

## Safe Use of Portable Ladders

EHS Compliance Manual, EHS-904, Rev. 1

Effective Date: 02/02/2015

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### 1 Purpose

Establish the process for using and maintaining portable ladders.

### 2 Scope

This procedure applies to all NCI at Frederick activities and all work conducted by Leidos Biomedical Research, Inc. and its subcontractors at all facilities, to include leased facilities.

### 3 Work Process

#### 3.1 Introduction

No introduction required.

#### 3.2 Procedure

The steps below are mandatory unless noted otherwise.

Step	Job Role	Action
1	Employee	<p>Before each use, visually inspect ladders per Appendix A and take one of the following actions:</p> <ul style="list-style-type: none"> <li>Report damage or deficiencies to the line supervisor and tag the equipment out of service so that the deficient ladder can be disposed or maintained (includes cleaning and replacement of worn or frayed rope with like kind, tolerances, and composition as manufactured).</li> </ul> <p><b>Note:</b> Because of the complexity and unreliability of repairing portable ladders, they may not be repaired.</p> <ul style="list-style-type: none"> <li>Check that the sticker indicating allowable load is in place and legible.</li> <li>Use the ladder, following the criteria in Appendix B.</li> </ul>
2	Supervisor	<p>2.1 If a ladder is found to be unsafe, cut it (or have it cut) into small sections and then dispose of it.</p> <p>2.2 Approve precautions taken to permit emergency work from a ladder in adverse weather conditions.</p>

### 4 Records Created by Work Process

The records listed below must be retained as indicated.

Description of Record (include form number if applicable)	Custodian	Indexing Method, Storage Medium	Federal Retention Requirement
none			

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### 5 Related Documents

The following documents provide background information relevant to the subject of this procedure.

- American National Standards Institute, *Ladders – Wood Safety requirements*, ANSI A14.1, 2007.
- American National Standards Institute, *Ladders – Portable Metal – Safety Requirements*, ANSI A14.2, 2007.
- American National Standards Institute, *Ladders – Portable Reinforced Plastic – Safety Requirements*, ANSI A14.5, 2007.
- American National Standards Institute, *Mobile Ladder Stands and Mobile Ladder Stand Platforms*, ANSI A14.7, 2006.
- [CFR Title 29, Part 1910.25, Portable Wood Ladders.](#)
- [CFR Title 29 Part 1910.26, Portable Metal Ladders.](#)
- [CFR Title 29 Part 1910.29, Manually Propelled Mobile Ladder Stands and Scaffolds \(Towers\).](#)

### 6 Definitions

Term	Definition and Source
none	

### 7 About this Procedure

Issuing organization:	EHS
Final approver:	Terri Bray
Subject matter expert:	Greg Ragan
Review cycle (months):	36
Date last revised:	2/2/15
Date last reviewed:	2/2/15

### 8 Summary of Changes in This Version

The following changes were made in this version:

- Specify that ladder usage >20 feet requires an EHS-approved fall protection plan.
  - Allow certain metal ladders to be used as part of a procedure approved by EHS on a case by case basis.
  - If the work only necessitates one climb from a portable ladder <20 feet high, the top of the ladder does not need to be secured.
  - An implementation period of approximately 90 days established to allow for replacement of worn safety stickers on existing ladders.
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### Appendix A: Use of Portable Ladders

Before use, check the condition of the portable ladder using the criteria listed below. If any of the criteria are met, do not use the ladder and remove it from service.

#### General

- Loose steps or rungs (loose if can be moved by hand or foot pressure)
- Loose nails, screws, bolts, joints, or other materials
- Cracked, split, decaying, or broken uprights, braces, steps, or rungs
- Splinters on uprights, rungs, or steps
- Rungs/steps missing
- Grease, oil, or slippery materials
- Movable parts do not operate freely
- Damaged or worn non-slip bases

#### Stepladders

- Wobbly
- Exceeds 20 feet in length
- Loose or bent hinge spreaders
- Broken stop on hinge spreaders
- Sharp edges on spreaders
- Loose hinges

#### Extension Ladders

- Loose, broken, or missing extension locks
  - Defective locks that do not seat properly when ladder is extended
  - Frayed or worn rope
  - Single section ladders exceeds 30 feet in length
  - Two-section (or more) extension ladders exceeds 60 feet in length.
  - Ladders used for heights >20 feet require an EHS approved fall protection plan
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### Appendix B: Use of Portable Ladders

Employees must follow the requirements below in the use of portable ladders:

1. Inspect ladders immediately after a ladder is tipped over, or after any occurrence that could affect safe use.
2. Use only portable ladders (extension, straight, and A-frame) made of a nonconductive material (wood, fiberglass, or resin).

**Note 1:** Because of their electrical conductivity, portable metal ladders are prohibited (unless the procedure is approved by EHS on a case-by-case basis).

**Note 2:** Rolling metal ladders/stairs or rolling metal platforms are allowed, but only if they carry an appropriate warning sign clearly indicating that they must not be used when the employee would be exposed to a potential electrical hazard and if they meet the requirements of the ANSI Standard 14.7 for *Mobile Ladder Stands and Platforms*.

3. Exercise caution when working near power lines, regardless of the material used for ladders. Do not come closer than 10 feet minimum distance from a 50 kV or less power line or 10 feet plus 0.4 inches for each additional 1 kV over 50 kV.
4. Do not work from a ladder in high wind or when the ladder is covered with ice or snow, except in extreme emergency when appropriate precautions are taken and the line supervisor has approved these precautions.
5. When ascending or descending the ladder, face the ladder and maintain three points of contact with it at all times.
6. Do not hand-carry tools or any other items up or down a ladder; carry them in pouches attached to the torso, or raise and lower them by a hand line.
7. Allow only one person on a ladder at a time unless the ladder is otherwise designed or approved by the manufacturer for more than one person and this fact is stated in writing on the ladder.
8. Do not exceed the rated capacity of a ladder. The rated capacity is printed on safety stickers applied to the ladder. When determining the capacity needed, consider the weight of the worker, weight of tools, and weight of anything that may be supported by the worker or the ladder. If the safety sticker is damaged or unreadable, the ladder manufacturer can supply new safety stickers. The ladder shall not be used until a new sticker is affixed.

**Note:** This procedure is being implemented for the first time, and as such, there are numerous ladders that have worn stickers that are in the process of being replaced. An implementation period ending April 30, 2015 is in effect for the safety sticker requirement. Beginning May 1, 2015, the ladder shall not be used until a new sticker is affixed.

9. When working from a ladder:
    - Keep both feet firmly planted on the same rung or step, with feet up against the inside of the side rails.
    - Do not over reach (do not let your belt buckle extend past the side rails).
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10. Secure extension and straight ladders in place (top and bottom). If the work only necessitates one climb, the top of the ladder (<20 feet) does not need to be secured. Extend the top of the ladder three feet above the working surface (unless the usage does not require leaving the ladder and extending that far creates more hazard or is not physically allowed i.e. a gutter system on a roof edge or interfering surface. EHS will approve on a case by case basis).  
**Note:** A second person may secure the ladder (<20 feet while you ascend the ladder to secure the top of the ladder.)
  11. Contact EHS at 301-846-1451 when an extension or straight ladder cannot be secured at the top, or extended above the working surface.  
  
**Note:** An employee holding the bottom of the ladder is not an acceptable alternative to securing the top of the ladder.
  12. Do not use stepladders in the folded position. Open and lock the spreaders, with all four feet placed on a flat, level surface. Do not stand on either of the top two rungs. Do not sit on the top step or straddle the ladder.
  13. Under normal conditions, fall protection is not required when you are working on or from a portable ladder. However, fall protection is required when working on or from a portable ladder that is near a leading edge without a handrail, or the overall height of the climb is over 20 feet (contact EHS for a fall protection assessment).
  14. When you are using a portable ladder near a leading edge where a handrail is present, fall protection is not required as long as the ladder is safely placed at a distance from the handrail that is equal to the height of the rung of the ladder the worker is standing on, in addition to the full height of the worker (e.g., if the worker is standing two feet up on the ladder and the worker is 5'10" tall, the ladder must be safely placed 7'10" away from the guardrail).
  15. Do not paint wood ladders except for identifying marks. Wood ladders may be coated with a clear varnish or shellac or other type of clear preservative.
  16. When working in common or high traffic areas, set up cones or barriers to mark off the area. If setting up behind a door, prop the door and use a barrier, or post a spotter.
  17. Ensure ladders are set at a 4:1 Ratio. Place the base of the ladder 1 foot away from the support for every 4 feet of working length of the ladder.
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