



U.S. Department of Energy

Office of Science
Stanford Site Office
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May 23, 2008

Dr. Persis Drell, Director
Stanford Linear Accelerator Center
2575 Sand Hill Road, MS 75
Menlo Park, CA 94025

SUBJECT: FY08 Mid-Year Performance Assessment

Dear Dr. Drell:

The purpose of this letter is to provide you formal Mid-Year Performance Assessment feedback. Our feedback is for Performance Measures Goals 4 through 8.

This letter completes the Site Office evaluation of SLAC's Mid-Year Self Assessment.

Sincerely,

Paul Golan
Site Manager

cc w/enclosures:
Stan S. Cohelan, Jr., SLAC
Walter Leclerc, SLAC
Ernest Maune, SSO
Tyndal L. Lindler, SSO
Katherine A. Woo, SSO

4.0 Laboratory Leadership and Stewardship

In this performance period, the Laboratory has *significantly upgraded* the leadership capacity and capability and is delivering leadership and stewardship of the laboratory that *exceeds* expectations. Of particular note and highlight are:

- SLAC leadership took bold actions to essentially begin the process of re-inventing the laboratory through the development and implementation the *One Lab* operating model, an innovative and forward looking process to integrate and connect previously independent and semi-autonomous sectors of the laboratory. Through the *One Lab* operating model, SLAC leadership has been able to:
 - Substantially reduce the accident and injury rate. Since the middle of October, there have been five DART occurrences, nearly a 50% reduction when compared to FY06 and FY07 full year rates.
 - Quickly repositioned the laboratory after enactment of the FY08 budget which reduced anticipated funding in the HEP Program by 20%. Laboratory leadership responded very quickly, modifying the operating energy of the B-factory to get the maximum scientific output, while restructuring the workforce in a very professional and humane manner to put the laboratory in the best possible position for the Site's future missions.
 - Served as champions and sponsors to encourage the High-Energy Physics community to develop a cogent strategy and plan in reshaping and remaking the HEP program in light of projected fiscal funding realities.
 - Developed the SLAC Improvement Initiative (SII) which takes the findings from the McCallum-Turner Review and strategically integrates process improvements across the entire Laboratory.
- Stanford University has taken aggressive action to augment the leadership team at SLAC. This includes:
 - Selected a superbly qualified, capable, and visionary Laboratory Director, who in a very brief period of time has taken bold actions to restructure and indeed, reinvent the Laboratory.
 - Established the position of Vice President for SLAC, reporting directly to the University President. The University recruited and brought onboard a former director of two national laboratories who is eminently qualified and capable for this position.
 - After three years of being vacant, filled the Director for Environmental Health and Safety with a highly qualified and experienced EHS/line management professional.
 - Stanford University, up through the Office of the President; has maintained a strong knowledge, understanding, and involvement with the Laboratory.
 - Substantially modified its oversight of SLAC through the formation of the Board of Overseers, where several subcommittees in key programmatic and management areas report into the Board. This is a notable improvement from the concerns raised in the FY07 PEMP Final Report.
- Laboratory leadership conducted a successful safety intervention at the LCLS project in November 2007 when management became uncomfortable with developing safety trends. This intervention was not sparked by an incident or accident, but rather a very proactive and positive initiative to bring an *accident-free work place* to the LCLS project. After a

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three-day safety stand down, SLAC working with its contractors and SSO brought significantly greater management attention to safety awareness and management by walking around. SSO has seen a noticeable improvement not only in the reduction in the number of safety incidents, but in the attitude it is seeing in workers towards safety at the job site. SLAC's subcontractor has instituted a "Safety Stars" program where workers are recognized and rewarded for looking after their co-worker.

- Laboratory leadership took a very proactive role in the development of the investigation, root cause analysis, and corrective action plan following the September 13th, 2007 pipe explosion in Sector 30 of the linac. This is significant as the laboratory was able to develop the report and corrective action plan largely with in house staff.
- Communication between SLAC and SSO and SLAC and Office of Science improved substantially in the performance period; communication is real-time and meaningful, less adversarial, more open and honest, and is focused on solutions. This has started to flow down the organization where lower level managers and staff are more engaged with SSO staff.
- While these are steps in the right direction, the Site Office is still concerned with the following:
 - SLAC does not have the required depth or breadth of experienced project managers on major conventional projects.
 - Stanford University needs to provide substantially more support and oversight in the area of ES&H and Independent Audit.
 - There are still a number of key leadership positions that are vacant and/or are filled with "acting".

Areas to focus on/keys to success during second half FY08:

1. Deliver LCLS and LUSI as committed.
2. Complete mission transition.
3. Aggressively implement the SLAC Improvement Initiative against plan.
4. Continue to aggressively focus on improving safety performance and modeling/positive reinforcement of safe and accountable behaviors.
5. Make fully operational the SLAC Board of Overseers.
6. Drive down the positive working relationship among SLAC, SSO and SC into the organization.
7. Fill key leadership and project management vacancies with the highest qualified candidates; seek assistance from SU in project management until SLAC can self-perform.
8. Obtain additional support from Stanford University in the areas of Independent Audit and ES&H.

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5.0 Integrated Safety, Health, and Environmental Protection

In this performance period, the Laboratory has *improved* safety performance at the Site, and while the Laboratory is improving, SSO is still concerned with the consistency of the implementation of requirements, work planning and control, and the variability of ES&H oversight of the laboratory across the site. Of particular note and highlight are:

- SLAC has shown no reduction in the TRC and DART.
- SLAC has done an admirable job of recognizing good safety performance, otherwise known as *modeling good safety behaviors*; however, SSO is still finding numerous examples of unsafe practices at the laboratory and subcontractor level (e.g., drilling into asbestos floor tile without recognizing the hazard, driving heavy equipment and forklifts improperly, and not recognizing fall protection hazards.)
- LCLS has experienced a series of worker injuries at the construction site. The Laboratory had two significant safety incidents at LCLS; a worker was struck by a backhoe bucket during excavation work in the Far Experimental Hall, and another worker's hand was severely injured during the lifting of a chemical tote from its secondary containment.
- The Laboratory is still not meeting expectations in reporting incident and events. Most notably, the late reporting of damage to a large number of GSA vehicles and the reporting deficiencies for the Sector 16 modulator fire.
- Backshift and weekend work did not get the appropriate level of oversight needed to ensure safe operations.
- The effectiveness of the implementation of the SLAC Lessons Learned Program varies significantly across the laboratory.
- The Site continues to struggle with housekeeping, and materials management. Some organizations are performing well in this area (SSRL, Power Conversion Facility, etc); some organizations have shown improvement (most notably LCLS); while other organizations across the site do not show the pride and ownership that one would expect of a National Laboratory.
- With the recent designation of a University Technical Representative (UTR) Program Manager, SLAC needs to continue the overall implementation of the UTR Program; examples include lack of a designated UTR Program Manager, unclear roles, responsibilities, authorities, and accountabilities.
- The engagement and safety consciousness demonstrated by the UTR Team at LCLS is excellent and deserves recognition.
- SSO remains concerned with the lack of a consistent "questioning attitude" to work and projects; SLAC staff does not yet feel completely empowered or comfortable with questioning or stopping work.

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- The Laboratory has been conducting joint SSO/SLAC Monthly Safety Meetings, and while participation has been generally good, attendance at the meeting and the safety walkdown following has been hit-and miss.
- The Laboratory's "Plan it right or don't do it" campaign has been generally successful, with momentum appearing to build.
- The overall performance of the Laboratory's pollution prevention and waste management programs continue to be excellent.
- SLAC is progressing on legacy chemical removal but needs to establish firm goals and targets and assess progress against the targets.
- SLAC has developed Environmental Management Programs (EMPs) with measurable targets and needs to continue to monitor progress against the targets.
- Proactive planning and work at the LCLS project in advance of major winter storms prevented mudslides and other major delays that many other local construction projects outside of SLAC experienced.
- Work planning and control is still inconsistently implemented across the Laboratory; the quality of documentation and implementation of Job Safety Analysis (JSA) and Job Hazard Analysis and Mitigation (JHAM) remains a concern. SLAC has not provided SSO with tangible evidence of improvement in this area since the 2005 ISM Review and the 2006 OIO Review. SLAC should implement an interim work planning control process prior to the final milestones in the OIO CAP.
- SLAC needs to ensure that evaluation of potential environmental impacts and mitigation is more effectively integrated into the work planning and hazards analysis process (e.g.; JHAMs) for routine operations.
- The Laboratory needs to ensure that line management implements a more robust program for routine assessment of workspaces as required by Chapter 33 of the ES&H Manual. SLAC has not described their efforts to ensure that line managers/supervisors are walking the workspaces, routinely communicating with workers about safety and work activities, evaluating work processes and being held accountable for ensuring safety in their work areas.
- The Laboratory continues to meet the target dates for Corrective Actions for CAP deliverables. The Laboratory has shown an overall improvement in the development of effective and meaningful corrective actions as evidenced by the LCLS and pipe explosion CAPS. The Laboratory needs to place a higher priority on completion of the Work Planning and Control corrective actions.
- The Laboratory has made some progress in addressing concerns/shortcomings in the Hot Work Program. Of note, is the requirement to have the hot work area inspected by an authorized inspector after setup and before any hot work begins and signed by the inspector. Continuation of the improvements in this program in accordance with NFPA Part 51 is needed to ensure effective and consistent implementation of the program.

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- Although SLAC has submitted quarterly reports, SLAC has not effectively described what steps SLAC has taken to address the negative trends. The current system of tracking the completion of corrective actions in CATS does not provide SSO with an adequate assessment of the effectiveness of the corrective actions to address findings from previous ISM reviews.
- The laboratory needs to provide an effective, comprehensive, and documented fire protection assessment and self-appraisal program in accordance with DOE Order 420.1B.

Areas to focus on/keys to success during second half FY08:

1. Continue focus on improving safe work and safe behaviors.
2. Ensure senior management ownership of work planning & work control, process improvements.
3. Implement substantial improvement in the reporting of incidents/abnormal conditions.
4. Implement substantial improvement in the oversight of weekend, backshift, and subcontractor work.
5. Implement substantial improvement in the investigation and analysis of causal factors for accidents and injuries.
6. Continue self-assessment of the effectiveness of implementation of ISM and EMS in preparation for the upcoming DOE ISM Effectiveness Review scheduled in July 2008.

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6.0 Effective and Responsive Business Systems

In this performance period, the Laboratory has *maintained* its performance in the areas of business systems at the Site. SSO is concerned that contract management, University oversight, and the vulnerability of the financial systems *do not yet meet expectations*. Of particular note and highlight are:

Financial Management System(s)

- SLAC has been timely regarding input to DOE financial reporting requirements.
- SLAC is maintaining its pursuit of continual improvement in financial/business management systems which now is being driven by the SLAC Improvement Initiative (SII) and includes outside consultants to recommend business system improvements.

Acquisition Management System(s)

- SLAC has moved beyond the McCallum-Turner (M-T) review to a new SLAC Improvement Initiative (SII) which is employing a third-party consulting firm to develop recommendations for improvements in the SLAC Business Financial System. Improvements recommended for SLAC's financial system will require considerable expenditure beyond previous levels. SLAC is working on incorporating the improvements suggested by M-T.
- SLAC was slow to respond and correct deficiencies from the 2007 PERT review. SLAC had not been able to complete corrective actions to raise purchasing threshold above \$100K until February 29, 2008. SLAC's purchasing authority was raised to \$500K based on their revised Business Service Procedures and improved procurement packages.
- After the first quarter review, SLAC procurement updated their Corrective Action Plan for PERT and submitted it to DOE Contracting. It is noteworthy, that after thoroughly reviewing the Corrective actions, some actions have been revised due to acknowledgment that the initial action did not sufficiently address the weakness. SLAC is continuing to complete and implement their corrective actions plan.
- SLAC's 13 out of 14 purchasing personnel completed four of four required training courses for the Procurement Personnel and they are also trained on internal purchasing procedures and policies.
- SLAC did not assess 56% (by Activity Value) of the BSC Performance Measures. The areas that have not been assessed are the following:
 - Customer Satisfaction Rating
 - Effective Utilization of Alternative Procurement Approaches
 - Employee Satisfaction
 - Employee Alignment
 - Cost to Spend Ratio
- Procurement is the first department within the Laboratory in which the SLAC Improvement Initiative has commenced.

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- Areas requiring further improvement: knowledge of Service Contract Act, training in the development of Statement of Work, improve quality control of documents submitted for review, funding of procurements in a timely manner, effective coordination between end users and procurement regarding safety submittals/approvals/concurrence.
- SLAC needs to follow-up on the corrective actions implemented to evaluate progress and measure the success of those actions.

Property Management System(s)

- The GSA Fleet is still of concern to SSO. SLAC continues to not meet the vehicle utilization goal of 94%. The 1H08 vehicle utilization rate was 69.3%.
- SLAC has not met the 2% year over year reduction in vehicle petroleum consumption. However, there has been noticeable action to improve vehicle utilization by implementing a plan to reduce the fleet by 100 vehicles before the end of the fiscal year.
- Actions taken to curtail GSA vehicle accidents and under-reporting have begun to show positive results.
- SLAC is close to resolving the sport utility vehicle off road mileage under utilization by eliminating the SUV fleet. SLAC's goal is to eliminate the SUV fleet before the end of the fiscal year.
- SLAC has not completed the property reviews and inventories for FY08, so it cannot be determined if SLAC is meeting all the targets in the Property Balanced Score Card until these reviews have been completed sometime in the 2H08.
- SLAC has successfully ensured that personal property acquired via purchase card is recorded in the property and financial database within 72 hours of receipt of property.
- SLAC has also attended the Property Management & Nonproliferation training as suggested by the FY07 PEER review.

Human Resources Management System and Diversity Program

- SLAC has hired a Laboratory Director, ES&H Director and a Deputy Purchasing Officer. SLAC is interviewing for the Communications Director position and appear to have some excellent candidates. However, SLAC has not hired a Chief Operating Officer, the HR Department Manager is retiring by the end of the fiscal year and a number of key critical/key vacancies in the area of project management remain open.
- SLAC HR Department did a professional job in planning, managing, and conducting the very difficult job of work force reduction driven by the FY08 appropriations.
- SLAC has completed the LCLS work force structuring plan.
- Process improvements to streamline HR work have not been implemented; specifically, self service employee personnel file updates and manager HR skill training.

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- Diversity Recruitment objectives are on track.

Management Systems for Internal Audit and Oversight

- There have been no material findings in any of the SLAC reviews/audits.
- Three observations were made by Stanford Internal Audit Department (SIAD) in the Allowable Cost Audit for SLAC for FY07. The Management (Corrective) Action Plan dates for implementation occur largely after this Mid-Year Feedback report, but the SIAD/SSO follow-up will continue through to the end of the fiscal year evaluation.
- The procurement audit result, which includes Professional and Consulting Fees, has not yet been released. Any potential findings from that audit will be incorporated into the end of the fiscal year evaluation.
- SLAC is responding to new/revised Cost Accounting Standards (CAS) Disclosure Statement clarification and reporting format change requests from DCAA.
- Stanford University independent audit remains reactive and not proactively engaged at the Laboratory.

Areas to focus on/keys to success during second half FY08:

1. Additional engagement and involvement from Stanford University in the internal audit program.
2. Complete the CAS Disclosure Statement audit.
3. Conduct all procurement operations professionally and IAW procedures.
4. Substantially reduce the number of licensed GSA vehicles on site.
5. Hire critical staff positions ASAP.

7.0 Operating, Maintaining, and Renewing Facilities and Infrastructure

In this performance period, the Laboratory has *maintained* its performance in the areas of facilities and infrastructure management at the Site. SSO is still concerned with project management and facilities/infrastructure maintenance and *does not yet meet expectations*. Of particular note and highlight are:

- The site-wide database does not appear to have been developed so that it can be a true site-wide database as it does not contain all sample information, nor does it provide the ability for outside entities to easily obtain information.
- The value and future use of the existing database as a tool will need to be evaluated over the next six months.
- The SLAC Environmental Restoration baseline and project controls documents consisted of 13 separate documents and were submitted in accordance with the DOE required schedule.
- The baseline and project controls documents could have been consolidated into fewer submittals with less detail allowing for easier preparation and expected maintenance. Comment resolution and updating of the applicable documents to approvable levels has not yet occurred.
- DOE has provided support personnel to help with the Project Control System Description and Project Management Plan revisions, resource loaded schedule changes and the earned value reporting and monthly resource loaded schedule statusing.
- Execution of SORI work has been conducted in a safe manner. The Laboratory continues to meet the target dates for reports and deliverables.
- The site is having difficulty managing and statusing projects (i.e.: GPP) against an approved baseline schedule.
- Housekeeping in many areas of the site remains poor.
- SLAC management has provided the necessary leadership and has taken ownership in developing a credible project proposal for the SC SLI initiative. This was not the case in FY07.
- SLAC achieved a Maintenance Management Index (MII) of 1.933%, based on the approved adjusted Replacement Plant Value (RPV) for SLAC.
- Significant progress was noted in implementation of the Computerized Maintenance Management System (CMMS).
- Efforts to identify potential energy savings at SLAC by the selected Energy Saving Company (ESCO) was initiated last November and is well underway. Proposed ECM's were reviewed on February 29, 2008 with the Initial Proposal (IP) reviewed on March 25, 2008. Final IP is due end of May 2008.

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- SLAC must develop and implement a plan to shutdown the B-Factory to a safe and stable configuration that minimizes utility load.

Areas to focus on/keys to success during second half FY08:

1. Develop a solid SLI Project plan.
2. Manage all projects, no matter how small within approved baselines.
3. Improve house keeping across the site; in some areas, a substantial improvement is required.

8.0 Integrated Safeguards and Security Management

In this performance period, the Laboratory's performance has *not been maintained* in the areas of integrated safeguards and security management at the Site. SSO remains concerned with emergency management and implementation of effective cyber security programs. Of particular note and highlight are:

- Emergency preparedness and emergency management programs have not made progress from weaknesses identified in FY07. The laboratory needs to provide an effective, comprehensive, and documented Emergency Management program in accordance with DOE O 151.1C.
- There are too many stand alone computer systems across the site, increasing the cyber security vulnerability.
- The proposed IT re-architecting needs to be defined, detailed, and completed. SLAC needs to get SSO Site Manager support in order to be successful in obtaining additional financial resources.
- SSO remains concerned with the lack of timely reporting incidents.
- Unencrypted remote access to PII was allowed until directed by SSO to cut off. SSO is still concerned as to how PII is protected. Per SC Program Cyber Security Plan, PII needs to be protected within a Moderate level enclave. SLAC has not provided an update to SSO since their reporting of the last incident on February 1, 2007 as to how this will be accomplished.
- Security posture at SLAC does not appear to be based on identifying what is trying to be protected, what are the credible threats, and then establishing a security regime.
- Inadequate internal assessment of SLAC's Emergency Management and Response plans and programs. External exercises and reviews conducted by DOE indicate that there is much to be improved in this area.

Areas to focus on/keys to success during second half FY08:

1. Develop a structured approach to IT re-engineering.
2. Significantly improve reporting of incidents.

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Summary:

1. Deliver LCLS and LUSI as committed.
2. Complete mission transition.
3. Aggressively implement the SLAC Improvement Initiative against plan.
4. Continue to aggressively focus on improving safety performance and modeling/positive reinforcement of safe and accountable behaviors.
5. Make the SLAC Board of Overseers fully operational.
6. Drive down the positive working relationship among SLAC, SSO and SC into the organization.
7. Fill key leadership and project management vacancies with the highest qualified candidates; seek assistance from SU in project management until SLAC can self-perform.
8. Obtain additional support from SU in the areas of Independent Audit and ES&H.
9. Continued focus on improving safe work and safe behaviors.
10. Aggressive sponsorship of improving work planning & work control by senior management.
11. Substantially improve reporting of incidents/abnormal conditions.
12. Substantially improve oversight of weekend, backshift, and subcontractor work.
13. Additional engagement and involvement from SU in the internal audit program.
14. Complete the CAS disclosure Statement audit.
15. Conduct all procurement operations professionally and IAW procedures.
16. Substantially reduce the number of licensed GSA vehicles on site.
17. Develop a solid SLI Project plan.
18. Manage all projects, no matter how small, to approved baselines.
19. Improve house keeping across the site; in some areas, a substantial improvement is required.
20. Develop a structured approach to IT re-engineering.
21. Significantly improve reporting of incidents.