Hazard Analysis & Work Authorization Policy and Overview

Brief

<table>
<thead>
<tr>
<th>Title:</th>
<th>Hazard Analysis &amp; Work Authorization Policy and Overview</th>
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<tr>
<td>Publication date:</td>
<td>8/31/2015</td>
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<td>7/30/2015</td>
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BRIEF

Policy Summary

Berkeley Lab's Hazard Analysis & Work Authorization Policy ensures that all work is performed in a safe manner by:

- Ensuring that work planning is performed prior to starting work
- Defining the work scope, analyzing associated hazards, and developing controls such that hazards are identified and mitigated
- Providing work authorization processes to ensure that procedures, controls, and resources are in place. These processes may include:
  - Work Planning and Control (WPC) activities in Activity Manager for work done by workers and affiliates
  - Subcontractor Job Hazards Analysis (sJHA)
  - Construction subcontractors' ES&H submittal package (Construction JHA)
  - Temporary Work Authorization (TWA)
  - Radiological Work Authorization (RWA)
  - Facility Work Authorization
- Ensuring that the process and authorizations are documented prior to starting work

Who Should Read This Policy

All Berkeley Lab employees, visitors, affiliates, and subcontractors

To Read the Full Policy, Go To:

The POLICY tab on this wiki page

To Read the ES&H Program Details, Go To:

http://www.lbl.gov/ehs/pub3000/CH06.html
http://www.lbl.gov/ehs/pub3000/CH31-quickstart.html
http://www.lbl.gov/ehs/pub3000/CH10-quickstart.html
http://www.lbl.gov/ehs/pub3000/CH21-quickstart.html

Contact Information

Work Planning and Control Subject Matter Contact
sJHA - Subcontractor Safety Assurance Program Manager
Construction Safety
Radiation Protection
Biosafety Officer
EHS Division

Policy

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A. Purpose

Lawrence Berkeley National Laboratory's (Berkeley Lab's) Hazard Analysis & Work Authorization Policy ensures that all work is performed in a safe manner by:

- Ensuring that work planning is performed prior to starting work by:
  - Defining the work scope
  - Analyzing associated hazards
  - Developing controls such that hazards are identified and mitigated
- Providing work authorization processes tailored to the type of work that ensure that controls, procedures, and resources are in place. These processes may include:
  - Work Planning and Control (WPC) activities in Activity Manager for work done by workers and affiliates
  - Subcontractor Job Hazards Analysis (sJHA)
  - Construction subcontractors' ES&H submittal package (Construction JHA)
  - Temporary Work Authorization (TWA)
  - Radiological Work Authorization (RWA)
  - Facility Work Authorization
- Ensuring that the process and authorizations are documented prior to starting work

B. Persons Affected

Berkeley Lab employees, visitors, affiliates, and subcontractors who perform work in technical areas or on construction sites

C. Exceptions

Those not performing hands-on work (i.e., those performing work tasks commonly performed by the public), who work 100% at a site not managed by the Berkeley Lab, or who work 100% of the time on the UC Berkeley Campus.

D. Policy Statement

1. Safety of all operations at Berkeley Lab is managed according to the principles outlined in the Integrated Environment, Safety, & Health Management Plan: Integrated Safety Management (ISM) System (PUB-3140). Using these principles, line management is responsible for assuring safety of its operations by identifying work hazards and developing and implementing tailored controls prior to authorizing work to proceed. The EHS Division collaborates with line management to identify hazards and controls by:
   a. Identifying appropriate safety standards and requirements
   b. Providing institutional tools, procedures, and methods to facilitate control of hazards and compliance with requirements;
   c. Providing subject-matter-expert support
2. Work authorization, a key principle in safe work planning, is a hazard review and management approval process designed to ensure that procedures, controls, and resources are in place before the work begins. All work at Berkeley Lab proceeds under authorization. Institutional authorization processes have been developed and tailored to facilitate line management authorization activities under a variety of administrative circumstances as follows:
   a. For Berkeley Lab employees and affiliates, line management authorization for routine work is granted using the Work Planning and Control (WPC) program documented in Chapter 6 of the ES&H Manual.
   b. Operations in a particular facility, under certain circumstances, may require authorization. Work Process B of the Work Planning and Control program provides general guidance on facility-based authorizations.
      i. The Temporary Work Authorization (TWA) process may be used only for laser as allowed in the Laser Safety program of the ESSH Manual.
   c. For non-construction subcontractors, the sJHA – Subcontractor Job Hazards Analysis (sJHA) program is used to ensure that all non-construction subcontractor work is performed safely and in accordance with Berkeley Lab requirements. For construction activities, Work Process C, Review Selected Subcontractors' EHS Submittal Package(s), of the Construction Safety program is used to ensure that construction subcontractors adequately evaluate hazards and implement safety controls.
   d. Radiological Work Authorization and Permit Programs are described in Section 21.6, Radiological Work Authorization and Permit Programs, of the Radiation Safety program.

E. Roles and Responsibilities

<table>
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<tr>
<th>Role</th>
<th>Responsibility</th>
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<tbody>
<tr>
<td>Employees, visitors, and affiliates</td>
<td>• Perform only work for which they are authorized and qualified</td>
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</table>
Principal investigators, managers, HR supervisors, and HR work leads

- Identify the hazards associated with the work to be performed
- Supply the controls necessary to perform the work safely
- Assure that employees under their supervision are authorized under appropriate authorization systems and receive specialized training as required by the ES&H Manual EHS Training Program (see also the EHS Training website)
- Assure that all work under their control is evaluated to determine the level of authorization required by this program, and that proper authorization is obtained before beginning work
- Assure that all work under their control is performed in compliance with the controls specified for that work
- Assure that authorizations for work under their control are reauthorized as required, including whenever work changes significantly

Project Leads, Activity Leads, and Activity Lead Designees

- Implement work and worker authorization processes as required by the ES&H Manual Work Planning and Control program. This includes defining work scopes, analyzing hazards, and assigning and authorizing workers.

Division directors

- Assure that all work spaces are evaluated at least annually for identification of hazards and implementation of controls
- Assure that all work has obtained line management, formal, or facility-based authorization, as required

Facilities Division

- Assures work by construction subcontractors is properly evaluated and authorized under construction subcontractor's ES&H submittals (Construction JHA documents)
- Prepares the appropriate NEPA/CEQA documentation

F. Definitions/Acronyms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Line management authorization</td>
<td>An authorization that is either implied from other documentation, or is explicit but administered by the responsible division doing the work. Examples include the Work Planning and Control (WPC) activities (in Activity Manager), Subcontractor Job Hazards Analysis (sJHA) for non-construction subcontractors, and Contractor JHA for construction subcontractors.</td>
</tr>
<tr>
<td>Formal authorization</td>
<td>A written document, authorized by the responsible division with EHS Division review and concurrence, that describes the scope of work, required procedures and controls, authorized materials and equipment to be used, and staff authorized to conduct the work. Examples include Radiological Work Authorizations and research involving human or animal subjects.</td>
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<tr>
<td>Facility-based authorization</td>
<td>Hazards analyses and controls are based on the facility as a whole rather than on an individual operation. Examples include Safety Analysis Documents, air and water discharge permits, and NEPA/CEQA analyses.</td>
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</table>

G. Recordkeeping Requirements

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<tr>
<th>Record</th>
<th>Database/Retention Location</th>
<th>Owner</th>
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<td>WPC Activities</td>
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<td>EHS</td>
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<td>sJHAs</td>
<td>sJHA Database</td>
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<td>RWA</td>
<td>RADAR</td>
<td>EHS</td>
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<td>TWAs</td>
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<tr>
<td>Construction JHA packages</td>
<td>Construction Project Documents</td>
<td>Facilities Division</td>
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<td>Facility-Based Authorizations</td>
<td>Maintained by the host Division</td>
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<tr>
<td>EHS Training Records</td>
<td>JHA/EHS Training Database</td>
<td>EHS</td>
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H. Implementing Documents

<table>
<thead>
<tr>
<th>Document Number</th>
<th>Title</th>
<th>Type</th>
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<tbody>
<tr>
<td>07.02.003.001</td>
<td>Work Planning and Control</td>
<td>Program</td>
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<tr>
<td>07.07.007.001</td>
<td>Construction Safety</td>
<td>Program</td>
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I. Contact Information

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sJHA - Subcontractor Safety Assurance Program Manager
Construction Safety
Radiation Protection
Biosafety Officer
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J. Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>By whom</th>
<th>Revision Description</th>
<th>Section(s) affected</th>
<th>Change Type</th>
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<tr>
<td>1/2/2012</td>
<td>0</td>
<td>J. Heim</td>
<td>Reformat for wiki (brief)</td>
<td>All</td>
<td>Minor</td>
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<td>12/18/2012</td>
<td>1</td>
<td>J. Heim</td>
<td>Reformat for wiki (policy)</td>
<td>All</td>
<td>Minor</td>
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<tr>
<td>1/14/2014</td>
<td>1.1</td>
<td>W. Wells</td>
<td>Revise as Policy Overview</td>
<td>All</td>
<td>Minor</td>
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<tr>
<td>8/31/2015</td>
<td>2</td>
<td>A. Peterson</td>
<td>Policy revised to sync with new program</td>
<td>All</td>
<td>Major</td>
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Document Information

DOCUMENT INFORMATION

Title: Hazard Analysis & Work Authorization Policy and Overview

Document number 07.02.003.000
Revision number 2
Publication date: 8/31/2015
Effective date: 7/30/2015
Next review date: 7/30/2018
Policy Area: Safe Work Authorization
RPM Section (home) Environment, Safety and Health
RPM Section (cross-reference) none
Functional Division EHS
Prior reference information (optional) PUB-3000 Chapter 6

Source Requirements Documents

- DOE Order 420.2C, Safety of Accelerator Facilities
- DOE Order 435.1, Radioactive Waste Management (only those sections/subchapters adopted into the current Contract 31 ESH Standards set)
- California Public Resources Code, Section 21000 et seq. (CEQA, California Environmental Quality Act)
- Title 19, California Code of Regulations, Section 2770.5, List of Substances
- Title 22, California Code of Regulations, Section 66260.1 et seq., California Hazardous Waste Regulations

Other Driving Requirements
- Title 42, United States Code, Section 4321 et seq. (NEPA, National Environmental Policy Act)

### Implementing Documents

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<td>07.07.018.001</td>
<td>Laser Safety</td>
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<td>07.08.001.001</td>
<td>Radiation Safety</td>
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<td>07.07.004.001</td>
<td>Biosafety</td>
<td>Program</td>
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<td>03.02.002.001</td>
<td>Research with Human and Animal Subjects</td>
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<td>07.02.004.001</td>
<td>sJHA – Subcontractor Job Hazards Analysis</td>
<td>Program</td>
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<td>07.02.004.002</td>
<td>Work Process A, sJHA Process Overview</td>
<td>Work Process</td>
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<td>07.02.004.003</td>
<td>Work Process B, Creating an sJHA</td>
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<td>Work Process C, Training and Orientation</td>
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