U.S. DEPARTMENT OF ENERGY | Office of Science

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Date: April 29, 2016

To: Chi Chang Kao, SLAC Laboratory Director
Bill Madia, Vice President for SLAC, Stanford University

From: Paul Golan, SLAC Site Office Manager, US Department of Energy

Subject: FY16 PEMP MID-YEAR FEEDBACK

The purpose of this memorandum is to provide SLAC and Stanford University FY16 Mid-Year feedback on the Performance Evaluation and Measurement Plan (PEMP). The attachment provides that specific feedback that was debriefed to the SLAC team on April 22nd.

Overall, SLAC and Stanford are continuing to provide high-quality leadership to the management and operation of SLAC National Accelerator Laboratory. There is a highly-functional and accountable management team that works well together, gets in front of issues, and drives excellence on the science, operations, and project management fronts.

Areas that I would commend the Laboratory and University leadership team's attention are:

1. Operations. Facilities and Operations management needs to improve the discipline of its activities and drive consistent standards across the organization. SSO views this as the part of the organization furthest from the SLAC operational norm (Goal 7.1).
2. Project Management. SLAC has over $1-billion in project backlog; this will test the entire suite of SLAC processes and people. While SLAC's performance in delivering projects has been exceptional, it is critical that the Laboratory and University keep a very close eye on this (Goal 2 and 7.2).
3. Cyber Security. While SLAC is developing and implementing a comprehensive program to address this threat vector, key milestones between now and the end of FY16 include: (a) implementation of multi-factor authentication (MFA), (b) network segmentation, and (c) successfully completing the FISMA review (Goal 8.2).
4. Leadership Transition. Both DOE and Stanford University will be undergoing leadership transitions in CY16/17. Under John Hennessey and Bill Maida's leadership, we have evolved the DOE/Laboratory/University partnership into the model for the Department of Energy. While we anticipate this relationship to continue, all parties must actively manage the coming transition (Goal 4.3).

Sustainability of high-performing organizations is always difficult and requires continuing fresh energy, passion and perspective; this is our collective challenge. We need to continue to drive, continue to innovate and continue to be both self-critical while being confident as we take this enterprise forward.

SLAC FY2016 PEMP Mid-Year SSO Assessment

Goal 4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

4.1 Leadership and Stewardship of the Laboratory

4.2 Management and Operation of the Laboratory

Notable Outcome

SSO: Develop and implement a risk-based campus infrastructure strategy that fully supports the ongoing and future mission requirements including a plan to mitigate the funding risk of the k-subs that incorporates a successful cost, scope, and schedule for FY2016. (Objective 4.2)

- SLAC has successfully developed a plan to deliver scope, cost and schedule for the K-subs project. The funding risk was wisely mitigated with a "plan B" scenario if it was needed.

4.3 Contractor Value Added

- SLAC has formalized the institutional risk management process and is continuing to make significant progress toward aligning the site risk evaluation process with key elements of the Contractor Assurance System (CAS), including issues management.
- SLAC is continuing to make significant progress in implementing improvements to incident investigation. Assessment processes and tools that are necessary for the timely identification of issues and negative performance trends are also being implemented, and corrective actions completion and overall effectiveness is being verified.

Goal 5.0 Safety, Health, and Environmental Protection

5.1 Health and Safety System

Notable Outcome
SSO: Evaluate/update the current Cryo/Pressure safety program(s) to adequately address the current SLAC and future LCLS-II mission needs. (Objective 5.1)

- SLAC has recently performed Cryogen and Pressure Safety Program assessments and identified gaps and deficiencies from recent pressure safety incidents. Program gaps and findings from incidents have been addressed in the respective ES&H manual chapters.
- The Cryogen and Pressure Safety Program managers perform field verifications to ensure ESH manual changes and corrective actions from assessments are being implemented, and communicate issues and changes regularly at the ESH Coordinator's meeting.
- SLAC and SSO are preparing to perform a joint Pressure Safety Assessment and a Cryogen System Assessment in 2017.
- LCLS has hired outside cryogen expertise and will continue to add staff in this area as the project moves forward.
- Industrial Ergonomics continues to be a concern. The Lab is transitioning into a more aggressive and proactive approach to reduce the number of ergonomic injuries.

5.2 Environmental Management System

Notable Outcome
SSO: Demonstrate effectiveness of line management implementation of hazardous waste management requirements at the waste generating locations around the site. (Objective 5.2)

- SLAC received very favorable feedback from the annual hazardous waste/materials inspection conducted by the San Mateo County Certified Unified Program Agency (CUPA), in November 2015.
- The CUPA inspector highlighted significant improvements in general housekeeping and regulatory compliance, and knowledge of hazardous waste management requirements by SLAC personnel since the last inspection in 2014.
- SLAC work planning activities for the LINAC Housing and Klystron Gallery Sector 0-10 disposition project continue to be well-coordinated and integrated with equipment removal project activities.
- SLAC Zero Waste Program has been expanded to 13 buildings with approximately 74% of employees working in buildings with zero waste programs. The program supports SLAC's sustainability efforts to achieve and significantly exceed DOE's municipal waste reduction goal of 50%.

Goal 6.0 Business System

6.1 Financial Management System

Notable Outcome

SSO: Assure effective implementation of the ERP systems, internal controls and regulatory compliance to advance the efficiency and effectiveness of SLAC business systems. (Objective 6.1)

- SSO and SLAC reached agreement on the SU space utilization process and methodology for FYs 15-17.
- SLAC has been very responsive to the OIG construction audit.

6.2 Acquisition Management and Property Management System

Notable Outcome

SSO: Complete the implementation of the SLAC Procurement Strategic Sourcing Module for bidding and external collaboration. (Objective 6.2)

- SLAC is making progress on implementing the Procurement Strategic Sourcing Module for bidding and external collaboration, and plan to go into production in 2H16.
- SLAC's pre-PERT review resulted in no significant findings.
- SLAC's firm fixed price construction subcontract terms and conditions were revised and approved by SSO.
- SLAC has been working on three large construction subcontracts (the Cryoplant Building Construction, the PSLB Outfitting, and the LINAC Equipment Removal and Radioactive Waste Disposal, sectors 0-10).
- SLAC adjusted the organization structure of the LCLS II procurement cell to address communication shortfalls, quality control issues and inefficiencies.

6.3 Human Resources Management System and Diversity Program

- SSO is waiting response from SLAC to the proposed revised clause H.32 Employee Compensation: Pay and Benefits.
- SLAC is instituting the new "SLAC Performance Guidance System".
- SLAC is being recognized across the DOE Contractor Human Resources complex for its new Performance Guidance System.
- The DOE OCIO/HQ will be using some of the SLAC talent planning work and leveraging it to do Enterprise Cyber Workforce Assessment across all of DOE.

6.4 Contractor Assurance System

- SLAC has formalized the institutional risk management process and is continuing to make significant progress toward aligning the site risk evaluation process with key elements of the Contractor Assurance System (CAS), including issues management.
- SLAC is in the process of formalizing the SLAC Enterprise Assessment Program for improving systems and processes that are necessary for the timely identification of issues and negative performance trends. Business and Research Plans have been developed by each SLAC Directorate to improve the execution of PEMP goals and notable outcomes.

6.5 Technology Transfer and Commercialization of Intellectual Assets

Notable Outcome

SC: In support of DOE's requirement to submit all peer-reviewed accepted manuscripts to DOE through the OSTI E-Link system, we are asking each Laboratory to (1) analyze the current status of submissions with respect to comprehensiveness, accuracy, and appropriate acknowledgement of DOE support; (2) identify any barriers to compliance; and (3) submit, with the next annual lab plan, a proposal and timeline for achieving full compliance. (Objective 6.5)

- SLAC is making monthly progress, with no barriers to compliance and submission of peer-reviewed accepted manuscripts for journal articles, from DOE-funded research in the DOE Public Access Plan, and the OSTI E-Link system.
- SLAC brought awareness to include Scientific Technical Information in their new hire orientation.
- SLAC will be hosting the Scientific Technical Information Program & DOE Data ID Working Group meeting on April 12 – 15, 2016.

Goal 7.0 Acquire, Construct, Operate, Maintain and Renew the Facility and

7.1 Manage Facilities and Infrastructure

Notable Outcome

SSO: Improve the maintenance and operation of mission essential critical systems.

- SLAC is maintaining laboratory operations while planning for multiple project support activities throughout the Linac.

7.2 Plan for and Acquire Facilities and Infrastructure Required to Support the Continuation and Growth of Laboratory Missions and Programs

Notable Outcomes

SSO: Complete scope, cost, and scheduling for the deactivation/decontamination and demolition for the Sectors 0-10 to ensure LCLS II mission needs are met. (Objective 7.2)

- SLAC is on track to successfully deliver the sector 0-10 equipment removal project; one of the largest operational planning challenges for the LCLS-II upgrade. This entails multiple project coordination efforts for critical accelerator systems shutdown, equipment removal, characterization/disposition of radioactive components and re-location activities within the laboratory.

SSO: Work to reach agreement with the California State Historic Preservation Office regarding completing the Section 110 process at SLAC. (Objective 7.2)

- SLAC is in consultation with the SHPO and has developed and delivered a survey methodology as part of completing the Section 110.

SC: Successfully deliver crosscut GPP projects on schedule. (Objective 7.2)

- SLAC has successfully developed a plan to deliver the GPP K-subs project scope, cost and schedule. The funding risk was mitigated with a "plan B" scenario if it was needed. This project is currently on track to award the long lead equipment. The award of the final design for installation is anticipated in March 2016.
- SLAC is in the midst of planning for the long lead equipment, delivery, construction design and installation of the k-subs.
- SLAC is in the planning stages for the design and renovation of the Building 950, the Near Experimental Hall (NEH). This project will relocate mechanical, electrical and piping (MEP) systems that are currently operating inside of the building, and will add new MEP to the upper rooftop of the NEH to make way for future lab space inside of the building.

Goal 8.0 Safeguards and Security Management (ISSM) and Emergency Management Systems

8.1 Emergency Management System

- SLAC continues to make improvements in the pre-incident planning process.
- SLAC continues to upgrade and modernize their Emergency Management system to be more risk based, flexible and cost effective.

8.2 Cyber Security System

- SLAC continues to make significant improvements to the cyber security program.
- SLAC is leading the complex in the Multi-Factor Authentication exclusion process.

8.3 Physical Security Programs for the Protection of Special Nuclear Materials, Sensitive Information and Property.

Notable Outcome

SSO: Complete physical security upgrades are in accordance with the cost, scope, and schedule. (Objective 8.3)

- SLAC is on budget and on schedule to complete the physical security upgrades as planned.
- SLAC has played an active role in re-write of draft DOE Order 151.1D, Comprehensive Emergency Management System.