ERNEST ORLANDO LAWRENCE
BERKELEY NATIONAL LABORATORY

Environment, Health, & Safety
Training Program

EHS 0571 QEW Electrical Safety for Batteries
Course Syllabus

Subject Category: Electrical Safety

Course Length: 2
Delivery Mode: Classroom

Course Prerequisites: EHS 0370, EHS 0538 (QEWR), EHS0540 – EHS0542 (QEW1), EHS0550 – EHS0554 (QEW2)
Medical Approval: None
Frequency: Every 3 years

Course Purpose:
This course builds upon the work covered in previous QEW training, applying ISM and specifically addressing Electrical Hazards and safety controls for Qualified Electrical Workers when working with Batteries and Battery Banks.

Course Objectives: Upon completion of the course the student should be able to:

- Implement the electrical safety requirements of LBNL ESM section 14.
- Discuss the various types of batteries in use today and be familiar with battery terms and definitions.
- Address the specific hazards associated with batteries for both normal operating and abnormal operating conditions (chemical, explosion, electrical, etc.)
- Understand how to use the Hazard Classification tables in the ESM as it pertains to batteries, including how to perform an Electrical Hazard Analysis.
- Selecting appropriate PPE and work controls, including requirements for LOTO.
- Assist non-QEW personnel.

Subject Matter Expert: Mark Scott, Stephanie Collins

Training Compliance Requirements: LBNL Electrical Safety Manual, EHS Safety Manual (formerly PUB-3000)- Chapter 8, *Electrical Safety Program,* 29CFR 1910.147, 29CFR 1910.333, NFPA 70E

Course Instructional Materials: PowerPoint presentation and video

Performance Criteria: Student must pass a written test to demonstrate their ability to use the classroom resources and prove understanding regarding when and how to conduct an electrical hazard analysis; determining the appropriate equipment, tools, metering devices and controls needed to perform work safely on battery systems in accordance with the Lab's Electrical Safety Program to receive course credit.

Web Resource: http://electricalsafety.lbl.gov/