FY10 Self-Evaluation

Contractor Performance Evaluation and Measurement Plan

Volume 2
Management and Operations
Goals 4 – 8

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Table of Contents

Executive Summary

SLAC mission support provides needed facilities and infrastructure, information and procedures, and human capital. Sections 4-8 of the PEMP demonstrate SLAC's self-assessment of its progress and shortcomings in this regard.

FY10 Highlights for PEMP Goals 4-8

Goal 4 - Provide Sound and Competent Leadership and Stewardship of the Laboratory

- The laboratory recruited world class science leaders in Chi-Chang Kao, SSRL ALD; Jens Nørskov, lead of a new initiative in catalysis and interfacial science; Norbert Holtkamp, ALD for the Accelerator Directorate; and Harold Hwang of the Stanford Institute of Materials and Energy Sciences.
- The Operations Leadership Team has been bolstered with the successful recruitment of a permanent, highly competent and DOE experienced CFO.
- New leadership has been installed at levels 2 and 3 in the Operations Directorate over the past two years: 15 new hires, 11 promotions from within, 3 transfers out of 46 leadership positions.
- SLAC does not have a permanent Communications Director; a search is in progress.
- Objective-based bonuses, aggressive performance monitoring, layoff of unneeded functions and involuntary terminations demonstrate the move toward a culture of performance and accountability.
- A human performance management system was deployed and did not meet SLAC expectations; SLAC is actively developing management requirements and associated improvement schedule.
- Furthering the performing research at SLAC, the Lab Directed Research and Development (LDRD) increased funding by 50% (to $3.5M).
- In order to pursue SLAC strategic objectives of maintaining its leadership as a premier Photon Science and Electron Accelerator Laboratory, the Accelerator Directorate was created.
- Institutional self-assessment is not sufficiently mature to allow SLAC management to identify and mitigate risks and enable continuous improvement.

Goal 5 - Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

- SLAC achieved the third consecutive year of low TRC and DART rates – 0.45 and 0.30, respectively – the lowest in our history and amongst the lowest of all DOE laboratories.
- SLAC's work planning and control approach and Plan of the Week implementation are integral elements of the ISEMS and are recognized as best practices among the SC labs.
- Through process improvement, SLAC reduced the number of dosimeters issued from over 10,000 per year to ~5,000 in FY10.
- SLAC reduced site collective dose from over 2 person-rem in 2005 to 170 person-mrem in FY10 through effective work planning implementation.
- SLAC led the DOE SC technical basis efforts to gain avenue for dispositioning metals and materials from accelerator facilities.
- As a result of the Laser Eye Injury at PULSE that occurred at the end of FY09, SLAC thoroughly reviewed the causal factors, including culture and took significant tactical and organizational corrective actions.

Goal 6 - Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)

- Costs to support the SLAC mission are now clearly understood and fairly allocated with a new multi-program financial model which has been created and installed; this replaces the landlord single purpose model.
- To enable the creation of the Accelerator Directorate, a new WBS budget approach was created.
- SLAC had inadequate financial controls in 2008, which were recognized by a recent Stanford University Internal Audit and Institutional Compliance (IAIC) report. SLAC has mitigated many of these concerns through the assignment of competent OCFO staff and other compensating policy, process and system controls.
- Increased procurement authority, shortened lead times (top quartile of DOE Labs)
    - RFP review limit revised from $1,000,000 to $5,000,000.
    - Competitive award limit raised from $1,000,000 to $2,000,000.
    - ARRA award limit raised from $25,000 to $200,000.
- Achieved $5M in savings from competitive sourcing, rebates, B2B.
- Key positions filled in finance and business systems: Controller, IT Enterprise Architect, IT Applications head, IT Operations and Infrastructure head.
- At least 2 million dollars computer/software savings; retained SUN discount after Oracle takeover pricing revision.
- AT&T installed a cell tower at no cost to SLAC, greatly enhanced cell service and safety communications.

Goal 7 – Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs

- 95% LCLS mission uptime was supported by focusing on mission readiness management.
- Achieved CD0 for Scientific User Support Building, CD1 for the Research Support Building, completed ARRA funded and other infrastructure project milestones on time; accomplished due to improvements to project management systems, improved construction management leadership and practices and formation of a Project Management Oversight Group.
- Cooling Tower 101completed in May 2010. Lessons learned and implemented from this project have improved project management across the board at SLAC.
- SLAC led the DOE-wide effort regarding sustainability at DOE high-energy facilities.

Goal 8 – Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

- A proficient Emergency Management System has been implemented as demonstrated in two significant real emergencies; one was a multi-day rain storm and power outage and the other was loaning emergency personnel in life-saving work at Stanford Hospital during a Stanford power outage caused by a plane crash in Palo Alto.
- SLAC continued to reduce the radioactive material inventory by dispositioning hundreds of sources.
- Self identified and aggressively resolved PII problem; prevention mechanism installed.

Management and Operations Score Calculation

Goal		Grade	Number	Weight	Score	Total
4	Provide Sound and Competent Leadership and Stewardship of the Lab	A	4.0	25%	1.00	
5	Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection	A	4.0	25%	1.00	
6	Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Lab Mission(s)	B+	3.2	25%	0.80	
7	Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Lab Needs	B+	3.4	15%	0.51	
8	Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems	B+	3.3	10%	0.33	
				Total Management and Operations Score		A- / 3.64

Goal 4

Element		Grade	Number	Weight	Score	Total
4	Provide Sound and Competent Leadership and Stewardship of the Lab (Goal Weight: 25%)					
4.1	Provide a Distinctive Vision for the Lab and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans	A	3.9	34%	1.36	
4.2	Provide for Responsive and Accountable Leadership throughout the Organization	A	3.9	33%	1.27	
4.3	Provide Efficient and Effective Corporate Office Support as Appropriate	A	4.0	33%	1.32	
					Performance Goal 4 Total	A / 3.95

This goal has three objectives and five notable outcomes.

Stanford is developing outstanding leadership and stewardship for SLAC and positioning the laboratory to become a leading Office of Science multi-program National Lab:

- SLAC recruited world class science leaders as well as bolstered the Operations Directorate with a highly competent and DOE experienced CFO, and new leadership at levels 2 and 3.
- Objective-based bonuses, aggressive performance monitoring, layoff of unneeded functions and involuntary terminations demonstrate the move toward a culture of performance and accountability.
- Furthering the performing research at SLAC, the Lab Directed Research and Development (LDRD) increased funding by 50% (to $3.5M).

Objective 4.1

NOTABLE OUTCOMES

4.1.1 Laboratory leadership will develop a strategic plan for the future scientific and technical activities of the laboratory, which aligns with Office of Science and department goals, and a detailed strategy for executing the plan during the next 2-5 years.

4.1.2 Laboratory leadership will provide a strategy for its Work for Others (WFO) program; the WFO program should align with and support Office of Science, department, and laboratory goals.

PERFORMANCE SUMMARY

Strategic Plan

- For the first time, the Annual Lab Plan was supported at year end by a Lab Agenda (one page per directorate, six total) that serves as a roadmap to guide business and performance plans for the divisions, departments and individuals.

Work for Others

- Cleared backlog of WFO requests and implemented tracking process by streamlining WFO requirements and processes.

NOTEWORTHY PRACTICES

Additional

- Collaborated with SSO to establish PEMP goals and notable targets, which were then integrated and tracked in the lab business plans with accountability established.

OPPORTUNITIES FOR IMPROVEMENT

- NA

Objective 4.2

NOTABLE OUTCOMES

4.2.1 Laboratory leadership will make significant progress in defining and implementing its contractor assurance system. It is expected that a collaborative and uniform approach to this issue among all contractors will be evident.

4.2.2 Laboratory leadership will demonstrate significant progress toward resolution of long-standing operational issues.

PERFORMANCE SUMMARY

Contractor Assurance System

- The Stanford Vice President for SLAC has developed, implemented and documented an effective Stanford Contractor Assurance System (SCAS).
- The balance and partnering of Stanford, SLAC and DOE in carrying out the mission, providing assurance and oversight is a model for an effective and productive GOCO laboratory.

Operational Issues

- The Operations Directorate introduced a five year strategic planning process that sets the stage for FY11 and beyond, guiding mission support functions to focus on institutional goals and strategy.
- Project management has been substantially improved since the establishment of the PM Office in 2009, the recruiting and placement of a Field Construction Program manager, and the Project Management Oversight Group (PMOG).

Additional

- For the first time, the Work Planning and Control at SLAC was identified as a Proficiency in the August, 2010, external assessment by the DOE/Oak Ridge ISC.
- New leadership has been installed in the Operations Directorate over the past two years: 15 new hires, 11 promotions from within, 3 transfers out of 46 leadership positions.
- Stanford supported SLAC by loaning an acting CFO, deputy CFO, acting Director of Research Administration, and interim Communications Director.

- Stanford opened their world class leadership training for 20 of SLAC's high potential managers.

NOTEWORTHY PRACTICES

- NA

OPPORTUNITIES FOR IMPROVEMENT

Contractor Assurance System

- Institutional self-assessment is not sufficiently mature to allow SLAC management to identify and mitigate risks and enable continuous improvement.

OBJECTIVE 4.3

NOTABLE OUTCOMES

4.3.1 The contractor will fill all key leadership positions at the laboratory in a timely manner.

PERFORMANCE SUMMARY

Key Leadership Positions

- The laboratory recruited world class science leaders in Chi-Chang Kao, SSRL ALD; Jens Nørskov, lead of a new initiative in catalysis and interfacial science; Norbert Holtkamp, ALD for the Accelerator Directorate; and Harold Hwang of the Stanford Institute of Materials and Energy Sciences.
- The Operations Leadership team has been bolstered with the successful recruitment of highly competent and DOE experienced CFO.

Additional

- Stanford continues its established comprehensive oversight and support processes, run via the SLAC Board of Overseers. Each of the four committees of the oversight board meet regularly, adding value by review and comment on SLAC's performance, risks, and opportunities.

NOTEWORTHY PRACTICES

Key Leadership Positions

- Stanford opened their world class leadership training for 20 managers.

OPPORTUNITIES FOR IMPROVEMENT

- NA

Goal 5

Element		Grade	Number	Weight	Score	Total
5	Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection (Goal Weight: 25%)					
5.1	Provide a Work Environment that Protects Worker Safety, Health and the Environment	A	4.0	40%	1.60	
5.2	Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management	A	4.0	50%	2.00	
5.3	Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention	A-	3.7	10%	0.37	
					Performance Goal 5 Total	A / 3.97

This goal has three objectives and five notable outcomes.

The overall goal is to continue to provide expert assistance and consulting support to line organizations to support and further the Laboratory's mission. SLAC's ES&H program is integrated throughout all operations and has been successful in achieving this goal during FY10.

- SLAC achieved the third consecutive year of low TRC and DART rates – 0.45 and 0.30, respectively – the lowest in our history and amongst the lowest of all DOE laboratories.
- SLACs work planning and control approach and Plan of the Week implementation are integral elements of the ISEMS and are recognized as best practices among the SC labs.
- Through process improvement SLAC reduced the number of dosimeters issued from over 10,000 per year to ~ 5000 in FY10.
- SLAC reduced site collective dose from over 2 person-rem in 2005 to 170 person-mrem in FY10 through effective work planning implementation.
- SLAC led the DOE SC technical basis efforts to gain avenue for dispositioning metals and materials from accelerator facilities.
- As a result of the Laser Eye Injury at PULSE that occurred at the end of FY09, SLAC thoroughly reviewed the causal factors, including culture and took significant tactical and organizational correction actions.

Objective 5.1

NOTABLE OUTCOMES

5.1.1 Develop wellness as a program to help decrease worker injury and illness. SLAC will increase worker awareness and participation in a plan with milestones in FY10 which will include measuring baseline participation and developing metrics to measure overall employee wellness.

5.1.2 Implement an effective return-to-work program as evidenced by reduced Days Away From Work rate by 15% as compared to the previous three year average.

PERFORMANCE SUMMARY

Wellness

- SLAC participants in the BeWell Stanford Health and Lifestyle Assessment (SHALA) program have increased by 55%. Promotions about the program saw SLAC employee participation increase from 270 in FY08-09 to 418 employees in FY09-10.

Return to Work

- The number of lost workdays due to workplace injury/illness in FY10 is approximately ~ 100 days, compared to an average of 278 days lost over the previous three fiscal years - a reduction of ~65%.

Additional

- The August 2010 DOE Assessment by DOE Oak Ridge ISC found the SLAC WPC to be a Proficiency (PRO) "embedded into the ISEMS framework".
- SLAC made effective use of the Plan of the Week meetings to promote communications among key organizations to coordinate planning and oversight of activities.

NOTEWORTHY PRACTICES

Wellness

- During FY10, SLAC carefully evaluated its existing occupational health business model and determined that it could improve coverage, capabilities, and performance, at 20% lower cost by partnering with Stanford University Occupational Health Center. This transition will occur at the beginning of FY11.

OPPORTUNITIES FOR IMPROVEMENT

Wellness

- Under the new leadership of the Occupational Health Center, SLAC expects to realize improvements in case management, wellness program development, and medical records management.

Additional

- Improve the quality of the ESH program implementation assessments, including the line management assessments, across the laboratory.

Objective 5.2

NOTABLE OUTCOMES

5.2.1 Continue to improve the Incident Investigation Program effectively investigating incidents, developing corrective actions that prevent recurrence, and communicating lessons learned as part of the SLAC Operating Experience/Lessons Learned (OPEX/LL) Program.

5.2.2 Implement an effective fire protection program.

PERFORMANCE SUMMARY

Incident Investigations, Lessons Learned

- Improved transparency of on-going investigations by:
  - Weekly Reporting to ALD at Plan of the Week Meeting the Status of investigations.
  - Established and implemented a Lessons Learned distribution and tracking methodology.
- Quality of investigation reports has improved, including the extent of condition review. All investigaton reports are screened for appropriate corrective actions. On a graded approach, extent of condition analyses are performed and activity restarts are being authorized by the Chief Safety Officer and the relevant ALD.

Fire Protection Program

- Completed ARRA-funded design and installation of new, state of the art fire alarm reporting system covering the entire site. Fire alarms now go directly to Palo Alto fire dispatch.
- Conducted sprinkler and life safety assessments covering facilities that house in excess of 90% of the SLAC population.
- Completed the fire hazard analysis for the Linac, an existing facility that presents unique fire and life safety egress considerations. Updated fire hazard analysis for End Station B NLCTA Accelerator.

NOTEWORTHY PRACTICES

Additional

- Developed an improved, more effective ES&H project review process whereby ES&H considerations are incorporated at the very earliest stages of projects.

OPPORTUNITIES FOR IMPROVEMENT

Incident Investigations, Lessons Learned

- Further improvement of the quality of investigations.
- Improve the Lessons Learned and comprehensive trending analysis of event data.

Additional

- Continue improvement in subcontractor selection and oversight.

Objective 5.3

NOTABLE OUTCOMES

5.3.1 Demonstrate progress in the implementation of sustainable environmental practices that support DOE environmental stewardship goals in pollution and waste prevention and recycling, reduction or elimination of acquisition and use of toxic or hazardous chemicals, post-consumer material recycling, and life-cycle environmental management of electronic assets.

PERFORMANCE SUMMARY

- SLAC is diverting over 60% of its sanitary waste from landfills, and has robust programs in place for recycling a variety of materials. Several significant examples of waste and hazard reduction efforts include:
  - The Building 901 construction diverted over 95% of its C&D wastes.
  - SLAC coordinated the reuse/recycling of two legacy ethane tube trailers, saving $100K.
  - SLAC continues to pursue research into alternatives for cyanide-based plating.
  - A tank assessment identified an unused tank which was drained of 4K gallons of diesel and taken out of service.
- SLAC has exceeded requirements for purchasing of EPEAT registered equipment, which has resulted in awards from the Federal Electronics Challenge for the last two years. Provided DOE-wide leadership in development of its Draft Strategic Sustainability Performance Plan, including SLAC's COO serving as co-chair for the High Energy Mission Specific Facility.
- Completed the Final Remedial Action Plan for SLAC's sites with volatile organic compound (VOC) impacts in groundwater.

NOTEWORTHY PRACTICES

- SLAC is one of only a few labs to complete its own Green House Gas (GHG) inventory (three years running) and has actively shared its experiences with other sites. DOE HSS credits SLAC with bringing the issue of potential fugitive emissions of sulfur hexafluoride (SF6) to their attention.

OPPORTUNITIES FOR IMPROVEMENT

- Address dismantlement and decommissioning.
- Develop a Site Strategic Sustainability Plan.

Goal 6

Element		Grade	Number	Weight	Score	Total
6	Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Lab Mission(s) (Goal Weight: 25%)					
6.1	Provide an Efficient, Effective and Responsive Financial Management System	C+	2.2	20%	0.44	
6.2	Provide an Efficient, Effective, and Responsive Acquisition Management System	B+	3.4	40%	1.36	
6.3	Provide an Efficient, Effective, and Responsive Property Management System	A	4.0	15%	0.60	
6.4	Provide an Efficient, Effective, and Responsive Human Resources Management System and Diversity Program	B+	3.4	10%	0.34	
6.5	Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate	B	3.0	15%	0.45	
				Performance Goal 6 Total		B+ / 3.19

This goal has five objectives and seven notable outcomes.

- Costs to support the SLAC mission are now clearly understood and fairly allocated with a new multi-program financial model which has been created and installed; this replaces the landlord single purpose model.
- SLAC had inadequate financial controls in 2008, which were recognized by a recent Stanford University Internal Audit and Institutional Compliance report. SLAC has mitigated many of these concerns through the assignment of competent OCFO staff and other compensating policy, process and system controls.
- Increased procurement authority; shortened lead times (top quartile of DOE Labs)
  - RFP review limit revised from $1,000,000 to $5,000,000.
  - Competitive award limit raised from $1,000,000 to $2,000,000.
  - ARRA award limit raised from $25,000 to $200,000.
- Achieved $5M in savings from competitive sourcing, rebates, B2B.
- Key positions filled in finance and business systems: Controller, IT Enterprise Architect, IT Applications head, IT Operations and Infrastructure head.
- At least 2 million dollars computer/software savings; retained SUN discount after Oracle takeover pricing revision.
- AT&T installed a cell tower at no cost to SLAC, greatly enhanced cell service and safety communications.

Objective 6.1

NOTABLE OUTCOMES

6.1.1 Create a financial management organization and architecture to support the accounting, financial reporting and business needs of a multi-program laboratory; including a strong, fully-functioning Office of the Chief Financial Officer and a centrally managed business management staff, deployed throughout the SLAC community.

6.1.2 Develop and begin implementing a plan, with schedule, milestones and deliverables, to update/replace the SLAC Business Information Systems.

PERFORMANCE SUMMARY

Financial Management Organization

- Recruited strong OCFO team to develop and implement business systems:

  - Acting CFO from Stanford assigned to SLAC for one year through June 15, 2010. Experienced DOE CFO, who has implemented new business systems and centrally-managed business staff model, scheduled to join SLAC in November 2010.
  - Deputy CFO (a Stanford Associate Controller with strong internal control and systems installation experience) assigned to SLAC since June 2009, currently serving as Interim CFO.
  - Experienced SLAC Directorate Business Manager assigned as Budget Director in 2009.
  - Director of Acquisition Management Systems (AMS), with significant Department of Defense procurement experience, joined SLAC in September 2009.
  - Controller, with both process improvement and internal control expertise, joined SLAC in January 2010.
  - Stanford's Director of Research Policy and Compliance assigned part-time to SLAC beginning January 2010.
  - Hired additional experienced staff in the Controller's Office, Budget Office, Business Analyst team and Acquisition Management Services, filling new or vacated positions.
- Implemented new financial model to appropriately allocate costs in a multi-program lab using an activity-based Work Breakdown Structure.
- Implemented incremental business system improvements including: purchasing workflow; automating funding and contract modification process; financial reporting; conference management; and other check requests. Additional enhancements to improve controls, particularly around financial reporting, are in process.

NOTEWORTHY PRACTICES

- NA

OPPORTUNITIES FOR IMPROVEMENT

Financial Management Organization

- Determine the right model for supporting Work for Others (WFO) at SLAC; reorganize the research administration/technology transfer unit, and ensure we have the needed skill sets.
- Increase our oversight and monitoring function, particularly around service centers.
- Continue to clarify our policies and procedures and make them easily accessible.
- Clarify roles and responsibilities, develop service level agreements and implement centrally-managed, field deployed business staff model.

Business Information Systems

- Complete the upgrade/implementation of comprehensive business systems that support the mission of the lab, balancing controls and compliance with service and support, and providing timely and accurate information for critical management decisions.

Objective 6.2

NOTABLE OUTCOMES

6.2.1 Implement and facilitate a Procurement Department value chain to ensure support of SLAC community needs and the continuous improvement of Procurement policies, processes and training. SLAC will attain full available procurement authority from SSO.

PERFORMANCE SUMMARY

- Implemented robust internal quality controls program resulting in significant reinstatement of SLAC's procurement authority:
  - RFP review limit revised from $1,000,000 to $5,000,000.
  - Competitive award limit raised from $1,000,000 to $2,000,000.
  - ARRA award limit raised from $25,000 to $200,000.
- Significantly increased level of procurement support of major programs. Earned praise for quality of support by DOE during major project (FACET, MECI, etc.) DOE reviews (Lehman reviews), especially around planning for ARRA project procurements.
- Achieved cost savings of almost $5M through negotiations, competitive sourcing and rebates.

NOTEWORTHY PRACTICES

- Development of a Cost Saving Tracking System to drive and document cost saving initiatives.

OPPORTUNITIES FOR IMPROVEMENT

- Expand eCommerce business solutions; take advantage of DOE supply-chain initiatives.
- Improve post award management of contracts.

Objective 6.3

NOTABLE OUTCOMES

6.3.1 Implement an effective program to increase the number of accounted equipment during the physical inventory to trend 98.5% or better.

PERFORMANCE SUMMARY

- The physical inventory for equipment (>$5K) showed a substantial improvement and is at 99.85% by line items and 99.99% by cost.

NOTEWORTHY PRACTICES

- NA

OPPORTUNITIES FOR IMPROVEMENT

- Improve custodian accountability for equipment and security around IT equipment.

Objective 6.4

NOTABLE OUTCOMES

6.4.1 Design and implement an integrated human asset management process for SLAC, including talent identification, retention, recruitment, increased awareness for diversity, improved hiring and screening process, and internal development (e.g., succession planning at the senior management level).

PERFORMANCE SUMMARY

- Conducted succession planning for senior leader positions. Identified successors for level 1 and degree of readiness to assume leadership role.
- Partnered with Stanford University to enlarge leadership development to include programs for four distinct leadership levels. Successor candidates placed into program cohorts.
- Identified mission-critical positions and gap analysis.

- Implemented performance evaluation system that incorporated achievement of objectives in overall evaluation.
- New hires represent 17% of Laboratory staff.
- Increased our diversity hires by 8% over FY09.

NOTEWORTHY PRACTICES

- Implemented Reward and Retention programs, FY Bonus program for key performers aligned to Laboratory annual goals.

OPPORTUNITIES FOR IMPROVEMENT

- Improve performance evaluation program.
- Implement web-based Applicant Tracking System to improve selection process.

Objective 6.5

NOTABLE OUTCOMES

6.5.1 Implement an effective internal audit program in accordance with the approved FY10 audit plan by Stanford University Internal Audit (SUIA).

6.5.2 Develop a plan to evaluate and improve Records Management program by COB Q2.

PERFORMANCE SUMMARY

Internal Audit

- SLAC Operations did a risk-based evaluation that was a major input to IAIC to develop the FY10 Internal Audit Plan.

Records Management

- Records Management project evaluation and plan were completed.
    - Our evaluation research included surveying SLAC's own electronic records (eRecords) management practices, as well as surveying SLAC and 6 sister labs with two tools, one for records management practices and one specifically for eRecords practices.

NOTEWORTHY PRACTICES

- NA

OPPORTUNITIES FOR IMPROVEMENT

Internal Audit

- Request data supporting audit requirements in a more efficient and effective manner.
- Communicate IAIC audit issues more timely.
- Improve IAIC annual planning by more accurately estimating the amount of carryover audit work.

Records Management

- SLAC is lagging behind best practices in records management and eRecords management. We need to make improvements including adequate staffing, alignment within the organization, establishing lab-wide records management responsibilities and effective communication and outreach.

Goal 7

Element		Grade	Number	Weight	Score	Total
7	Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Lab Needs (Goal Weight: 15%)					
7.1	Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs	B+	3.4	50%	1.70	
7.2	Provide Planning for and Acquire the Facilities and Infrastructure Required to Support Future Lab Programs	A-	3.5	50%	1.73	
					Performance Goal 7 Total	B+ / 3.43

This goal has two objectives and six notable outcomes.

- 95% LCLS mission uptime was supported by focusing on mission readiness management.
- Achieved CD0 for Scientific User Support Building, CD1 for the Research Support Building, completed ARRA funded and other infrastructure project milestones on time; accomplished due to improvements to project management systems, improved construction management leadership and practices and formation of a Project Management Oversight Group.
    - Long range development plan illustrates partnership between Stanford and SLAC, support Lab vision and provides conceptual "road map" for future development to address identified mission gaps. This plan helped achieve the above results.
- Cooling Tower 101 completed in May 2010. Lessons learned and implemented from this project have improved project management across the board at SLAC.
- SLAC led the DOE-wide effort regarding sustainability at DOE high-energy facilities.

Objective 7.1

NOTABLE OUTCOMES

7.1.1 Develop and implement a formal project management delivery process, aligned with operations-wide Project Management Office. The process will have a special focus on programs under 10 million dollars and will include an effective process to incorporate Integrated Resource Loaded Schedules for all projects and operations managed by facilities.

7.1.2 Develop the skills, expertise and establish maintenance programs necessary to support LCLS operations and ensure reliability of associated equipment and infrastructure.

7.1.3 Deliver Cooling Tower 101 Replacement NLT December 31, 2009.

PERFORMANCE SUMMARY

Project Management Delivery Process

- Increased project management capabilities by acquiring project director expertise from PNNL to manage RSB project (project was previously at risk) and hiring four new project managers with significant construction and project management experience.
- Established a program to provide training in project management best practices.
    - Established a Project and Construction Management Evaluation Program to provide customer input.
    - Developed procedures and implemented a design review process.
- Established results oriented Field construction service.
    - Centralized the Field Construction Managers (eight) under competent leader to deliver consistent, reliable expertise.
    - Published and trained to Field Construction Management Manual.

- Developed oversight review process and formal monthly reporting for large projects (using the PMOG) and small projects internally within Facilities to ensure projects are on track.
    - For larger projects, partnered with Project Controls group to develop and update resource loaded schedules and use as a tool for keeping projects on track.
    - For smaller projects, partnered with Project Management Office to monitor schedules and costs on P-track database.

Maintenance Programs

- Developed training standards for core skill sets of Maintenance personnel.
- Identified all critical equipment for LCLS, developed preventive maintenance program in FAMIS.
- Partnered with Accelerator and LCLS programs to identify infrastructure capability gaps, developed multi-year plan and executed FY10 projects successfully.
- A building/system engineering framework was developed which adopts a maintenance approach that improves prioritization based on risk to the mission and addresses long-term repairs rather than temporary fixes.

Cooling Tower 101

- Completed CT-101 late, delivered May 2010. However, in the course of earlier failures we learned and are applying lessons for long term project management success:
    - Put the right leadership and team in place and established clear expectations, requirements.
    - Applied additional oversight, through field oversight and Project Management Oversight Group.
    - Established centrally managed field construction management approach through leadership of a competent, experienced construction manager.
    - Established contractor selection criteria based on best value, which includes quality and safety performance consideration.
    - Documented and distributed lessons.

NOTEWORTHY PRACTICES

Project Management Delivery Process

- Instituted new construction management philosophy and oversight for construction project and introduced Field Construction Managers.

OPPORTUNITIES FOR IMPROVEMENT

Project Management Delivery Process

- Implement centralized conventional facility Project Management to deliver consistent, reliable expertise.
- Ensure skills and capabilities for delivering projects on schedule and within budget.
- Implement Building/System Engineer program (hire Building/System Engineers, implement system ownership model).
- Develop and implement predictive maintenance program to improve reliability of aging conventional electrical and mechanical systems and reduce emergency maintenance costs and potential adverse program impact.

Objective 7.2

NOTABLE OUTCOMES

7.2.1 Develop an integrated process for infrastructure planning and facilities renewal to support the Mission Readiness of the laboratory business lines, which will include a planning process that allows for this to cradle grave stewardship, including site planning and space management.

7.2.2 Develop the proposals for SLI II (Signature Building) and SLI III (Photon Sciences Building).

7.2.3 Develop an executable plan that allows SLAC to adequately support and fund multi-year programs and projects as necessary, in order to meet long term milestones.

PERFORMANCE SUMMARY

Infrastructure Planning

- Developed the new central campus vision in the revision of the SLAC Long Range Development.
    - Based on the SLAC Ten-year vision, a central campus concept with hubs in outlying areas was developed to foster collaboration of core capabilities in the central campus while locating large-scale facilities in hubs in outlying areas.

SLI Proposals

- Feasibility study for Science and User Support Building (SUSB) and Photon Sciences Laboratory Building (PSLD) was developed in conjunction with Long Range Development Plan.
    - Science and User Support Building (formerly SLI II) has achieved CD-0 despite former expectations of a best case 2023 start.
    - Photon Sciences Laboratory Building (formerly SLI III) early discussions well received by DOE.

Multi-Year Executable Plan

- Identified mission critical assets and completed condition assessments to support Mission Readiness and infrastructure planning and facilities renewal.
- Sustainability efforts have come to fruition
    - Completed first phase of Advanced Metering project which included the design for the installation of electric and natural gas meters and acquisition of hardware, software for data acquisition, analysis and reporting system.
    - Completed water meter project with water meters installed at ~35 sites, including non-programmatic buildings, cooling towers and landscaping areas.

NOTEWORTHY PRACTICES

Infrastructure Planning

- Centralized space planning and management across Lab to standardize processes and manage space changes.
- Long range development plan illustrates partnership between Stanford and SLAC, support Lab vision and provides conceptual “road map” for future development to address identified mission gaps.

OPPORTUNITIES FOR IMPROVEMENT

Infrastructure Planning

- Develop strong core competencies within the Facilities organization to prepare for upcoming major construction projects, and Mission Readiness review.

- Seek available opportunities for replacement of aging facilities and infrastructure to sustain mission need.
- Develop effective sustainability program based on realistic return on investment.

Goal 8

Element		Grade	Number	Weight	Score	Total
8	Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems (Goal Weight: 10%)					
8.1	Provide an Efficient and Effective Emergency Management System	B+	3.4	30%	1.02	
8.2	Provide an Efficient and Effective System for Cyber-Security	B+	3.4	40%	1.36	
8.3	Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, and Property	A	4.0	10%	0.40	
8.4	Provide an Efficient and Effective System for the Protection of Sensitive Information	C+	2.4	20%	0.44	
					Performance Goal 8 Total	B+ / 3.22

This goal has four objectives and four notable outcomes.

- A proficient Emergency Management System has been implemented as demonstrated in two significant real emergencies; one was a multi-day rain storm and power outage and the other was loaning emergency personnel in life-saving work at Stanford Hospital during a Stanford power outage caused by a plane crash near Palo Alto.
- SLAC continued to reduce the radioactive material inventory by dispositioning hundreds of sources.
- Self identified and aggressively resolve PII problem; prevention mechanism installed.

Objective 8.1

NOTABLE OUTCOMES

8.1.1 Develop an effective and verifiable Emergency Management Program.

PERFORMANCE SUMMARY

Emergency Management Program

- SLACs emergency preparation activities were demonstrated by the response to the January 2010 power outage.
- Training of response teams continued, as did table top and other exercises to ensure proficiency.
- Provided support to the Joint Hospital EOC and emergency equipment and emergency management staff support during power outage caused by an airplane crash severing power lines.
- SLAC implemented mass notification process, consisting of “SLAC911” and website “emergency.slac.stanford.edu” (emergency information website).
- Developed and implemented Emergency Response Team (40 first responders) event notification process using pagers, cell phones and radios.
- Training with response agencies included: Palo Alto Fire Department industrial high angle rescue; 3-shift training for Santa Clara County Hazmat Team for class “Responding to Radiological Emergencies.”
- Tested mutual aid response coordination and capabilities during Palo Alto city-wide power outage that impacted Stanford Hospital and Lucille Packard Children’s Hospital.

NOTEWORTHY PRACTICES

Security and Safeguards

- Worked extensively with SSO and DOE HSS to develop a plan for implementing security technology systems to provide for effective, "transparent" security systems; to improve loss prevention, security and safety. Initial design concepts and initial systems identified during FY10, with project to continue through FY11.

OPPORTUNITIES FOR IMPROVEMENT

Emergency Management Program

- Complete the training and implementation of a hazardous materials response team, as part of the SLAC Emergency Response Team.
- Further implementation of hazardous material emergency response requirements.

Objective 8.2

NOTABLE OUTCOMES

8.2.1 Develop and migrate towards an information security program flexible to the requirements of a multi-program environment and balanced between enabling science and protecting the laboratory's information resources.

PERFORMANCE SUMMARY

- Participated in the Office of Science Federated Model -- sharing information with other SC labs about attacking sites and blocking IP addresses of sites attacking other labs.
- Installed and activated a Cooperative Protection Program (CPP)-sensor, allowing extensive intelligence and data mining capability concerning network traffic crossing the boundaries to Esnet and Internet2.
- No significant intrusions even with diversions of resources and no increase in staff.

NOTEWORTHY PRACTICES

- Participated in the roll-out of Internet Explorer 7.0, which included enhanced security settings based on the federally-recommended FDCC standard.
- Led cross-DOE group of network security professionals including developing and running incident management training at a national conference. Probable cross-lab funding after presentation to SC headquarter staff.

OPPORTUNITIES FOR IMPROVEMENT

- Installation of web proxy, host-based intrusion detection and appropriate staffing for same would reduce probability of intrusion from a major threat vector and implement a standard industry best-practice.
- Better network segmentation or equivalent practices would allow for appropriate protection to be in place for office workers as opposed to scientists.
- Get a more comprehensive view of the activity on the lab's centrally maintained machines, including web servers. Raise alerts in instances where possibly suspicious activity warrants further investigation.

Objective 8.3

NOTABLE OUTCOMES

8.3.1 Demonstrate continual progress in the stewardship of radioactive materials.

PERFORMANCE SUMMARY

- Implemented a pilot program to manage and to have positive controls for the transfer of radioactive material outside of Controlled Areas using a new bar-code read out system.
- Completed preparation of 555 legacy sealed sources for disposal; returned to manufacturer for reuse of 28 legacy sealed sources.
- Completed the first comprehensive site-wide study of potential induced soil radioactivity.
- Implemented the program for reduction of dosimeter issuance and loss rates. Reduced the number of dosimeters issued from 10,000 to ~5,000 in FY10.

NOTEWORTHY PRACTICES

- Lead the DOE SC and developed and secured approval from DOE on protocols for unrestricted release of BaBar and PEP-II metals and concrete shielding blocks from radiological control.
- Developed and maintained reuse path for sealed sources through return to manufacturer.

OPPORTUNITIES FOR IMPROVEMENT

- Develop and finalize release protocols for unrestricted release of material from radiological controls that would lead the efforts for DOE accelerator facilities for release of metals from accelerators (beyond BaBar and PEP-II).

Objective 8.4

NOTABLE OUTCOMES

8.4.1 Enhance Human Resources Information Systems to incorporate management access to relevant and necessary employee data, employee self service for basic data upkeep, and a robust web based candidate tracking portal while ensuring that all sensitive information is protected in an efficient and effective manner.

PERFORMANCE SUMMARY

- The HR information is now protected by maintaining the data in an appropriately secured database.
- Laptops for HR personnel now include hardware-based encryption.

NOTEWORTHY PRACTICES

- Performed a comprehensive PII data search and we are currently deploying a state-of-the-art tool (Symantec DLP) that will help prevent the inadvertent storage of PII information in an electronic format anywhere within SLAC.

OPPORTUNITIES FOR IMPROVEMENT

- Provide enhanced access ability to SLAC managers to review and update their employees' records, while maintaining an acceptable level of security.
- Better educate staff and visitors on secure locations for storing confidential information.
- Improve site security plan to address issues identified in Unclassified Foreign Visits and Assignments Program gap analysis.