BRIEF

Policy Summary

Berkeley Lab's Fall Protection Program applies to work on any walking or working surface having an unprotected side or edge above a lower level that is:

- 6 feet high or more (for construction work)
- 4 feet high or more (for nonconstruction work)

Surfaces include leading edges, roofs, tanks, manholes, unguarded machinery, aerial lifts, ladders, slopes steeper than 2:1 (horizontal to vertical), hillsides, roofs, and surfaces with open holes or skylights.

Who Should Read This Policy

Berkeley Lab employees, construction contractors, nonconstruction subcontractors, vendors, and affiliates who work on any walking or working surface having an unprotected side or edge above a lower level that is:

- 6 feet high or more (for construction work)
- 4 feet high or more (for nonconstruction work)

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/CH30/CH30.html

Contact Information

Fall Protection SME
EHSS Division

POLICY

A. Purpose

Lawrence Berkeley National Laboratory's (Berkeley Lab's) Fall Protection Program applies to work on any walking or working surface having an unprotected side or edge above a lower level that is:

- 6 feet high or more (for construction work)
- 4 feet high or more (for nonconstruction work)
Surfaces include leading edges, roofs, tanks, manholes, unguarded machinery, aerial lifts, ladders, slopes steeper than 2:1 (horizontal to vertical), hillsides, roofs, and surfaces with open holes or skylights.

B. Persons Affected

Berkeley Lab employees, construction contractors, nonconstruction subcontractors, vendors, and affiliates who work on any walking or working surface having an unprotected side or edge above a lower level that is:

- 6 feet high or more (for construction work)
- 4 feet high or more (for nonconstruction work)

C. Exceptions

Fall-protection work controls are not required under the following conditions:

1. For nonroofers only: Work on a flat or low-sloped roof (slope of less than 4 in 12) when all of the following conditions are met:
   a. All work is conducted at least 15 feet from any unprotected edge
   b. A warning line is used to denote the 15-foot distance
   c. No work activities take place between the warning line and the unprotected edge
   d. Workers follow the work rule of not going past the warning line
2. Work on scissor lifts if an engineered anchor point is not provided by the manufacturer
3. During scaffold erection and dismantling, when all of the following conditions are met:
   a. The designated Competent Person overseeing the operation has determined that active fall protection is infeasible
   b. The Competent Person has put a fall-protection plan in writing that meets the California Occupational Safety and Health Administration (Cal/OSHA) requirements found in the Construction Safety Orders, Sections 1635.1-1667
   c. The Competent Person has submitted the written fall-protection plan to Berkeley Lab Project Management for review and approval prior to commencing the operation
4. Climbing up and down ladders
5. Work from ladders higher than 6 feet and below the third rung when the user can maintain three-point contact (consisting of two feet and one hand) at all times
6. Work from platform ladders when the user can demonstrate that he or she can work safely inside the rails of the ladder

D. Policy Statement

1. At Berkeley Lab, height limits are set at:
   a. 6 feet for construction work
   b. 4 feet for nonconstruction work
2. A written fall-protection plan is required for any task requiring fall protection. For most situations, a Fall Protection Planning Matrix (FPPM) is used. An FPPM can be obtained and will be approved by the Fall Protection subject matter expert (SME).
3. Authorized Persons are Berkeley Lab employees (including affiliates and directly supervised subcontractors) who perform work tasks where the use of fall-protection equipment is required. Authorized Persons must successfully complete Berkeley Lab training course EHS2076 (Fall Protection) and be authorized by their supervisors or work leads. Only trained Authorized Persons can use fall-protection equipment.
4. New construction and installations with fall hazards must be designed to eliminate the need for fall protection.
5. Work controls are required under the following conditions:
   a. Any work task on a walking/working surface with an unprotected side or edge above height limits
   b. Any work task on an aerial lift (including a scissor lift only if an engineered anchor point is provided by the manufacturer) when working above the protection system at floor openings, unprotected perimeters above height limits, and whenever a fall above height limits could occur
   c. Any work task done by steel erectors and sheet metal installers above height limits
   d. Any use of a portable ladder when working above height limits or above the third rung (from the top of the ladder)
   e. Any use of a portable ladder when working above height limits and below the third rung when the user cannot maintain three-point contact (consisting of two feet and one hand) at all times. A written fall-protection plan is required for any task requiring fall protection. In most cases, an FPPM will be used for planning.
   f. Any use of scaffolding, including erecting and dismantling, requires a written fall protection plan to identify and control site and access issues with the scaffolding location.
6. Work controls must be used when working above height limits.
   a. Initial work controls are identified in:
      i. Individual Baseline Job Hazards Analyses (JHAs) or
      ii. Task-based JHAs
   b. Control systems to be used are:
      i. Passive systems that eliminate the need for fall protection through the application of engineering controls (such as lowering the work surface or providing barriers such as parapets that prevent contact with the leading edge) or administrative controls (such as changing a process, sequence, or procedure so that workers do not need to work at heights)
      ii. Active systems that protect the worker through fall-arrest equipment. An active fall-protection system or personal fall-arrest system (PFAS) requires the use of specialized fall-protection equipment that must be fitted to the user and worn to control fall hazards. The user is secured to an anchorage point at all times, even while moving from point to point.
iii. See the program document for special requirements covering:
1. Scaffolding
2. Steel erection
3. Tree trimming
4. Roofing and nonroof work on roofs
5. Fixed ladders
6. Confined spaces
7. First-person-up situations

### E. Roles and Responsibilities

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibility</th>
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</table>
| Authorized Persons        | • Must have a working understanding of Berkeley Lab's Fall Protection Program  
                            • Must have knowledge and training necessary to properly wear and care for fall-protection equipment and to follow all fall-protection hazard controls developed by a Competent Person  
                            • Must successfully complete Berkeley Lab course EHS0276, *Fall Protection*, (or the equivalent for subcontractors)  
                            • Must be authorized by supervision either through an employee Job Hazards Analysis (JHA); a construction JHA; or, for service contractors, through the subcontractor Job Hazards Analysis (sJHA) |
| Competent Persons         | • Must identify fall hazards of work tasks by conducting fall-hazard surveys, stopping or limiting work at the hazard site, supervising selection and use of fall-protection equipment, verifying equipment is compliant and workers are trained, participating in investigations, conducting equipment inspections, and removing damaged equipment from service  
                            • Are authorized to take prompt corrective measures to eliminate or mitigate fall hazards, and are knowledgeable in the application and use of fall-protection equipment  
                            • Must complete a training program approved by the Berkeley Lab Environment, Health, Safety, and Security (EHSS) Fall Protection Program Administrator |
| Qualified Persons         | • Supervise the design, selection, installation, and inspection of fall-protection equipment, and participate in the investigation of incidents  
                            • Have specialized training (such as a Registered Professional Engineer), extensive knowledge and experience in fall protection, and have successfully demonstrated the ability to solve problems relating to fall protection  
                            • Are responsible for designing specialized fall-protection systems and equipment, and evaluating and approving anchorage points  
                            • At Berkeley Lab, the Qualified Person is the Facilities Division Structural Engineer |
| Program Administrator     | • Develops, implements, maintains, and evaluates the Fall Protection Program, providing guidance to all others involved with the program, establishing a procedure to identify fall hazards, developing fall protection and rescue procedures, ensuring training, and participating in incident investigations  
                            • At Berkeley Lab, the Fall Protection Program Administrator is the EHSS Group Leader for Occupational Safety |

### F. Definitions/Acronyms

See [PUB-3000, Chapter 30, Fall Protection Program](#) for technical terms related to the details of this policy and its implementation.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Work Surface</td>
<td>Surfaces including leading edges, roofs, tanks, manholes, unguarded machinery, aerial lifts, ladders, slopes steeper than 2:1 (horizontal to vertical), hillsides, roofs, and surfaces with open holes or skylights</td>
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<tr>
<td>Active Fall Protection System</td>
<td>An active personal fall-restraint or personal fall-arrest system (PFAS) requires specialized fall-protection equipment that must be fitted to the user and worn to control fall hazards. The user is secured to an anchorage point at all times, even while moving from point to point.</td>
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<td>Passive Fall Protection System</td>
<td>A system used to control fall hazards by means other than the wearing of personal protective equipment (PPE). Examples are guardrails, safety nets, warning lines, etc.</td>
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Personal Fall Arrest System (PFAS)

A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a full-body harness, and a shock-absorbing connecting device that may include a lanyard, deceleration device, lifeline, or a suitable combination of these. Safety belts must not be used as part of a fall-arrest system.

G. Recordkeeping Requirements

Fall Protection Planning Matrix

H. Implementing Documents

<table>
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<th>Document Number</th>
<th>PUB-3000 Reference</th>
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<th>Type</th>
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<td>Chapter 10, Appendix A, Section A.13</td>
<td>Ladders</td>
<td>Procedure</td>
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<td>Chapter 10, Appendix A, Section A.21</td>
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I. Other References

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<td>ANSI A14.3, Ladders – Fixed – Safety Requirements</td>
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J. Contact Information

Fall Protection SME
EHSS Division

K. Revision History

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<th>Revision Description</th>
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<td>M. Wisherop</td>
<td>Re-write for RPM wiki (brief)</td>
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<tr>
<td>9/10/2013</td>
<td>1.1</td>
<td>M. Rice</td>
<td>Reviewed 8/28/13</td>
<td>SRD, Next Review Date</td>
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Document Information

DOCUMENT INFORMATION
Title: Fall Protection Hazard Assessment and Control

Document number: 07.07.014.000
Revision number: 1.1
Publication date: 9/10/2013
Effective date: 4/29/2010
Next review date: 9/10/2016
Policy Area: Industrial Hygiene and Safety
RPM Section (home): ESH
RPM Section (cross-reference): none
Functional Division: EHSS

Source Requirements Documents

- 10 CFR 851, Worker Safety and Health Program
- 29 CFR 1910, Occupational Safety and Health Standards for General Industry
- 29 CFR 1910.25, Portable Wood Ladders
- 29 CFR 1910.26, Portable Metal Ladders
- 29 CFR 1910.27, Fixed Ladders
- 29 CFR 1910.28, Safety Requirements for Scaffolding
- 29 CFR 1910.29, Manually Propelled Mobile Ladder Stands and Scaffolds (Towers)
- 29 CFR 1926 Safety and Health Regulations for Construction
- 29 CFR 1926.104, Safety Belts, Lifelines, and Lanyards
- 29 CFR 1926.105, Safety Nets
- 29 CFR 1926 Subpart L, Scaffolds
- 29 CFR 1926 Subpart M, Fall Protection
- 29 CFR 1926.760, Fall Protection — Steel Erection
- 29 CFR 1926 Subpart X, Ladders

Other Driving Requirements

- Title 8 CCR, Div. 1, Chapter 4, Subchapter 4, Construction Safety Orders (for all construction safety unless 29 CFR 1926 is more strict) (Cal/OSHA Standard)
  - Article 21, Scaffolds — General Requirements (Sections 1635.1–1637)
  - Article 22, Scaffolds — Various Types (Sections 1640–1655)
  - Article 23, Suspended Scaffolds (Sections 1658–1667)
  - Article 24, Fall Protection (Sections 1669–1672)
  - Article 25, Ladders (Sections 1675–1678)

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