Machine Guarding and Shop Safety

**Title:** Machine Guarding and Shop Safety

**Publication date:** 9/10/2013

**Effective date:** 6/16/2008

**BRIEF**

**Policy Summary**

The Machine Safeguarding — Shop and Lab Machine Safety Program at Berkeley Lab assures that machine tools, power tools, machine equipment, and robotics in shops, laboratories, equipment rooms, on construction sites, and other locations are properly guarded and used safely.

- It is the responsibility of division line management to provide machine guarding and to ensure it is used to protect operators, researchers, and other employees from hazards.
- Machine tools, machine equipment, and power tools may only be operated and/or maintained by authorized personnel working in accordance with the requirements of this chapter.

**Who Should Read This Policy**

Berkeley Lab employees, visitors, affiliates, and subcontractors who could be performing work that may include the work with machine tools, power tools, machine equipment, or robots.

**To Read the Full Policy, Go To:**

The POLICY tab on this wiki page

**To Read the EH&S Program Details, Go To:**

http://www.lbl.gov/ehs/pub3000/CH25.html

**Contact Information**

Machine Guarding Subject Matter Expert  
EH&S Division  
MPWisherop@lbl.gov

**POLICY**

**A. Purpose**

The Machine Safeguarding — Shop and Lab Machine Safety Program at Lawrence Berkeley National Laboratory (Berkeley Lab) assures that machine tools, power tools, machine equipment, and robotics in shops, laboratories, equipment rooms, on construction sites, and in other locations are properly guarded and used safely.

- It is the responsibility of division line management to provide machine guarding and to ensure that it is being used to protect operators, researchers, and other employees from hazards.
- Machine tools, machine equipment, and power tools may only be operated and/or maintained by authorized personnel working in accordance with the requirements of this chapter.
B. Persons Affected

Berkeley Lab employees, visitors, affiliates, and subcontractors who could be performing work that may include the work with machine tools, power tools, machine equipment, or robots

C. Exceptions

None

D. Policy Statement

1. New or used acquired machines, machine tools, power tools, or machine equipment are required to meet the guarding requirements of OSHA 29 CFR 1910. (Work Process A)
2. Only qualified personnel are permitted to operate, maintain, adjust, or repair machines, machine tools, power tools, or machine equipment. Qualification is machine specific. Shop managers may qualify users of shop equipment through a documented training and testing program. (Work Process B)
3. Only authorized personnel are permitted to operate, maintain, adjust, or repair machine tools, power tools, or machine equipment. Authorization is through employee Job Hazards Analyses (JHAs), or SJHA, and, when in Berkeley Lab shops, the shop manager. (Work Process C)
4. Assess the hazards for the work being done. Hazards are dependent on the type of work being performed. Assess points of operations, pinch/nip points, as well as entanglement, struck by, cutting, or crushing hazards posed by the task. (Work Process D)
5. Hazards control, including guarding, Lockout/Tagout (LOTO) and personal protective equipment (PPE), are dependent on the type of work being performed. Implement controls based on the work, and comply with OSHA requirements. (Work Process E)

E. Roles and Responsibilities

Managers, supervisors, and employees have the responsibility to adhere to the provisions of this policy.

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line Management</td>
<td>• Ensures personnel know how to safely operate, maintain, adjust, and/or repair machines, machine tools, power tools, or machine equipment</td>
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<tr>
<td></td>
<td>• Enforces the use of work techniques, and maintains machines, machine tools, power tools, or machine equipment in good mechanical and operating condition</td>
</tr>
<tr>
<td>Shop Manager</td>
<td>• Controls use of the shop equipment, and limits use to qualified operators</td>
</tr>
<tr>
<td></td>
<td>• Controls the use of any keys or other mechanisms for preventing unauthorized use of shop equipment</td>
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<tr>
<td>Employees</td>
<td>• Must be appropriately trained, and demonstrate safe operation of the machinery they use, maintain, adjust, or repair</td>
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<tr>
<td></td>
<td>• Must observe all established safety regulations relating to machine safety</td>
</tr>
<tr>
<td>EH&amp;S Division Machine Guarding Subject Matter Expert</td>
<td>• Provides technical assurance of the Machine Safeguarding — Shop and Lab Machine Safety Program</td>
</tr>
</tbody>
</table>

F. Definitions/Acronyms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Machine</td>
<td>Any mechanically operated machines, machine tools, power tools, or machine equipment, including robots</td>
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</table>

G. Recordkeeping Requirements

- User (Non-Shop Staff) Training Records
- Program Effectiveness Review and Assurance

H. Implementing Documents

<table>
<thead>
<tr>
<th>Document number</th>
<th>PUB-3000 Reference</th>
<th>Title</th>
<th>Type</th>
</tr>
</thead>
</table>
I. Contact Information

Machine Guarding Subject Matter Expert
EH&S Division
MPWisherop@lbl.gov

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>9/10/2013</td>
<td>1.1</td>
<td>M. Wisherop</td>
<td>Reviewed 8/28/13, no changes</td>
<td>Publ &amp; Next Review Dates</td>
<td>Minor</td>
</tr>
<tr>
<td>1/2/2012</td>
<td>1</td>
<td>M. Wisherop</td>
<td>Rewrite for wiki</td>
<td>all</td>
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Document Information

**DOCUMENT INFORMATION**

**Title:** Machine Guarding and Shop Safety

**Document number:** 07.07.021.000

**Revision number:** 1.1

**Publication date:** 9/10/2013

**Effective date:** 6/16/2008

**Next review date:** 9/10/2013

**Policy Area:** Industrial Hygiene and Safety

**RPM Section (home):** ESH

**RPM Section (cross-reference):** none

**Functional Division:** EH&S

**Prior reference information (optional):** PUB-3000 Chapter 25

Source Requirements Documents

- 10 CFR 851.23, Safety and Health Standards
- 10 CFR 851.24, Functional Areas
- 10 CFR 851.25, Training and Information
- 10 CFR 851.26, Recordkeeping and Reporting
- 29 CFR 1910 Subpart O, Machinery and Machine Guarding

Implementing Documents

<table>
<thead>
<tr>
<th>Document number</th>
<th>PUB-3000 Reference</th>
<th>Title</th>
<th>Type</th>
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<tr>
<td>07.07.021.001</td>
<td>Chapter 25</td>
<td>Machine Safeguarding — Shop and Machine Safety</td>
<td>Program</td>
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<tr>
<td>07.07.021.002</td>
<td>Chapter 25, Work Process A</td>
<td>General Requirements</td>
<td>Work Process</td>
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<td>07.07.021.004</td>
<td>Chapter 25, Work Process C</td>
<td>Authorization and Qualification</td>
<td>Work Process</td>
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<td>07.07.021.006</td>
<td>Chapter 25, Work Process E</td>
<td>Inspection and Maintenance</td>
<td>Work Process</td>
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