

Environmental Energy Technologies Division

2014 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, and Personal Protective Equipment) during performance of work and providing feedback that promotes improvement in work processes and ES&H programs.

The 2014 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 refined to ensure that one or more of the EETD departments and/or EETD buildings were included in the overall scope of this 2014 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 2014 (FY14):

1. ***Assessment of EETD Laboratory Area Personal Protective Equipment Practices:*** Assess Building 62 and 70 laboratory areas to determine practices for use of personal protective equipment while handling hazardous materials. Personal protective equipment (PPE) is used as a supplement to engineering controls. PPE includes chemically resistant gloves, eyewear, footwear, lab coats, and respiratory protection. To be effective, employees must understand the proper selection, use and limitations of PPE. The ESDR and EAEI departments are primarily included in this assessment.
2. ***Assessment of EETD Chemical Management System Effectiveness:*** Assess Buildings 62, 63, 70, and 71 technical areas to determine accuracy and effectiveness of chemical inventory tracking through the use of the Chemical Management System (CMS). An accurate chemical inventory in lab areas is needed for assessment of hazards and emergency planning/response purposes. The ESDR, EAEI, and BTUS departments are all included in this assessment.
3. ***Joint Assessment of Off-Site Safety Work Practices:*** Participate in a lab-wide self-assessment project that evaluates how LBNL manages risks associated with off-site work. The ability to assess hazards and implement appropriate controls becomes more challenging at off-site locations compared to the level of institutional support available for

on-site work. Furthermore, there is no current institutional program specifically addressing issues related to off-site management of particular hazards. EETD conducts a good deal of research at off-site locations. This self-assessment will involve representatives from other divisions, including EETD.

2.2 Assessment Categories (Drivers)

2.2.1 Compliance with Institutional Requirements

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

- LBNL PUB-3000, Health and Safety Manual, Chapter 19- Personal Protective Equipment
- LBNL PUB-5341, Chemical Hygiene and Safety Plan- Personal Protective Equipment
- 10 CFR 851 requirements, such as, ANSI and OSHA standards for PPE use.

EETD will evaluate the focus area of *EETD Chemical Management System Effectiveness* for compliance with the following LBNL requirements:

- LBNL PUB-3000, Health and Safety Manual, Chapter 4.7- Chemicals
- LBNL PUB-5341, Chemical Hygiene and Safety Plan- LBNL Chemical Inventory
- LBNL PUB-5341, Chemical Hygiene and Safety Plan- Guidance for Chemical Management System Program
- LBNL PUB-5341, Chemical Hygiene and Safety Plan- Controls for Hazardous Materials
- LBNL PUB-5341, Chemical Hygiene and Safety Plan- Control Procedures for Particularly Hazardous Substances

EETD will evaluate the focus area of *Joint Assessment of Off-Site Work Practices* for compliance with the following LBNL requirements:

- LBNL Requirements and Policies Manual (RPM)- “Off-Site Work Authorization Policy”
- 10 CFR 851 requirements
- EETD “Field Work Hazard Assessment” work process

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 Personal Protective Equipment Practices

1a. Persons listed below will conduct this assessment:

- EETD Safety Manager
- EHS Division representative
- Lab area representative identified by the ESDR Dept.
- Lab area representative identified by the EAEI Dept.

1b. Assessment Frequency and Schedule:

- The assessment will begin in January 2014.
- This is a one-time assessment during 2014.
- The final self-assessment report will be completed and submitted by March 30, 2014.

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 personal protective equipment use practices.
- A team of assessors will visit each lab area and use the personal protective equipment check sheet as a guide in observing personnel using their PPE.
- The assessment team will also survey lab personnel, area safety leads, and Principal Investigators regarding PPE use practices. A web-based survey will be considered in order to cover more of the lab population.
- The assessment team will identify recommendations for improvement and best practices. These will be communicated to EETD personnel.

1d. Lines of Inquiry:

- Are personnel wearing the appropriate hand protection for the hazards observed?
- Are personnel wearing the appropriate eye/face protection for the hazards observed?
- Are personnel wearing the appropriate body protection for the hazards observed?
- Are personnel wearing the appropriate foot protection for the hazards observed?
- Is adequate personal protective equipment being made available in work areas?
- Do personnel understand how to identify and select proper personal protective equipment for the tasks they perform?
- Do personnel understand the limitations of the personal protective equipment they use?
- Is personal protective equipment adequately stored and maintained?
- Do line management and/or safety leads monitor work activities on a regular basis to ensure proper PPE is used in their lab areas?

2. Self-Assessment Focus Area: EETD Chemical Management System Effectiveness

2a. Person(s) conducting assessment

- EETD Safety Manager
- Representative from EHS Division CMS program
- Lab area representative identified by the ESDR Dept.
- Lab area representative identified by the EAEL Dept.

2b. Assessment Frequency and Schedule

- The assessment will begin April 2014.
- This is a one-time assessment during 2014.
- The final assessment report will be completed and submitted in June 30, 2014.

2c. Self-Assessment Methodology

- The assessment team will perform a chemical inventory check of selected lab areas in Buildings 62 and 70. At least six lab areas will have an inventory check to determine level of accuracy of the CMS inventory vs. actual inventory in the area. Types of inventory deficiencies will be identified (lack of bar code, bar code not entered, bar code not entered properly, bar code listed in wrong location, etc.)
- Principal Investigators and lab area safety leads will be surveyed to obtain their feedback on how they maintain their CMS chemical inventories. The survey will also be used to determine what they like and don't like about the CMS system. A web-based survey will be considered in order to cover more of the lab population.
- The assessment team will review the CMS database and determine if there are any EETD areas that need updating. Obvious issues may include: listing of owners that are no longer at LBNL, inventories for lab areas that no longer exist, lab area inventories that appear inconsistent, etc.
- The assessment team will review the CMS database and determine if there any high hazard or significant quantity chemicals listed for EETD lab areas. Principal Investigators will be contacted to identify if there are safer alternatives available.
- A list of inventory deficiencies with recommended corrective actions will be generated and communicated to EETD personnel.

2d. Lines of Inquiry

- Are all chemicals stored in the selected lab area properly identified with CMS bar codes?
- Are bar codes for all chemicals in the selected lab area entered properly into the CMS?
- Are bar codes for chemicals disposed or used up in the selected lab area deleted from the CMS inventory?
- What do CMS users in EETD perceive as benefits through the use of the CMS?
- What do CMS users in EETD believe are areas for improvement needed for the CMS?
- Is the CMS inventory for EETD accurate and reflect correct chemical owners, types of chemicals, and quantities for each area?
- Are there opportunities to reduce hazards in a lab area through elimination of substitution of a high hazard chemical?

3. Self-Assessment Focus Area: Joint Assessment of Off-Site Work Practices

3a. Person(s) conducting assessment

- EHS Division team lead
- Representatives from other interested divisions
- EETD Safety Manager (representing EETD)

3b. Assessment Frequency and Schedule

- The assessment will begin November 2013.
- This is a one-time assessment during 2014.
- The final assessment report will be completed and submitted in July 30, 2014.

3c. Self-Assessment Methodology

- The joint self-assessment team will focus on hazards associated with off-site research work. Each participating division will provide feedback on the types of off-site work being performed, associated hazards, and controls being followed. This will also serve as a benchmarking opportunity to share best practices currently being employed by each division. Based on the feedback provided, EHS Division can determine what type of institutional programs should be implemented or improved. In addition, EETD can also use this information to improve its current fieldwork hazard assessment process.

3d. Lines of Inquiry

- What is the scope of hazards associated with off-site work?
- How do divisions identify when off-site research work is being performed?
- How are hazards and controls reviewed and implemented?
- How do divisions know that controls are adequate and effective?
- What resources are available to off-site workers? Are these resources sufficient?
- What current systems does LBNL have in place that can better support off-site work? Are those systems sufficient?