



The Arcticom Group

HEALTH & SAFETY POLICY Fall Protection Program

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1. PURPOSE

This plan has been made to establish controls and procedures whenever an employee of The Arcticom Group is working at elevated heights greater than six (6) feet. This plan will help minimize the risk of serious injury or death and help identify areas where protection will be needed. This plan is to ensure employee safety while working at heights and has been made to conform to OSHA standards set in 29 CFR1926 Subpart M.

2. POLICY

This plan establishes the minimum procedures and requirement that should be used by employees that are working at heights greater than six (6) feet above the ground/floor level. This plan also pertains to employees that will be working over or around any opening that would allow them to fall four (4) or more feet to a level below them (ex. docks, pits, tank openings, catwalks, lofts, roofs, etc.). Any injury resulting from a fall will be investigated.

3. RESPONSIBILITIES

a. Management Responsibilities

The manager in charge of the project is responsible for overseeing that this plan is followed and enforced. This individual will also be responsible for the following but not limited to:

- Evaluating the job and deciding what type of personal fall protection is required.
- Re-evaluate the procedures and protection being used when hazards or conditions change that could place an employee in danger.
- Train employees in the proper use of fall protection and its importance.
- Monitor employees to make sure they are in compliance with local, state, and federal fall protection laws.
- Monitor employees for proper use of fall protection.
- Investigation, coordinated with the Director of Safety, on any fall-related injury.
- Establish a rescue plan in the event a fall occurs, or an employee is suspended in a harness from a fall.



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b. Employee Responsibilities

The employees performing the work are responsible for the following:

- Understanding the requirements of this plan.
- Inspecting all parts of their fall protection (i.e. Harness, clips, D-rings, lanyards, etc.)
- Reporting any unsafe acts or conditions to the safety representative or supervisor immediately.
- Immediately ask the safety representative or the supervisor if there are any questions or concerns about fall protection or the work being performed.
- Report all falls and injuries that result from falls.
- Dispose of equipment that has been used in a fall.

4. PROCEDURE

This section describes the different types of fall protection and the proper procedures that accompany them. Each employee that will be exposed to fall hazards will be trained in these procedures. It is the employee's responsibility to inform the Director of Safety or their manager if they feel they are at risk or that the fall protection will cause greater harm. At this point the Director of Safety or manager will discuss and reevaluate the job with the employee before work is continued.

a. General Fall Protection

Whenever possible standard fall protection systems will be utilized and will be followed as stated in Subpart M (1926.502):

- i. Guardrails/handrails will be utilized where employees are exposed to potential falls from unprotected sides. Guardrails and handrails must meet the following requirements:
 - Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches plus or minus 3 inches above the walking/working level. When conditions warrant, the height of the top edge may exceed the 45-inch height.



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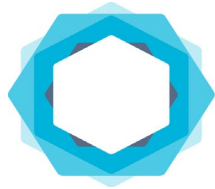
- Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge.
 - Guardrail systems shall be so surfaced as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
 - The ends of all top rails and mid-rails shall not overhang the terminal posts, except where such overhang does not constitute a projection hazard.
 - When the 200-pound test load is applied in a downward direction, the top edge of the guardrail shall not deflect to a height less than 39 inches above the walking/working level.
- ii. Mid-rails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members shall be installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 inches high.
- Mid-rails, when used, shall be installed at a height midway between the top edge of the guardrail system and the walking/working level.
 - Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding, without failure, a force of at least 150 pounds applied in any downward or outward direction at any point along the mid-rail or other member.
- iii. Screens and mesh, when used, shall extend from the top rail to the walking/working level and along the entire opening between top rail supports.
- iv. Intermediate members (such as balusters), when used between posts, shall be not more than 19 inches apart.
- v. Other structural members (such as additional mid-rails and architectural panels) shall be installed such that there are no openings in the guardrail system that are more than 19 inches wide.
- vi. Steel banding and plastic banding shall not be used as top rails or mid-rails.



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- vii. Top rails and mid-rails shall be at least one-quarter inch nominal diameter or thickness to prevent cuts and lacerations. If wire rope is used for top rails, it shall be flagged at not more than 6-foot intervals with high-visibility material.
- viii. When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.
- ix. When guardrail systems are used at holes, they shall be erected on all unprotected sides or edges of the hole.
- x. When guardrail systems are used around holes used for the passage of materials, the hole shall have not more than two sides provided with removable guardrail sections to allow the passage of materials. When the hole is not in use, it shall be closed over with a cover, or a guardrail system shall be provided along all unprotected sides or edges.
 - When guardrail systems are used around holes which are used as points of access (such as ladderways), they shall be provided with a gate, or be so offset that a person cannot walk directly into the hole.
- xi. Guardrail systems used on ramps and runways shall be erected along each unprotected side or edge.
- xii. Manila, plastic or synthetic rope being used for top rails or mid-rails shall be inspected as frequently as necessary to ensure that it continues to meet the strength requirements of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge
- xiii. Safety nets are placed under working areas where personal fall arrest systems and guardrails are not practical or possible. These nets need to meet the following requirements:
 - Safety nets shall be installed as close as practicable under the walking/working surface on which employees are working, but in no case more than 30 feet below working level.



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- Safety nets shall be installed with sufficient clearance under them to prevent contact with the surface or structures below when subjected to an impact force equal to the drop test
- Safety nets and their installations shall be capable of absorbing an impact force equal to that produced by the drop test
- safety nets and safety net installations shall be drop-tested at the jobsite after initial installation and before being used as a fall protection system, whenever relocated, after major repair, and at 6-month intervals if left in one place. The drop-test shall consist of a 400-pound bag of sand 30+ or -2 inches in diameter dropped into the net from the highest walking/working surface at which employees are exposed to fall hazards, but not from less than 42 inches above that level.
- Defective nets shall not be used. Safety nets shall be inspected for wear, damage, and other deterioration. Defective components shall be removed from service. Safety nets shall also be inspected after any occurrence which could affect the integrity of the safety net system.
- Materials, scrap pieces, equipment, and tools which have fallen into the safety net shall be removed as soon as possible from the net and at least before the next work shift.
- Each safety net shall have a border rope for webbing with a minimum breaking strength of 5,000 pounds

b. Personal Fall Arrest Systems (PFAS)

Personal fall arrest systems are used to arrest an employee in a fall from a working level. In addition to the PFAS, each employee should have trauma straps in the event of a fall to allow for relief on lower extremities. These systems must meet the following requirements:

- i. Body belts are not an acceptable form of personal fall arrest, except when used in a positioning device system.
- ii. Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.



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- iii. Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- iv. D-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds.
- v. Only locking type snap hooks shall be used.
- vi. Lifelines shall be protected against being cut or abraded.
- vii. Personal fall arrest systems, when stopping a fall, shall be rigged such that an employee can neither free fall more than 6 feet, nor contact any lower level.
- viii. The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head.
- ix. Harnesses and components shall be used only for employee protection and not to hoist materials.
- x. Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
- xi. The employer shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.
- xii. Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
- xiii. Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists.

c. Positioning Device System

Positioning device systems allow employees to work near the edge but will prevent them from falling over or minimizing the fall to two feet. These devices must meet the following requirements:

- i. Positioning devices shall be rigged such that an employee cannot free fall more than 2 feet.
- ii. Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.



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- iii. Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of this system.
- iv. Positioning device systems shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service.
- v. Body belts, harnesses, and components shall be used only for employee protection and not to hoist materials.

d. Warning Line System

A warning line system is in place to allow employees to work without other forms of fall protection, however they are prohibited from working on the outside of the warning line. The following requirements must be met:

- The warning line shall be erected not less than 6 feet from the roof edge.
- Points of access, materials handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines.
- When the path to a point of access is not in use, a rope, wire, chain, or other barricade, equivalent in strength and height to the warning line, shall be placed across the path at the point where the path intersects the warning line erected around the work area, or the path shall be offset such that a person cannot walk directly into the work area.

Warning lines shall consist of ropes, wires, or chains, and supporting stanchions erected as follows:

- The rope, wire, or chain shall be flagged at not more than 6-foot intervals with high-visibility material.
- The rope, wire, or chain shall be rigged and supported in such a way that its lowest point (including sag) is no less than 34 inches from the walking/working surface and its highest point is no more than 39 inches from the walking/working surface.



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- After being erected, with the rope, wire, or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 pounds applied horizontally against the stanchion, 30 inches above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof, or platform edge.
- The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.
- No employee shall be allowed in the area between a roof edge and a warning line unless the employee is performing roofing work in that area.

e. Covers

Covers are used to prevent falls into holes on the working level. Covers need to meet the following criteria:

- All covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.
- Covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees.
- Covers shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.

f. Aerial Work

When performing aerial work employees must use boom lifts, scissor lifts, aerial lifts, forklift cages, or other means to reach the worksite whenever possible.

- Employees must take conventional fall protection measures when possible.
- With the exception of scissor lifts, whenever any of these power lifts are being used all employees will be tied off.
- Employees will wear a full body harness.
- Tie off points are specified by the manufacturer and must be used.



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g. Safety Monitoring System

Often it is impossible, infeasible, or will create a greater hazard to the employee if a fall protection system is installed. In this case fall protection will consist of a Safety Monitoring System and a site-specific fall protection plan. Employees performing the work will be trained in the hazards of the job, how to properly perform the work:

- The employee will be informed as to how to enter and exit the project.
- The company will designate a competent monitoring person.
- The monitoring person will warn employees of hazards if they appear unaware.
- The monitoring person will warn employees who are acting or working in an unsafe manner.

The safety monitor shall:

- Be competent to recognize fall hazards.
- Shall not monitor more than 6 employees at a time.
- Will have no other responsibilities other than monitoring employees.
- Will have constant visual sight of employees.
- Will be located close enough to employees to communicate verbally.
- The employee, employee job function(s), training received and job specific information shall be documented.

Requirements of the specific fall protection plan will contain:

- Documentation of the reasons why the use of conventional fall protection systems (guardrail systems, personal fall arrest systems, or safety nets systems) are infeasible or why their use would create a greater hazard.
- The fall protection plan shall include a written discussion of other measures that will be taken to reduce or eliminate the fall hazard for workers who cannot be provided with protection from the conventional fall protection systems. For example, the employer shall discuss the extent to which scaffolds, ladders, or vehicle mounted work platforms can be used to provide a safer working surface and thereby reduce the hazard of falling.



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- The fall protection plan shall identify each location where conventional fall protection methods cannot be used.
- The fall protection plan must include a statement which provides the name or other method of identification for each employee who is designated to work in the area.
- In the event an employee falls, or some other related, serious incident occurs, (e.g., a near miss) the employer shall investigate the circumstances of the fall or other incident to determine if the fall protection plan needs to be changed (e.g. new practices, procedures, or training) and shall implement those changes to prevent similar types of falls or incidents.

5. TRAINING

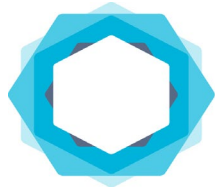
All of The Arcticom Group employees that will, or have the potential to, be exposed to falls will be trained on this plan and procedures. Employees will also be trained to properly use and maintain the fall protection devices. Training will teach employees how to inspect equipment before use and how to identify worn or damaged equipment. Employees will be trained to identify hazards and what to do when a hazard is noticed. Employees will be trained on their individual responsibilities and duties. Employees will be trained on the proper emergency procedures should an accident occur. Employees will be trained on the proper use of trauma straps.

Retraining will occur if:

- There is reasonable suspicion that an employee is not adequately trained.
- If employees are found not using the required fall protection devices or using the devices improperly.
- New hazards appear.
- A major incident or accident occurs.

All training will be documented. Documentation shall include:

- Topics or areas discussed.
- Training location.



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- Trainer(s) name.
- Date training occurred.
- The name of employees being trained.
- The employee must print and sign their name.

6. REFERENCES

TAG HS-1 Injury and Illness Prevention Program

TAG HS-29 Aerial Lift Program