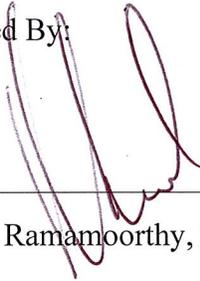


Energy Technologies Area (ETA)

2017 ES&H Self-Assessment Plan

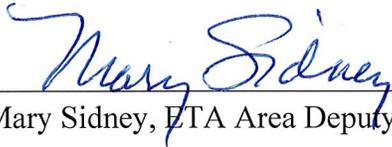
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Approved By:



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10/7/16
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1.0 Introduction

The Energy Technologies Area (ETA) 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 2017 ETA ES&H self-assessment process is a tailored, risk-based approach to assessing safety program effectiveness. Area 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 associated Divisions, and in the process, identifies findings, observations, and noteworthy practices.

2.0 2015 Self-Assessment Focus Areas

2.1 Selection of Focus Areas

A survey was conducted of Division Directors, Principal Investigators, and Safety Committee members on possible self-assessment topics. The survey included a “long list” of over 20 potential self-assessment topics. 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 ETA Divisions and/or ETA buildings were included in the overall scope of this 2017 plan.

ETA has identified the following three focus areas that will be evaluated as part of the ES&H Self-Assessment process for fiscal year 2017 (FY’17):

1. ***Assessment of ETA Work Planning and Control “Activity Manager” System Implementation by Workers:*** The “Activity Manager” Work Planning and Control (WPC) hazard analysis system has been implemented by ETA for around 18 months. All ETA personnel are now assigned to one or more work activities that were developed as part of the implementation process. A previous self-assessment was completed with a focus on Activity Leads. This self-assessment will focus on assigned workers and will determine how effective the system has been in addressing Integrated Safety Management (ISM) principles by ETA personnel in their daily work. The ESDR, EAEL, Cyclotron Road, and BTUS Divisions are included in this self-assessment.
2. ***Assessment of ETA Work Practices Involving Use of Ovens and Furnaces:*** Ovens and furnaces are used in almost every lab area operated by ETA. This type of equipment involves high temperatures and improper use can result in injuries, hazardous fumes, fires, and even explosions. This self-assessment will determine the condition of ovens and furnaces used in the lab areas, controls implemented, and maintenance/calibration practices. The ESDR, EAEL, and Cyclotron Road Divisions are included in this assessment.
3. ***Assessment of ETA Telecommuter Office Ergonomics:*** Personnel who work from home are required to obtain approval through a telecommuting agreement. Part of the approval process is ensuring that their home office is configured adequately to address any

ergonomic concerns. Improperly configured home office areas can result in ergonomic-related injuries. This self-assessment will determine the effectiveness of telecommute ergonomic evaluations and any needed improvements. The ESDR, EAEI, Cyclotron Road, and BTUS Divisions are included in this assessment.

2.2 Assessment Categories (Drivers)

2.2.1 Compliance with Institutional Requirements

1. ETA will evaluate the focus area of *Assessment of ETA Work Planning and Control “Activity Manager” System Implementation by Workers*: for compliance with the following LBNL requirements:
 - LBNL ES&H Manual, Chapter 6, “Work Planning and Control”
 - LBNL ES&H Manual, Chapter 24, “EHS Training Program”
 - Requirements and Policies Manual- “Work Alone Policy”
2. ETA will evaluate the focus area of *Assessment of ETA Work Practices Involving Use of Ovens and Furnaces*: for compliance with the following LBNL requirements:
 - LBNL ES&H Manual, Chapter 8, “Electrical Safety Program”
 - LBNL ES&H Manual, Chapter 12, “Fire Prevention and Protection”
 - LBNL ES&H Manual, Chapter 14, “Electrical Equipment Safety Program”
 - LBNL ES&H Manual, Chapter 45, “Chemical Hygiene and Safety Plan”
 - LBNL Electrical Safety Manual
3. ETA will evaluate the focus area of *Assessment of ETA Telecommuter Office Ergonomics*: for compliance with the following LBNL requirements:
 - LBNL ES&H Manual, Chapter 17, “Ergonomics”
 - Requirements and Policies Manual- “Flexible Work Options Policy”
 - “Agreement and Authorization for Telecommuting” Form
 - LBNL Ergonomic Assessment Database

2.2.2 Compliance with Established Area/Divisional Requirements

ETA will also evaluate all three-focus areas identified in Sect. 2.1 against the relevant requirements specified in the ETA Integrated Safety Management Plan. This document can be found at: <https://eta-safety.lbl.gov/content/integrated-safety-management-ism>

3.0 Assessment Frequency, Methodology, and Lines of Inquiry

Each self-assessment will be specific to the focus area being evaluated. 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, best practices, and recommendations for improvement.

1. Self-Assessment Focus Area: *Assessment of ETA Work Planning and Control “Activity Manager” System Implementation by Workers*

1a. Persons listed below will conduct this assessment:

- ETA Safety Manager
- EHS Division WPC representative

- Representatives from BTUS, EAEI, Cyclotron Road, and ESDR Divisions
- Note: This self-assessment may be combined with similar efforts by other non-ETA divisions.

1b. Assessment Frequency and Schedule:

- The assessment will begin in January 2017.
- This is a one-time assessment during FY2017.
- The final self-assessment report will be completed and submitted by April 30, 2017.

1c. Self-Assessment Methodology:

- The scope of this assessment project will include all current ETA personnel and the Work Activities they are assigned to. There are currently 130 Work Activities associated with ETA. Approximately 650 personnel are assigned to one or more of these Work Activities.
- The self-assessment team will survey ETA personnel regarding Activity Manager effectiveness. A web-based survey will be considered in order to cover more of the worker population. Roundtable in-person meetings will also be considered for selected Work Activities.
- The self-assessment team will access the Activity Manager system and review the status of each worker. The assigned work activities, authorization level, required training status, training waivers, and listed restrictions will be evaluated for accuracy. This includes those listed as “opt out” status.
- The assessment team will identify recommendations for improvement and best practices. These will be communicated to ETA personnel.

1d. Lines of Inquiry:

- Are workers assigned to the correct Work Activity? This includes those assigned as “opt out” status.
- Do the workers find Activity Manager a useful tool for Work Planning and Control?
- How often do workers normally access their assigned Work Activities?
- Do the workers understand how to access and use the Activity Manager system?
- Do workers understand the scope of work, hazards and controls listed in their Work Activities?
- Are additional ETA Work Activities needed to address work not already identified in Activity Manager?
- Are there any gaps in training requirements triggered by Activity Manager?
- Do workers feel they have received adequate On the Job (OJT) training as specified in the Work Activities?

2. Self-Assessment Focus Area: Assessment of ETA Work Practices Involving Use of Ovens and Furnaces

2a. Person(s) conducting assessment

- ETA Safety Manager
- ETA Electrical Safety Officer (ESO)
- Representative from EHS Division

- Lab Area Safety Leads

2b. Assessment Frequency and Schedule

- The assessment will begin April 2017
- This is a one-time assessment during FY2017.
- The final assessment report will be completed and submitted by June 30, 2017.

2c. Self-Assessment Methodology

- The scope of the work will include all ETA lab areas in Buildings 62, 70, and 977.
- The equipment surveyed will include ovens, furnaces, tube furnaces and other heating equipment such as heat tapes.
- The assessment team will perform a walkthrough of ETA lab areas and determine the following:
 - Types of ovens, furnaces and heat tapes used in each lab area.
 - Determination of equipment condition including electrical cords, control functions, etc. (good, poor, discontinue use)
 - Determination if equipment is listed by a Nationally Recognized Testing Laboratory (NRTL) or equivalent LBNL inspection/approval.
 - Determination of over temperature alarm and shut-off features.
 - Identification of any fire safety issues such as nearby storage of combustible materials or use of flammable liquids.
 - Determination of equipment calibration and maintenance procedures.
 - Identification of engineering controls such as exhaust ventilation or interlocks.
 - Identification of Personal Protective Equipment in use.
- Principal Investigators and lab area safety leads will be surveyed to obtain their feedback on how they use and maintain ovens/furnaces in their lab areas. A web-based survey will be considered in order to cover more of the lab population.
- The assessment team will determine if the equipment is associated with one or more approved Work Activities.
- The assessment team will identify recommendations for improvement and best practices. These will be communicated to affected ETA personnel.

2d. Lines of Inquiry

- What purpose is the oven/furnace used for?
- Is the equipment adequate for the intended work?
- Is the equipment safe to use?
- Is the oven/furnace properly maintained and calibrated?
- Do the personnel understand how to operate the equipment?
- Do personnel understand the equipment's limitations?
- Do personnel understand the hazards associated with the equipment?
- Do personnel know what to do if the equipment malfunctions or is damaged?

3. *Self-Assessment Focus Area: Assessment of ETA Telecommuter Office Ergonomics*

3a. Person(s) conducting assessment

- ETA Safety Manager

- EHS Division Ergonomist
- Representatives from BTUS, EAEL, and ESDR Divisions (Ergo Advocates)

3b. Assessment Frequency and Schedule

- The assessment will begin June 2017.
- This is a one-time assessment during FY2017.
- The final assessment report will be completed and submitted by September 30, 2017.

3c. Self-Assessment Methodology

- The scope of work will include all current ETA telecommute personnel.
- The self-assessment team will access previously approved Telecommute Agreements and compile a list of active ETA telecommute workers.
- The self-assessment team will review each approved telecommute agreement in order to determine:
 - Nature of ergonomic issues identified by the worker.
 - Status of ergonomic equipment requested.
 - Home workstation photographs submittal.
 - Adequacy of workstation set-up based on information provided.
- The self-assessment team will survey identified telecommute workers to determine if their ergonomic issues have been adequately addressed. This includes previously completed ergonomics assessments in the LBNL Ergonomics Assessment database.
- The self-assessment team will determine if the telecommute workers are assigned to the correct Work Activity that includes the “telecommute” hazard/controls.
- The self-assessment team will identify recommendations for improvement and best practices. These will be communicated to affected ETA personnel.

3d. Lines of Inquiry

- Does the telecommute worker understand how to assess their work area for ergonomic issues?
- Does the telecommute worker know where to get assistance if they need any further help in setting up their work station?
- Has the telecommute worker received the ergonomic equipment requested?
- Is the home office adequately set-up to prevent ergonomic injuries? This includes use of laptop computers.
- Are the Telecommute Agreement forms being used and completed properly?