

Guidance for Performing FY08 ES&H Division Self-Assessment

I. Introduction

LBNL's Division Environment, Safety and Health (ES&H) Self-Assessment Program provides the mechanism for assuring that Integrated Safety Management (ISM) is fully implemented and effective at all levels of Laboratory activities and operations. The Division ES&H Self-Assessment Program is a formal, internal process used to evaluate ES&H programs, policies, and processes. The process is designed to ensure that Laboratory work is conducted safely and with minimal adverse effects to workers (employees, participating guests, and subcontractors), the public, and the environment. For reference, *PUB-3105 Division ES&H Self-Assessment Manual* describes how the Lab administers the Division Self-Assessment Program.

II. FY07 ES&H Division Self-Assessment Effectiveness Review Results

Following the FY07 ES&H Division Self-Assessment cycle the Lab's Office of Contract Assurance performed an effectiveness review of the process. The effectiveness review identified opportunities for improving the ES&H Division Self-Assessment process and noteworthy practices that may have Lab-wide applicability.

Divisions should consider the following opportunities for process improvement in performing their FY08 ES&H Division Self-Assessment:

- Broaden the scope of the self-assessments beyond the self-assessment performance measures. Each division should:
 - Assess if they are effectively addressing the requirements of their respective division ISM Plan.
 - Provide greater analysis as part of the assessment. Beyond reporting on performance, divisions should analyze if this performance was effective and identify possible ways to improve performance.
 - Identify future safety program improvements and goals resulting from the self-assessment process.
- Provide further detail and analysis to improve this process. Improvement opportunities include:
 - Describe how the previous year's assessment findings were addressed.
 - Describe actions taken to prevent recurrence of adverse events.
 - Assess the effectiveness of the initiatives and corrective actions taken to address these issues. Identify any potential lessons learned in implementing these initiatives.
- Broaden communication of self-assessment results, such as posting the self-assessment report on each respective division's website and sending the report to senior and line managers. Increasing divisional attention to the self-assessment report could also assist in preventing recurrence of adverse events and conditions.

III. FY08 Performance Measures and Assessment Guidance

ISM CORE FUNCTION 1: DEFINE WORK

E1. *Division revises division ISM plan to reflect a) ES&H policy changes (including Work Lead responsibilities), and b) updates to the Institutional ISM plan. Line management communicates updates to the plan to division personnel.*

Division ISM plan updates should reflect PUB-3000 and Institutional Integrated Safety Management System (ISMS) plan changes made subsequent to the last revision of the division ISM plan and through June 30, 2008.

- PUB-3000: Refer to the LBNL/PUB-3000 Change Record for calendar year 2008 changes and LBNL/PUB-3000 Change Archive for pre-calendar year 2008 changes, as appropriate.
 - Institutional ISMS plan: Refer to LBNL/PUB-3140 Integrated Environment, Health and Safety Plan/Integrated Safety Management (ISM) System, September 2007, Revision 6.
- Review our ISM Plan. Did we address all updates, as applicable?
 - How did we communicate changes to our ISM plan to the entire division?
 - How effective was this communication?

E2. *Per the Lab-wide implementation schedule, division ensures workers have a current Individual Baseline Job Hazards Analysis (JHA), authorizing regular and routine work that he/she performs, and if necessary one or more current Task-based JHA(s) to authorize unpredictable, short-term, or unusual work that is not included in the Individual Baseline JHA.*

- Did we document our process for performing JHA's in our ISM Plan?
- What percentage of staff have a current Individual Baseline JHA?
- What percentage of required staff have a current Task-based JHA?

What noteworthy accomplishments in the ISM core function *Define Work* did we achieve?

What opportunities for improvement in the ISM core function *Define Work* exist?

ISM CORE FUNCTION 2: IDENTIFY HAZARDS

E3. *Divisions review work activities to identify, analyze, and categorize hazards and environmental impacts for the associated work. Examples of hazard inventory include: Hazards Management System (HMS) database (or equivalent), project safety review, workspace safety review, Job Hazard Analyses (JHA), environmental review (NEPA/CEQA), and chemical inventory.*

- Review division's hazard identification and inventory documentation.

- Did we review our work activities to identify, analyze, and categorize hazards consistent with Lab policy?
- Do we have a specific hazards review process described in our ISM plan? If so, did we follow this process?
- How do we ensure our inventory is comprehensive (i.e. did we include all of our workspaces)?

E4. Division participates in pollution prevention, energy conservation, recycling, and waste minimization programs, as appropriate for the environmental impact of their activities.

- Complete the Environmental Review Checklist (Attachment 1), or similar process.
- What are our opportunities for improvement?

What noteworthy accomplishments in the ISM core function *Identify Hazards* did we achieve?

What opportunities for improvement in the ISM core function *Identify Hazards* exist?

ISM CORE FUNCTION 3: CONTROL HAZARDS

E5. Division ensures appropriate engineering and other safety/environmental controls are in place and properly maintained.

Examples of controls include, but are not limited to:

- *Guards, barriers and shields*
 - *Fume hoods, glove boxes, biosafety cabinets*
 - *Interlocks*
 - *Exhaust system filtration*
 - *Secondary spill containment*
 - *Personal protective equipment*
 - *In-lab alarm monitors*
 - *Stack emission monitors*
 - *Lockout/tagout*
 - *Ergonomic workstation modifications (furniture, equipment and/or accessories)*
 - *Manual material handling lift assist devices*
 - *Cranes and hoists*
- How do we determine the need for engineering and other safety/environmental controls? Is this process effective?
 - Did we properly identify (with assistance from EH&S, as appropriate) engineering and other safety/environmental controls?
 - What actions(s) did we take to resolve deficiencies in this area, as applicable?

E6. Division ensures administrative controls are in place and maintained. Examples of administrative controls include: work authorizations (including but not limited to JHAs, AHDs, BUAs and RWAs), work permits (including but not limited to confined space, and energized electrical work), environmental permits, work procedures, and project safety reviews.

- Did we review formally authorized work on schedule?

- How did we address changes in work scope?
- Are our processes to ensure administrative controls are in place and maintained consistent with our division ISM Plan?

E7. *Division ensures that ergonomic hazards (computer, laboratory, and material handling) are adequately controlled and that employees and line management are knowledgeable and engaged in this process, including the early reporting of ergonomic pain or discomfort (before an injury). Ergonomic issues/concerns/discomfort/pain are reported promptly for immediate corrective action.*

- Did we implement ergonomic safety policies and procedures as described in our ISM Plan?
- How do we communicate the importance of early reporting of discomfort and workload management as strategies for preventing ergonomic injuries?
- What is our completion rate for required ergonomics training?
- How timely are our ergonomic evaluations?
- Review of Ergo Advocate Program
 - Did our division participate in the Ergo Advocate Program?
 - What were the results of our participation?
- Review ergonomics database.
 - Did we complete ergonomic corrective actions?
 - How timely is implementation of corrective actions?

What noteworthy accomplishments in the ISM core function *Control Hazards* did we achieve?

What opportunities for improvement in the ISM core function *Control Hazards* exist?

ISM CORE FUNCTION 4: PERFORM WORK

E8. *Work is performed within the ES&H conditions and requirements specified by Lab policies and procedures. Performance criteria include work authorizations (including but not limited to JHAs, AHDs, BUAs, RWAs); work permits (including but not limited to confined space, energized electrical work); waste management criteria (SAAs, waste sampling, NCARs); and environmental permits and management criteria (resource conservation, pollution prevention and waste minimization).*

- What are our formal work authorizations?
- Did we perform work within the scope of our formal authorizations and hazardous work permits? How do we assure work is performed within scope?
- Did we complete and document on-the-job training as required by our formal work authorizations?
- How do we assess SAA compliance? What is our compliance rate?
- Did we receive any notices of violation from external regulatory agencies? If so, did we implement corrective actions?

E9. *Staff (including employees, participating guests, students and visitors) is properly trained.*

- What percentage of our staff completed the JHQ in the past 12 months (in cases where the JHA process is not implemented)?
- What is our required training completion rate?

What noteworthy accomplishments in the ISM core function *Perform Work* did we achieve?

What opportunities for improvement in the ISM core function *Perform Work* exist?

ISM CORE FUNCTION 5: FEEDBACK AND IMPROVEMENT

E10. *Division implements an effective safety walkaround program per the requirements of the Division ISM Plan. Ensure all personnel required to perform safety walkarounds, as defined in the Division ISM Plan, have completed EHS 27 Performing an Effective Safety Walkaround.*

- Did we document walkaround requirements in our Division ISM Plan?
- Have all personnel required to perform safety walkarounds, as defined in the Division ISM Plan, completed EHS 27, "Performing Effective Safety Walkarounds"?
- Did personnel perform assigned walkarounds as scheduled? How were results recorded? Are results recorded consistent with the Division ISM Plan?
- Were all safety deficiencies not corrected on the spot documented? How?

E11. *Division performs a thorough review of all accidents, injuries, incidents, near misses and concerns according to Lab policy and the division's ISM plan. Corrective actions to prevent recurrence are identified, effectively implemented, and shared via the Lab's Lessons Learned and Best Practices database, as appropriate.*

- Is our process for investigating staff injuries and accidents detailed in our ISM Plan?
- Did we follow this process?
- Review injury and accident reports (SAARs).
- How effective were our corrective actions?
- Did we share lessons learned with others via the Lab's Lessons Learned and Best Practices database? Did we apply any lessons learned from the Lessons Learned and Best Practices database that may help reduce injuries?

E12. *ES&H deficiencies that cannot be resolved upon discovery are entered in CATS in a timely manner and tracked to resolution. Deficiencies include those from workspace inspections, self-assessment activities, SAARs, Occurrence Reports, Non-compliance Tracking System Reports, environmental inspections, Division Self-Assessment, EH&S technical reviews, Management of ES&H (MESH) Reviews, and external appraisals.*

- How do we assure that deficiencies identified from workspace inspections, self-assessment activities, SAARs, Occurrence Reports, Non-compliance Tracking System Reports, environmental inspections, Division Self-Assessment, EH&S technical reviews, Management of ES&H (MESH) Reviews, and external appraisals are entered in CATS in a timely manner?
- How did we address opportunities for improvement identified in FY07 self-assessment (division self-assessment, MESH, ESH Technical Assurance)? A CATS report may suffice as a response.
- What is our CATS completion rate (regardless of schedule)?
- What is our CATS on-time completion rate (excluding entries sent to the Work Request Center)?

What noteworthy accomplishments in the ISM core function *Feedback and Improvement* did we achieve?

What opportunities for improvement in the ISM core function *Feedback and Improvement* exist?

Attachment 1 Environmental Review and Self-Assessment Checklist

Lab staff should be aware of the environmental impacts of their activities and seek ways to reduce those impacts. The checklist is designed to: 1) assist Divisions in reducing their environmental impacts as required in Pub-3000 and the Institutional ISM Plan, and 2) provide guidance to Divisions in self-assessing their performance.

Listed below are suggested examples of activities that can accomplish this purpose. This is not meant to be an exhaustive list and is meant to provide basic activities and possibly stimulate other ideas for reducing the environmental impacts.

Answer "yes" or "no" to the following questions. By asking your Departments, Groups or teams these questions, areas for improvement may be identified. If activities cannot be implemented, describe any impediments.

Paper reduction

- | Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Are your Divisions' copy machines default settings to make double-sided copies? |
| <input type="checkbox"/> | <input type="checkbox"/> | Are all documents printed and copied on both sides? |
| <input type="checkbox"/> | <input type="checkbox"/> | Are documents routinely stored and sent in electronic formats, rather than making hard copies? |
| <input type="checkbox"/> | <input type="checkbox"/> | Is paper that is clean on one side used routinely for in-house drafts and message pads? |
| <input type="checkbox"/> | <input type="checkbox"/> | Have cover sheets for faxes been eliminated? |

Lessons Learned: Are there additional areas where you have reduced or eliminated the use of paper? If yes, please describe:

General

- | Yes | No | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Are all presentations using electronic formats rather than transparencies? |
| <input type="checkbox"/> | <input type="checkbox"/> | Are all items such as paper, aluminum cans, cardboard, plastic bottles, transparencies, floppy disks and packing peanuts recycled? |
| <input type="checkbox"/> | <input type="checkbox"/> | Are all batteries rechargeable and all calculators solar? |
| <input type="checkbox"/> | <input type="checkbox"/> | Is your Division using 100% recycled content copier paper? |
| <input type="checkbox"/> | <input type="checkbox"/> | Are remanufactured items such as recharged toner cartridges routinely used? |

Lessons Learned: Are there other activities that you have implemented? If yes, please describe:

Laboratory Areas

- | Yes | No | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Has your Division minimized the purchase and use of hazardous materials to the extent feasible? (Waste Management can assist) |
| <input type="checkbox"/> | <input type="checkbox"/> | Do all oil cans, plant cans and other liquid materials have appropriate drip pans or trays to catch leaks? |
| <input type="checkbox"/> | <input type="checkbox"/> | Has all mercury-containing equipment been replaced with non-mercury alternatives where ever possible? |

Has your Division developed and implemented a process whereby all existing and planned research experiments using hazardous chemicals or radioactivity reviewed for use of alternative non hazardous materials?

Has your Division replaced photochemicals with digital imaging where feasible?

Lessons Learned: Has your Division implemented other activities that have reduced or eliminated the use of hazardous materials? If so, please describe:

Purchases

Yes No

Has your Division purchased equipment and was it Energy Star rated? If so, are the Energy Star features enabled?

Are routine supplies made with recycled materials (i.e., paper products, toner cartridges, office products)?

Are office supplies such as trays, binders, etc. obtained from the Property Reuse Center?

Are potential return-on-investment opportunities identified (such as equipment purchases) and submitted to the Lab for funding? (WM can assist)

Lessons Learned: Has your Division implemented other activities that have reduced energy consumption, or minimized the use of virgin materials? If yes, please describe:

Signature

Date