outstanding."

The secondary indicator, Emergency Management, was assigned 9.5 of the possible 10 points, yielding a score of "Outstanding." In FY 2005 the Lab conducted an Emergency Management Peer Review that rated the Lab's program as "outstanding"; however, many of the planned Emergency Management exercises or planned events outlined in the 2004 Emergency Readiness Assurance Plan (ERAP) were not accomplished or met. The Site Office believes that room for improvement exists in the Lab's fulfillment of planned emergency exercises and drills.

4.0 Quality of Business and Administrative Practices (105 Points)

This performance category measures the degree to which the Laboratory is maintaining effective and efficient business and administrative practices. Performance is measured by a peer review of the Laboratory's administrative and business systems and several secondary indicators that provide more detailed validation of the key indicator. The secondary indicators are grouped in the following functional areas: facilities management, property management and protection, financial management, procurement, human resources and services, and information systems. Based on the results addressed below, Jefferson Lab achieved an "Outstanding" rating in FY 2005.

Peer Review

For FY 2005, it was agreed by all parties that there would not be an Administrative Peer Review since there would be very few changes from the FY 2004 Review and that there were not any significant issues in the FY 2004 Review that needed to be addressed. In reallocating the overall

65 points for the Administrative Peer Review, the parties agreed that this section would: 1) Use the results of three “more focused” reviews for a total of 20 points; and, 2) Prorate the results of the FY 2004 Administrative Peer Review for a total of 45 points. Specific allocation of points is as follows:

- 5 points for the CFO – Timesheet Floor Check
- 5 points for the CFO – Funds Control Review
- 10 points for the Unclassified Foreign Visits and Assignments Review
- 45 points from the FY 2004 Administrative Peer Review.

Based upon the various reviews and TJSO awareness activities, the following points were awarded based upon FY 2005 performance:

- 5 points for the CFO – Timesheet Floor Check
- 5 points for the CFO – Funds Control Review
- 10 points for the Unclassified Foreign Visits and Assignments Review
- 42 points from the FY 2004 Administrative Peer Review (prorated based on FY 2004 previous rating: $[65/70] * 45 = 42$ points).

Therefore the Laboratory received an overall score of 62 points out of the total 65 points with an adjectival rating of “Outstanding.” The Site Office agrees with the overall rating of “Outstanding” and the recommendations resulting from the various reviews as an accurate evaluation of the Laboratory’s FY 2005 performance in the area of business management.

Secondary Indicators

Specific performance highlights and areas for improvement by each functional category are discussed below:

- Facilities Management. In FY 2005, the performance measures for this category focused on performing condition assessments, implementing planned projects, and comparing asset condition against the established goals in DOE O 430.1B, “Real Property Asset Management” (RPAM). The challenges in this area are formidable requiring both good planning and flexibility to meet the needs of a growing facility under tight budget constraints. Because of aging facilities across the DOE complex combined with severe funding constraints for capital projects, facilities management is one of the most important concerns within the Department. There were three measures (“secondary indicators”) used to assess performance in this area for FY 2005. Based on these performance measures, the Laboratory’s achievements in facility management resulted in an overall weighted rating of “Outstanding.”

The Site Office agrees with the Facilities Management accomplishments identified in the self-assessment document. In particular, the Facilities Management staff should be recognized for their outstanding effort towards performing condition assessments as planned on a more aggressive schedule than is required by RPAM. This process which identifies maintenance needs and utilization issues is a key element of a healthy facilities management

program. It provides the foundation for planning to optimize the life cycle costs of mission essential facilities and infrastructure. The emphasis on safety and diligence towards satisfying the ever changing and increasing requirements of the Facilities Information Management System (FIMS) are also commended. Although not mentioned in the self-assessment, the Lab has continued to do well at budgeting for maintenance activities as indicated by a Maintenance Investment Index (MII) of 2% which meets the SC goal. Additionally, the Lab continues to do well on energy efficiency initiatives.

The Site Office concurs with the overall rating of "Outstanding" for the Facilities Management performance measures based on the overall performance towards the goals set for this area. These measures establish a challenging mix of goals that emphasize assessment, planning, and implementation for a healthy life cycle approach to facilities management and they should be continued for FY 2006. Additional challenges for FY 2006 include continuing facility maintenance expenditures to sustain at least a 2% MII, balancing capital renewal projects to achieve an overall 4% Facility Investment Index, and reducing deferred maintenance.

- Property Management and Protection. The Site Office concurs in the overall rating of "Excellent" which resulted from the satisfactory achievement of the FY 2005 performance goals and agrees that the measures are an accurate evaluation of the Laboratory's performance in property management and protection. The Capital Equipment Inventory rating increased from "Good" (98.9%) in 2003 to "Outstanding" (99.7%) in 2005.

The Sensitive Inventories fell from "Outstanding" in 2004 to "Marginal" in 2005. Discussions with the Laboratory's Property Officer and review of the inventory results reveals that 70% of the unidentified material is comprised of IT equipment and components that are more than 5 years old and are thus essentially of little intrinsic value.

The primary reason for this decrease in accountability and protection for IT equipment appears to be a weakness in the property custodian area. The DOE's major concern is that the quantity and type of data that may have been contained in the missing equipment is unknown. There are specific and stringent requirements for protection and disposal of IT equipment. The Lab needs to take immediate action to ensure appropriate emphasis is placed on the responsibilities, and accountability, of property custodians, for protection and use of assigned sensitive property, and that established procedures in the approved Property Management System are followed.

Site observations and facility walkthroughs indicate that Jefferson Lab continues to strive to establish and maintain an appropriate level of property accountability and protection. With the exception of the Sensitive property inventory, other inventories conducted in FY 2005 reflect an accurate accountability rate exceeding 99%. Visible results of these ongoing efforts are: (1) the continued emphasis on housekeeping and disposal of excess items, which has resulted in noticeable improvements in the warehouse areas and the accelerator site, including vacating no longer required leased warehouse space; (2) the policies and procedures established for inventory, protection and accountability for Precious Metals continues to improve; (3) improvements in the material receiving process to include

additional protection for sensitive property between receipt and delivery to the end user; and (4) continued support of corporate citizenship by donations to schools through the Computers for Learning program.

The Lab's efforts to not only maintain the quality and control but to improve the operation of the Technical Stockroom continued in FY 2005, with the incorporation of a reutilization operation. Lab personnel turn excess common use and other materials in to the Stockroom where they are made available to other Lab users, thus saving both the cost of disposal and new acquisition. The Lab Property Office is presently establishing a tracking database for this material, and while no dollar estimates are yet available, it is known to have saved expenditures since its inception in early FY 2005. The FY 2005 stockroom inventory results were 99.6%, which is Outstanding.

The Lab continues its support for maintaining and improving the professional capabilities of the property staff by providing opportunities for professional training. As noted, DOE concurs with the "Excellent" overall rating of the Property Management function, but the importance of immediate action to resolve the cause(s) of the "Marginal" Sensitive property inventory cannot be over-emphasized.

- Financial Management. The Site Office agrees with the overall rating of "Outstanding" of the Laboratory's FY 2005 financial management performance based upon the FY 2005 financial performance measures and on additional oversight of the Laboratory's day-to-day financial management activities such as the results of assessments and annual transaction-testing audits.

Among the challenges met by the CFO organization in FY 2005: implementation of a new time and reporting system; working with the Oak Ridge Office (ORO) in minimizing the impact of DOE's implementation of the Standard Tracking and Reporting System (STARS) on financial records; and meeting CFO responsibilities while working with reduced staffing. SURA's support to DOE to correct FY 2005 uncoded balances in STARS was outstanding. The FY 2005 uncoded balances in STARS were incorrect due to system delays. The Lab's budget and financial personnel ensured DOE had the information needed to properly realign the costs in STARS.

SURA continued following through with agreements reached concerning unallowable expenses. Working with the Oak Ridge Office financial personnel and the Contracting Officer, the SURA home office finalized the actual Central Office Expenses (COE) for FY 2004 and negotiated the estimated FY 2005 COE amount. The costs charged to the COE were consistent with SURA's current approved Cost Accounting Standards (CAS) Board Disclosure Statement, Office of Management and Budget Circular A-122, and clause H.29 – SURA COE of the Jefferson Lab contract.

The Laboratory continues to adhere to financial plan controls and has an effective system of closely monitoring expenditures against approved funding levels. There were no issues with the accuracy and timeliness of the monthly 533M Cost Report and the annual budget submission was properly detailed and addressed the needs of the Lab including the funding

required to maintain higher level requirements for research and security programs. The Laboratory CFO is proactive in identifying budget issues to DOE.

As part of the three-year assessment schedule, FY 2005 assessments were performed by the ORO and covered the areas of: (1) SURA and TJNAF Audit Resolution and Follow-up System, (2) Time Charging Practices, and (3) Funds Control Process. No major weaknesses were identified in any of the three assessments. An area for improvement noted in the Funds Control Process assessment was the need to develop an automated system control to prevent an over commitment of funding. While no over commitment of funds has occurred, it was noted that human intervention should not be the primary means of funds control and that SURA should incorporate an automated process to safeguard against over commitments. The recommendations have been reviewed and a corrective action plan developed by the Lab. Additionally, the Lab volunteered and was selected to participate in the DOE Headquarters' Purchase Card Program Data Mining Pilot Project. Started in July, this program further strengthens an already very adequate internal control system the Lab utilizes in their Purchase Card Program. The program also aids the Site Office and Headquarters with oversight of the program.

The Lab's financial personnel maintain positive working relationships with the staffs of the Site Office, Oak Ridge and HQ. This professional staff is responsive and timely to data calls and requests for information. The Lab's senior management personnel demonstrate support of the CFO organization through their encouragement of cost and budget awareness throughout the organization.

While no Administrative Peer Review (APR) was conducted this year, not much has changed from FY 2004. As noted in the last APR, the CFO organization has considerable experience in the financial management of the Lab. Some of the recommendations from the last APR, while not implemented in FY 2005 have been addressed. For example, the FY 2004 APR recommended the CFO Organization give consideration to the expansion of the self-assessment process and the use of performance metrics beyond those identified in the Contract Appendix B. The new Performance Evaluation Management Plan negotiated for FY 2006 does implement new performance metrics that further help the CFO organization to focus on being a responsive, value-creating, customer-focused partner in the Lab's business results.

- Procurement. The Site Office agrees with the overall rating of "Outstanding" resulting from the performance measures as an accurate evaluation of the Laboratory's FY 2005 procurement performance. The Business Services Department continues to have a high level of customer satisfaction within the Laboratory and their efforts have resulted in an average procurement cycle time of 5.72 days. The use of P-cards and e-commerce appears to be well controlled. The procurement managers have an average of 20+ years of experience and are dedicated to supporting the mission of the Laboratory. The successful transition of property management into the Business Services Department appears to have gone very smoothly with little to no interruption in the service level provided.

Jefferson Lab continues to support the Department's socio-economic objectives and goals. Their dedicated efforts exceeded three of their five FY 2005 contractually required socio-economic subcontracting goals. The reason that the Laboratory did not meet or exceed the Small Disadvantage Business concerns and the Service-Disabled Veteran business concerns goals is due to the fact that the Department revised the overall procurement base. In May of 2005, DOE directed all expenditures be included in the base when determining the expended dollars. In the past, certain expenditures (i.e., specific University Agreements) were exempt from the inclusion in the expended dollars calculation. Further, this year marked the addition of a new category (Service-Disabled Veteran business concerns) and this goal was not met due to the lack of potential subcontractors in this category. This will continue to be a challenge for the Laboratory in FY 2006.

The Laboratory's Small Business Manager is on the Tidewater Regional area of the Virginia Minority Supplier Development Council, which once again shows the Laboratory's strong commitment to the Department's small business program. Jefferson Laboratory's "Small/Disadvantaged Subcontractor of the Year" award continues to be greatly appreciated by the proud recipients and demonstrates, once again, the Laboratory's strong support of DOE's socio-economic objectives. The Laboratory continues to do an outstanding job of balancing achievement of socio-economic goals while maintaining subcontracting competition and transitioning toward commercial procurement practices.

In FY 2006, a number of Laboratory-held small business contracts are to become DOE prime contracts. A high degree of communication, coordination, and cooperation by all parties will be needed to ensure a smooth transition and implementation.

- Human Resources Management. The Site Office concurs in the overall rating of "Outstanding" as an accurate evaluation of the Laboratory's performance in Human Resources and Services based on the metrics in the performance plan. The Laboratory's compensation program is competitive with other DOE laboratories and provides a complete range of employee benefits at a reasonable cost. Compensation positions were aligned with market and annual increases in benefit premium costs were below market. The approved FY 2005 Salary Increase Fund plan and required salary actions were conservative, reasonable, and reflective of a "non-growth" budget. However, subsequent budget cuts will challenge the Lab to find ways to minimize impact on the workforce. The Laboratory continues to invest in training its employees and finding new ways to deliver training. The Lab continued efforts in identifying minority recruiting sources and increasing representation in protected classes.

The Human Resource division remains responsive to data calls. Of note this year, the U.S. Department of Labor, Office of Federal Contract Compliance Programs (OFCCP) performed a compliance evaluation of the equal employment opportunity policies and practices at the Lab. There were no findings. Additionally the Lab reviewed and determined they were in compliance with the new Fair Labor Standards Act (FLSA) interpretation of exempt/nonexempt overtime positions. There were no reclassifications needed or back pay issues as a result of the review.

A general recommendation of the FY 2004 Administrative Peer Review was for the Lab to continue its efforts in the development of and deployment of supervisor training as well as a formal Management Development Program. It was noted in an FY 2005 internal audit report the Lab was making progress in these two areas. With increasing pressures on the budget, future progress could be slowed.

In FY 2005, the Laboratory developed a balanced human resources (HR) score card to use in FY 2006 as part of the Performance Evaluation and Management Process. These score measures are more reflective of a balanced HR service organization and will, along with continued emphasis on communication strategies, add to the management of this critical area, especially in times of tight budgets.

- Information Systems. With regard to cyber security operations, the operations are well managed and during FY 2005 there were no root-level compromises and no instances where Jefferson Lab was used to attack other systems. Cyber security controls include mitigating risks with Internet-based technology and processes that provide assurance for information and systems. This includes automatic edits to analyze large quantities of data, the ability to trace Internet-based actions and transactions to individuals, as well as written policy and its implementation within coded instructions. Most importantly, cyber security is not negatively impacting the delivery of science.

The Site Office analyzed the Lab's ability to implement corrective actions, Peer and Independent Review assessments, and certified the managerial, operational, and technical controls of all computer systems. The Lab has made effective improvement in correcting areas identified by a DOE May 2004 inspection. The Lab has implemented a series of new control measures such as: the enhancement of wireless network access controls and intrusion detection systems, revising risk management plans, and enhancing virtual local area networks segmentation. The Site Office noted a missed milestone date for a revised security plan and this is reflected in contract metric calculations. During the first quarter of the fiscal year, the Site Office expressed concern with the Lab's ability to attain future corrective milestone dates, as the chance of simultaneous complex projects would increase. However, the Lab performed very well and completed all of the proposed milestones for the fiscal year.

A Peer Review was conducted with the focus on risks to enclaves, the controls used to mitigate the risk, the security level of the system, and the controls put in place to provide the level of protection required. The Peer review served as a walkthrough of the Security Plan and how those controls were tested or demonstrated during the security testing and evaluation phase. The Site Office utilized an independent reviewer to provide an outside perspective by focusing on the mapping of these controls and any possible gaps in the presentation. The independent reviewer favorably assessed the program and stated that the scopes of risks are sufficient and adequate measures are in place to address those risks. A suggested action is to isolate the mass storage system and compute farm onto its own network, separate from the general purpose JLab network. The network infrastructure is now in place to support this configuration. The Site Office reviewed these observations and in conjunction with its own operational oversight, used this as part of the DOE accreditation process.

The Site Office has analyzed plans and action items in the Laboratory's document management system which is being used to manage and publish security documentation to appropriate internal users. General document management used within enclaves is described in the security plans of specific work groups. Configuration Management has been enhanced and the Site Office verified both an access control list management system, and that exposed web servers have been partitioned in screened networks. As part of the certification/ accreditation process, the Site Office tested access control to the Human Resource, Finance, and Budget areas and the segmentation remains solid. The Site Office also tested the validity of operational monitoring capabilities that is performed on code review tests and unit testing of Bidder Portal and JList applications. Through various walkthroughs and inspections the Site Office verified several operational processes in the Computing Infrastructure Enclave. In both May and June 2005 contingency planning exercises were verified, and in July, the Site Office granted full accreditation to the Lab's systems.

The Laboratory's wireless network is protected to where there is minimal risk. On routine inspections the Site Office participated in war driving exercises for detection of rogue access points and observed and verified the process for which wireless networking is distributed. War driving is done with state of the art equipment at least once a month on an intentionally irregular schedule in order to locate rogue access points and map the site's wireless "footprint." These networks in use at the lab have the following constraints: no critical services depend on wireless networking; no wireless devices are enabled on protected business administration subnets; and site-wide and conference wireless devices are contained on dedicated virtual local area networks that allow specific access-controls at their boundaries. A complete and successful installation of a wireless management system has taken place.

- Security. In FY 2004, a Security Survey was conducted by the Oak Ridge Office to assess the JLab's Security Program. The Security Program at the Laboratory comprises a broad area of responsibility that includes export control, material control and accountability, and personnel and physical security.

The Survey did not find any areas of concern and the Security Program received the highest rating of "Satisfactory" in all applicable topical areas and a "Satisfactory" composite rating. This bi-annual Security Survey will be conducted again in FY 2006.

In lieu of the Administrative Peer Review, JLab decided with TJSO concurrence to have an Unclassified Foreign Visits and Assignments (UFV&A) Peer Review. The UFV&A Peer Review was conducted at JLab on August 23-24, 2005. As a result of the Peer Review, the panel concluded:

- JLab has an effective approval process for foreign national visits and assignments;
- JLab has an effective process for documenting and tracking visits and assignments of foreign nationals associated with the Lab;

- One minor non-compliance (i.e., not requiring persons of non-U.S citizenship to declare place of birth in addition to current citizenship). The minor non-compliance was corrected immediately.

The Peer Review panel did identify several areas for JLab to evaluate for continual improvement of the site's UFV&A program. JLab is currently evaluating the areas for improvement.

JLab Security Program has kept pace with fast-emerging initiatives such as the Homeland Security Presidential Directive-12, and Counterintelligence program. With respect to HSPD-12, JLab working aggressively to ensure compliance with the recently issued directive by the mandated date of October 12, 2005. JLab was prepared to implement the program by October 27, 2005. As a result of recent direction from the Deputy Secretary of Energy, JLab does not have to implement the requirement of DOE O 206.3; however, they have effectively prepared the site if implementation is required in the future. In regards to the counter-intelligence program implemented by DOE, JLab has been involved and actively collaborating with the Washington Regional Office of Counterintelligence (WROC) to ensure their CI needs are being effectively achieved without impedance.

Another opportunity that arose for the JLab Security Program was the unplanned termination (because of financial default) of the site physical security subcontractor and within days, the instatement of an interim subcontractor. Based on JLab's proactive approach, they ensured the site's physical security program transitioned seamlessly between subcontractors, with minimal impact to the site. The Lab proactively and professionally re-competed the physical security contract, with the successful selection of a new subcontractor in the first quarter of FY 2006.

Lastly, the Lab continues to effectively manage the Materials Control & Accountability Program, including monthly reporting requirements; as well as, the complexities involving export control.

Based upon the overall performance, SC-TJSO has concluded that the JLab Security Program Performance Objective Rating is "Outstanding."

In addition to the various focused reviews and the performance metrics, the Site Office monitors the Laboratory's performance on a day-to-day basis and utilizes matrix support from SC/HQ and ORO. In summary, the "Outstanding" rating achieved in this category is well supported by the various review panels' work, secondary performance measures, the Laboratory's self-assessment, DOE's ongoing operational awareness, and by other indicators of an effective business and administrative structure.

5.0 Responsible Institutional Management (100 points)

In 2004, an Institutional Management Review of the TJNAF was conducted. In addition, the Laboratory conducted its 2005 Self-Assessment. Both reviews resulted in a rating of “Outstanding” in the area of Institutional Management. The TJSO agrees that a rating of “Outstanding” in the Institutional Management Category is appropriate.

Performed on a biennial basis, the 2005 Institutional Management Review included the review of Strategic Planning, Managerial Effectiveness and Organizational Culture. The review panel indicated that the Laboratory is a “vibrant institution which continues to be well managed and to have a clear vision of its future.” The panel also indicated that “The Laboratory is clearly making its mark in quark physics and is viewed worldwide as a unique institution...the Lab is delivering on its commitments...(and) Lab culture is viewed as robust.” The panel recognized the establishment of an Associate Director (AD) for EH&S who is a member of the Director’s Council. It was noted the establishment of this position will contribute significantly to the success of the safety program. The Laboratory has initiated several efforts to enhance more open communication with the Site Office through regular meetings and enhanced planning activities. Operationally the panel indicated that the Laboratory has delivered on its commitments. The Laboratory’s business plan is well developed and well aligned with the goals of the DOE and the Laboratory User community. The currently experimental and theoretical scientific programs and their potential were found to be “Outstanding” by the 2004 and 2005 Science and Technology Reviews. The Laboratory has consistently delivered physics over 100% of the goal every year and Hall availability exceeded expectations. The Laboratory has initiated several safety initiatives to enhance safety at the Laboratory. JLab management worked hard to help prepare for a CD-1 approval for the 12 GeV Project and continues to secure continued funding for the FEL.

The Office of Science has continued to undergo organizational changes in FY 2005. In addition to its Federal stewardship, program management, and contract management and administration responsibilities, the Site Office will continue to be relied upon heavily by Office of Science senior leadership to provide a “Sense of the Laboratory.” These changes will require enhanced communication and collaboration between the Site Office and JLab personnel at all levels. The Laboratory management is encouraged to continue to work with the Site Office to enhance and promote such efforts. The potential assignment of JLab small business contracts from JLab to DOE will introduce the need for close coordination and integration with other JLab operations. A high level of interaction will be needed to maintain a strong ES&H and security program, minimize impacts to operations and to ensure the work gets done in an effective and efficient manner.

As we look ahead to 2006, the TJNAF management should continue to focus attention on improving the EH&S program to ensure a safe work environment for all its employees. Given the FY 2006 budget and potential outyear budgets, SURA and JLab are encouraged to investigate efficiency initiatives to improve productivity, and to contain and, where possible, reduce costs. In addition, a strong effort should also be placed on achieving success with the 12 GeV Project. This project is critical to the future of the TJNAF and should be managed accordingly.

6.0 Project Management (70 Points)

There were six performance measures for this area in FY 2005. The greatest emphasis was placed on schedule performance for the Spallation Neutron Source (SNS) Project. The other five measures covered cost and schedule performance on the CEBAF Center Addition, Phase 1 (CCA) Project; cost and schedule performance on other projects valued at over \$100K; and schedule performance on the 12 GeV CEBAF Upgrade Project.

The SNS Inter-laboratory Memorandum of Agreement (MOA) requires that SNS management assess, at least annually, the performance of the SNS partner laboratories consistent with the SNS performance measures contained within their respective management and operating contracts. The following is quoted directly from the SNS management evaluation of the technical and management performance of Jefferson Lab for SNS work performed during FY 2005:

“Jefferson Lab is responsible for the superconducting cavities and cryomodules and cryogenics system. Over the course of the year, all the issues that arose on cryomodule production were addressed and carefully tracked. Given the tight funding constraints for the fiscal year it was very important that JLab stay on schedule and within their budget for the final work. JLab management was able to achieve this goal with only minor changes to the plan. In March 2005, the last cryomodule was delivered. Several cryomodules experienced leaks, some of which were known and some of which were new. In cooperation with JLab, repairs were performed at JLab and at the SNS. Efficient exchange of information and procedures was necessary to complete the unexpected work on schedule. Commissioning the cryogenic plant was another large part of the JLab effort. After overcoming a number of issues with the 2K system, operational performance has been very good. JLab has consistently delivered excellent hardware, which has exceeded performance specifications as demonstrated in the recent commissioning of the superconducting linac.

The team, under the leadership of Claus Rode, continued to work closely with SNS staff to pursue construction and testing activities to meet crucial project milestones. We appreciate the JLab contribution to the overall success of SNS.”

Although FY 2005 was again a year of many challenges as work was completed on the SNS Project, the Laboratory responded well to the challenges and has delivered quality products with cost and schedule tracking closely to the approved production plan. The Site Office agrees with the score of “Outstanding” on this measure in the self-assessment document based on the scoring criteria established for FY 2005.

This was a good year for the CCA Project which is well on the way to beneficial occupancy meeting both schedule and budget expectations. The CCA will provide greatly needed office and computer space to support the Laboratory’s mission. It was ranked as the number one priority in the Laboratory’s Strategic Facilities Plan. The Site Office agrees with the score of “Outstanding” on the CCA cost and schedule measures in the self-assessment document based on the scoring criteria established for FY 2005.

Challenges in FY 2006 for the CCA Project will be to maintain a safe work environment while achieving technical, cost and schedule baselines to completion of the project. CCA Project metrics for FY 2006 will continue to measure both cost and schedule performance.

The cost and schedule measures in FY 2005 for projects valued at over \$100K were scored using an aggregate of performance on all projects versus a sum of the performance on individual projects. This approach is appropriate for these projects since the overall performance on projects of this size is of greater significance than individual project performance. The Site Office agrees with the scores of "Outstanding" for cost and schedule performance on projects valued over \$100K in FY 2005.

Challenges in FY 2006 are to continue to improve the process for joint Laboratory and Site Office review and prioritization of General Plant Projects, and to provide additional technical, cost and schedule status information on selected projects. Measuring aggregate cost and schedule performance for projects valued at over \$100K is appropriate and will be continued in FY 2006.

In FY 2005 the 12 GeV CEBAF Upgrade project made significant progress on R&D activities and preparation for Critical Decision 1 (CD-1). JLab did an outstanding job of preparing for an Independent Project Review of the 12 GeV Upgrade Project in support for CD-1. The review concluded that, "All of the requirements for CD-1 approval have been completed." The Site Offices agrees with the score of "Outstanding" for schedule performance based on the scoring criteria established for FY 2005. The challenge in FY 2006 will be to maintain momentum under the extremely constrained budget.