

2003 OSHA Voluntary Protection Program (VPP)/Integrated Safety Management System (ISMS) Self-Assessment Report

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I. Background/Summary

A SLAC self-assessment was conducted during the week of August 18, 2003. The purpose of the assessment was to identify opportunities for laboratory improvement by using the OSHA Voluntary Protection Program (VPP) and DOE Integrated Safety Management System (ISMS) as standards of comparison. The laboratory is considering seeking VPP certification, which may be useful if SLAC is regulated directly by the Occupational Safety and Health Administration (OSHA). Regulation by OSHA may be the result of a Congressional External Regulation initiative. The laboratory is currently required to implement the ISMS program under the existing DOE contract with Stanford University. This assessment partially fulfills the laboratory's responsibility to conduct an annual self-assessment under the DOE contract.

The VPP/ISMS Assessment was conducted during the week of August 18, 2003 by five teams selected under the direction of the Safety and Environmental Discussions Assistance Committee (SEDAC). Teams were organized along SLAC divisional lines, as shown in Appendix D. Each team conducted about six group meetings and each meeting had five to seven employees from the team's home organization. Each meeting included group survey, discussion, and fact-finding follow-up activities. In addition, each team performed a walk-through inspection of selected areas within the team's organization. The Auditor Instruction Pamphlet (Appendix E) provides details about the overall process.

SEDAC used the information received from surveys, discussions, follow-up activities, team reports, and the experience of the Committee to develop the recommendations contained in Section II of this report. Section II lists the SEDAC recommended Opportunities for Improvement, and provides a brief discussion of the reasoning behind the recommendations. Section III provides a discussion regarding the walk-through program. Section IV discusses the assessment methodology, and an overview of the feedback received on the process. Appendices A, B, and C contain supporting quantitative results received directly from participants in the survey process.

Overall, SEDAC believes that the laboratory has made excellent progress in attaining its safety and health objectives. Employee perceptions and Committee fact-finding indicate that strong support exists at the highest level of the laboratory for safety and health objectives. The depth and breadth of the laboratory's safety and health program is mature, and significant investments in time and money have been made to advance the state of safety at all levels of the organization.

As with most large and complex organizations, improvement opportunities exist in deployment of safety attitudes and implementation throughout the organization. While safety programs cover most areas of concern, gaps in the programs could be filled to provide a more robust program. Misunderstandings may have developed over time that could be rectified to take the laboratory's safety excellence to the next level. Section II of this report suggests eleven VPP/ISMS Opportunities for Improvement. In some cases, the recommendations may be useful to correct deficiencies. In other cases, the recommendations may serve to simply correct misunderstandings that have developed. In all cases, SEDAC determined that recommendations useful for attaining VPP certification would also be useful toward attaining ISMS objectives.

The Committee thanks the team members and invited participants who took part in this assessment.

II. VPP/ISMS Opportunities for Improvement

A. List of VPP/ISMS Opportunities for Improvement

As a result of the assessment, SEDAC recommends the following VPP/ISMS Opportunities for Improvement:

- 1) Align communication of the ES&H expectations and values for workers, supervisors, and Directorate by developing three simple expectations/values lists. Each list should be in bullet format and be no longer than one to two pages. With ES&H Division staff support, the Directorate list should be derived from the consensus process at the Directorate level. Again, with ES&H Division support, the supervisors' and employees' lists should be developed in keeping with the lab-wide direction, and approved by the Directorate. Expectations/values lists should be designed to address important issues (or issues perceived as important) presented in this report, including but not limited to encouraging reporting of safety issues, following approved safety rules, encouraging mandatory safety training, and the SLAC role in overseeing subcontractors.
- 2) Incorporate environment, safety, and health expectations and values lists for workers and supervisors into respective training programs, and post the lists on the ES&H web site.
- 3) Establish the expectation that supervisors and employees have regular group meetings where safety is on the agenda. Supervisors assemble these meetings as frequently as necessary, relative to the amount of safety issues in a working group. Each meeting will include any issues relating to environment, safety, and health expectations and values, as applicable to the working group.
- 4) Create an ES&H web page that logically lists and links to all environment, safety, and health policies, procedures, Bulletins, briefs, and so on, logically sorted by category and topic. To ensure that the web page is user-friendly, form a users committee to participate in the "look and feel" of the design. Include capability to review documents on-line.
- 5) Continue at least one annual Directorate-level ES&H meeting involving all staff. This will continue the tradition that began in 2002 with the August divisional safety standdown and the May 2003 standdown to address the Type B incident that occurred at SSRL.
- 6) Develop site-wide awareness communications for: a) ES&H hazard tracking systems, Quality Assurance Tracking System (QATS), and Self-Assessment Tracking System. (SATS) and b) requirements for line management and Building Manager inspections. Longer term, develop a consolidated more user-friendly database for all types of findings (from regulators, in house audits, and self-assessment data).
- 7) Establish that students, job shop personnel, and other visiting workers, are included in ES&H communications and have appropriate training. Confirm to supervisors of such workers that they are required to ensure the communication to and training of these workers.

- 8) Review the OSHA compliance inspection requirements for research equipment and correct any deficiencies.
- 9) Human Resources and the ES&HCC should collaborate to develop a disciplinary system for those who repeatedly disregard safety policies and procedures.
- 10) Document that supervisors include in the annual performance evaluation process a direct discussion with each employee about his/her Employee Training Assessment (ETA).
- 11) Establish and advertise the availability of a resource Subject Matter Expert (SME) who serves as a consultant on complex chemical reaction safety.

B. VPP Opportunities for Improvement Discussion

General Conclusion/Detailed Conclusions

The VPP Assessment has evaluated SLAC's safety and health programs to determine whether the elements are in place to qualify for OSHA's VPP. The General Conclusion: **SLAC should be ready for VPP certification with modest preparation that includes an educational program about VPP.**

Detailed conclusions for each of the four categories of VPP are provided below.

Management Leadership and Employee Involvement

Overall Rating- 4.1

1. The Directorate and middle management are committed to and involved in worker health and safety.
2. The SLAC safety program, with its policies and procedures, addresses the lab's safety and health issues and is well documented by ES&H.
3. Communication of the elements of the safety program that are applicable to the individual workers should be improved. Improvement includes:
 - a. Making the various ES&H policies, procedures, and other safety information easier to access by individual employees in the field.
 - b. Supervisors holding frequent safety meetings to address and reinforce safety actions that affect the current activities of the work group.
4. Safety and health is integrated into day-to-day work activities.
5. Some work groups have not experienced the same high level of local management leadership and employee involvement that exists in most areas of SLAC.

Opportunities for Improvement have been designed to address issues suggested by #3 and #5.

Worksite Analysis

Overall Rating- 4.0

1. This category has the lowest response rate of the four VPP topic areas, ranging from 26% to 78% to the various questions. This was due to several factors:
 - a. Office staff has had little exposure to the hazard analysis process.
 - b. The baseline hazard analysis was formally completed several years ago and is updated annually; however, few employees are familiar with the process.
2. Formal work hazard analyses are done infrequently for in-house work.
3. The Type B Accident Investigation of the January 28, 2003 Ladder Incident at SSRL has done much to enhance staff's understanding of the hazard analysis and accident investigation processes and contributed to the positive ratings achieved. In the near future, the hazard identification and control process will be improved by implementing the investigation's judgment of need to prepare a job hazard analysis for work activities at SLAC.
4. The SLAC policy for line management to perform quarterly ES&H inspections is not well known.
5. Programmatic (research) construction sites do not receive the same scrutiny, as do conventional construction sites.

Opportunities for Improvement are suggested for #1, #2, #4, and #5.

Hazard Prevention and Control

Overall Rating 4.2

1. SLAC has an effective system for eliminating and controlling hazards.
2. Communication of the existence and availability of the ES&H hazard tracking systems should be improved.
3. Employees are well aware of and have a high regard for the on-site medical services and fire department.
4. Employees would appreciate a fair and consistent disciplinary process for those who disregard safety policies, including traffic regulations.
5. The documented Facility Evacuation Plans and annual evacuation drills are visible to staff and provide reassurance that the lab is well prepared for emergencies.

Opportunities for Improvement have been developed to address items #2 and #4.

Safety and Health Training

Overall Rating- 4.3

1. Employees receive effective safety training appropriate to their duties and exposures.
2. Many staff members do not participate in the preparation of their Employee Training Assessments and, therefore, do not contribute to and are not aware of the process.

A program has been proposed to increase the visibility of the ETA process.

C. ISMS Opportunities for Improvement Discussion

General Conclusion/Detailed Conclusions

The ISMS Assessment has evaluated SLAC's safety and health programs to determine whether the SLAC program is meeting the DOE ISMS expectation. The General Conclusion: **Overall, SLAC is meeting the ISMS Program objectives and requirements.**

Detailed conclusions for each of the guiding principles (GP) and core function (CF) evaluated are provided below. CF-5 was addressed separately. CFs 1,2,3 and 4 were covered in the questions developed for the GPs, so those questions were not duplicated.

Line Management Responsibility for Safety (GP 1) Overall Rating- 4.3

The average ratings and response rates were generally highly positive with comments such as:

- Line management shows leadership in addressing safety issues with workers.
- Line management conveys expectations for adherence to and use of safety controls and procedures.
- Supervisors make sure that workers understand the scope of work.
- Supervisors provide feedback to workers on addressing safety and health issues in their work.

Comments regarding the Director's level of support for safety were uniformly positive. Some comments suggest that some staff perceived that support by some management is not always visible. Some indicated that safety commitment may vary from division to division. In the view of SEDAC it may be helpful for management at all levels to verbalize a consistent safety position consistent with the laboratory position. In some cases, we suspect lack of information may lead to misunderstandings regarding management's position.

Another issue expressed relates to management's efforts to fund repair of safety items. While much has been spent, funding for some items has not been sufficient to remedy all existing safety issues. SEDAC is aware of programs, outside of the recommendations

contained in this report, to provide additional funding to remedy safety issues. These programs are outside of the recommendations contained in this report.

Another issue is a report of a manager who is alleged to have openly challenged the credibility of safety procedures. Another report alleges that taking safety training is, in at least one case, not fully supported by management. A report alleges that a supervisor discouraged employees from reporting safety issues. Clarification of the laboratory position on following documented and approved safety policies, encouraging reporting of safety issues, and getting approved training is suggested as part of the values/expectations communication recommendation in the Opportunities for Improvement section.

Clear Roles and Responsibilities (GP 2) Overall Rating 4.4

The rating and response rate reflect that participants felt strongly that they have clear roles and responsibilities. One comment stated that more emphasis is needed on employees being responsible for their own safety. Generally, few comments were provided in this topic area.

Competence Commensurate with Responsibilities (GP 3) Overall Rating 4.2

Generally, this rating is fairly high.

In regard to Question 1, the requirement for and purpose of Employee Training Assessments (ETAs) are not uniformly understood throughout SLAC. ETAs may not be viewed as equally important among Divisions and among types of workers, for example, among office workers versus workers performing more hazardous duties.

Regarding Question 2, many felt that training was adequate; however, some suggested that training could be better tailored to the work being performed. Some suggested that physicists, students, and Post Docs are not sufficiently trained (for example, ladder training). The qualifications, licensing, and experience required for manlift and boom crane operators were raised as a concern. SEDAC is aware of existing improvement initiatives in these areas.

For Questions 3 and 4, most felt that they received enough training and were able to get help for concerns beyond their training. Some indicated that coaching and mentoring were available, others apparently did not have access to coaching and mentoring. This may be an issue to consider as a laboratory values/expectation process.

Balanced Priorities (GP 4) Overall Rating 4.6

Again, this rating is generally high in this area. Many indicated that production pressure does not compromise safety; however, some participants indicated that this was not necessarily true for urgent jobs and during accelerator downtime work periods.

Representatives from one organization were very positive about the response of the group to unanticipated safety issues.

Specific concerns were expressed regarding establishing a safety shower. SEDAC is aware of initiatives to resolve this issue.

SLAC provides centralized testing in some areas, for example, dosimeters, and fire extinguishers. Some believe it would be helpful to more specifically identify those areas where centralized testing would benefit the SLAC safety program.

Identification of Safety Standards and Requirements (GP 5) Overall Rating 4.3

Comments suggest that safety standards are well documented; however, some people are having difficulty navigating the system and finding appropriate standards. SEDAC is aware of an ISMS training initiative that is also suggested by some. Inclusion of Work Smart Standards would be a helpful element of this program. Some expressed concerns that ES&H documentation is difficult to find in general, and the Committee suggests recommendations that may be useful in improving this situation.

Some had suggested that safety standards and requirements for complex chemical reactions were not clear. After investigating this, the Committee agrees that this may be an area with opportunity for improvement. A recommendation is provided that suggests that a Subject Matter Expert (SME) should be identified (perhaps on retainer), for issues about complex chemical reactions. The SME would serve by identifying standards and providing consulting when required.

Hazard Controls Tailored to Work Being Performed (GP 6) Overall Rating 4.0

Task hazard analysis is being well embraced by SLAC but some areas of concern exist as follow:

- Pre-job hazard analyses are not frequently done for routine processes; routine and non-routine jobs should be separated when performing pre-job hazard analyses
- Formal analyses are not routinely done

Formalizing the process of completing pre-job hazard analyses is a relatively new activity for some routine and non-routine jobs performed at SLAC. Increased supervisor training in the area of ISMS can be a supporting tool to clarify how to complete formal, documented pre-job hazard analyses for routine and non-routine jobs. SEDAC is aware of a major initiative to formalize the hazard analysis process.

Operations Authorizations (GP 7) Overall Rating 4.6

The ability to stop unsafe work was suggested as a positive tool to control safety concerns at SLAC. This general perspective was shared among several of the teams, and was the inspiration for positive comments.

Concerns were expressed that subcontractors are perceived as not being managed to the same safety standards as SLAC employees. Others suggested that subcontractors too frequently work without a University Technical Representative (UTR). Concerns were also expressed about personal protective equipment not always being available. It is recommended that these issues be corrected as part of the suggestions in Opportunities for Improvement, item #1.

Provide Feedback and Continuous Improvement (CF 5) Overall Rating 3.6

In general, when reviewing the series of questions under this topic, the two questions on the Behavior Based Safety process received a low rating because not everyone at SLAC is familiar with this process. These two questions were excluded from the statistics however, since these low readings were believed to be a testing artifact (see Process Feedback section for a discussion as to why).

Questions 1 through 4 provided responses of participants on their ability to provide feedback on safety concerns through measures summarized below:

- Input to department policies and guidelines (Q1)
- Conducting post-job debriefings with opportunities to share observations (Q2)
- Are there any procedures for improving future work (Q3)
- Participating in safety meetings (Q4)

Some participants felt that guidelines were sometimes imposed with little opportunity for input. Some suggested that forwarding of ES&H Bulletins should be considered by departments to assure that safety concerns and feedback are available to employees at a department level. A system for reviewing documents on-line is proposed.

Debriefings scored the lowest rating (3.3). Many participants indicated a lack of formality in addressing safety issues through debriefings or meetings. Safety meetings may provide an alternative to debriefings for most jobs, a system of safety meetings is proposed.

On the question “Are there procedures for improving future work” there was, perhaps, confusion over the question; however, a system of “lessons learned” is available at SLAC.

Some office worker participants indicated that there was little involvement in safety meetings.

Variations appear among the Divisions in regard to how much of a role and how frequently employees have an opportunity to provide feedback on safety concerns through one of the above measures. Some supervisors are reported to always be responsive to feedback about worker safety issues. Laboratory-wide systems are available to promote feedback; for example, Citizen Committees; Talk, Walk, and Clean standdown; and response systems to employee concerns (ES&H Hotline, for example). Participants did not feel that formalized measures exist for providing feedback about safety concerns at the department level. As previously described in Section II, a system of more formalized meetings with safety on the agenda is proposed.

III. Facility Walk-Throughs

The 2003 VPP/ISMS SLAC Self-Assessment process included a facility walk-through by each of the five teams. The teams had the standard SLAC Facility Inspection Checklist as provided in the Building Manager Program. The Facility Inspection Checklist includes the following sections:

- (1) Safe and Orderly Operating Conditions – All Buildings
- (2) Fire Safety – All Buildings
- (3) Earthquake Safety – All Buildings
- (4) Electrical Safety – All Buildings
- (5) Chemical Storage
- (6) Hazardous Waste
- (7) Compressed Gases

(8) Inspection Items Unique to Your Facility

The Facility Inspection Checklist is provided to Building Managers as an aid in ensuring that facilities promote a safe and hazard-free workplace. The checklist focuses on the most important aspects of safety in the research environment.

Each team chose to walk-through areas within their organization, focusing on industrial areas, or areas requiring housekeeping attention. The teams designated day 4 of the self-assessment week for walk-through activities. The teams discovered issues in the following areas: electrical, fire, earthquake, personnel safety (general OSHA), improper signage, housekeeping, hoisting and rigging, hazardous materials, and general safety. The individual building managers and divisions will correct the specific findings. An example of such a finding is an extension cord taped to the floor of a room. A covering should be in place over the cord and corrective action will be taken to fix the issue. Most issues were in the area of electrical safety. This could be attributed to the team in which the leader is the chairman of the electrical safety committee. The teams validated their findings and supported the findings with code/regulation citations.

In summary, the walk-throughs were a successful part of the SLAC Self-Assessment process. The team members offered a helpful new view of workplace situations and, in some cases, the inspections offered validation of the group discussions and surveys completed earlier in the week. The individual team reports indicated findings.

IV. VPP/ISMS Assessment Methodology and Process Feedback

Assessment Methodology

The results of the VPP and the ISMS survey questions and discussions that followed were analyzed both quantitatively and qualitatively to determine whether SLAC safety programs have the elements to qualify for the OSHA VPP and to demonstrate that SLAC is meeting the intent of the DOE-mandated ISMS program. The numerical averages of the participant responses to the 36 VPP and 29 ISMS questions provide a representative result of how employees perceive that SLAC is performing against the principles, processes, and procedures that are addressed in the VPP and ISMS questions. A qualitative analysis of each question was then performed, using the comments provided during the group discussions, to identify any ambiguous or job specific questions that may have mislead participants into incorrect responses, trends that signify strengths or areas of concern, and comments judged as noteworthy by SEDAC. This information, taken together, and SEDAC fact-finding, forms the basis for the general conclusions and recommendations on whether SLAC is ready to apply for VPP status and whether SLAC is meeting the objectives of its existing ISMS Program.

The rating scale used for the survey questions ranged from 1 to 5, with 1 defined as *never*, 3 as *sometimes* and 5 as *always*. A rating of “4” is considered to be compliance with the principles or criteria set forth by the survey question. Participants were given guidance on the objectives, approach, and methodology of the VPP/ISMS Assessment through an Auditor’s Instruction Pamphlet (Appendix E).

Process Feedback

All teams were able to complete the survey and interview process, and all were able to generate consolidated team reports in roughly the timeframe provided. In keeping with the program design, lab wide statistics were generated for inputs from 187 individuals and many comments were received relevant to developing VPP/ISMS opportunities for improvement. Of those teams offering global comments on the consolidated survey and interview process, two teams thought that, overall, this initial process went well, and one team concluded that there were serious concerns regarding the process.

All teams expressed varying degrees of concern with the applicability of the survey questions or the degree to which the survey questions were understood. This issue seemed somewhat more pronounced with VPP questions as opposed to ISMS questions (perhaps measured by the higher response rate for ISMS than VPP questions). Some described the vagueness or broadness of the questions as concerns. SEDAC believes that this is not an unexpected result, as the lab had extensive outreach and training on the meaning of the terms used in ISMS, while there has been no program to promote understanding of general VPP terms. In part, the degree to which the lab is ready to manage general VPP principles is one of the areas that the survey was designed to measure. Not surprisingly, need for an educational program before attempting VPP may be implied by the VPP survey response.

Most teams did not report any difficulties in the group discussion session of the assessment. Some teams reported that the group discussion session helped to clarify issues and uncertainties that participants observed in the survey. One group, however, suggested that they had difficulty keeping the discussion process focused. This team also had the most negative overall assessment of the VPP/ISMS process.

Several teams suggested that targeting questions to specific types of workers would have been helpful. Some teams suggested that questions should be translated into terms that they could understand. Certainly, some questions were outside of the experience of the individuals taking the survey, and a not applicable response or leaving the item blank is a tactic used to manage this lack of information. If this method of managing uncertainty occurred consistently, it should not adversely impact the statistics provided. Some questions were more applicable to managers than workers. Unfortunately, some teams neglected to submit the first page of the survey as instructed. The first page provided identification of the respondent's level in the organization so that data could be evaluated along this line.

Interestingly, some expressed concerns regarding the applicability and understanding of longstanding laboratory programs relevant to all. Some did not understand the Employee Training Assessment (ETA), for example, which is a program applicable to all survey participants. It is required that an ETA be generated for each employee, including office workers. In this instance, the concerns were interpreted as a site-wide educational issue, as opposed to the applicability of the question. Two questions on Behavior Based Safety (BBS) were not used in the roll-up of statistics because, on reflection by SEDAC of the input received, these two questions called for a measurement of participation in this program, when, by design, not all employees are expected to participate. These were the lowest rated questions, which we believe was a testing artifact, as opposed to a meaningful conclusion.

Most Team Leaders reported that providing more time for the preliminary planning work leading up to the assessment effort would have been very helpful. The self-assessment was a demanding

effort for Team Leaders. More time for training and group meetings would have been helpful in the view of several team members.

If the VPP/ISMS process were to be repeated (there are currently no plans to do so) the following would be suggested: 1) a review of the survey questions, 2) more time for Team Leader preparation, and 3) evaluation of the training process.

Appendices

Appendix A - VPP Survey Questionnaire Averages by Question

TOPICS/SURVEY QUESTIONS	TEAMS #1, #2, #3, #4 & #5 ALL GROUP INTERVIEWS	
	Ave. Rating	% Responses
Management Leadership and Employee Involvement		
1. Do your division's managers demonstrate a commitment to worker safety and health protection?	4.5	97%
2. Is top management (Associate Director, Deputy Director, Assistant Director) personally involved in promoting and carrying out safety and health activities?	4.5	87%
3. Are division safety and health concerns integrated into the overall planning cycle?	4.2	82%
4. Is safety and health management integrated with the general day-to-day management system?	4.2	86%
5. Does the safety and health program (ES&H Manual, Bulletins, ISM Program, division procedures, etc.) address the issues in your division?	4.0	92%
6. Is the safety and health program communicated to your division's employees?	4.2	97%
6a. Is the safety and health program well understood by your division's employees?	3.8	90%
7. Where appropriate, do work groups, departments, individually or as part of the Laboratory as a whole, have health and safety goals and results-oriented objectives for meeting these goals?	3.9	82%
8. Does your division, individually or as part of the Laboratory as a whole, have clearly assigned safety and health responsibilities with documentation of authority and accountability from top management to line supervisors to workers?	4.1	89%
9. Are adequate resources, including authority, provided to meet responsibilities, including access to certified safety and health professionals and subject matter experts as needed?	4.2	88%
10. Does the process for the selection and oversight of subcontractors ensure effective safety and health protection for all workers at SLAC?	3.7	53%
11. Are employees in your division meaningfully involved, in at least three ways, in activities and decision-making that impact their safety and health?	3.8	78%
12. Is your division's health and safety system evaluated on an annual basis with narrative reports, recommendations for improvements, and documented follow-up?	4.0	73%

Worksite Analysis

1. Has a baseline hazard analysis been conducted that identifies and documents common hazards (those recognized in OSHA, building codes and other recognized standards) in your workplace?	4.2	72%
2. Is there documentation within the baseline hazard analysis to identify health hazards and accurately assess employees' exposure, including duration, route, frequency of exposure, and number of exposed employees?	4.1	61%
3. Have hazard analysis of routine jobs, tasks, and processes that identify uncontrolled hazards that lead to hazard elimination or control been performed?	3.9	71%
4. Is a hazard analysis performed for significant changes, including non-routine tasks, new processes, materials, equipment, and facilities to identify uncontrolled hazards prior to activity or use and leads to hazard elimination or control?	3.9	65%
5. Are self-assessments that cover all your division's facilities, performed by trained staff with written documentation and hazardous correction tracking, conducted at least quarterly?	3.3	53%
6. Are weekly self-assessment inspections conducted for construction sites by trained staff with written documentation and hazardous correction tracking?	3.2	26%
7. Does a written hazard reporting system exist that enables employees to report their observations or concerns to management without fear of reprisal, and provides timely responses?	4.0	73%
8. Are accident/incident investigations conducted by trained staff, with written findings that attempt to identify all contributing factors?	4.5	78%
9. Are analyses of trends in injury/illness experience and in hazards found performed to identify patterns of problems and needed corrections in procedures, equipment or programs?	4.3	66%

Hazard Prevention and Control

1. Does the Laboratory have an effective system for eliminating or controlling hazards, one emphasizing engineering solutions that provide the most reliable and effective protection, or in preferred order, administrative controls and personal protective equipment?	4.3	90%
2. Is there a system for tracking identified hazards, from identification through correction?	4.0	73%
2a. Is this tracking system communicated and available to employees?	3.5	67%
3. Where applicable, do departments have a written preventive/predictive maintenance system that reduces safety-critical equipment failures and schedules routine maintenance and monitoring?	3.8	63%
4. Does the Laboratory have an occupational health care program appropriate for your particular workplace? Elements include as a minimum:		
4a. Nearby medical and emergency services,	4.9	99%
4b. Staff trained in first aid and CPR available on-site during all shifts,	4.6	87%
4c. Hazard analysis performed by licensed health care professionals as needed.	4.4	74%
5. Does a consistent disciplinary system exist that is applied to all employees (including managers and supervisors) who disregard the rules?	3.5	72%
6. Are there written plans to cover emergency situations, including emergency and evacuation drills for all shifts?	4.4	93%

Safety and Health Training

1. Do managers and supervisors receive training that emphasizes their safety and health leadership responsibilities?	4.0	75%
2. Do all employees receive training on SLAC's safety and health management system, hazards, hazard controls in place, recognition of hazardous conditions, safe work practices, the use and maintenance of personal protective equipment, and other policies and procedures as applicable to their duties and exposures?	4.5	97%
2a. Is there a method of assessing employee comprehension and training effectiveness?	3.9	84%
3. Is all the training that individual employees receive documented?	4.6	96%
4. Do employees participate in emergency preparedness drills, including annual evacuations?	4.3	96%

Appendix B - ISMS Survey Questionnaire Averages by Question

TOPICS/SURVEY QUESTIONS	TEAMS #1, #2, #3, #4 & #5 ALL GROUP INTERVIEWS	
	Ave. Rating	% Responses
Line Management Responsibility for Safety (GP 1)		
1. Does line management show leadership in addressing safety issues with workers?	4.2	92%
2. Does line management convey expectations for adherence to, and use of, safety controls and procedures?	4.3	91%
3. Does your supervisor make sure that workers understand the scope of work?	4.3	88%
4. Does supervision provide feedback to workers on addressing safety and health issues in their work?	4.2	92%
Clear Roles and Responsibilities (GP 2)		
1. Are safety concerns conveyed to you in your work?	4.3	97%
2. Do you know when to address safety in your projects?	4.6	95%
Competence Commensurate with Responsibilities (GP 3)		
1. Is your Employee Training Assessment (ETA) filled out annually, and whenever your job changes?	4.3	68%
2. Are guidelines followed to insure that workers are properly trained and that the training is adequate?	4.3	89%
3. Do you feel you receive enough training before being asked to perform a new task?	4.4	88%
4. Do you get help on safety concerns that are beyond your training?	4.5	83%
5. Is there a guidance program within your department (coaching, mentoring)?	3.4	75%
Balanced Priorities (GP 4)		
1. Do you, as a worker or manager, ensure that production pressure does not compromise safety?	4.6	90%
2. Do you address a safety issue that wasn't defined in the job but has arisen during implementation of the job?	4.6	84%

Identification of Safety Standards and Requirements (GP 5)

1. Does ES&H help you identify requirements and standards in your work?	4.2	94%
2. Are safety requirements and standards documented?	4.3	89%
3. Do you follow/use standards and are they readily available?	4.3	92%
4. Are safety requirements and standards communicated to the workers?	4.3	97%

Hazard Controls Tailored to Work Being Performed (GP 6)

1. Are pre-job hazard analyses generated before work is performed?	3.8	67%
2. Are hazard controls implemented to address the hazards identified in the pre-job hazard analysis?	4.1	64%

Operations Authorizations (GP 7)

1. Does your supervisor convey to workers that they must work within safety and health controls?	4.5	93%
2. Would you intervene if you found someone working unsafely?	4.7	97%
3. Do you stop work and reassess the activity when you find an unanticipated job hazard?	4.7	81%
4. Is the PPE needed for a job available?	4.5	65%

Provide Feedback and Continuous Improvement (CF 5)

1. Do you have input into department policies and guidelines as they pertain to safety?	3.9	91%
2. Do post-job debriefings occur with an opportunity to share observations?	3.3	71%
3. Are there any procedures for improving future work?	3.7	73%
4. Do you participate in safety meetings (e.g., tailgate meetings, Dept. Safety Coordinator's monthly meetings, etc.)?	3.6	87%
5. Are you involved with the Behavior Based Safety Process?	2.3	44%
6. Does the Behavior Based Safety Process impact on your work?	2.7	34%

Appendix C - Summary of VPP/ISMS Survey Averages by Topic and Team

VPP SURVEY

TOPICS/SURVEY QUESTIONS	Team #1 Average	Team #2 Average	Team #3 Average	Team #4 Average	Team #5 Average	Overall Average
Management Leadership and Employee Involvement	4.3	3.7	4.3	4.3	4.0	4.1
Worksite Analysis	4.2	3.7	4.3	4.0	3.7	4.0
Hazard Prevention and Control	4.4	4.0	4.4	4.2	3.9	4.2
Safety and Health Training	4.5	3.9	4.5	4.2	4.0	4.3

ISMS SURVEY

TOPICS/SURVEY QUESTIONS	Team #1 Average	Team #2 Average	Team #3 Average	Team #4 Average	Team #5 Average	Overall Average
Line Management Responsibility for Safety (GP 1)	4.3	3.9	4.4	4.5	4.2	4.3
Clear Roles and Responsibilities (GP 2)	4.5	4.3	4.6	4.6	4.3	4.4
Competence Commensurate with Responsibilities (GP 3)	4.3	3.8	4.4	4.5	4.1	4.2
Balanced Priorities (GP 4)	4.6	4.5	4.6	4.8	4.7	4.6
Identification of Safety Standards and Requirements (GP 5)	4.4	3.9	4.6	4.4	4.2	4.3
Hazard Controls Tailored to Work Being Performed (GP 6)	4.0	3.7	4.2	4.1	3.8	4.0
Operations Authorizations (GP 7)	4.6	4.5	4.7	4.8	4.7	4.6
Provide Feedback and Continuous Improvement (CF 5)	3.8	3.3	3.6	4.0	3.6	3.6

Appendix D - Organization of VPP/ISMS Teams

2003 Teams

Team #1

- Business Services / ES&H Divisions
 - [Rick Challman](#) (Team Leader)
 - [Kay Ganapathi](#)
 - [John Weisskopf](#)

Team #2

- Technical Division
 - [Bill Kroutil](#) (Team Leader)
 - [John Shepardson](#)
 - [Bob Reif](#)

Team #3

- Technical Division
 - [Mary Regan](#) (Team Leader)
 - [Elsa Nimmo](#)
 - [Alan Conrad](#)

Team #4

- Research Division
 - [Perry Anthony](#) (Team Leader)
 - [Mike Grissom](#)
 - [Linda Ahlf](#)

Team #5

- SSRL
 - [Ian Evans](#) (Team Leader)
 - [Ed Guerra](#)
 - [Cathy Knotts](#)

Alternates

- [Karen Kruger](#) (Business Services Division)
- [Ann Redfield](#) (Research Division)

Appendix E - Auditor Instruction Pamphlet

The Auditor Instruction Pamphlet is available on the Web at:

<https://www-internal.slac.stanford.edu/esh/vpp-isms/vpp2003pamphlet.pdf>