

Environmental Energy Technologies Division

2013 ES&H Self-Assessment Plan

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Approved By:



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Date

1.0 Introduction

The EETD ES&H self-assessment is a continuous process for evaluating performance. The key objectives of the ES&H self-assessment process are to monitor effectiveness of hazard controls (administrative, engineering, etc.) during performance of work and providing feedback that promotes improvement in work processes and ES&H programs.

The 2013 EETD ES&H self-assessment process is a tailored, risk-based approach to assessing safety program effectiveness. Division management (with input from the Safety Committee and Principal Investigators) has identified the hazards having potential impact on the safety of employees, protection of environment, and/or continuity of operations. This self-assessment plan describes focus areas, methodologies, and evaluation frequencies. It addresses those programs and hazards of importance to the division and, in the process, identifies findings, observations, and noteworthy practices.

2.0 2013 Self-Assessment Focus Areas

2.1 Selection of Focus Areas

A survey was conducted of Division Department Heads, Principal Investigators, and Safety Committee members on possible self-assessment topics. The survey included a “long list” of over 20 potential self-assessment topics identified by the Safety Committee. Based on the survey results, the top three topics were selected. The scope and methodology for the top three topics was further defined to ensure that one or more of the EETD departments and/or EETD buildings were included in the overall scope of this 2013 plan.

EETD has identified the following three focus areas that will be evaluated as part of the ES&H Self-Assessment process for fiscal year 2013 (FY13):

1. ***Assessment of EETD Laboratory Area Housekeeping Practices:*** Assess Building 62 and 70 laboratory areas and determine improvement opportunities in housekeeping practices. Lab areas that practice good housekeeping are generally safer and more compliant with LBNL requirements. The ESDR and EAEI departments are primarily included in this assessment.
2. ***Assessment of EETD On-the-Job Training (OJT) Practices:*** Assess On-the-Job Training practices used by each lab area and determine best practices as well as improvement opportunities in providing key information to lab personnel. An effective OJT program will ensure that personnel are aware of hazards and controls specific to their work area. The ESDR department is the primary focus of this assessment though the processes developed will be shared with the EAEI and BTUS departments for future implementation.
3. ***Assessment of EETD Building Electricity Usage Practices:*** Assess EETD employee practices in using electrical equipment in Building 90 office areas to determine improvement opportunities for reducing electricity usage. Minimizing electricity usage helps to protect the environment as well as reduce operating costs. While looking at the

usage, safety aspects of electrical equipment will also be addressed. The BTUS and EAEL departments along with Division staff will be included in this assessment.

2.2 Assessment Categories (Drivers)

2.2.1 Compliance with Institutional Requirements

EETD will evaluate the focus area of *EETD Laboratory Area Housekeeping Practices* for compliance with the following LBNL requirements:

- LBNL PUB-5341, Chemical Hygiene and Safety Plan, Work Practice Controls-Housekeeping
- LBNL PUB-5341, Chemical Hygiene and Safety Plan, Hazardous Materials Storage Requirements
- LBNL PUB-3000, Health and Safety Manual, Chapter 4.6- Ventilation, Hoods, and HEPA Filters
- LBNL PUB-3000, Health and Safety Manual, Chapter 8- Electrical Safety
- LBNL PUB-3000, Chapter 12- Fire Prevention and Protection
- OSHA 29 CFR 1910.22, Housekeeping

EETD will evaluate the focus area of *EETD On-the-Job Training (OJT) Effectiveness* for compliance with the following LBNL requirements:

- LBNL PUB-3000, Health and Safety Manual, Chapter 6- Safe Work Authorizations
- LBNL PUB-3000, Health and Safety Manual, Chapter 24- EH&S Training
- LBNL PUB-3000, Health and Safety Manual, Chapter 32- Job Hazards Analysis

EETD will evaluate the focus area of *EETD Building Electricity Usage Practices* for compliance with the following LBNL requirements:

- University of California Policy on Sustainable Practices (2009)
- LBNL Environmental Management System (2012)- “Energy Use”
- LBNL PUB-3000, Health and Safety Manual, Chapter 12.8.1, Fire, Space Heaters
- LBNL PUB-3000, Health and Safety Manual, Chapter 8, Electrical Safety

2.2.2 Compliance with Established Divisional Requirements

EETD will also evaluate all three focus areas identified in Sect. 2.1 against the relevant divisional requirements specified in the EETD Integrated Safety Management Plan.

3.0 Assessment Frequency, Methodology, and Lines of Inquiry

Each self-assessment will be specific to the focus area being evaluated (though if other ES&H items are identified during the assessments, they will be referred to the Division Safety Coordinator or other appropriate entity). Each will be conducted separately during the course of the fiscal year. Upon completion of data gathering, a separate report will be prepared along with conclusions and recommendations for improvement.

1. Self-Assessment Focus Area: EETD Laboratory Area Housekeeping Practices

1a. Persons listed below will conduct this assessment:

- EETD Safety Manager
- EETD Deputy Department Heads- Operations
- Building Managers
- EHSS Division Liaison to EETD

1b. Assessment Frequency and Schedule:

- The assessment will begin in November 2012.
- This is a one-time assessment during 2013.
- The final self-assessment report will be completed and submitted by February 2013.

1c. Self-Assessment Methodology:

- The scope of this assessment project will include EETD lab areas located in Buildings 62 and 70. The ESDR and EAEI departments within EETD operate these lab areas.
- A check sheet will be developed that identifies key housekeeping practices. The check sheet will include a scoring system.
- A team of assessors will visit each lab area and use the check sheet to determine the level of housekeeping being implemented.
- Each lab area will be given a score based on the assessment team findings. The scores and findings will be communicated to each responsible Principal Investigator.
- Each lab area will be given an opportunity to make improvements in house keeping practices.
- The assessment team will perform a follow-up visit of each lab area to determine the level of housekeeping being implemented. Each lab area will be given a follow-up housekeeping score for comparison with the previous visit.
- Division Management will recognize those lab areas that consistently demonstrated good housekeeping practices (score greater than 90%).
- Division Management will determine further corrective actions necessary for lab areas with poor housekeeping practices (score less than 60%).
- Best practices identified by the assessment team will be documented and communicated to EETD personnel.
- Lessons learned from use of the housekeeping check sheet will be incorporated into on-going quarterly self-inspections performed by each lab area.

1d. Lines of Inquiry:

- Are hazardous materials being properly stored?
- Are hazardous materials and sample containers properly identified?
- Are the fume hoods being adequately maintained?
- Are the glove boxes being adequately maintained?
- Are lab benches and tabletops organized and free of clutter?
- Is the area free of trip and fall hazards?
- Is access to emergency exits and electrical panels clear?
- Is emergency equipment such as emergency shower, fire extinguisher, and spill kit clearly accessible?

- Are quarterly self-inspections being performed? Are housekeeping issues being identified and corrective actions documented?
- Are personnel working in the area aware of housekeeping issues? Do they feel empowered to correct issues they see?

2. Self-Assessment Focus Area: EETD On the Job Training Effectiveness

2a. Person(s) conducting assessment

- EETD Safety Manager
- Representative from EHSS Division Training Department
- Representative identified by ESDR Department

2b. Assessment Frequency and Schedule

- The assessment will begin February 2013.
- This is a one-time assessment during 2013.
- The final assessment report will be completed and submitted in May 2013.

2c. Self-Assessment Methodology

- The scope of this self-assessment is limited to the ESDR Department of EETD. Results will be shared with other EETD departments for future implementation across the entire division.
- Interview ESDR Principal Investigators to determine the methods currently used for giving On the Job Training to the personnel specific to their lab areas.
- Based on the interviews, identify best practices and areas that need improvement.
- Develop and implement a department-wide On the Job Training program that incorporates the best practices and identified improvements. This includes any needed training materials.
- Conduct follow-up interviews with ESDR personnel to determine implementation and effectiveness of the developed On the Job Training program.
- Share the results of this assessment with the EAEI and BTUS departments within EETD. Implement similar On the Job Training programs tailored to their specific needs.

2d. Lines of Inquiry

- Is On the Job Training currently being offered to lab personnel?
- What type of information is being shared with personnel?
- Is the training information documented?
- Is completion of the On the Job Training documented? How is this documentation maintained?
- Are new hires given On the Job Training? How soon after hire is the training completed?
- Is any follow-up or periodic On the Job Training offered to personnel?
- How much time is spent giving On the Job training?
- What is the most effective format for providing On the Job Training?
- How is it determined that the employee understands the training?

- Do personnel actually demonstrate competence in important lab area-specific procedures such as: emergency response, use of personal protective equipment, use of fume hoods, use of glove boxes, etc.?

3. Self-Assessment Focus Area: EETD Building Energy Usage Practices

3a. Person(s) conducting assessment

- EETD Safety Manager
- EETD Building Manager
- EETD Assistant Building Manager
- Representative from BTUS department

3b. Assessment Frequency and Schedule

- The assessment will begin June 2013.
- This is a one-time assessment during 2013.
- The final assessment report will be completed and submitted in September 2013.

3c. Self-Assessment Methodology

- The scope of this assessment project will include EETD office areas located in Building 90.
- A check sheet will be developed that identifies key office area energy efficiency practices. We will use the expertise of the BTUS Department to develop this checklist.
- A team of assessors will visit each office area and use the check sheet to determine if good energy efficiency practices are being used. Best practices will also be noted.
- The results of the assessment will be communicated to affected EETD personnel. An energy efficiency awareness program will be implemented based on the observations made from the initial assessment.
- The assessment team will perform a follow-up visit of each office area to determine if any energy efficiency improvements were implemented as a result of the awareness campaign.
- If possible, Building 90 electricity usage data will be obtained and analyzed to see if the assessment had any impact on overall usage. This data will also be made available to EETD Building 90 personnel on an on-going basis for added awareness.
- Best practices identified by the assessment team will be documented and communicated to EETD personnel.

3d. Lines of Inquiry

- Are office lights being turned off when the area is not occupied? Does the office area have automatic lighting sensors?
- Are computers and printers turned off during non-working hours?
- Is any energy inefficient equipment such as portable space heaters in use?
- Are windows being left open during non-working hours?
- Are there any temperature control issues encountered by a particular area?
- Is conference room equipment and lighting turned off when not in use?
- Is break room equipment turned off when not in use?
- Is office equipment EPA “energy star” listed?