

Flat Roof Access

EHS Procedure EHS-902, Rev. 0

Effective Date: 1/1/2015

1.0 PURPOSE

Establish the process for accessing flat roofs of buildings for operations, maintenance, and construction work activities where an OSHA-compliant guard rail system is not installed.

2.0 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.

3.0 PROCEDURE

This procedure is used when an individual requires access to a flat roof on an NCI at Frederick facility that is not fully equipped with an OSHA-compliant guardrail. Access to these locations is needed to perform inspection, repairs, or other related activities.

| Step | Job Role | Action |
|------|--|---|
| 1 | Individual from EHS assigned to the manage roof access process | Develop and maintain this procedure for accessing flat roofs. |
| 2 | EHS Safety Staff | Post and maintain a list of access requirements, illustrated in the sample posting in Appendix A, by all doors, ladders, and hatches that provide access to the roof. Provide training and authorization to FME staff that have been designated as approval authorities for granting roof access. |
| 3 | Personnel with need to access a flat roof | When roof access is needed, request approval from the FME designated approver or EHS safety staff, or the building maintenance foreman or designee, to access the roof. |
| 4 | FME designated approver or EHS safety staff | Direct the employee requesting roof access to review a copy of the process posted at access points. After the employee has reviewed and understands the process for accessing flat roofs, grant approval for the employee to access the roof and provide a copy of the approval form to the employee (Appendix B). Approval may be granted for a period of time, not to exceed one year. Forward a copy of the approval form to EHS@mail.nih.gov. |

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| Step | Job Role | Action |
|------|------------------------------------|--|
| 5 | Employee assigned work on the roof | <p>After reviewing a copy of the posting located at the roof access points and receiving approval, conduct work in accordance with the following:</p> <ul style="list-style-type: none">• When working on or crossing a roof, stay a minimum 6 feet away from the edge of the roof or any openings in the roof.• If at any time your work requires that you approach closer than 6 feet to any unprotected leading edge of the roof or any unprotected opening in the roof, properly use fall protection equipment (full body harness, approved anchor point, lanyards, etc.) in accordance with NCI at Frederick policies and procedures. <p>Note: Failure to adhere to these requirements will result in disciplinary action.</p> |

4.0 RECORDS

| Description of Record (include form number if applicable) | Custodian | Storage Medium |
|---|-----------|----------------|
| None | | |

5.0 RELATED DOCUMENTS

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

- [CFR Title 29 Part 1910.66](#) App C – Personal Fall Arrest System.
- [CFR Title 29 Part 1926 Subpart M](#) – Fall Protection.
- DOE Letter of Interpretation D11-11-001 (Fall protection requirements for operations and maintenance activities on flat roofs) (See Appendix C)

6.0 DEFINITIONS

| Term | Definition |
|------|------------|
| none | |

7.0 ABOUT THIS PROCEDURE

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

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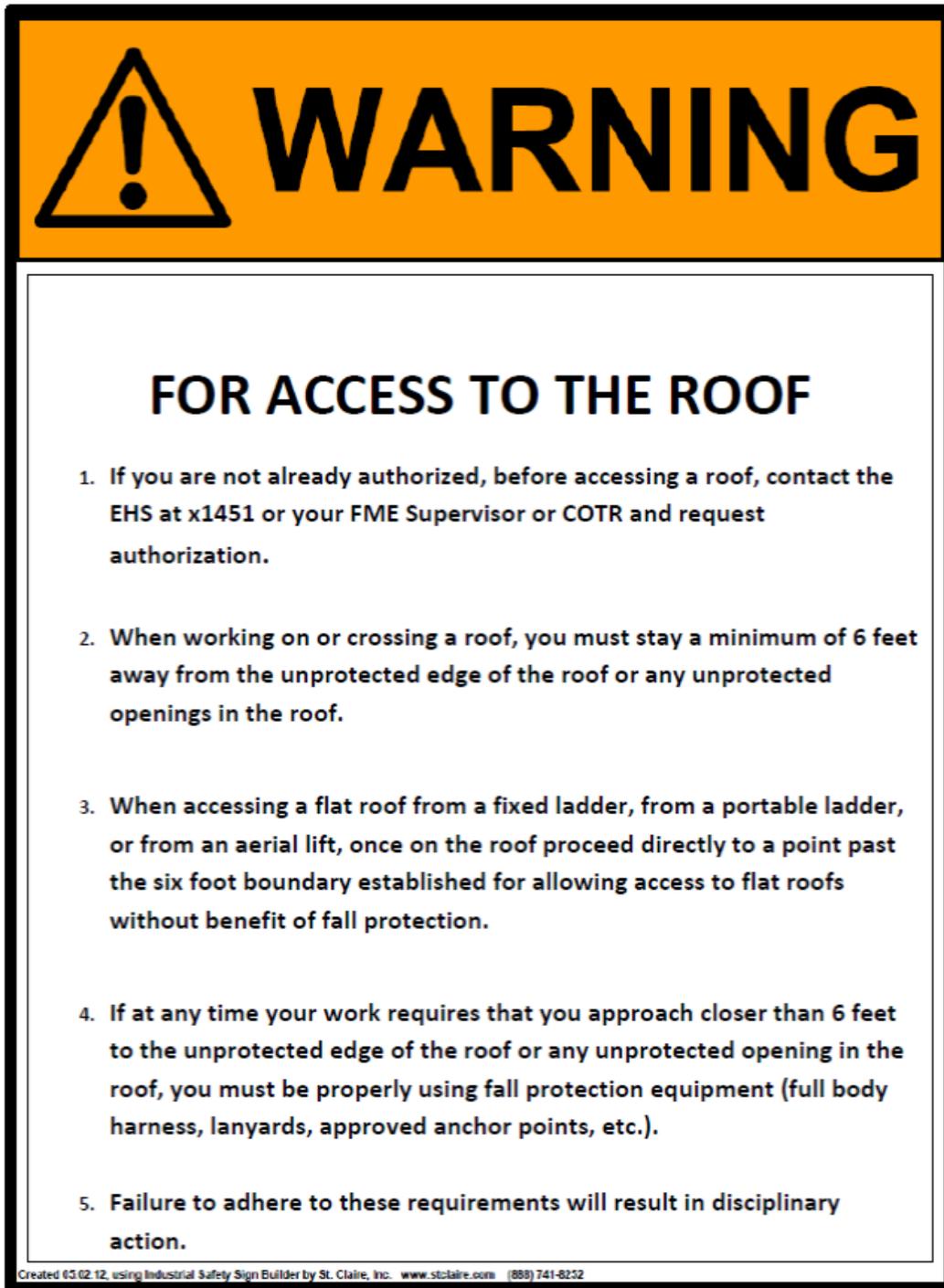
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8.0 SUMMARY OF CHANGES IN THIS VERSION

None. Initial issue.

APPENDIX A: Sample Posting for Roof Access Points



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APPENDIX B: Flat Roof Access Authorization Form

Date:

Authorization dates (not to exceed 1 year):

Access Authorized by: _____
Print Name Signature

| Name (Please Print) | Employee # | Organization | Phone | Signature acknowledging that you have read and understand the requirements for accessing a flat roof without a guardrail |
|------------------------|------------|--------------|-------|--|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
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| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |

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APPENDIX C: Department of Energy Letter of Interpretation D11-11-001

Note: While this letter of interpretation does not apply to NIH facilities, it is used as a reference as a reasonable approach to managing access to flat roofs without guardrail systems as DOE has regulatory authority granted to them in a manner like OSHA.

RECORD ID D11-11-001

STANDARD NUMBER 29 CFR 1910.23

INFORMATION DATE 11-28-2011

SUBJECT Fall protection requirements for operations and maintenance activities on flat roofs.

DISCLAIMER

The information contained in this response is a technical clarification to a DOE Rule or Directive and should only be applied to the specific conditions described in this response. These responses represent the best available technical knowledge available from the Department's subject matter experts and are NOT binding upon the DOE. These responses DO NOT represent approval of a variance, exemption, or equivalence for any requirements. Requests for exemptions or equivalences for Directives requirements must follow the procedures in DOE O 251.1C. Interpretive rulings, that are binding on DOE, may only be made the Office of General Counsel.

QUESTION

There has been an increase in questions regarding safe access to large-area flat roofs at SRS. Though not specifically addressed by 29 Code of Federal Regulations (CFR) 1910, Subpart D, Savannah River Nuclear Solutions (SRNS) is trying to ensure our employees are safe when they access the roof to perform maintenance and operations activities on roof-mounted equipment. These activities include equipment gauge readings, checking steam traps, changing HVAC filters, and general preventive maintenance. For the purpose of this question, all such services are appropriately classified as work subject to 29 CFR 1910 and not 29 CFR 1926 (these are not construction activities addressed by Subpart M of OSHA's construction safety standards).

Not all of our roof areas have full guardrails around the roof edge. We have signs at the access points to control access. The Facility Administrator or Shift Manager determines if the person requesting access to the roof is allowed to ascend, based on the need (scope of the work), and current facility and weather conditions. If access is approved, a pre-job brief emphasizes the need to adhere to applicable procedures for access of the roof in question (e.g., staying on walking pads). We have not had any potential fall issues while using this system of administrative controls.

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Some people think placing warning lines across the roof to the various locations that need to be accessed is required to comply with a letter of interpretation by OSHA addressing construction activities other than roofing upon the roof's surface. I believe placing the warning lines would create other potential hazards such as flying debris, as the stanchions could not be secured to the roof without creating a source for possible roof leaks. Also, the installation and maintenance of these warning lines could actually cause employee exposure to fall hazards that would otherwise have not existed.

Is the use of administrative controls as described above (clearly marked walkways away from the roof's edge, along with appropriate briefings) an acceptable method to prevent employee exposure to fall hazards at the roof edge?

REGULATORY REVIEW

OSHA has interpreted 29 CFR 1910.23

(http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=19578, accessed December 5, 2011) to require "perimeter protection or fall protection for all employees exposed to hazardous falls from height, such as from roofs." This interpretation is ambiguous in that it (and the standard upon which it is based) does not specifically stipulate that a fall hazard no longer exists for an employee maintaining a safe distance from the roof edge. However, a reasonable reading of this interpretation leads to the conclusion that a violation does not exist if exposure to hazardous falls from height does not exist. Hence, a system of administrative controls that effectively keeps employees a safe distance from the roof edge and unexposed to fall hazards (e.g., marked walkways and relevant training) is a satisfactory means to ensure their safety while performing maintenance activities upon roof-mounted equipment which is located far enough from the roof edge that work upon them does not reasonably constitute a fall hazard. However, if the equipment is located close enough to the roof edge that work upon it will expose employees to fall hazards, a more positive means of fall protection is required. Similarly, appropriate fall protection measures are essential while accessing the roof surface and while traversing the distance between the roof edge and a point on the roof where a fall hazard can be reasonably determined to no longer exist. Potential fall hazards for work must be fully analyzed (per 10 CFR 851.21) and appropriate hierarchy of controls (per 10 CFR 851.22) developed through a rigorous work planning and control process and implemented in work instructions as required by the DOE approved contractor Integrated Safety Management System and/or Worker Safety and Health Program.