U.S. Department of Energy
Office of Science (SC)
Stanford Site Office (SSO)
Stanford Linear Accelerator Center (SLAC)
2575 Sand Hill Road, MS-8A
Menlo Park, CA 94025

February 15, 2007

Dr. Jonathan Dorfan, Director
Stanford Linear Accelerator Center
2575 Sand Hill Road
Menlo Park, CA 94025

Subject: SLAC Contract #DE-AC02-76SF00515 FY06 Annual Performance Evaluation Report

Dear Dr. Dorfan:

The Department of Energy (DOE) Office of Science Senior Management and the Stanford Site Office evaluated SLAC's FY06 performance based upon the criteria established in the FY06 Performance Evaluation and Measurement Plan (PEMP). The PEMP was incorporated into our contract via modification number M506, Appendix B on October 24, 2005. Based upon this process, the Science and Technology (S&T) performance goal letter grade is a B+, and the Management and Operations (M&O) performance goal is a B-. The enclosed evaluation report provides the detail of this evaluation.

As you know, this is the first full fiscal year under the new Office of Science (SC) Laboratory Appraisal Process, and we expect this process to facilitate continued improvement in the consistency and rigor of our SC laboratory assessments across the complex. The enclosed SLAC report card will be posted on the SC website under the national laboratory appraisal link on February 16, 2007.

Sincerely,

Aundra Richards
Acting Site Manager

Enclosure: SLAC FY06 Annual Performance Report
SLAC FY06 Report Card

cc: Tyndal Lindler

SLAC FY06 Report Card

The Stanford Site Office recommends the approval of the FY06 Report Card for Stanford Linear Accelerator Center.

A	Mission Accomplishment (Quality and Productivity of R&D)
B+	Design, Fabrication, Construction and Operations of Facilities
B-	S&T Research Project/Program Management
B-	Leadership/Stewardship of the Laboratory
C+	Integrated Safety, Health, and Environment Protection
B	Business Systems
C+	Operating, Maintaining, and Renewing Facility and Infrastructure Portfolio
B	Integrated Safeguards and Security Management and Emergency Management Systems

Stanford Site Office

DOE Office of Science

FY 2006

Performance Evaluation of Stanford University for the Management and Operations of the *Stanford Linear Accelerator Center*

January 2007

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I. OVERALL SUMMARY RATING

Performance-Based Score and Adjectival Rating:
The basis for the evaluation of The Board of Trustees of the Leland Stanford Junior University (Stanford University) during FY 2006 centered on the Objectives found within the following Performance Goals:

1.0 Provide for Efficient and Effective Mission Accomplishment (Quality, Productivity, Leadership, & Timeliness of Research and Development)

2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Facilities

3.0 Provide Effective and Efficient Science and Technology Research Project/Program Management

4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

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

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

8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

Each Performance Goal was composed of two or more weighted Objectives and most Objectives had a set of performance measures, which assisted in determining the Contractor's overall performance in meeting that Objective. Each of the performance measures identified significant activities, requirements, and/or milestones important to the success of the corresponding Objective. The following describes the methodology utilized in determining the Contractor performance rating.

Each Objective within a Goal was assigned a numerical score by the evaluating office. Each evaluation measured the degree of effectiveness and performance of the Contractor in meeting the Objective and was based on the Contractor's success in meeting the set of Performance Measures/Targets identified for each Objective as well as other performance information available to the evaluating office from other sources to include, but not limited to, the Contractor's self-evaluation report, operational awareness (daily oversight) activities; "For Cause" reviews (if any); other outside agency reviews (OIG, GAO, DCAA, etc.), and the annual 2-week review (if needed). If no performance measures/targets were utilized the description of the general expectations for the success of the objective was utilized as the baseline of the effectiveness and performance of the Contractor in meeting the corresponding Objective and in determining the score assigned. The Goal score was then computed by multiplying the numerical score by the weight of each Objective within a Goal. These values were then added together to develop an overall score for each Goal. This score was then compared to Table A to determine the overall grade for each Goal. A set of tables is provided at the end of each Performance Goal section of this document to assist in the calculation of Objective scores to the Goal score. The raw score (rounded to the nearest hundredth) from each calculation was carried through to the next stage of the calculation process. The raw score for Science and Technology and Management and Operations was rounded to the nearest tenth of a point for utilization in determining fee as discussed below. A standard rounding convention of x.44 and less rounds down to the nearest tenth (here, x.4), while x.45 and greater rounds up to the nearest tenth (here, x.50).

Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**

Table A. FY 2006 Contractor Letter Grade Scale

Based on the evaluation of Stanford University performance against the Goals and Objectives contained within the FY 2006 Performance Evaluation and Measurement Plan (PEMP) the scores and corresponding grades awarded for each are provided within Table B below. Specific information regarding the Contractor's performance in meeting each of the Goals and their corresponding Objectives is provided within Section II of this report.

S&T Performance Goal	Numerical Score	Letter Grade	Weight	Weighted Score	Total Score
1.0 Mission Accomplishment	3.9	A	31%	1.21	
2.0 Design, Fabrication, Construction and Operations of Facilities	3.3	B+	49%	1.62	
3.0 Science and Technology Research Project/Program Management	2.7	B-	20%	.54	
				Total Score	3.4
M&O Performance Goal	**Numerical Score**	**Letter Grade**	**Weight**	**Weighted Score**	**Total Score**
4.0 Leadership and Stewardship of the Laboratory	2.7	B-	20%	.54	
5.0 Integrated Safety, Health, and Environmental Protection	2.3	C+	25%	.58	
6.0 Business Systems	2.9	B	20%	.58	
7.0 Operating, Maintaining, and Renewing Facility and Infrastructure Portfolio	2.3	C+	15%	.35	
8.0 Integrated Safeguards and Security Management and Emergency Management Systems	2.9	B	20%	.58	
				Total Score	2.6

Table B. FY 2006 Contractor Evaluation Score Calculation

II. PERFORMANCE GOALS, OBJECTIVES, AND MEASURES/TARGETS

1.0 Provide for Efficient and Effective Mission Accomplishment (Quality, Productivity, Leadership, & Timeliness of Research and Development)

The Contractor produces high-quality, original, and creative results that advance science and technology; demonstrates sustained scientific progress and impact; receives appropriate external recognition of accomplishments; and contributes to overall research and development goals of the Department and its customers.

The weight of this Goal is 31%.

Provide for Efficient and Effective Mission Accomplishment Goal measured the overall effectiveness and performance of the Contractor in delivering science and technology results which contributed to and enhanced the DOE's mission of protecting our national and economic security by providing world-class scientific research capacity and advancing scientific knowledge by supporting world-class, peer-reviewed scientific results, which were recognized by others.

ASCR: The laboratory has a meaningful impact on wide areas of computational science and plays a leadership role in areas that are critical to DOE missions.

BES: The materials sciences research programs are world-class and have had broad impact in correlated electron systems, superconductivity, and magnetism research. Research in the area of ultrafast chemical science continues to make scientific progress.

BER: The PI's have been effective in their interactions with and support of other funded investigators wishing to utilize SLAC. These contributions are given noteworthy recognition in a recent Physics Today article (September 2006) which acknowledges SLAC for its "support of actinide science that assisted the cleanup activities at Rocky Flats."

HEP: Overall, the laboratory's priorities are well aligned with the DOE mission and the national HEP program. The SLAC B-Factory is one of the highest priority facilities to support advancing the DOE's strategic goals for science. SLAC continues to be an indispensable player and international leader in International Linear Collider (ILC) R&D. It is strongly engaged in four areas including RF power sources, beam tuning and instrumentation, particle sources and the machine-detector interface.

WDTS: Laboratory has a long standing, well established mentor culture within the Laboratory. The success of the undergraduate internship program funded in WD is based in the careful attention in matching mentors and students.

The overall numerical score is 3.9 and grade assigned A

1.1 Science and Technology Results Provide Meaningful Impact on the Field

Numerical score = 3.7 Grade = A-

ASCR: The Laboratory has a meaningful impact on wide areas of computational science and plays a leadership role in areas that are critical to DOE missions. Significant results in the area of accelerator design simulations were accomplished in FY06. The SLAC researchers are invited to give talks at conferences related to computational science and make important contributions to computational science publications.

BES: The program supported by Condensed Matter Physics and Materials Chemistry was reviewed in FY 2006. The reviewers uniformly lauded the excellent and high impact science in the program. The research programs of Z-X Shen and Jo Stohr were deemed world class, and the reviewers felt these

two SLAC researchers have produced some of the most influential scientific discoveries in correlated electron systems and magnetism. The SLAC program includes research on important national topics, including nanostructures, high temperature superconductors and other strongly correlated electron systems, energy conversion phenomena, and environmentally important materials. The SLAC programs fulfill a very important DOE mission in performing outstanding science-driven x-ray scattering research.

While not reviewed in FY 2006, work in the area of ultrafast chemical science continued to make scientific progress.

BER: SSRL experiments enabled understanding of the impact of injection of ethanol to enhance microbial immobilization of the uranium. The environmental synchrotron science program at the laboratory is helping many ERSD investigators to take advantage of the facility/capability.

HEP: SLAC currently operates a cutting edge program in high energy physics based on the B-factory, a space-based astroparticle physics experiment (GLAST), a number of initiatives for non-accelerator based experimental proposals, theoretical physics in particle and particle-astrophysics, and an advanced accelerator research program. SLAC has recently joined the ATLAS detector group, strengthening the U.S. participation in the LHC. It is also participating in the LHC accelerator research program (LARP). It has become a Tier-2 computer site for LHC data analysis and is partnering with UCSC and LBNL to become a west coast hub for the ATLAS community. A long-range program is being developed in accelerator research aimed towards the design of an energy-frontier ILC. SLAC is leading the design of the RF power sources for the ILC, is also working on detector designs and is engaging 60 FTE's in these efforts.

The SLAC theory group worked in a variety of areas ranging from the development of fundamental theories to detailed calculations and tests of theories directly relevant to high energy physics experiments at SLAC, the LHC and elsewhere. At the HEP annual review, their work was evaluated to be outstanding with significant impact on the field.

1.2 Provide Quality Leadership in Science and Technology

Numerical score = 3.7 Grade = A-

BES: The research projects supported at SLAC by the BES Materials Sciences and Engineering Division that are deemed world leading are those in correlated electron systems, Nan magnetism, and materials synthesis as evidenced by the latest program review. With the recent hire of Phil Bucksbaum, Photon Ultrafast Laser Science and Engineering (PULSE) is poised to be a major center in ultrafast science for the nation.

The investigators associated with the ultrafast chemical dynamics project are increasingly well recognized for pioneering work in this field using novel sources, including the Sub-Picosecond Pulse Source (SPPS).

BER: PI's are providing scientific leadership in the application of synchrotron capabilities to environmental remediation science.

HEP: The laboratory staff also carried out an excellent advanced accelerator research program with a wide variety of topics covering performance enhancement of current accelerators, research and design for near-future facilities, research in fundamental aspects of accelerator and beam physics, and accelerator physics and technology relevant to high gradient acceleration and advanced concepts The FFTB experiment E167 demonstrated a near doubling of the peak energy of the linac when it produced 42 Gev of acceleration in 1.2 m length of plasma.

1.3 Provide and sustain Science and Technology Outputs that Advance Program Objectives and Goals

Numerical score = 4.3 Grade = A+

BES: The research supported by the BES Materials Sciences and Engineering Division at SLAC produces high quality publications in prestigious journals in the areas of photoemission studies of HiTc superconductors, x-ray scattering of magnetic materials, ultrafast science, and discovery of complex oxides and rare earth compounds with novel properties.

BER: Output is excellent for the investment.

HEP: SLAC contributes significantly to the ILC R&D program, focusing on development of critical technologies such as klystrons and solid-state modulators, design and test of high gradient structures, examination of final-focus requirements, and an aggressive R&D program in the NLCTA program. The lab is planning a new High Gradient collaborative effort. The FFTB, which was dismantled in the summer of 2006 to make way for LCLS construction, is planned to relocate to the SLC south arc tunnel and become the SABER project.

The Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), which is connected to both Stanford University and SLAC, completed its third full academic year and strengthened SLAC's impact on particle astrophysics research. The scientific program at KIPAC is quite diverse, ranging from traditional astrophysics topics to investigations of dark matter and energy that are of interest to HEP. The LSST R&D project, a major initiative for several KIPAC faculty members, will focus in part on dark energy and dark matter investigations.

EXO-200, designed to confirm or refute the Majorana nature of the neutrino and estimate its mass, is well underway. However, with limited available resources, the R&D progress continues to be slow and the detector deployment to underground testing has been delayed until January 2007.

1.4 Provide for Effective Delivery of Science and Technology

Numerical score = 4.3 Grade = A+

BES: The activities supported by the Materials Sciences and Engineering Division have been effective in transmitting the results to the community.

BER: The PI's have been effective in their interactions with and support of other funded investigators wishing to utilize SLAC. These contributions are given noteworthy recognition in a recent Physics Today article (September 2006) which acknowledges the laboratory for its "support of actinide science that assisted the cleanup activities at Rocky Flats."

HEP: BaBar analyzed and presented its latest results with over 250 submitted publications since 1999, of those 76 appeared between the beginning of FY2006 and Sept 2006. At a major summer conference, the International Conference on High Energy Physics (ICHEP) 2006 held in Moscow, BaBar contributed 114 abstracts. BaBar continues to make substantial progress in a comprehensive set of measurements for CP-violating asymmetries, a systematic exploration of rare decay processes, and detailed studies to elucidate the dynamics of processes involving heavy quarks. Its accurate, high precision studies test the limitations of the Standard Model, constrain possible new physics discoveries at the LHC and show hints of intriguing new physics which might be further elucidated at the LHC. In addition, its discovery of new heavy quark states in the multi-GeV region may lead to greater understanding of QCD, the theory of the strong interaction of quarks and gluons. Babar is a large (543 members and 358 associate members) collaboration with members from 76 institutions in 10 countries. There are approximately 153 graduate students and 89 postdoctoral researchers receiving training on BaBar. SLAC's research staff contributed significantly to this outstanding achievement.

Science Program Office	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of Advanced Scientific Research					
1.1 Impact	A	3.8	40%	1.52	
1.2 Leadership	A	3.8	30%	1.07	
1.3 Output	A+	4.3	15%	.65	
1.4 Delivery	A+	4.3	15%	.65	
				Overall ASCR Total	3.9
Office of Basic Energy Sciences					
1.1 Impact	A	4.0	50%	2.0	
1.2 Leadership	A	4.0	20%	.80	
1.3 Output	A+	4.3	15%	.65	
1.4 Delivery	A+	4.3	15%	.65	
				Overall BES Total	4.1
Office of Biological and Environmental Research					
1.1 Impact	B+	3.4	30%	1.02	
1.2 Leadership	B+	3.4	20%	.68	
1.3 Output	A+	4.3	20%	.86	
1.4 Delivery	A+	4.3	30%	1.29	
				Overall BER Total	3.9
Office of High Energy Physics					
1.1 Impact	B+	3.4	30%	1.02	
1.2 Leadership	B+	3.4	30%	1.02	
1.3 Output	A+	4.3	30%	1.29	
1.4 Delivery	A+	4.3	10%	.43	
				Overall HEP Total	3.8
Office of Workforce Development for Teachers and Scientists					
1.1 Impact	A+	3.7	25%	.925	
1.2 Leadership	A	3.7	30%	1.11	
1.3 Output	A+	4.3	30%	1.29	
1.4 Delivery	A+	4.3	15%	.65	
				Overall WDTS Total	4.0

Table 1.1 – 1.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of Advanced Scientific Research	A	3.9	.1%	.004	
Office of Basic Energy Sciences	A+	4.1	50.3%	2.06	
Office of Biological and Environmental Research	A	3.9	1.5%	.059	
Office of High Energy Physics	A	3.8	48%	1.82	
Office of Workforce Development for Teachers and Scientists	A	4.0	.1%	.004	
				Performance Goal 1.0 Total	3.9

Table 1.2 – SC Program Office Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 1.5 – 1.0 Goal Final Letter Grade

2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Facilities

The Contractor provides effective and efficient strategic planning; fabrication, construction and/or operations of Laboratory facilities; and is responsive to the user community.

The weight of this Goal is 49%.

Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Research Facilities Goal measures the overall effectiveness and performance of the Contractor in planning for and delivering leading-edge specialty research and/or user facilities to ensure the required capabilities are present to meet today's and tomorrow's complex challenges. It also measured the Contractor's innovative operational and programmatic means for implementation of systems that ensures the availability, reliability, and efficiency of these facilities; and the appropriate balance between R&D and user support.

BES: Stanford Synchrotron Radiation Laboratory SSRL researchers benefited from the increased photon brightness and stability resulting from the SPEAR 3 upgrade. However, the Linac Coherent Light Source (LCLS) suffered from significant increases in conventional costs that have created the need for reevaluation of some conventional construction. The LCLS Ultrafast Science Instruments (LUSI) project has been very slow responding to the scientific and budgetary criteria. Overall, progress on the LUSI project has not been satisfactory.

BER: The structural molecular biology (SMB) program at the Stanford Synchrotron Radiation Laboratory (SSRL) has outstanding accomplishments for FY 2006, culminating in the selection of Roger Kornberg as sole recipient of the Nobel Prize for Chemistry for his accomplishments in understanding the structure and function of RNA Polymerase II, research which was conducted at SLAC.

HEP: SLAC's B-Factory enjoyed considerable success in FY2006. From September 2005 to August 2006, PEP-II delivered 100.3 fb^{-1} of which the BaBar detector recorded 97.3 fb^{-1}. This is a doubling of the luminosity delivered in FY 2005. This period included unscheduled downtime of approximately three months, late December of 2005 to late March 2006, to fix vacuum bursts that were limiting the B-Factory's luminosity. The GLAST project delivered the Large Area Telescope (LAT) to the U.S. Naval Research Laboratory this past summer, for mounting on the launch vehicle. The KIPAC continues to bring fresh vibrant intellectual activities to SLAC.

The overall numerical score is 3.1 and grade assigned B+

Objectives:

2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs

Numerical score = 2.5 Grade = B-

BES: The LCLS Ultrafast Science Instruments (LUSI) project has been very slow responding to the scientific and budgetary criteria.

HEP: The GLAST project delivered its LAT to the U.S. NRL in early summer of 2006 and it passed four months of instrument level vibration tests. The instrument was shipped to Arizona on September 16, 2006, for mounting on the launch vehicle. The launch itself is now scheduled for Fall, 2007. The LAT is expected to generate data which will make fundamental discoveries in our search for the dark matter which makes up a large fraction of all the matter in the universe. The laboratory is prepared to analyze data in their Instrument Science Operations Center (ISOC).

The KIPAC continues to bring fresh vibrant intellectual activities to SLAC. However, there is a clear difference between the KIPAC and SLAC as institutions. The expansion of the particle astrophysics and cosmology program requires thorough planning with realistic budgetary projections weighted by mission relevance to HEP.

2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components

Numerical score = 2.6 Grade = B-

BES: The LCLS has suffered from significant changes in conventional costs that have created the need for reevaluation of some conventional construction. The project has suffered in the past from lack of senior laboratory management understanding of the complexities of the project. It is expected that this project will be on track in FY 2007.

2.3 Provide Efficient and Effective Operation of Facilities

Numerical score = 3.9 Grade = A

BES: During FY 2006, SSRL researchers benefited from the increased photon brightness and stability resulting from the SPEAR 3 upgrade. Joachim Stohr, an outstanding x-ray scientist, became the new SSRL Director, replacing Keith Hodgson who became the Director of the new SLAC Photon Sciences Directorate. Under Stohr's leadership SSRL is addressing some of the key issues raised during the 2005 BES Scientific User Facility peer review. A Scientific Advisory Committee (SAC) has been formed and steps are being taken to provide clear career advancement for its non-faculty junior staff scientists. Working with the SAC and the user community, SSRL is developing a beamline strategic plan to fully capitalize on the SPEAR 3 brightness upgrade. The plan includes implementation of top-off mode operation.

BER: The SMB program at the SSRL has outstanding accomplishments for FY 2006, culminating in the selection of Roger Kornberg as sole recipient of the Nobel Prize for Chemistry for 2006 for his accomplishments in understanding the structure and function of RNA Polymerase II. This research would not have been possible without protein crystallography experiments over an extended period of time at SSRL.

During FY 2006 the SSRL SMB program provided the foundation for many publications in high-impact peer-reviewed journals.

HEP: SLAC's B-Factory enjoyed considerable success in FY2006. From September 2005 to August 2006, PEP-II delivered 100.3 fb^{-1} of which the BaBar detector recorded 97.3 fb^{-1}. This is a doubling of the luminosity delivered in FY 2005. This period included unscheduled downtime of approximately three months, late December of 2005 to late March 2006, to fix vacuum bursts that were limiting the B-Factory's luminosity.

The effectiveness of SLAC management was well demonstrated by the luminosity records at the

B-Factory and the high efficiency of the BaBar detector. SLAC delivered sufficient computing resources for BaBar by effectively managing its computing resources, as well as successfully coordinating with five major European agency-funded computing centers in Europe.

The excellent achievements in the advanced accelerator research program also demonstrate well developed research plans with effective management and optimal use of resources.

However, it is not clear if SLAC has the manpower needed to support both B-Factory operations in its last two years of operations as well as its many projects in accelerator operations and R&D in light of the demands that the LCLS will make on the laboratory manpower. An ongoing assessment by SLAC management will be needed to address this question.

2.4 Utilization of Facility to Grow and Support Lab's Research Base and External User Community

Numerical score = 3.9 Grade = A

BES: The SSRL is efficiently used by the programmatic research at SLAC.

BER: BER is pleased to see SLAC scientist John Barger succeed as a funded investigators in the ERSD program in addition to the environmental synchrotron science funding.

Science Program Office	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of Advanced Scientific Research					
2.1 Design of Facility	N/A	N/A	N/A	N/A	
2.2 Construction of Facility	N/A	N/A	N/A	N/A	
2.3 Operation of Facility	N/A	N/A	N/A	N/A	
2.4 Utilization of Facility	N/A	N/A	N/A	N/A	
				Overall ASCR Total	N/A
Office of Basic Energy Sciences					
2.1 Design of Facility	C-	1.5	10%	.15	
2.2 Construction of Facility	B-	2.6	60%	1.56	
2.3 Operation of Facility	A	3.9	20%	.78	
2.4 Utilization of Facility	B+	3.3	10%	.33	
				Overall BES Total	2.8
Office of Biological and Environmental Research					
2.1 Design of Facility	N/A	N/A	N/A	N/A	
2.2 Construction of Facility	N/A	N/A	N/A	N/A	
2.3 Operation of Facility	N/A	N/A	N/A	N/A	
2.4 Utilization of Facility	N/A	N/A	N/A	N/A	
				Overall BER Total	N/A
Office of High Energy Physics					
2.1 Design of Facility	B+	3.4	20%	.68	
2.2 Construction of Facility	N/A	N/A	N/A	N/A	
2.3 Operation of Facility	A	3.8	80%	3.04	
2.4 Utilization of Facility	N/A	N/A	N/A	N/A	
				Overall HEP Total	3.7
Office of Workforce Development for Teachers and Scientists					
2.1 Design of Facility	N/A	N/A	N/A	N/A	
2.2 Construction of Facility	N/A	N/A	N/A	N/A	

2.3 Operation of Facility	N/A	N/A	N/A	N/A	
2.4 Utilization of Facility	N/A	N/A	N/A	N/A	
				Overall WDTS Total	N/A

Table 2.1 – 2.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of Advanced Scientific Research	N/A	N/A	N/A	N/A	
Office of Basic Energy Sciences	B	2.82	51%	1.44	
Office of Biological and Environmental Research	N/A	N/A	N/A	N/A	
Office of High Energy Physics	A-	3.72	49%	1.82	
Office of Workforce Development for Teachers and Scientists	N/A	N/A	N/A	N/A	
				Performance Goal 2.0 Total	3.3

Table 2.2 – SC Program Office Overall Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 2.3 – 2.0 Goal Final Letter Grade

3.0 Provide Effective and Efficient Science and Technology Research Project/Program Management

The Contractor provides effective program vision and leadership; strategic planning and development of initiatives; recruits and retains a quality scientific workforce; and provides outstanding research processes, which improve research productivity.

THE WEIGHT OF THIS GOAL IS 20%.

Provide Effective and Efficient Science and Technology Research Project/Program Management Goal measured the Contractor's overall leadership in executing S&T programs. Dimensions of program management covered included: 1) providing key competencies to support research programs to include key staffing requirements; 2) providing quality research plans that take into account technical risks and identify actions to mitigate risks; and 3) maintaining effective communications with customers to include providing quality responses to customer needs.

ASCR: SLAC makes critical contributions to the vision, planning and coordination of computational efforts in areas of core competency. Communications and coordination with ASCR could be strengthened.

BES: Laboratory management performance on the LCLS construction project has not been fully satisfactory. Program planning and management is in transition for the Condensed Matter Physics and Materials Chemistry Program. The management and budgetary details of the Photon Sciences Division, within which the science programs will reside, are still not fully developed. It is unclear how this will happen. The formation of PULSE will help to ensure SLAC's leadership in ultra fast science.

BER: The SSRL SMB program reached a major milestone in the automation of crystallography experiments in 2006 allowing researchers to run crystallographic experiments from their home laboratory.

HEP: The B-Factory is being effectively managed, as indicated by meeting its luminosity goals in spite of the hard-to-diagnose vacuum leaks, and high physics productivity.

WDTS: Undergraduate interns at SLAC are fully integrated into the lab operation and gain significant research capability but are placed on equal footing with other lab researchers and benefit from that immersion experience.

The overall numerical score is 2.7 and grade assigned B-

Objectives:

3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision

Numerical score = 3.5 Grade = A-

BES: SLAC has been an excellent steward of strategic research areas in materials research via the close coupling of SSRL and the LCLS capabilities. Their efforts in photoemission spectroscopy, x-ray microscopy, coherent lenseless imaging, and time-dependent x-ray imaging are viewed as the best in the world. The formation of PULSE will help to ensure their leadership in ultra fast science.

The laboratory management has performed poorly in the LCLS construction project.

BER: The SSRL SMB program also is noteworthy for its efforts to increase community awareness of the full range of technologies available for use in biological research and its integrated management of use of all major synchrotron x-ray techniques, crystallography, spectroscopy, and small-angle x-ray scattering (SAXS). SSRL scientists conducted several workshops on SAXS applications in structural biology for new and potential users that included hands-on beam time.

The SSRL SMB program reached a major milestone in the automation of crystallography experiments in 2006, completing implementation of their remote access system that enables researchers to run crystallographic experiments from their home laboratory. Nearly 50% of the crystallographic experiments now are run using this system. A remote workshop on use of the system was held at the Hauptmann-Woodward Institute in Buffalo, New York in August 2006, attracting more than thirty researchers primarily from the northeastern U.S. This is an indication of the success of SSRL in reaching a community outside its region, making its capabilities widely available across the United States.

HEP: PEP-II operations were generally strong over the last year, but the quest for higher luminosities continued to put considerable stress on its aging machine components. Although PEP-II achieved its luminosity goal for the year, it experienced a three month down time because of vacuum bursts, which proved difficult to find and analyze. If the accelerator improvements being made from Aug. 2006 to Jan. 2007 are successful, SLAC may be able to recover its lost running time and achieve its ultimate goal of delivering 1000 fb^{-1} by the end of FY2008.

3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management

Numerical score = 3.5 Grade = A-

ASCR: SLAC makes critical contributions to the vision, planning, and coordination of computational efforts in areas of core competency. Communications and coordination with ASCR could be strengthened.

BES: During the FY 2006 review of the Condensed Matter Physics and Materials Chemistry Program, it was found that the program planning and management was in a transitional stage. The overall structure of the laboratory programs supported by the Materials Sciences and Engineering Division was presented, but the management and budgetary details of the Photon Sciences division, within which the programs would be housed, is a concept that is still not fully developed. SLAC was requested to reorganize and rearticulate its scientific thrust areas in order to fashion the program into a truly synergistic endeavor. The program is instituting a scientific advisory committee to help in its strategic planning.

The laboratory is in transition from a single purpose to a more diverse scientific mission. The present management structure is incompatible with the new mission requirements.

BER: Science conducted for BER is consistent with both the SLAC overall mission and the specific work plan for their research project.

HEP: The B-Factory operations review conducted in April 2006 concluded that B-Factory is being very effectively managed; however, it pointed out the high level of stressful professional demands on SLAC's aging and lean professional staff. The review panel asked SLAC management to develop a staffing plan to optimize the transition from B-Factory operations to follow-on programs, such as LCLS and future HEP activities.

WDTS: Undergraduate interns at SLAC are fully integrated into the Laboratory operation and gain significant research capability but are placed on equal footing with other lab researchers and benefit from that immersion experience.

3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs

Numerical score = 3.5 Grade = A-

BES: Management of the programs supported by Condensed Matter Physics and Materials Chemistry is effective with frequent communication along properly defined management lines.

The communication channels with the laboratory and the BES Scientific User Facilities Division are open, but the responsiveness is not always adequate or timely.

BER: Communications with SLAC are open and productive. SLAC management is available and responds promptly and effectively to BER requests for assistance or information.

HEP: SLAC's future as a high energy physics laboratory is continuously being developed. It is becoming a major player in the design stage of the ILC, it is taking on more responsibilities, both in computer support, and phenomenology, of the LHC, and it continues to lead world class research efforts in new accelerator concepts. However, it has not developed a plan in high energy experimental physics program that will replace the B-Factory, which is scheduled to close by the end of FY2008. SLAC, therefore, risks losing its vitality and relevance in the field, and its other plans in high energy physics will eventually be negatively impacted by this lack of initiative.

Science Program Office1	Letter Grade	Numerical Score	Weight	Weighted Score	Overall Score
Office of Advanced Scientific Research					
3.1 Effective and Efficient Stewardship	A+	4.1	35%	1.44	
3.2 Project/Program Planning and Management	A	3.8	35%	1.33	
3.3 Communications and Responsiveness	B+	3.4	30%	1.02	
				Overall ASCR Total	3.8
Office of Basic Energy Sciences					
3.1 Effective and Efficient Stewardship	C	1.8	40%	.72	
3.2 Project/Program Planning and Management	C+	2.2	30%	.66	
3.3 Communications and Responsiveness	C+	2.1	30%	.63	
				Overall BES Total	2.0
Office of Biological and Environmental Research					
3.1 Effective and Efficient Stewardship	A	4.0	20%	.80	
3.2 Project/Program Planning and Management	A	4.0	30%	1.20	
3.3 Communications and Responsiveness	A	4.0	50%	2.00	
				Overall BER Total	4.0
Office of High Energy Physics					
3.1 Effective and Efficient Stewardship	B+	3.4	40%	1.36	
3.2 Project/Program Planning and Management	B+	3.3	40%	1.32	
3.3 Communications and Responsiveness	B+	3.3	20%	.66	
				Overall HEP Total	3.3
Office of Workforce Development for Teachers and Scientists					
3.1 Effective and Efficient Stewardship	A+	4.1	20%	.82	
3.2 Project/Program Planning and Management	A+	4.1	40%	1.64	
3.3 Communications and Responsiveness	A	3.9	40%	1.56	
				Overall WDTS Total	4.0

Table 3.1 – 3.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	Funding Weight (BA)	Weighted Score	Overall Weighted Score
Office of Advanced Scientific Research	A	3.8	.1%	.004	
Office of Basic Energy Sciences	C	2.0	50.3%	1.01	
Office of Biological and Environmental Research	A	4.0	1.5%	.060	
Office of High Energy Physics	B+	3.3	48%	1.58	
Office of Workforce Development for Teachers and Scientists	A	4.0	.1%	.004	
				Performance Goal 1.0 Total	2.7

Table 3.2 – SC Program Office Overall Performance Goal Score Development

1 A complete listing of the S&T Goals & Objectives weightings for the SC Programs is provided within Attachment I to this plan.

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 3.5 – 3.0 Goal Final Letter Grade

4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

The Contractor's Leadership provides effective and efficient direction in strategic planning to meet the mission and vision of the overall Laboratory; is accountable and responsive to specific issues and needs when required; and corporate office leadership provides appropriate levels of resources and support for the overall success of the Laboratory.

THE WEIGHT OF THIS GOAL IS 20%.

Provide Sound and Competent Leadership and Stewardship of the Laboratory Goal measured the Contractor's Leadership capabilities in leading the direction of the overall Laboratory. It also measured the responsiveness of the Contractor to issues and opportunities for continuous improvement and corporate office involvement/commitment to the overall success of the Laboratory.

The Laboratory embarked on developing a plan for transitioning from a HEP to a BES dominant mission. To meet the challenges of the transition, a proactive approach by Stanford University and Laboratory management is necessary to successfully plan and execute the shift in programmatic emphasis by 2009. The Laboratory was effective in achieving the luminosity records at the B-Factory and the high efficiency of the BaBar detector. Implementation of Integrated Safety Management still needs to be further developed to ensure processes are institutionalized and implemented at the working level.

The Laboratory has an excellent communications/outreach department and should be congratulated on its contributions to the community through Symmetry magazine.

The overall numerical score is 2.7 and grade assigned B-.

4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans

Objective Weight = 35%

Numerical Score = 2.5 Grade = B-

SLAC's future in the field of high energy physics is continuously being developed by its management team. It is becoming a major player in the design stage of the ILC, it is taking on more responsibilities, both in computer support and phenomenology, of the LHC, and it continues to lead world class research efforts in new accelerator concepts. It is evolving into a major player in the new field of particle astrophysics through its KIPAC program. The GLAST project is moving successfully toward a Fall 2008 launch. SLAC's management must continue to monitor the relevance of the lab's new initiatives to its HEP mission and it must avoid losing its HEP vitality when the B-Factory is closed at the end of FY08.

In FY2006, the Laboratory management formulated plans for the programmatic transition from HEP to BES. Planning activities began late and often the scenarios used to produce bottoms-up plans have been overly optimistic, if not unrealistic. This management practice has often resulted in coming-short of providing sound and complete leadership and stewardship.

The Laboratory has worked to embrace the shift in programmatic mission from HEP to BES. But the lab experienced difficulties because of the magnitude of the challenge associated with the transition. Developing a future plan with a realistic budget scenario is a management challenge which requires attention. SLAC leadership has begun to address these challenges and focused its efforts. SLAC management has articulated this new vision and communicated it to the entire lab to ensure the transition to an accelerator-based BES program is complementary.

DOE was impressed with the thoroughness of the SLAC linac operations funding estimates during the September 2006 BES review and with space planning activities that accompanied the October 2006 SC Independent Project Review of the LCLS project. However, both activities were prompted by DOE requests, not by SLAC initiative. In general, the transition requires SLAC management initiative to successfully plan and execute the shift in programmatic emphasis by 2009.

SLAC has an excellent communications/outreach department and should be congratulated on its contributions to the community through Symmetry magazine. SLAC continues to reach out to the community through public lectures which are well received, distribution of posters to the community and establishment of "SLAC Connections" which reaches out to Historically Black Colleges and Universities and high Hispanic enrollment schools by email.

Stanford University has also leveraged its relationships with academia and industry to the benefit of the lab and DOE. SLAC leadership was instrumental in recruiting outstanding individuals to support the lab's current and future mission.

4.2 Provide for Responsive and Accountable Leadership throughout the Organization

Objective Weight = 35%

Numerical Score = 2.5 Grade = B-

The effectiveness of SLAC management was well demonstrated by the luminosity records at the B-Factory and the high efficiency of the BaBar detector. SLAC has delivered sufficient computing resources for BaBar by effectively managing its computing resources, as well as successfully coordinating with five major European agency-funded computing centers in Europe. SLAC's HEP theory group continues to be highly regarded, productive, and influential. The excellent achievements in the advanced accelerator research program also demonstrate well developed research plans with effective management and optimal use of resources.

The Laboratory leadership communicates with SC management and proactively notifies SC management of accidents, successes with the machines and exciting news from SLAC. Lab leadership responds quickly and effectively to accidents and safety concerns at the laboratory. SLAC has been proactive in reporting information on problems and incidents to the site office. This open flow of communication has served as a basis for collaboration in problem solving and early notification of issues. This assures prompt notification of issues to HQ-SC.

SLAC is recognizing the challenge of a transitioning Laboratory and the promise that the fields SLAC supports offer. However, a major challenge that the lab must overcome is the successful completion of the LCLS project. Stanford University and SLAC actions and support will be critical for ensuring LCLS success. SLAC and LCLS management meet daily to discuss high level issues and to identify solutions. An issue that required continuous management attention was with the construction management (CM) subcontractor performance. Stanford University was able to facilitate communications with the Chief Executive Officer of the CM subcontractor. This led to changes in CM performance but this will continue to be a focus area for SLAC and LCLS management as civil construction ramps up in the next year.

In the area of safety, SLAC completed all corrective actions from the Electrical Arc-flash Type A accident investigation on schedule and validated by the site office. However, implementation of ISM at the working level still needs to be further developed. Proactive leadership by SLAC management is needed to ensure ISMS processes are institutionalized and implemented at the working level.

In the business management area, there was inadequate SLAC leadership and management during the establishment of the LCLS procurement cell which contributed to issues and concerns regarding the Request for Proposal and acquisition processes for the construction manager (CM) subcontractor services. Issues included inconsistent execution of the subcontract in accordance with the DOE approved purchasing system.

4.3 Provide Efficient and Effective Corporate Office Support as Appropriate

Objective Weight = 30%

Numerical Score = 3.0 Grade = B

Stanford University has provided invaluable support to the laboratory by providing joint appointments of scientists and attracting three top scientists (Bucksbaum, Hadju and Andersson) that will enable the LCLS scientific program.

Dr. Hennessey has always been involved in visits from DOE leadership and articulates the work and value SLAC provides to the country and to the scientific enterprise.

Stanford was able to facilitate meetings with the Chief Executive Officer (CEO) of the construction manager (CM) subcontractor performing work for LCLS. The Stanford representative and the SLAC Director met with the CEO to resolve performance and personnel issues with the CM. Stanford continues to provide support to SLAC and LCLS on civil construction issues.

Stanford University corporate leadership (Dr. Hennessey and Dr. Bienenstock) continues to be engaged with laboratory research programs. However, corporate leadership engagement in the laboratory's strategic mission is critical. As the laboratory transitions from HEP to BES, Stanford University should ensure that corporate resources are readily available to the Laboratory.

The SLAC Policy Committee (SPC) meets bi-annually to evaluate the effectiveness of SLAC's mission; ES&H; and management and organization and provides advice directly to Stanford University President Hennessey on the health of SLAC, the vitality of its mission and robustness of future scientific plans. The SPC's independent assessment is critical to assure Stanford University takes appropriate and timely action to resolve issues. The SPC may not have adequate resources or time to fully appreciate mission execution issues and leadership challenges the lab is facing to provide recommendations to Stanford University.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
4.0 Effectiveness and Efficiency of Contractor Leadership and Stewardship					
4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans	B-	2.5	35%	.88	
4.2 Provide for Responsive and Accountable Leadership throughout	B-	2.5	35%	.88	

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
the Organization					
4.3 Provide Efficient and Effective Corporate Office Support as Appropriate	B	3.0	30%	.90	
				Performance Goal 4.0 Total	2.7

Table 4.1 – 4.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 4.2 – 4.0 Goal Final Letter Grade

5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

The Contractor sustains and enhances the effectiveness of integrated safety, health and environmental protection through a strong and well deployed system.

THE WEIGHT OF THIS GOAL IS 20%.

SLAC continues to maintain a high regard for safety at the laboratory, as exhibited by numerous actions from management, such as briefings to SLAC staff on safety awareness, and the updated issuance of the ISEMS card, which places an emphasis on individual accountability for safety. The main area for improvement in ISEMS includes proactive development of safety management processes and more effective implementation of requirements at the institutional and working level, versus developing a safety process in response to an incident in the context of a reactive mode. The implementation of 10 CFR 851, will also require SLAC to become more proactive in safety process planning. SLAC needs to improve in the area of electrical safety, as recurrent incidences in this area are indicative of weaknesses in subcontractor oversight and other safety system and process implementation issues. SLAC's program for lockout/tagout is compliant with NFPA-70E; however, there is a lack of consistent site-wide flow down of requirements and implementation of formal work planning and authorizations at the subcontractor level. Construction safety on the LCLS project continues to be noteworthy, as the lab has developed an effective safety oversight program both at the programmatic and subcontractor levels. With further refinements in safety process development, the lab will be on track for significant improvement in FY07.

The overall numerical score is 2.3 and grade assigned C+.

5.1 Provide a Work Environment that Protects Workers and the Environment

Objective Weight = 20%

Numerical Score = 2.1 Grade = C+

DART and TRC rates continue to exceed the DOE/SC targets, and remain a significant concern, and clearly this goal was not met in FY06. The TRC/DART rates versus the established goal for this area are listed in the table below:

FY05 SLAC	# Cases to date through 4th QTR FY06	Rates to date through 4th QTR FY06	FY06 Performance Measure Goal	FY07 SC Performance Measure Goal
0.62	**TRC** (24 Cases)	**1.11**	0.87	0.65
0.45	**DART** (14 Cases)	**.65**	0.35	0.25

Although this is a trailing metric, it does in effect serve to indicate that more still remains to be done to promote worker safety.

SLAC has taken some proactive steps to remediate the TRC/DART increase, noted below:

Actions taken by SLAC to reduce TRC and DART rates: - In-progress
Focus on improving safety and reducing the TRC/DART rate currently has emphasis on the 1st line supervisory level as the primary means of communication regarding safety to the SLAC workforce.
SLAC is conducting training for supervisors (ES&H Course 139) in the area of self-assessment, which includes methodology training for conducting workplace safety inspection walkthroughs. Management at every level is conducting safety walkthroughs, and the SLAC Director of Operations (John Cornuelle) is about 75 percent through his planned walkthrough effort throughout the SLAC site.
SLAC ES&H Division presents a quarterly injury report to ES&HCC, during which there are safety performance reports from each Directorate and discussions about possible cause (s) and prevention – this is in addition to the weekly updates presented by the SLAC ES&H Director to the ES&HCC.
SLAC is also communicating safety topical information to the workforce weekly in their on-line newsletter "SLAC Today".
SLAC Operating Safety Committee has studies accident and injury experiences and determines trends where applicable accident reduction measures are evaluated – there is also lessons learned and review of applicability to other areas of the site.
SLAC is working diligently to update the ES&H Manual, and to date they have updated 27 chapters (about 1,000 pages of material).
SLAC-wide injury prevention event was conducted on 5/11/06. Ideas from the many organizations were reviewed by each directorate, along with follow-up by management.

In measures 5.1c, d, and e, there were no reportable occurrences of releases to the environment, or overdue corrective actions. SLAC continues to do a commendable job in terms of occurrence reporting to DOE/SSO in a timely manner with effective corrective actions and lessons learned follow-up.

5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management

Objective Weight = 70%

Numerical Score = 2.1 Grade = C+

In measure 5.2a, SLAC continues to implement improvements to the ES&H training program, with a completion of 92.2% of all mandatory training. The laboratory did not submit a corrective action plan for the October 2005 ISM review, however, they have substantively addressed the review findings, but not fully implemented all of the follow-up actions. The implementation of ISM seems to be lacking in terms of a consistent program across the laboratory complex, as issues remain in the area of work authorization. In FY06, there were some incidents of unauthorized work involving excavations and electrical LOTO. SLAC is in the process of developing a process flow for the excavation permit process, and the DOE/SSO is planning to conduct a surveillance of this process in FY'07. SLAC has issued Chapter 42 in the ES&H Manual, which addresses safety requirements for subcontractor construction on-site. Electrical incidents continue to be a concern, particularly with subcontracted work. SLAC has prepared a list of actions in response to a DOE/SSO letter, dated July 19, 2006, requesting a formal CAP.

SLAC has responded with the following actions:

- Subcontractor Construction Safety, ES&H Chapter 42 issued
- Electrical Deconstruction Safe Work Practices issued
- Pressurized piping deconstruction procedures prepared
- Service contractor safety ES&H Chapter 49 issued

In July 2006, the SSO completed an Effectiveness review of the Type A Corrective Action Plan and determined that additional follow-up actions for CA 3-1 and CA 9-1 related to subcontractor oversight and SLAC ES&H Division assessment program, respectively. SLAC proposed additional actions that were subsequently approved by the SSO and are being tracked to completion and closure.

In December 2005, the SSO, with support from the DOE Integrated Support Center, Oak Ridge Office, successfully validated the implementation of EMS at SLAC. The SSO provided the EMS self-declaration memo to the Office of Science in December 2005 in accordance with the requirements for EMS implementation reporting outlined in Executive Order 13148.

SLAC has been very responsive in generating corrective actions; however, implementation of ISMS at the working level still needs to be further developed. SLAC's performance is consistent with the letter grade indicated, and it is anticipated that further development and effective implementation of systems and processes down to the subcontractor performing work will provide measures for improvement in this area. SLAC ES&H remains very committed to ISMS, the main issues have been in translating the 5 core functions down to the working level, with appropriate authorizations, work planning, and hazard controls being implemented in a consistent manner. The letter grade of C+ is consistent with SLAC's performance in this area, coupled with the fact that corrective action plans have been developed, and SLAC is cognizant that more effective and consistent process implementation of ISMS at the lower tier level is required.

5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention

Objective Weight = 10%

Numerical Score = 3.7% Grade = A-

SLAC continues to excel in the area of hazardous waste management and pollution prevention. SLAC has reduced the hazardous waste generation from routine operations by 69% at the end of FY06. SLAC has also developed an FY06 baseline for generation of low level radioactive waste from routine operations. This information will be used to improve the quality of low level waste generation data routinely required by the Office of Science. The Chemical Management Services (CMS) project, implemented at SLAC beginning in August 2005, has allowed SLAC to reduce the risks of toxic chemical procurement and use through the use of a chemical services supplier. The CMS allows comprehensive tracking of chemicals during procurement, delivery, storage and use and provides opportunities for continual improvement in reducing risks associated with large chemical inventories and on-site storage by allowing a more effective process to review chemical usage. SLAC has demonstrated on-plan progress in the management of chemical inventories, utilizing just in time ordering to minimize on-site inventory storage of chemicals. SLAC's programs in this area are indicative of effective environmental stewardship.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection					
5.1 Provide a Work Environment that Protects Workers and the Environment	C+	2.1	20%	2.1	
5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management	C+	2.1	70%	2.1	
5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention	A-	3.7	10%	3.7	
				Performance Goal 5.0 Total	2.26

Table 5.1 – 5.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 5.2 – 5.0 Goal Final Letter Grade

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

The Contractor sustains and enhances core business systems that provide efficient and effective support to Laboratory programs and its mission(s).

THE WEIGHT OF THIS GOAL IS 20%.

Provide Business Systems that Efficiently and Effectively Support the Overall Mission of the Laboratory Goal measured the Contractor's overall success in deploying, implementing, and improving integrated business system that efficiently and effectively support the mission(s) of the Laboratory.

6.1 Financial Management System: SLAC continues to meet this performance measure overall in an expected and acceptable manner. Reviews have been performed and evaluated for financial systems, and internal controls over financial systems, by both the Stanford Internal Audit Department and the DOE via the OMB Circular A-123 process, with good audit results and no areas of deficiency. The Defense Contract Audit Agency (DCAA) audit of the Cost Accounting Standards (CAS) Disclosure Statement (DS) is nearing completion with an anticipation of revised DS for signature. There are opportunities for improvement that can be achieved through a more proactive approach by management. SLAC is completing an upgrade of their PeopleSoft financial system software. One potential area for consideration is an audit of a major portion of the financial system by an external financial consulting firm.

6.2 *Procurement:* The Laboratory's Procurement System is sufficient for assessing systems operations, resolved deficiencies and implemented process improvements. The procurement Balanced Scorecard Results received an adjectival rating of Excellent. The Laboratory did not meet the Internal Business Process Perspective. The factors that contributed to Laboratory not meeting this target is 1) 50% turnover in Laboratory's Purchasing Department buying force, 2) the two new purchasing hires to the LCLS Procurement Cell, and 3) hiring of two new key purchasing managers. Virtually all the new buyers came from the commercial sector, and were not familiar with federal government requirements. In fact, nearly 80% of the new buyers, and the two new key purchasing managers had limited experience with government contracts, and in particular, with respect to the LCLS project had no experience in construction contracts.

Based on the evaluation and analysis, SLAC received a rating of Excellent. The areas where the Purchasing Department lost points was in Effective Internal Controls (-3), Effective Supplier Management (-3), Effective Use of Competition (-2), and Good Corporate Citizenship through Purchasing (Socio Economic Subcontracting) (-2). The Purchasing Department, therefore, had a total activity value score for all four perspectives of 3.4.

As was the case for FY06, SSO would again like to see and recommends to SLAC Purchasing Department to improve and/or concentrate on the following:

- Reduce the number of Purchase Card Holders
- Continue to place more emphasis on competing their procurements and ensure that procurements that are sole-sourced have strong justifications
- Better utilization of transactions placed through E-Commerce
- Increase the percentage of on-time deliveries of key suppliers
- Better use of community outreach in an effort to generate more interest in small businesses doing business with SLAC

6.2 *Property:* The Laboratory's Property System is sufficient to retrieve, track, and maintain personal property. The property Balanced Scorecard (BSC) results received an adjectival rating of Excellent. The Laboratory did not meet the national targets and will continue to work on improving areas in the BSC:

- Improve the purchase card goal of marking within 72 hours
- Increase on-line sales
- Improve to meet DOE approved vehicle utilization standard
- Improve SUV's trips required driving on other than normal road conditions

6.3 *Human Resources*: The Laboratory's Human Resources Department earned an overall Outstanding rating through customer feedback obtained from its annual survey of all SLAC staff. The Laboratory was successful in the attraction and retention of qualified people. The Laboratory's attraction and retention of staff in particular, PhD's metric assesses the success of SLAC at retaining its most critically skilled workforce.

SLAC continues to be very active in support of the Graduate Engineering for Minorities (GEM) program by hosting 5 GEM fellows this year; as well as hosting students as part of the Science Undergrad Lab Internship (SULI) and the Youth Outreach program. The lab increased participation of host departments by two for a total of nine departments participating.

No funding was made available for the prior successful HBCU faculty exchange program due to budget cuts.

6.4 Internal Audits and Oversight: SLAC performed at a less than acceptable level on this measure, by not completing one of the sub-measures. As a result, they did not earn a "meets" performance rating. Internal audits were performed as planned in the annual audit plan, and five other reviews were performed as well. The few corrective actions that were recommended in three reviews were completed. In addition, a Business Peer Review (BPR) Team from various Office of Science laboratories conducted a peer review of the SLAC Business Services Division (BSD). Overall the BSD received positive marks with some recommendations for improvement. A comment in the BPR summary stated that the SLAC BSD was "...well-managed and provided a high level of service to its customers."

For this performance measure, SLAC's opportunities for improvement are directly related to available staff resources. The *Contractor's comparison of Information Technology (IT) cost performance with like industry and government entities measure* (6.4.d.) was not performed by SLAC due to unavailable staff resources. To improve in this performance measure, future performance of the Contractor's comparison of IT cost performance must be completed, and that completion is related to SLAC's acquisition of sufficient staff resources to perform this and other increasing financial workload.

6.5: Transfer of Technology and Commercialization of Intellectual Assets: The weight of this objective is 0% as technology transfer is not a large enough activity at SLAC to be weighted.

The overall numerical score is 2.6 and grade assigned B-.

6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)

Objective Weight = 25%

Numerical Score = 3.4 Grade: B+

SLAC continues to perform at an expected and acceptable level for demonstrating an effective financial management system through external reviews. The Stanford Internal Audit Department (SIAD) performed six reviews of systems associated with the financial management system at SLAC. The results state that SLAC's financial management system has been evaluated, and has received good audit result with no notable areas of deficiencies identified to adversely impact the mission of the Laboratory.

No Corrective Action Plans CAPs were required by SLAC after the implementation and testing of A-123 internal controls. SLAC has implemented the A-123 components of A-123 Internal Control at the Entity Level.

SLAC met the financial management goals and expectations of the design and operation of internal controls over financial reporting (OMB A-123, III, A. – E.) SIAD performed the overall assessment of the design and operation of internal controls over financial reporting. As noted on the first paragraph, six reviews were conducted in FY2006. All high-risk line items and some of the medium and low-risk items in the AART assessment spreadsheets for Entity Control and Process Control were tested. In accordance with the DOE A-123 implementation guidance, SIAD recorded in the AART testing spreadsheets details of the testing.

SLAC implemented the Senior Assessment Team (SAT) and a minimum of five of the six A-123 recommended actions. The SAT is composed of functional managers across SLAC and includes the Stanford Internal Audit Department (SIAD), helping to ensure clear communication of assessment objectives. The SAT is responsible for providing appropriate resources to carry out objectives. SLAC staff performed the assessment and the SIAD performed the testing. The scope of the assessment followed the DOE-CH direction for financial reports covered by the assessment. The SAT oversees the implementation of the assessment design and methodology as outlined by DOE in the OMB A-123 AART.

SLAC exceeded the performance measure at a more than acceptable leveling management and reporting in the area of Indirect costs. SLAC places a high priority on the management of indirect costs. SLAC has implemented A-123 recommended actions for evaluation of internal control at all levels. Budgets are established by organizational Directorate and program. Direct and indirect annual budgets are submitted, reviewed, and adjusted to meet programmatic goals given available funding. SLAC's Indirect Rate, at approximately 80/20 percent (combining both the DOE Operating Program funds ratios, and Total DOE Costs ratio including capital and construction), is significantly better than the private industry, industrial plant standard of 60/40 percent. SLAC's control over this rate has been consistent over many years. Given the financial structure of SLAC, it is doubtful that this level of control will change in any significant way. Currently the Defense Contract Audit Agency (DCAA) is close to completing a review of the SLAC Cost Accounting Disclosure Statement, requested by DOE-CH and SSO. The audit is expected to be completed in early 2007 and the SSO is anticipating a clean Disclosure Statement for signature.

6.2 Provide an Efficient, Effective, and Responsive Acquisition and Property Management System(s)

Objective Weight = 35%

Numerical Score =2.6 Grade = B-

Procurement: Although SLAC continues to maintain a good program for assessing system operations, resolving system deficiencies, and implementing process improvements, there are still areas in which SLAC needs to improve their processes, including the Procurement Cell involving the Light Coherent Light Source (LCLS) processes.

SLAC Procurement is measured using the Balanced Score Card (BSC) methodology, a tool used to assess four operational perspectives relative to the Customer, which measures the ability of the organization to provide quality goods and services, effective deliver, and overall customer satisfaction; Internal Business Processes, which measures effective internal controls, effective supplier management, effective use of competition, effective utilization of alternative procurement approaches, acquisition cycle times, and socioeconomic subcontracting; Learning and Growth, which measures the ability of employees, information systems, and organizational alignment to manage the business and adapt to change; and Financial, which measures the cost to spend ratio.

The Customer Perspective measured three areas: percentage of satisfied requestors (using purchase order transactional surveys), percentage of satisfied BIS operators (using climate surveys), and percentage of satisfied P-Card holders (using P-Card surveys). Procurement met the negotiated targets in all three areas and received a rating of "outstanding" in this perspective.

Internal Business Process Perspective measures six areas: Effective Internal Controls, Effective Supplier Management, Effective Use of Competition, Effective Utilization of Alternate Procurement Approaches, Acquisition Process, and Good Corporate Citizenship through Purchasing (Socio Economic Subcontracting). SLAC met or exceeded three of those six measures. The first measure; Effective Internal Controls measures the Procurement Department's ability to ensure they are complying with applicable laws, regulations, prime contract terms and conditions, and SLAC's established policies and procedures. The target was 90%, they accomplished 83.3%. The factors that

impacted SLAC not meeting this target was 1) the 50% turnover in SLAC's Purchasing Department buying force, 2) the two (2) new purchasing hires to the LCLS Procurement Cell, and 3) hiring of two (2) new key purchasing managers. Virtually all of the new buyers, including the two new key purchasing managers came from the commercial sector, and were not familiar with government requirements and practices. In fact, nearly 80% of the new buyers and the two new key purchasing managers had limited experience with government contracts, and in particular, with respect to the LCLS Project, had no experience in construction contracting. There was a significant amount of effort to provide the necessary training to the buyers so they could become familiar with SLAC internal purchasing policies and procedures, and so that they could become familiar with the Federal Acquisition Regulations and with DOE procurement policies/procedures, and the SLAC M&O contract terms and conditions. Subsequently, there was a time factor in the learning curve for those buyers.

To address the "learning curve" concerns/issues, the SLAC Purchasing Department has created a new buyer's checklist and a standardized Memorandum-to-File format, which will be implemented in order to reinforce/remind the buyers of approved purchasing policies and procedures. The new checklist and standardized Memorandum-to-File will also be applicable to the LCLS procurement cell. In addition, new buyers are required to attend mandatory procurement training classes, some of which are being held on site locally, and others are off-site at other DOE M&O Contractor Procurement offices.

Based on the PROAM "Gauge Model", the total point value assigned for Effective Internal Controls is 5, and the total points given to this activity because of the above-mentioned factors is 2.

The negotiated target for Effective Supplier Management was 84% and 74.1% was the average percentage of on-time deliveries of key suppliers. This is a slight increase from FY05's average of 67.6%, but still not reaching the negotiated target. In March 2006, three Expeditor positions were eliminated, so responsibility of expediting has been transferred to the buyers in order to promote attention to supplier performance and on-time delivery. Purchasing has developed a new on-time delivery report sent to all Buyers each morning to notify them of overdue line items. It is believed that buyer ownership will lead to more efficient expediting. Based on the PROAM "Gauge Model", the total point value assigned for Effective Supplier Management is 5, and the total points given to this activity because of the expeditor issues is 2.

The negotiated target for Effective Use of Competition was 70%. Even though Purchasing met this goal (87.6%), their rating was slightly reduced because it was felt that many of their sole-source justifications were not adequate or buyers could have done a better job in seeking other vendors to compete the procurement. Based on the PROAM "Gauge Model", the total point value assigned for Effective Use of Competition is 20, and the total points given to this activity is 18.

The negotiated target for Effective Utilization of Alternative Procurement Approaches (Transactions through Rapid Purchasing Techniques) was 85%, and SLAC accomplished 87.4%. Even though there was no point value assigned to Transactions Placed through E-Commerce for FY06, the target was 75%, and SLAC only accomplished 35% in this category, which will result in a point value assigned in this category for FY07, as the emphasis in government is being placed on electronic means. Based on the PROAM "Gauge Model" the total point value assigned for Transactions through Rapid Purchasing Techniques is 10, and the total points given to this activity is 10.

The negotiated target for Acquisition Process (Average Cycle Time, Transactions >$100K) was 27-32 days, and SLAC's average processing time was 23.4 days. Based on the PROAM "Gauge Model" the total point value assigned for Average Cycle Time for Transactions >$100K is 15, and the total points given to this activity is 15. Of the five negotiated goals Purchasing had for Socioeconomic Subcontracting, SLAC met only one (Small Business). The negotiated target was 41.3% and SLAC accomplished 43.7%. The same factors as FY05 contributed to SLAC not meeting the other four negotiated targets: use of the purchase card, large businesses receiving awards on the LCLS projects due to the specific nature of their efforts, and the initiative by DOE HQ of the ICPT. Based on the PROAM "Gauge Model" the total point value assigned for Socio Economic Subcontracting is 5, the total points given to this activity is 3.

The Learning and Growth Perspective measured two areas and negotiated the following targets for each: Employee Satisfaction (90%), and Employee Alignment (98%). SLAC accomplished 94.4% and 100%, respectively. Based on the PROAM "Gauge Model" the total point value assigned for Employee Satisfaction were 5, and for Employee Alignment were 10. SLAC received the assigned total point value of 15 for this activity.

The Financial Perspective measured the cost to spend ratio. The negotiated target for purchasing organization cost compared to total purchasing obligations was $.025. SLAC accomplished $.018. Based on the PROAM "Gauge Model" the total point value assigned for this activity was 10. SLAC received the assigned total point value of 10 in this activity.

Property: Based on Appendix B, the SLAC Personal Property Balance ScoreCard Performance Expectations are measured and broken down into four perspectives. They are Customer Perspective, Internal Business Perspectives, Learning and Growth Perspective, and Financial Perspective. Of the four perspectives, the areas attributing the reduction of rating are the Internal Business Perspective and the Financial Perspective.

The Customer Perspective measured Perspective measured three areas and met all the negotiated targets.

In the six areas measured in the Internal Business Perspective, four areas met or exceeded their negotiated national targets and three areas did not meet national targets. The target increased to 10% in FY06 compared from 5% in FY05 attributed to not meeting the percentage of items sold on-line. A total of 20 internet auction lots were posted with a total of 78 items. Of these items, only 48 items were sold. On some of the sales, the buyer did not meet the minimum bid, were non-responsive, or were no longer interested. The sales are dependant on the number of items SLAC receive for excess and the Property Control Department does not have control over the items turned into the Salvage Group. Each custodian and department at SLAC decides what is excess to their needs. SLAC achieved 81.43% for fiscal year 2006 as compared to 70.43% for fiscal year 2005, but did not meet the national target of 98% of personal property acquired via purchase card recorded in the property and financial database within 72 hours of receipt of property. Of the 210 items acquired via purchase card, 171 items were recorded in the database within 72 hours of receipt. SLAC achieved 74.45% of the DOE approved vehicle utilization standard, the negotiated target is 90%.

The Learning and Growth Perspective measured three areas and met all the negotiated targets.

In the area of Financial Perspective, SLAC achieved 10.63% and did not meet the 90% national target of each non-law enforcement sport utility vehicle (SUV) trips required driving on other than normal road conditions.

SLAC personal property management system complies with the Federal Property Management Regulations, the DOE Property Management Regulations, and applicable DOE Orders. The SLAC personal property management system approval is effective through 9/30/07.

6.3 Provide an Efficient, Effective, and Responsive Human Resources Management System

Objective Weight = 20%

Numerical Score = 3.5 Grade = A-

SLAC's Human Resources Department earned an overall rating of 1.8 (on a scale of 1 to 5, with 1 being "Outstanding") through customer feedback obtained from its annual survey of all SLAC staff. The rating of 1.8 reflects consistency with 2005 in the level of customer satisfaction Human Resources has achieved.

Despite the positive feedback and achievement of the "B+" target, SLAC initiated an action plan to address feedback that customers found it difficult to contact HR staff without being directed to voicemail, and, in response to feedback that communications should be more broadly distributed, are ensuring relevant articles from Stanford campus publications are duplicated in SLAC Today.

Based on customer feedback, SLAC Human Resources Department identified its website as the "system" it would affect improvements on under this measure – appropriate given it functions as the primary source for information, policies, benefit changes, and other communications. Feedback had been received that the website was cumbersome to navigate and required updating to become more user-friendly. The HR Department formed a team to create the layout and align the site with SLAC overall website. All identified improvements were made within the appraisal period and feedback from users has indicated a high level of customer satisfaction.

SLAC was successful in the attraction and retention of qualified people. The intent of this metric is to measure the extent to which the limited salary budget SLAC manages within impacts the decisions of potential hires to decline SLAC employment offers. For FY2006, 198 offers were made, of which 23 were declined, 15 due to compensation. Therefore, 89.4% of offers were accepted, reflecting well on the ability of the SLAC HR staff to target salary dollars where necessary. The 7.6% declination rate, however, is a significant increase over the 2% declination rate for FY2005, and may indicate an emerging trend in the weight compensation plays for potential hires.

In the area of attraction and retention of staff, this metric assesses the ability of the Laboratory to retain its staff in a high cost-of-living area against the ability of Stanford University as a whole, as its corporate organization, given the consistent benefit and compensation systems and common salary increase budgets. For FY2006, Stanford University's turnover (excluding SLAC) was 15.4%, whereas SLAC's was 45% lower at 8.4%.

SLAC's attraction and retention of staff in particular, PhD's metric assesses the success of SLAC at retaining its most critically skilled workforce. The ability to limit attrition of this group to between 5%-9% is difficult in the highly competitive environment SLAC exists in. For FY2006, attrition was held to 5.2%, significantly lower than FY2005's 10.6% rate.

There were nine participating departments, including two new departments that serve students at various education levels. The lab has continued their activities of the Graduate Engineering for Minorities program and hosted five students this year; as well as hosting students as part of the SULI and the Youth Outreach program.

There were no funding made available for the second year in a row to conduct the successful faculty exchange program at SLAC with Historically Black Colleges and Institutions serving minorities and women.

6.4 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate

Objective Weight = 20%

Numerical Score = 2.7 Grade = B-

SLAC's internal audits were achieved in accordance with annual audit plan. SIAD completed all of the SLAC audits listed in the Revised FY2006 SLAC Audit Plan. The revision, dated June5, 2006, was mutually agreed upon by all parties. These audits incorporated the required OMB Circular A-123 internal controls testing for FY2006. In addition, the "High Level Review of Internal Controls at SLAC" was also conducted. The reports for two other reviews: *"OMB Circular A-123 Testing of*

Internal Controls for Human Resources and Payroll" and *"Review of the Accounts Payable Process"* was delayed into November 2007. This delay was necessitated by the priority focus on recording testing details into the A-123 Assessment and Reporting Tool (AART) spreadsheets to meet an early September deadline for transmittal to DOE.

SLAC completed the corrective actions for reviews in accordance with approved Corrective Action Plan. Participated in five reviews during FY 2006 and two reviews had no recommendations or corrective actions. Of the remaining three reviews, the *"Stanford Internal Audit Review of SLAC Allowable Costs for FY2005"* had one recommendation and corrective action was completed. The *"Stanford Internal Audit on SLAC's Internal Procedures on the Review and Approval of Invoices from Subcontractors Subject to the Davis-Bacon Act in FY2005"* had two recommendations and two corrective actions which were completed by SLAC. The *"Stanford Internal Audit of SLAC PeopleSoft - Application Security Review"* (version 8.8) had eight recommendations. Six of the eight corrective actions have been completed, with scheduled progress being achieved on the last two.

SLAC achieved an overall satisfactory rating from an external review of Contractor's success in meeting Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services management goals and expectations consistent with professional auditing standards received an overall satisfactory rating from an external review every five years. In 2006 a Business Peer Review Team with representatives from the Thomas Jefferson Laboratory, Fermi National Accelerator Laboratory, and the Lawrence Berkeley National Laboratory conducted a peer review of the SLAC Business Services Division (BSD). Functional areas reviewed were Procurement, SLAC Site Security, Property Management, and Travel/Travel Accounting. The report summary stated that the BSD was exceptionally well-managed and provided a high level of service to its customers.

SLAC did not achieved, excluding scientific IT, the Contractor's comparison of Information Technology (IT) cost performance with like industry and government entities for 1) IT spending as a percent of overall cost plan, 2) percent of Laboratory employees in IT jobs and 3) IT budget per end user. SLAC was unable to perform this analysis due to other demands on the Business Services Division and the CFO organization. Accomplishment of this performance measure is scheduled for FY2007.

6.5 Demonstrate Effective Transfer of Technology and Commercialization of Intellectual Assets

Objective Weight = 0%

The weight of this Objective is 0% as technology transfer is not a large enough activity at SLAC to be weighted.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)					
6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)	B+	3.1	25%	0.78	
6.2 Provide an Efficient, Effective, and Responsive Acquisition and Property Management System(s)	B-	2.6	35%	0.91	
6.3 Provide an Efficient, Effective, and	A-	3.5	20%	0.70	

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
Responsive Human Resources Management System					
6.4 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate	B-	2.7	20%	0.54	
6.5 Demonstrate Effective Transfer of Technology and Commercialization of Intellectual Assets	N/A	N/A	0%	0.00	
				Performance Goal 6.0 Total	2.9

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 6.2 – 6.0 Goal Final Letter Grade

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

The Contractor provides appropriate planning for, construction and management of Laboratory facilities and infrastructures required to efficiently and effectively carry out current and future S&T programs.

THE WEIGHT OF THIS GOAL IS 15%.

The Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs Goal measured the overall effectiveness and performance of the Contractor in planning for, delivering, and operations of Laboratory facilities and equipment needed to ensure required capabilities are present to meet today's and tomorrow's complex challenges.

7.1 Facilities and Infrastructure Usage and Life Cycle: The laboratory did not meet the Deferred Maintenance goal stated in their Ten Year Site Plan. The laboratory expenditure was significantly short of the Office of Science goal 2% and the laboratory is in the process of establishing a facility metering plan that will be implemented in FY07.

7.2 Planning and Acquiring Facilities and Infrastrucuture: There is an effective execution of seven Facility and Infrastructure Projects greater than $250k. The other ten are on schedule and within budget. There is no formal system in place for notifying SSO on facility projects, but the Laboratory is in the process of establishing a formal system that will be implemented in FY07. The S&ORI Project was not realistically scoped after funds were restored in FY06 and did not adequately develop an award strategy with sufficient contingency.

The overall numerical score is 2.3 and grade assigned C+.

7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs

Objective Weight = 50%

Numerical Score = 2.0 Grade = C

Although there was an improvement in the maintenance expenditure in FY06, SLAC expenditure falls considerably short and achieved 1.02% of the Office of Science MII goal of 2%. The VFI study currently underway is intended to determine the appropriate MII level for high Replacement Plant Value low maintenance facilities vs. other conventional facilities.

SLAC did not meet the Deferred Maintenance (DM) reduction goal as stated in the Ten Year Site Plan, and improvement were noted in the DM reduction and DM tracking process.

SLAC did not complete 100% of scheduled preventive maintenance (PM) within 30 days , but achieved 80%, therefore, the Computerized Maintenance Management System implementation next year is intended to enhance maintenance scheduling process and improve completion of the high priority PM items. Although the fleet service scheduled maintenance has shown some improvement, overall preventive maintenance (PM) needs improvement.

Most of the Energy Management Plan on energy conservations and management goals were met; however, some objectives were not met due to funding shortfall.

The overall numerical score is 2.0 and grade assigned is C.

7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to support Future Laboratory Programs

Objective Weight = 50%

Numerical Score = 2.6 Grade = B-

SLAC have only one line item project, S&ORI and its deferred maintenance reduction identified. The Infrastructure Plan lists planned GPP projects for the next 10 years; therefore, SLAC has met the requirement. There is no formal system in place for notifying SSO on facility projects, but SLAC is in process of establishing a formal system that will be implemented in FY07.

The S&ORI project is within 5% of target for cost and schedule. Cumulative costs to date are $4.1M in accrued and committed funds. Cost to date $5.3M for percentage of 96% which is within the -5% target for cost. The lower tier milestone targets are expected to be one month late. The CD3 was achieved as scheduled.

The effective execution of seven Facility and Infrastructure Projects > $250K has been fully met. The other ten are on schedule and within budget.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs					
7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that	C	2.0	50%	1.00	

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
Optimizes Usage and Minimizes Life Cycle Costs					
7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to support Future Laboratory Programs	B-	2.6	50%	1.30	
				Performance Goal 7.0 Total	2.3

Table 7.1 – 7.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 7.2 – 7.0 Goal Final Letter Grade

8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

The Contractor sustains and enhances the effectiveness of integrated safeguards and security and emergency management through a strong and well deployed system.

THE WEIGHT OF THIS GOAL IS 20%.

The Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems Goal measured the Contractor's overall success in safeguarding and securing Laboratory assets that supports the mission(s) of the Laboratory in an efficient and effective manner and provides an effective emergency management program.

8.1 Emergency Management System: The milestones were not achieved for the emergency management system and they are 1) Lessons Learned Program not mature and 2) External Reviews.

8.2 Cyber Security: SLAC exceeded the criteria for an Efficient and Effective System for Cyber Security:

- Laboratory exceeded the measure by conducing monthly scans of the entire Laboratory network
- ISS Scans 3 times per day against everything except the visitor network, non-public networks, and a portion of the MCC subnet
- Laboratory implemented innovative processes to scan their Network; purchased utilities which alleviated the need for the operator to physically connect to each individual server and scan
- Level of scanning is very detailed, entire network is scanned daily, users are scanned weekly or sometimes on a daily basis
- An external review conducted in July 2006 and achieved positive observations and there were no findings

8.3 Protection of Special Nuclear Materials; and Property: SLAC provided an efficient and effective system for protection of special nuclear materials as verified by the ISC/OR during its bi-annual review in July 2006 which conducted an NMC&A inspection resulting in a satisfactory inspection with no corrective actions.

8.4: Protection of Classified and Sensitive Information: This Objective is weight 0% since there is no classified and very little sensitive information at SLAC for the objective to be weighted.

The overall numerical score is 2.9 and grade assigned B.

8.1 Provide an Efficient and Effective Emergency Management System

Objective Weight = 50%

Numerical Score = 2.3 Grade = C+

SLAC has incorporated many improvements into its lessons learned program. However, this program is still being developed. One key feature of the program that needs to be more fully incorporated is posting of SLAC Lessons Learned (LL) web page. The LL for the IR-4 fire was actually completed within 45 days time frame as part of the ORPS report. Best practice would be to share the lessons learned from this incident with the lab.

An independent self assessment evaluation was conducted during FY 2006/Q3 by an audit team led by Robin Wendt (SLAC Office of Assurance). Other team members were Don Bell, Consultant (LBNL Emergency Management Coordinator, Retired), Randy Bradley, LLNL Fire Marshal, and Michael Stanek, SLAC Accelerator Department. The recommendations are being addressed.

An Emergency Operations Center (EOC) exercise was conducted as part of a larger Stanford-wide exercise on April 6, 2006. EOC training includes the Incident Command System (ICS). Also an ICS FEMA course is provided to EOC members and management for certification. SLAC currently maintains a SERT (SLAC Emergency Response Team) and the SLAC Emergency Management Coordinator arranges training for approximately 30 members. In the year 2007/2008 there will be 30 more SLAC personnel added to the roster. The plan is to have a group of about 60 trained and equipped to respond to a site wide mass casualty emergency. Training records were not provided to SSO demonstrating that all employee training have been completed.
Currently, there are 72 facilities at SLAC with Facility Emergency Plans. These plans are reviewed and updated annually by their respective facility managers.

SLAC has been very responsive in completing ORPS actions within allocated timeframe. SLAC completed ORPS corrective action plans and corrective actions on time.

8.2 Provide an Efficient and Effective System for Cyber-Security

Objective Weight = 40%

Numerical Score = 3.5 Grade = A-

SLAC has met and exceeded the objective by conducting Monthly Scans of the entire SLAC network systems. In addition, ISS scans 3 times per day against everything except the visitor network, non-public networks, and a portion of the MCC subnet.

SLAC has been aggressive in seeking better-automated ways to scan the SLAC network. This is evidenced by the acquisition of various IT appliances to scan the SLAC network. One of the purchased utilities alleviated the need for the operator to physically connect to each individual server to scan. With the new appliance SLAC is now automatically scanning its servers on a periodic basis. This action has provided enhanced cyber security.

The level of scanning is very detailed. While the entire SLAC network is scanned, the users are scanned on weekly or sometimes daily basis. This is in support of an aggressive policy to assure that all authorized users are connected through machines that are to date with their patches and virus protection programs.

An external review was conducted in July by the Oak Ridge Operations Office in conjunction with a bi-annual Security Survey that included unclassified Cyber Security. The inspection focused on Security and no corrective actions were identified.

8.3 Provide and Efficient and Effective System for Protection of Special Nuclear Materials; and Property

Objective Weight = 10%

Numerical Score = 3.4 Grade = B+

There were no significant safeguard reported during FY2006. The ISC/OR conducted an NMC&A inspection as part of the Focused Audit on Security in July 2006 and there were no corrective actions requiring completion in FY06. There were no problems identified during the ISC/OR NMC&A inspection in July 2006.

8.4 Provide an Efficient and Effective System for the Protection of Classified and Sensitive Information

Objective Weight = 0%

This Objective weight is 0% since there is no classified and very little sensitive information at SLAC for the objective to be weighted.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM)					
8.1 Provide an Efficient and Effective Emergency Management System	2.3	C+	50%%	1.15	
8.2 Provide an Efficient and Effective System for Cyber-Security	3.5	A-	40%%	1.40	
8.3 Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, and SLAC Property	3.4	B+	10%	.34	
8.4 Provide an Efficient and Effective System for the Protection of Sensitive Information	N/A	N/A	0%	0	
			Performance Goal 8.0 Total		2.9

Table 8.1 – 8.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-08	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 8.2 – 8.0 Goal Final Letter Grade

Fiscal Year 2006 — Office of Science Input Sheet - Objective Scoring and Weightings

Stanford Linear Accelerator Center

	ASCR			BES			BER			FES			HEP			NP			WDTS			Chksum	Goal Score	Goal Weight	Weighted Goal Score
	Weights			Weights			Weights			Weights			Weights			Weights			Weights						
	Objective	Goal		Objective	Goal		Objective	Goal		Objective	Goal		Objective	Goal		Objective	Goal		Objective	Goal					
	Score	Objective	Funding	Score	Objective	Funding	Score	Objective	Funding	Score	Objective	Funding	Score	Objective	Funding	Score	Objective	Funding	Score	Objective	Funding				
Goal #1 Mission Accomplishment		70%	0.1%		20%	50.3%		75%	1.5%		0%	0.0%		40%	48.0%		0%	0.0%		65%	0.1%	100.0%			
Objectives																									
1.1 Impact	3.8	40%		4	50%		3.4	30%		0	0%		3.4	30%		0	0%		3.7	25%					
1.2 Leadership	3.8	30%		4	20%		3.4	20%		0	0%		3.4	30%		0	0%		3.7	30%					
1.3 Output (productivity)	4.3	15%		4.3	15%		4.3	20%		0	0%		4.3	30%		0	0%		4.3	30%					
1.4 Delivery	4.3	15%		4.3	15%		4.3	30%		0	0%		4.3	10%		0	0%		4.3	15%					
Goal #1 Score (calculated)	3.85			4.09			3.83			0			3.76			0			3.97				3.93	0.3100	1.2178
Goal #2 Design, Fabrication, Construction and Operation of Facilities		0%	0.0%		60%	51.0%		0%	0.0%		0%	0.0%		40%	49.0%		0%	0.0%		0%	0.0%	100.0%			
Objectives																									
2.1 Design of Facility	0	0%		1.5	10%		0	0%		0	0%		3.4	20%		0	0%		0	0%					
2.2 Construction of Facility/Fabrication of Components	0	0%		2.6	60%		0	0%		0	0%		0	0%		0	0%		0	0%					
2.3 Operation of Facility	0	0%		3.9	20%		0	0%		0	0%		3.8	80%		0	0%		0	0%					
2.4 Utilization of Facility to Grow and Support Lab's Research Base	0	0%		3.3	10%		0	0%		0	0%		0	0%		0	0%		0	0%					
Goal #2 Score (calculated)	0			2.62			0			0			3.72			0			0				3.26	0.4900	1.5979
Goal #3 Program Management		30%	0.1%		20%	50.3%		25%	1.5%		0.0%	0.0%		20%	48.0%		0%	0.0%		35%	0.1%	100.0%			
Objectives																									
3.1 Stewardship of Scientific Capabilities and Programmatic Vision	4.1	35%		1.8	40%		4	20%		0	0%		3.4	40%		0	0%		4.1	20%					
3.2 Program Planning and Management	3.8	35%		2.2	30%		4	30%		0	0%		3.3	40%		0	0%		4.1	40%					
3.3 Program Management-Communication & Responsiveness (to HQ)	3.4	30%		2.1	30%		4	50%		0	0%		3.3	20%		0	0%		3.9	40%					
Goal #3 Score (calculated)	3.765			2.01			4			0			3.31			0			4.02				2.68	0.2000	0.5364
Total S&I Score (calculated)	3.9005			2.912			3.8875			0			3.66			0			3.9875						
																							Overall S&I Grade		3.35

	ASCR	BES	BER	HEP	NP	WDTS
Goal 1 Weights for Presentation	0.1%	50.3%	1.5%	48.0%		0.1%
Goal 2 Weights for Presentation		51.0%		49.0%		
Goal 3 Weights for Presentation	0.1%	50.3%	1.5%	48.0%		0.1%

Contents

Note *This entire manual is being revised. Newly revised chapters will be designated as part of revision R023, including chapters 23 and 28. Chapter titles will be changing in some cases, and some chapters added, deleted, and combined. Minor revisions are marked below by R023.x, with x referring to the revision of the chapter.*

Fundamentals

Topics

Revision Record

Note *This entire manual is being revised. Newly revised chapters will be designated as part of revision R023, including chapters 23 and 28. Chapter titles will be changing in some cases, and some chapters added, deleted, and combined. Minor revisions are marked below by R023.x, with x referring to the revision of the chapter.*

Number	Date	Chapters Affected	Change
R001	29 April 1992	Chapter 8, "Electrical Safety"	Added section about hi-pot testing
R002	7 June 1993	"About This Manual"	New
R002	7 June 1993	Table of Contents	Revised to reflect new structure
R002	7 June 1993	Chapter 1, "The SLAC ES&H Program"	Revised to reflect current SLAC policy
R002	7 June 1993	Chapter 2, "Hazardous Equipment and Unsafe Operations"	Revised to reflect current SLAC policy. Incorporated Bulletin 8, "Stopping Hazardous Operations"
R002	7 June 1993	Chapter 3, "Medical"	Revised to reflect current SLAC policy. Incorporated Bulletin 16, "Medical Monitoring of 'Most Exposed' Employees"
R002	7 June 1993	Chapter 24, "Training"	Revised to reflect current SLAC policy.
R002	7 June 1993	Chapter 28, "Accidents, Injuries, and Illnesses"	New. Incorporated Bulletin 6, "Procedures for Handling Worker Injuries—Non-SLAC Personnel" and Bulletin 7, "Procedures for Handling Worker Injuries—SLAC Personnel"
R002	7 June 1993	Chapter 31, "Citizen Committees"	New
R003	10 September 1993	Chapter 6, "Confined Space"	New. Incorporated Bulletin 25, "Policy on Permit Required Confined Spaces"
R003	10 September 1993	Index	New
R004	17 December 1993	Table of Contents	Revised to include new chapter.
R004	17 December 1993	Chapter 29, "Respirator Program"	New

Number	Date	Chapters Affected	Change
R016	18 August 1997	Chapter 21, "Secondary Containment of Hazardous Material and Waste"	New
R016	18 August 1997	Chapter 31, "Citizen Committees"	Revised to reflect current SLAC policy
R016	18 August 1997	Table of Contents	Revised to reflect changes in chapter titles. Chapter 26, "Water Quality," has been replaced by Chapter 26, "Waste Water and Domestic Supply Water," and Chapter 44, "Surface Water"
R017	16 December 1997	Chapter 1, "The SLAC ES&H Program"	Revised to reflect current SLAC policy
R017	16 December 1997	Chapter 11, "Excavations"	Revised to reflect current SLAC policy
R017	16 December 1997	Chapter 32, "PCB and Oil-Filled Equipment"	New
R017	16 December 1997	Chapter 33, "Self Assessment"	New
R017	16 December 1997	Table of Contents	Revised to reflect changes in chapter titles. Chapter 32, "Seismic Safety," has been replaced by "PCB and Oil-filled Equipment"
R018	4 June 1998	Chapter 6, "Confined Space"	Revised to reflect current SLAC policy
R018	4 June 1998	Chapter 27, "Asbestos"	Revised to reflect current SLAC policy
R019	13 November 1998	Table of Contents	Revised to reflect completion of chapters
R019	13 November 1998	About This Manual	Revised to reflect current controlled copies information
R019	13 November 1998	Chapter 17, "Hazardous Waste"	New
R020	13 December 1999	Table of Contents	Revised to reflect completion of chapters
R020	13 December 1999	Revision Record	Revised to reflection revised records
R020	13 December 1999	Chapter 23, "Warning Signs and Devices"	Revised to reflect current SLAC policy
R020	13 December 1999	Chapter 9, "Radiological Safety"	Revised to reflect current SLAC policy
R021	13 October 2000	Table of Contents	Revised to reflect completion of chapters
R021	13 October 2000	Revision Record	Revised to reflection revised records

Number	Date	Chapters Affected	Change
R021	13 October 2000	Chapter 2, "Stop Work Authority and Stopping Unsafe Activities"	Revised and renamed to reflect current SLAC policy
R021	13 October 2000	Chapter 26, "Stormwater"	New
R021	13 October 2000	Chapter 31, "Citizen Committees"	Revised to reflect current SLAC policy.
R022	September 2003	Table of Contents	Revised
R022	September 2003	Rev Record	Revised
R022	March 2002	Chapter 3, "Medical"	Revised to reflect current SLAC policy
R022	August 2002	Chapter 8, "Electrical"	Revised to reflect current SLAC policy
R022	April 2002 (revised September 2003)	Chapter 37, "Emergencies"	New
R022	May 2001	Chapter 43, "Industrial Wastewa ter Protection (Sanitary Sewer)"	New
R023		All	Updating and restructuring content
R023	19 December 2003	Chapter 23, "Warning Signs and Devices"	Revised
R023	19 December 2003	Chapter 28, "Accidents, Injuries, and Illnesses"	Revised
R023	18 July 2005	Chapter 8, "Electrical Safety"	Revised. Incorporates bulletins 53A, "Update on Outdoor Ground Fault Circuit Interrupter (GFCI) Rules" and 68A, "Electrical Work"
R023	17 August 2005	Chapter 1, "General Policy and Responsibilities"	Revised. Retitled from "The SLAC ES&H Program". Reflects changes in the *SLAC Integrated Safety and Environmental Management System Description* (SLAC-I-720-0A008-001-R002, August 2005)
R023	17 August 2005	Chapter 2, "Work Authorization"	New. Incorporates former Chapter 2, "Stop Work Authority and Stopping Unsafe Activities". Reflects changes in the *SLAC Integrated Safety and Environmental Management System Description* (SLAC-I-720-0A008-001-R002, August 2005)
R023	19 August 2005	Chapter 44, "Penetration Safety"	New

Number	Date	Chapters Affected	Change
R023	30 September 2005	"About This Manual"	Revised. Reflects new content and process requirements and distribution practice of publishing via the web and not via controlled hard copy
R023	30 September 2005	Chapter 31, "Institutional ES&H Committees"	Revised. Reflects organizational changes in revised chapters 1 and 2 and the *SLAC Integrated Safety and Environmental Management System Description* (SLAC-I-720-0A008-001-R002, August 2005)
R023	6 October 2005	Chapter 45, "Fall Protection"	New. Adopts Cal/OSHA fall protection standards for use at SLAC. Sets up a three-tiered scheme of roles/responsibilities for fall protection, authorized, competent, and qualified persons (the fall protection training program has been revised to match the new scheme). Requires an established procedure or elevated surface work plan for work authorization. States SLAC's policy regarding transit from a fixed ladder to a work area that is more than six feet removed from a leading roof edge
R023	18 November 2005	Chapter 11, "Excavation Safety"	Revised. Requires an excavation permit and plan and site-specific health and safety plans, along with a competent person, inspections, and documentation of existing and as-built conditions. Adopts Cal/OSHA. Incorporates Bulletin 54A, "Excavation Clearance Form"
R023	18 November 2005	Chapter 42, "Subcontractor Construction Safety"	New. Describes roles and responsibilities and requirements for subcontracted construction work. Adopts Cal/OSHA. Incorporates Bulletin 63, "Protecting the Environment during Construction, Soil Excavating, and Grading"

Number	Date	Chapters Affected	Change
R023	20 November 2005	Chapter 15, "Ladder Safety"	Revised. Describes requirements for training, inventorying, inspecting (every three years), and assigning ownership to fixed ladders, allowing users to remove portable ladders from service, and making supervisors responsible for identifying users who need retraining. A series of simple procedures have been developed for procuring, inspecting, and using ladders, and a database developed for tracking fixed ladders. Incorporates Bulletin 60: "Safely Using Ladders and Accessing Elevated Work Surfaces"
R023	20 November 2005	Chapter 20, "Lead Safety"	Revised. Describes worker safety controls for lead use. Describes common lead working tasks, the controls to be used, including industrial hygiene surveys, medical surveillance, and personal protective equipment. Incorporates Bulletin 55, "Legacy Lead (Pb)"
R023	20 November 2005	Chapter 46, "Blood-borne Pathogens"	New. Constitutes the exposure control plan (ECP) for SLAC required by federal regulation. Describes at-risk employees, the controls to be used, including personal protective equipment, and procedures to be used in the event of an exposure
R023	2 December 2005	Chapter 10, "Laser Safety"	Revised. Describes hazard controls based on laser class and identifies roles and responsibilities of the laser safety officer and system laser safety officers
R023	13 December 2005	Chapter 27, "Asbestos"	Revised. Describes the asbestos program at SLAC, including the classification of asbestos work, training requirements, and guidelines. Incorporates Bulletin 62, "Properly Managing Asbestos Floor Tiles"

Number	Date	Chapters Affected	Change
R023	22 December 2005	Chapter 3, "Medical"	Revised. Describes the medical program at SLAC, including services offered by the Medical Department and a summary of medical surveillance programs. Incorporates bulletins 28, "Guidelines for the Use of Video Display Terminals/Computers"; 56, "Hazards of Magnetic Fields for Persons with Pacemakers and Other Medical Implants"; and 64, "Medical Surveillance Programs at SLAC".
R023	22 December 2005	Chapter 6, "Confined Space"	Revised. Describes safety controls for working in confined spaces, such as how confined spaces are classified and entry into them controlled, including permit and training requirements.
R023	22 December 2005	Chapter 9, "Radiological Safety"	Revised. Describes the radiological safety program at SLAC, including access based on classification areas and shielding policy. Incorporates bulletins 21D, "Using Whole-body and Extremity Dosimeters at SLAC"; 32A, "Policy on Reporting Radiation Dose Information"; 33A, "Procedures for Radioactive Sealed Sources"; and 44, "Policy on Radioactive Material at SLAC"
R023	22 December 2005	Chapter 39, "Machine Safeguarding"	New. Describes the machine safeguarding program at SLAC, including requirements and recommendations for safe operation and training. Incorporates Bulletin 23, "Guidelines for Machine Safeguarding"
R023	14 January 2006	Chapter 24, "Training"	Revised. Describes the training program at SLAC, including non-employee training. Incorporates bulletins 49C, "SLAC Contracted Parties Safety Training", and 74, "SLAC User and Similar Non-employee Safety Training"
R023	27 February 2006	Chapter 36, "Cryogenic and Oxygen Deficiency Hazard Safety"	Revised. Describes the cryogenic and oxygen deficieny hazard safety program, including requirements for classifying areas, assessing risk, and approving work. Incorporates ES&H Bulletin 70, "Non-life Supporting Gases Work"

Number	Date	Chapters Affected	Change
R023.1	27 March 2006	Chapter 10, "Laser Safety"	Revised (minor). Updates links and changes Section 5.1.4.5, "Personal Protective Equipment": "All laser protective eyewear will be .... Inspected periodically for signs of damage, such as pitting, cracking, light leaks, or discoloration. Eyewear in suspicious condition will be tested to ensure that it is safe for use or discarded [inserted]
R023.1	19 May 2006	Chapter 9, "Radiological Safety"	Revised (minor editorial). Updates links and changes citation: Radioactive Waste Manual (SLAC-I-760-2A08Z-001-R001, August 2003) [changed from 800-IA08G-001]
R023	13 July 2006	Chapter 12, "Fire and Life Safety"	Revised. Describes the fire and life safety program at SLAC, including design review, safety systems, inspection, and hot work permits. Incorporates Chapter 7, "Evacuation, Exit Paths, and Emergency Lighting".
R023	13 July 2006	Chapter 7, "Evacuation, Exit Paths, and Emergency Lighting"	Cancelled. Incorporated in Chapter 12, "Fire and Life Safety".
R023	13 July 2006	Chapter 33, "Line Management Self-assessment"	Revised. Describes line management self-assessment (part of a larger assessment program) including requirements for periodic reviews.
R023	13 July 2006	Chapter 47, "Mobile Elevating Work Platforms (MEWP)"	New. Describes the MEWP program, including requirements for operator training and authorization, designation of MEWP custodians, and maintenance and inspection.
R023	13 July 2006	Chapter 48, "Powered Industrial Vehicles"	New. Describes the PIV program, including requirements for training, non-routine JHAMs, and equipment maintenance.

Number	Date	Chapters Affected	Change
R023.1	28 July 2006	Chapter 1, "General Policy and Responsibilities"	Revised (minor). Ensures consistent use of the term and abbreviation for our system description, Integrated Safety and Environmental Management System (ISEMS). Includes a description of the newly formed Office of Assurance in the responsibilities section, 5.2.2. Expanded Section 5.2.7 to include processes for revised as well as new ES&H policy and requirements. This includes allowing changes that are not substantive and major to be approved by the associate director for ES&H. Includes a provision for an implementation section for each policy and requirement
R023.1	28 July 2006	Chapter 2, "Work Authorization"	Revised (minor). In Section 5.2.3, a reference to the work approval authority of safety officers is made. Section 5.3.1 is revised to simplify the authority description for stopping unsafe activities.
R023.1	28 July 2006	Chapter 31, "Institutional ES&H Committees"	Revised (minor). Makes minor clarifications throughout
R023.1	28 July 2006	Chapter 33, "Line Management Self-Assessment"	Revised (minor editorial). Updates links
R023.1	28 July 2006	"About This Manual"	Revised (minor). Reflects content and process changes made in Chapter 1 (R023.1)
R023	15 September 2006	Chapter 32, "Polychlorinated Biphenyls"	Revised. Describes SLAC requirements for identifying and minimizing the hazard of PCBs to humans and the environment. Covers requirements for labeling PCB-containing equipment and articles and inspecting equipment. General requirements for oil-filled containers have been moved to Chapter 40, "Hazardous Materials".

Number	Date	Chapters Affected	Change
R023.1	15 September 2006	Chapter 28, "Incident Investigation"	Revised. Describes how SLAC handles incident investigation. Sections of the chapter that were covered in other chapters have been removed and processes that apply to all incidents have been defined. Detailed procedures have been added, including for securing an accident scene; investigation; and follow up. Of particular importance are notification requirements that apply to everyone at SLAC. Qualifications for investigators, including training requirements, have been defined. What incidents are tracked in CATS, and how, is described. How the lessons learned program works is described.
R023.2	22 September 2006	Chapter 2, "Work Authorization"	Revised (minor editorial). Updates links and modifies Section 5.2.1.1, "Job Hazard Analysis and Mitigation"
R023	23 September 2006	Chapter 19, "Personal Protective Equipment"	Revised. Reflects changes in standards and institutional learning that has occurred since the last revision. No substantial new requirements have been added. The training requirements are unchanged.
R023.1	9 October 2006	Chapter 3, "Medical"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 6, "Confined Space"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 8, "Electrical Safety"	Revised (minor editorial). Updates links
R023.2	9 October 2006	Chapter 9, "Radiological Safety"	Revised (minor editorial). Updates links
R023.2	9 October 2006	Chapter 10, "Laser Safety"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 11, "Excavation Safety"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 15, "Ladder Safety"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 20, "Lead Safety"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 27, "Asbestos"	Revised (minor editorial). Updates links

Number	Date	Chapters Affected	Change
R023.1	9 October 2006	Chapter 36, "Cryogenic and Oxygen Deficiency Hazard Safety"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 39, "Machine Safeguarding"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 42, "Subcontractor Construction Safety"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 45, "Fall Protection"	Revised (minor editorial). Updates links
R023.1	9 October 2006	Chapter 46, "Blood-borne Pathogens"	Revised (minor editorial). Updates links
R023	9 January 2007	Chapter 40, "Hazardous Materials"	New. Describes a comprehensive hazardous material management program that addresses the complete material lifecycle up to the point it becomes a waste; incorporates the requirements of various laws, regulations and DOE directives in a manner that supports the goals of the ISEMS; defines the expectations and requirements for purchasing, storing, and using chemicals and other hazardous materials and provides tools for achieving them. Highlights include the new chemical purchasing system (Haas), definition of a chemical storage asset custodian, and monthly documented inspections of storage assets. Incorporates the following: chapters 4, "Hazard Communication", 21, "Secondary Containment of Hazardous Material and Waste", and 35, "Chemical Hygiene Program", and bulletins 11, "Food Handling Near Hazardous Substances"; 27, "Mercury Handling Guidelines"; 35, "On-site Transportation of Hazardous Materials and Waste"; 40, "Policies and Procedures for Disposal of Sharp Objects"; 51, "Hazards of Organic Peroxides"; 58, "Inspection Responsibilities for Eyewash Stations and Safety Showers"; and 67, "Health Hazards of Crystalline Silica".
R023	9 January 2007	Chapter 4, "Hazard Communication"	Cancelled. Incorporated in Chapter 40, "Hazardous Materials"

Number	Date	Chapters Affected	Change
R023	9 January 2007	Chapter 21, "Secondary Containment of Hazardous Material and Waste"	Cancelled. Incorporated in Chapter 40, "Hazardous Materials"
R023	9 January 2007	Chapter 35, "Chemical Carcinogen Control"	Cancelled. Incorporated in Chapter 40, "Hazardous Materials"
R023	16 January 2007	Chapter 5, "Industrial Hygiene"	Revised (major substantive). This Chapter 5, "Industrial Hygiene", has been revised in its entirety. It has been amended to include more detailed information on how the industrial hygiene program is implemented at SLAC. Additions are - Definitions - Survey methods - Equipment maintenance - Hazard control ventilation - Survey reports - Recordkeeping

Number	Date	Chapters Affected	Change
R023.1	17 January 2007	Chapter 44, "Penetration Safety"	Revised (minor substantive). This Chapter 44 has been revised to - Incorporate changes to the penetration permit, namely requiring a penetration permit for any penetration within a radiologically controlled area (RCA), a radioactive material management area (RMMA), or part of accelerator shielding (for example, the Accelerator Housing Structure, End Station A Hall, Klystron Gallery Floor). Sections affected are - 5.1.1.1, "Class 1 Penetrations" - 5.1.4, "Structure and Equipment Specific" In addition, roles and responsibilities have been added for the penetration safety program manager: - 5.1.6.1, "Penetration Safety Program Manager" Penetration Safety: Penetration Permit (SLAC-I-730-0A23R-002) has been revised and incorporates instructions formerly given in Penetration Permit Requirements (SLAC-I-730-0A23S-001), which is revoked. The latest revision of the permit (R002) provides additional requirements concerning the need for a radiation safety work control form (RSWCF) under certain conditions.

Number	Date	Chapters Affected	Change
R023.1	19 January 2007	Chapter 24, "Training"	Revised (minor substantive). This Chapter 24 has been revised to clarify how training requirements apply to different types of personnel at SLAC and to elaborate on how instructors are selected and evaluated. The affected sections are - Section 5.1.4, "Satisfying Training Requirements for Individuals". Removed the term "users" from the sentence, "contracted parties and users will satisfy all training requirements before beginning work at SLAC" - Section 5.1.5, "Providing Training". Deleted the sentence "the ES&H training program is only required to provide contracted parties training in SLAC-specific hazards." - Section 5.1.8, "Roles and Responsibilities". Added references to various roles in the new trainer qualification process. In addition, four exhibits have been have been added: - Training: Training at SLAC - Training: Instructor Certification Procedure - Training: Instructor Evaluation Guidelines - Training: Instructor Selection, Qualification, and Authorization (ISQA) Form The first gives an overview of all training at SLAC. The last three describe how instructors are selected and evaluated. Finally, definitions were added to describe different kinds of courses, core, resource, and practical, and references and links were updated throughout.

Number	Date	Chapters Affected	Change
R023	29 January 2007	Chapter 16, "Spills"	Revised (major substantive). This Chapter 16, "Spills", has been developed to communicate the requirements for the prevention, response to, and reporting of spills at SLAC. Spills are the release of any material that results in an increased risk or potential risk to human health, the environment, and/or property. Spill prevention is realized through primary and secondary containment and proper work practices and housekeeping. Response, with the aim of minimizing adverse impacts to personnel, the environment, and the general public in the event of a spill, is based on proper planning and preparation followed by appropriate and timely action. Reporting consists of notifying internal and external parties and the DOE as appropriate. This chapter outlines requirements and roles and responsibilities for spill prevention, response, and reporting and includes procedures for initial spill response, containment, cleanup, and reporting. This document replaces the existing Chapter 16, "Spills", published in March 1997.

Number	Date	Chapters Affected	Change
R023	31 January 2007	Chapter 22, "Waste Minimization and Pollution Prevention"	Revised (major substantive). This Chapter 22, "Waste Minimization and Pollution Prevention", describes SLAC requirements for planning, reporting, and implementing waste minimization and pollution prevention measures. Highlights are - Better defined planning and reporting requirements - Better defined waste minimization and pollution prevention guidelines/procedures including performance of pollution prevention opportunity assessments - Clearer roles and responsibilities, especially for UTRs and subcontractors This document replaces the existing Chapter 22, "Waste Minimization and Pollution Prevention", published in April 1995.

Number	Date	Chapters Affected	Change
R023	5 February 2007	Chapter 43, "Industrial Wastewater"	Revised (major substantive). This Chapter 43, "Industrial Wastewater", outlines the program and responsibilities required to comply with the rules and regulations administered by the South Bayside System Authority (SBSA) and the West Bay Sanitary District (WBSD). These rules pertain only to wastewater discharged to the sanitary sewer. SLAC's relationship with the SBSA and the WBSD is formalized in discharge regulations and wastewater discharge limits. These limits are necessary to protect the sanitary sewer system and treatment plant as well as its operators, and are based on the ability of the sewage treatment plant to treat wastewater to safe levels before discharge to the San Francisco Bay. Highlights are - Descriptions of the various permits and their conditions, including reporting and sampling - Exhibits describing permitted, conditional, and prohibited discharges, guidelines on determination, and a set of best management practices This document replaces the existing Chapter 43, "Industrial Wastewater Program (Sanitary Sewer)", published in May 2001.

Number	Date	Chapters Affected	Change
R023	8 February 2007	Chapter 17, "Hazardous Waste"	Revised (major substantive). This Chapter 17, "Hazardous Waste", has been revised to - Better define hazardous waste management guidelines/procedures - Clarify on-site hazardous waste transportation guidelines - Better define various hazardous waste types generated at SLAC - Further clarify roles and responsibilities including UTRs and subcontractors This document replaces the existing Chapter 17, "Hazardous Waste", published in November 1998.
R023	15 February 2007	Chapter 18, "Hearing Conservation"	Revised (major substantive). This Chapter 18, "Hearing Conservation", has been revised in its entirety. It has been amended to include more detailed information on the program's requirements and how they are implemented at SLAC. Additions are - Definitions - Survey methods - Survey reports - Equipment maintenance - Audiometric tests - Recordkeeping In addition, "high noise area" has been renamed "designated noise area". This document replaces the existing Chapter 18, "Hearing Conservation", published in October 1994.