

Brookhaven National Laboratory/ Photon Sciences Directorate			
Subject:	FALL PROTECTION AND ELEVATED WORK		
Number:	PS-ESH-PRM-1.8.0	Revision:	1
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Prepared By: R. Chmiel		Approved By: A. Ackerman	
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*Approval signatures on file with master copy.

1.0.0 INTRODUCTION

The policy of the Photon Sciences Directorate is to protect its staff, users, and contractors from falls off elevated walking/working surfaces. This is accomplished by providing a standard rail system (e.g., a guardrail) on **normally accessed** walking/working surfaces that are 4 or more feet above the adjacent floor or ground level. There exist many **infrequently accessed** elevated walking/working surfaces (e.g., hutch roofs, X-Ray tunnel roof, booster shielding, magnets, etc.) throughout the Photon Sciences Directorate Facilities that have no rail system. Working on these surfaces will require other means to prevent exposure to unprotected edges that create fall hazards.

2.0.0 SCOPE: The [BNL SBMS Fall Protection Subject Area](#) is the primary guidance for fall protection concerns at BNL. This Photon Sciences document sets forth the responsibilities and some specific elements of the Photon Sciences fall protection policy not referenced in the Subject Area. .

3.0.0 RESPONSIBILITIES

3.1.0 *PS ESH Manager* is responsible for ensuring implementation of this procedure.

3.2.0 *PS ESH Staff* is responsible to assist workers in proper implementation of the BNL SBMS Fall Protection Subject Area requirements.

3.3.0 *PS Users, staff and contractors* must comply with the requirements set forth in this PRM and the [BNL SBMS Fall Protection Subject Area](#). As such, all workers and supervisors must ensure that work on unprotected surfaces greater than four feet above an adjacent surface are evaluated and protected as determined by safety review prior to start of the work. These evaluations will be conducted as part of the PS work-planning program.

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4.0.0 ELEVATED AREA REQUIREMENTS

4.1.0 All work on an unprotected surface greater than four feet above an adjacent surface must be evaluated by a “competent” ESH person as required in the [BNL SBMS Fall Protection Subject Area](#). In many cases, a practical solution can be established by installation of a temporary guardrail system or by working from a ladder, scaffold, or man lift. In some cases, with the approval of the ESH person, existing barriers such as cable trays or ductwork may be deemed to constitute an adequate guardrail. If these solutions are not possible, a fall restraint system or positioning device with a full body harness will be considered.

4.2.0 Fall Arrest System - If it is not possible to use the above-mentioned equipment, then the worker shall be protected by a personal fall arrest system, preferably a self-retracting lifeline. Self-retracting lifelines significantly limit the free fall distance, thus lowering the risk of trauma to the worker in the event of a fall. If a fall arrest system is used, the following conditions must be adhered to:

- 4.2.1** Training: BNL fall protection training (GE-FALLPROTECT) must be completed before working on an elevated surface while wearing a fall arrest system.
- 4.2.2** The work location shall be evaluated for adequate attachment points.
- 4.2.3** Once an area has been evaluated, a record of the evaluation shall be recorded in the NSLS Fall Protection database that is located on the ES&H server. Subsequent accesses to the same area shall comply with the initial evaluation, unless conditions have changed that present additional or modified hazards.
- 4.2.4** While using a fall arrest system a second person (safety watch) must observe the work from the lower level so that he/she can call for help in case of an emergency.
- 4.2.5** Personal fall arrest systems and components subjected to impact loading, e.g. a fall, shall be removed from service and shall not be used again for employee protection until inspected and determined by a competent person (the manufacturer) to be undamaged and suitable for reuse.
- 4.2.6** If the installation of the fall arrest system creates a greater hazard than performing the work, other solutions will be developed with the guidance of a competent person.
- 4.2.7** Body harnesses, lanyards, beam clamps, and self-retracting lifelines are available to be borrowed by properly trained personnel. This equipment is located in room 1-150.

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4.3.0 NSLS Roof Requirements - While working on the NSLS roof, the following conditions apply:

- All non-routine work must be formally screened for work planning.
- All work on NSLS roofs must comply with the [BNL SBMS Fall Protection Subject Area](#).

4.4.0 Portable Ladder work

Refer to the BNL SBMS Walking Working Surfaces Subject Area found here:

[Walking and Working Surfaces -- 4. Using Portable Ladders](#)

In addition, Type III ladders are **not** permitted to be used at PS facilities.

4.5.0 Aerial Lifts

An aerial lift is a type of hydraulic platform or man lift designed to hoist personnel vertically to access elevated work. Due to the hazards involved in working from these lifts, the following requirements must be met:

1. Only operators authorized by Photon Sciences (complete Job Training Assessment [GE-80] and appropriate practical for equipment being used) and trained in the safe operation of aerial lifts shall be permitted to use such equipment.
2. Scissor lift operators shall perform the pre-use inspection check list ([Attachment 1](#)) each day prior to use to determine that the lift is in a safe working condition.
3. The surrounding area shall be inspected to ensure the area is level, there are no holes, bumps, power cords or overhead hazards such as power lines and that workers will not get caught between the platform edge and a roof joist or beam.
4. No belting off to an adjacent pole, structure, or equipment or leaving the floor of the working platform is permitted (e.g. standing on rails or exiting the basket in a raised position) while working from an aerial lift.
5. Workers shall always stand firmly on the floor of the platform and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices while working in the lift.
6. An aerial lift shall not be used on an incline without prior ESH approval.
7. An aerial lift shall not be moved when the basket is elevated in a working position with workers in the platform.
8. The capacity of the platform shall not be exceeded.

[Attachment 1 – Pre-Use Scissor Lift Inspection Check List](#)

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PHOTON SCIENCES DIRECTORATE REVISION LOG

Document Number:	PS-ESH-PRM-1.8.0	Review Frequency
Subject:	FALL PROTECTION AND ELEVATED WORK	3 Years
Review signatures on file with master copy of controlled document		
Rev	Description	Date
1	Original document. Revised from LS-ESH-PRM-1.8.0 rev. 3. Newly numbered procedure to reflect Photon Sciences Directorate, as well as to remove items covered by the BNL SBMS Fall Protection Subject Area. Added additional section on Aerial Lifts with Pre-use Scissor Lift Inspection Check List.	03/20/12