

# FALL PROTECTION

## 1.0 Purpose

This procedure establishes minimum requirements for eliminating fall hazards through application of proper guarding policies and equipment, and for the use of personal fall arrest systems when fall hazards cannot be controlled.

## 2.0 Scope

2.1 This procedure is applicable to all International Paper - Franklin Mill employees (including Fiber Recycling Plant and Sheet Converting) and employees of contractors performing work at this location.

2.2 Fall protection requirements associated with work from scaffolds are specified in the Mill Multi-Level Work Standard.

2.3 This procedure does not apply to positioning belts (see section 4.10).

## 3.0 Responsibilities

Affected personnel are responsible for complying with this procedure.

## 4.0 Definitions

4.1 **Body Harness** - A design of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it, to other components of a personal fall arrest system.

4.2 **Connector** - A device which is used to couple (connect) parts of the system together. It may be an independent component of the system (such as a carabiner), or an integral component of part of the system (such as a buckle or D-ring sewn into a body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).

4.3 **Fixed Fall Protection** - Standard railings, partitions, walls, pipework, structural steel or other structures that would, because of their construction and location, prevent a person from falling from an elevation.

4.4 **Floor Hole** - Any opening in any floor, platform, or pavement that measure less than 12 inches but more than 1 inch in its least dimension.

4.5 **Floor Opening** - Any opening in any floor, platform, or pavement measuring 12 inches or more in its least dimension through which persons may fall.

4.6 **Lanyard** - A flexible line of rope or nylon strap which is used to secure the body harness to a deceleration device, lifeline, or anchorage. The lanyard should be of the shock absorbing type with double locking hooks.

4.7 **Lifeline** - A component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

4.8 **NCG** – “Non Condensable Sulfur Gases” – A mixture of hydrogen sulfide, methyl mercaptan, dimethyl sulfide, dimethyl disulfide and several organic compounds emitted from pulping operations.

4.9 **Personal Fall Arrest System** - A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

4.10 **Positioning Belt** - A waist belt designed to restrain a person in a work position with no potential for free fall.

4.11 **Rope Grab** - A deceleration device which travels on a lifeline and automatically frictionally engages the lifeline and locks so as to arrest the fall of an employee.

4.12 **Standard Railing** - A vertical barrier erected along exposed edges of a floor opening, wall opening, ramp, stairs, platform, or runway to prevent falls of personnel.

4.13 **Standard Toeboard** - A vertical barrier at floor level erected along exposed edges of floor openings, platforms, or ramps to prevent falls of materials.

## 5.0 References

5.1 VOSHA 1910.21-.23 - Walking, Working Surfaces

5.2 VOSHA 1910.66, Appendix C - Personal Fall Arrest System

5.3 VOSHA 1926.502, Appendix C - Personal Fall Arrest Systems

5.4 ANSI A10.14-1975 - Requirements for Safety Belts, Harnesses, Lanyards, Lifelines, and Drop Lines for Construction and Industrial Use

5.5 NFPA #1983 - Fire Service Life Safety Rope, Harnesses, and Hardware

5.6 Franklin Mill “Multi-Level Work Standard”

5.7 Franklin Mill “Barricade Procedure”

## 6.0 Procedures

6.1 Fall Hazard Prevention

6.1.1 Guarding Requirements and Equipment

6.1.1.1 The following openings shall be appropriately protected:

6.1.1.1.1 Every stairway floor opening shall be guarded by a standard railing on all exposed sides.

6.1.1.1.2 Every ladderway floor opening or platform shall be guarded by standard railings and toeboards on all exposed sides.

6.1.1.1.3 Every wall opening from which there is a drop of more than four feet shall be guarded by a railing, halfdoor, or equivalent barrier.

6.1.1.1.4 Every open-sided floor or platform 4 feet or more above an adjacent floor or ground level shall be guarded by a standard railing on all open sides.

6.1.1.1.5 Every manhole floor opening shall be guarded by a standard manhole cover which need not be hinged in place. When open or uncovered, every manhole floor opening or temporary floor opening shall be guarded by a standard railing, or the manhole opening shall be constantly attended by someone.

6.1.1.2 Regardless of height, all walking surfaces (e.g. open sided floors, wall openings, walkways, platforms, runways, or ground level surfaces) above or adjacent to dangerous equipment, open pits and tanks containing hazardous substances (e.g. sewer distribution boxes), and similar hazardous arrangements shall be guarded with a standard railing and toeboard.

6.1.1.3 Temporary barricades of wood, or yellow or red barricade tape, may be used to warn against fall hazards on floor levels or open pits, sumps, holes, valve boxes, open trenches, and ditches less than 4 feet deep. Standard signs (International Paper Storeroom No. 95728) designating the nature of the hazard shall be posted on all sides of the barricaded area.

6.1.1.4 Covers shall be provided to protect personnel from the hazards of open pits, tanks, vats, or ditches when standard railings or temporary barricades are not provided.

6.1.1.5 Toeboards shall be provided with railings wherever, beneath the open sides, persons can pass, there is moving machinery, or there is equipment onto which falling materials could create a hazard.

6.1.1.6 When the type of work being performed on the platform could result in material falling through the handrails onto personnel below, consideration should be given to providing a meshed screen between the toeboards and top handrail.

6.1.1.7 Every flight of stairs having four or more risers shall be equipped with standard stair railings on both sides of the stairs. Railings should be grasped by employees to prevent slips and falls when using stairs.

6.1.1.8 Handrails shall not be sat on or used as support for work platforms.

## 6.1.2 Construction Specifications

6.1.2.1 A standard railing shall consist of a top rail 42 inches above the floor surface with one intermediate rail. A stair railing of similar design shall not be more than 34 inches above the nose of the stair tread. The structure shall be capable of withstanding a load of at least 200 pounds applied in any direction at any point on the top rail.

6.1.2.2 For elevated platforms in the designated NCG areas (D, E, F, G evaporators and TRS fans at #6 power boiler) and where there are inclined (greater than 5 degree slope) exterior walking/working surfaces subject to the accumulation of ice and snow, the standard railing shall consist of a top rail 42 inches above the floor surface with two intermediate rails approximately 12 inches apart and 14 inches below the top rail. The Loss Prevention Department shall be contacted if questions arise regarding the application of this paragraph.

6.1.2.3 For wood railings, the posts shall be of at least 2" x 4" stock spaced not to exceed 6 feet. For pipe railings, posts and top and intermediate railings shall be at least 1.5 inches nominal diameter with posts spaced not more than 8 feet on centers.

6.1.2.4 A toeboard shall be 4 inches in height from its top edge to the level of the floor with not more than 1/4 inch clearance above floor level. It can be made of any substantial material either solid or with openings not over one inch in greatest dimension.

6.1.2.5 Floor opening covers may be of any material that meets the strength requirements. Floor opening covers may not project more than one inch above the floor unless the cover is barricaded.

6.1.2.6 A floor opening cover shall be marked "Floor cover - do not remove."

6.1.2.7 When barricade tape is used, it shall be a minimum of 36 inches above floor level and at least 36 inches from the edge of the opening or excavation.

6.1.2.8 Barricade tape is not to be used for anything other than its intended use (e.g., rigging, securing material, tying electric cords, etc.).

6.1.2.9 In addition to barricades, flashing yellow lights shall be used at night around excavations subject to vehicle traffic.

## 6.2 Personal Fall Arrest System Procedure

### 6.2.1 Use

6.2.1.1 Any work from heights of six (6) feet or more where there is no fixed fall protection shall require the use of a personal fall arrest system. This includes work from (including but not limited to) elevated platforms, aerial manlifts, bosun chairs, tanks, fixed and portable ladders, and work within 6 feet of the edge of a flat roof.

**NOTE:** Fall protection (full body harness, lanyard, anchorage) is required for articulating boom manlifts. Fall protection is NOT required for scissors lifts when the center of gravity of the occupants remain within the footprint of the lift.

6.2.1.2 Regardless of height, body harnesses shall be used in conditions specified in section 6.1.1.2 where standard railings have not been provided on walking working surfaces above or adjacent to dangerous equipment, open pits and tanks containing hazardous substances (e.g. sewer distribution boxes) and similar hazardous arrangements.

6.2.1.3 Body harnesses shall be anchored utilizing a shock absorbing lanyard or be attached to a lifeline by using a lanyard and rope grab combination. The lanyard or lifeline shall be securely attached to substantial members of the structure or to securely rigged lines per 6.2.1.4 which will safely suspend the worker in case of a fall. Sprinkler pipes, handrails, and electrical conduit shall not be used for this purpose.

6.2.1.4 Vertical and horizontal lifelines shall be installed using VOSHA 1926.502 Appendix C as a guideline. The Mill Emergency Response Coordinator shall be contacted with questions regarding this application.

6.2.1.5 All rope grabs shall be compatible with the lifeline to which they are being attached.

6.2.1.6 All connectors should be properly secured and locked if not of a self-locking design.

6.2.1.7 Only body harnesses, lanyards, and lifelines approved by NFPA #1983 and ANSI A10.14 shall be used. Body harness and lanyard make/model shall be approved by the Mill Emergency Response Coordinator prior to their use by IP employees.

## 6.2.2 Inspection

6.2.2.1 The inspector shall look for the manufacturer's permanent tag affixed to the body harness. If no tag is found, the harness shall be rejected.

6.2.2.2 The inspector shall look for frayed webbing, deformity of any metal parts, breaks, tears, and incomplete riveting or sewing. If any of these are found, the equipment shall not be accepted, and shall be returned to the manufacturer.

6.2.2.3 Each piece of equipment shall be inspected before and after each use. Inspect for frayed webbing, deep cuts, deformed metal parts, loose rivets, breaks, and tears. If any of these defects are found, the equipment shall not be used and shall be removed from service and destroyed.

6.2.2.4 Any fall arrest system equipment that has been subjected to a fall shall be taken out of service and destroyed.

## 6.3 Training

Employees shall be properly trained in the use of personal fall arrest system equipment prior to its actual use. This training includes discussing the contents of this procedure.

## 7.0 Documentation

N/A