

	<b>COMPANY HEALTH AND SAFETY PROGRAM</b>	
	<b>Document No.</b> 8.8	<b>Date:</b> August 16, 2006
	<b>Scaffolding Safety Practices</b>	<b>Revision:</b> 0

## 1.0 PURPOSE

The purpose of the Scaffolding Safety Practices is to promote safe working conditions for HES personnel who may use scaffolding and to understand the scaffolding requirements. The requirements are set forth in OSHA 29 CFR 1910.28 and 1926 Subpart L.

## 2.0 SCOPE

The practices identify requirements and guidelines that apply to all HES projects involving the use of scaffolding equipment. This document covers the scaffolding used in construction, alteration repair, abatement, and demolition workplaces. It may also be used in conjunction with document 8.5 Fall Protection Program.

**NOTE:** Criteria for aerial lifts is defined in 29 CFR 1926.453. Aerial lift usage requirements by HES personnel is discussed in section 10.0 of this document.

## 3.0 DOCUMENT MAINTENANCE

This document will be maintained by the Health & Safety Manager and approved by the Director, Environmental Services with each new revision.

## 4.0 DEFINITIONS

Many of the terms used in this document have been defined in 29 CFR 1926 Subpart L. The following terms are commonly used:

- *Aerial lifts* - vehicle mounted elevating and rotating work platforms used to elevate personnel to work areas above ground level. (i.e. extensible boom platforms, aerial ladders, articulating boom platforms, or vertical towers)
- *Bearer* (putlog) - means a horizontal transverse scaffold member (that may be supported by ledgers or runners) upon which the scaffold platform rests and which joins scaffold uprights, posts, poles, and similar members.
- *Boatswains' chair* - means a single-point adjustable suspension scaffold consisting of a seat or sling designed to support one employee in a sitting position.
- *Body belt* (safety belt) - means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device. **USE IS RESTRICTED.**

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- *Body harness* - means 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.
- *Brace* - means a rigid connection that holds one scaffold member in a fixed position with respect to another member, or to a building or structure.
- *Cleat* - means a structural block used at the end of a platform to prevent the platform from slipping off its supports. Cleats are also used to provide footing on sloped surfaces such as crawling boards.
- *Competent Person* - means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- *Coupler* - means a device for locking together the tubes of a tube and coupler scaffold
- *Deceleration device* - means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyard, or automatic self-retracting lifeline lanyard, which dissipates a substantial amount of energy during a fall arrest or limits the energy imposed on an employee during fall arrest.
- *Fabricated frame scaffold* (tubular welded frame scaffold) - means a scaffold consisting of a platform(s) supported on fabricated end frames with integral posts, horizontal bearers, and intermediate members.
- *Guardrail system* - means a vertical barrier, consisting of, but not limited to, toprails, midrails, and posts, erected to prevent employees from falling off a scaffold platform or walkway to lower levels.
- *Lifeline* - means a component consisting of a flexible line that connects to an anchorage at one end to hang vertically, or that connects to anchorages at both ends to stretch horizontally, and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.
- *Maximum intended load* - means the total of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.
- *Mobile scaffold* - means a powered or unpowered, portable, caster, or wheel-mounted supported scaffold.
- *Outrigger* - means the structural member of a supported scaffold used to increase the base width of a scaffold in order to provide support for and increased stability of the scaffold.
- *Personal fall arrest system* - means a system used to arrest an employee's fall. It consists of an anchorage, connectors, a body harness and may include a lanyard, deceleration device, lifeline, or combinations of these.
- *Tube and coupler scaffold* - means a supported or suspended scaffold consisting of a platform(s) supported by tubing, erected with coupling devices connecting uprights, braces, bearers, and runners.

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## **5.0 POLICY**

HES personnel will not be allowed to use any scaffolding equipment that is broken, loosened, bent, structurally defective, or damaged in any other way. Scaffold equipment found in any of these conditions should be tagged with “DO NOT USE” removed from service and either repaired or decommissioned.

Supervisors or personnel using scaffold equipment in their work areas will check the scaffolds prior to use to verify the integrity and that no damage has occurred. If scaffolding equipment is unacceptable for use then the supervisor will decommission the equipment and either repair or decommission it.

Each employee on a scaffold more than six (6) feet above a lower level will be protected from falling to that lower level.

## **6.0 CONTRACTORS AND SUBCONTRACTORS**

Whenever HES contractors or subcontractors use scaffolding or aerial lifts, they will be required to submit to the information required by this program.

## **7.0 GENERAL SCAFFOLD REQUIREMENTS**

OSHA 29 CFR 1910.28 (General Industry Standard) and 29 CFR 1926 Subpart L both state requirements for the use of scaffolding equipment. The following general requirements have been summarized:

1. Each scaffold and scaffold component will be capable of supporting, without failure, its own weight and at least four (4) times the maximum intended load applied or transmitted to it.
2. Each platform on all working levels of scaffolds will be fully planked or decked between the front uprights and the guardrail supports as defined by the standard.
3. Each ladder jack scaffold, top plate bracket scaffold, roof bracket scaffold, and pump jack scaffold will be at least twelve (12) inches wide.
4. Each end of a platform, unless cleated or otherwise restrained by hooks or equivalent means, will extend over the centerline of its supports at least six (6) inches but not more than twelve (12) inches.
5. Wood platforms will not be covered with opaque finishes, except that platform edges may be covered or marked for identification.

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6. Platforms may be coated periodically with wood preservatives, fire-retardant finishes, and slip-resistant finishes, but the coating may not obscure the top or bottom wood surfaces.
7. Supported scaffold poles, legs, posts, frames, and uprights will bear or rest on base plates and mud sills or other firm foundations.
8. Footings will be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
9. Supported scaffold poles, legs, posts, frames, and uprights will be plumb and braced to prevent swaying and displacement.
10. Cross braces or tubular welded frame scaffolds will not be used as a means of access or egress.
11. The use of shore or lean-to scaffolds is prohibited.
12. Independent support lines and suspension ropes will not be attached to the same points of anchorage.
13. Debris will not be allowed to accumulate on platforms.
14. Makeshift devices, such as but not limited to boxes and barrels, will not be used on top of scaffold platforms to increase the working level height of employees.
15. Ladders will not be used on scaffolds to increase the working level height of employees.
16. Personnel will be prohibited from working on scaffolds covered with snow, ice, or other slippery material except for removal of that material.
17. Personnel will not work on scaffolds outside during storms or high winds.
18. Personnel working on or around scaffolding will wear hardhats.
19. Each suspension rope, including connecting hardware, used on adjustable or non-adjustable suspension scaffolds will be capable of supporting, without failure, at least six (6) times the maximum intended load applied or transmitted to that rope.
20. Scaffold couplers will be of structural metal, such as drop-forged steel, malleable iron, or structural grade aluminum. The use of gray cast iron is prohibited.

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21. All scaffolds must be erected, moved, or dismantled only under the supervision of a competent person and per the manufacturer's specifications..
22. All scaffolds must be inspected on a regular basis, and checked both before and after use for any damage.
23. Personnel working on scaffolding should remain within the platform area. Work should not extend out over the guardrails where leaning may occur.

## **8.0 GUARDRAIL, MIDRAIL, AND TOEBOARD REQUIREMENTS**

Guardrail systems will be installed around any platform that is six (6) feet or more above a lower level. Guardrail systems will be installed along all open sides and ends of platforms. Guardrail systems will be installed before the scaffold is released for use by employees other than erection/dismantling crews.

1. The top edge height of top rails on a guardrail system will be installed between 38 inches and 45 inches above the platform surface.
2. The top rails must be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along the top edge of at least 100 pounds.
3. Guardrails will be surfaced to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
4. Steel or plastic banding will not be used as a top rail or midrail.
5. When midrails, screens, mesh, intermediate vertical members, solid panels, or equivalent structural members are used, they will be installed between the top edge of the guardrail system and the scaffold platform.
6. Midrails will be installed at a height approximately midway between the top edge of the guardrail system and the platform surface.
7. Toeboards will be erected along the edge of platforms more than six (6) feet above lower levels for a distance sufficient to protect employees below.
8. The area below the scaffold where objects may fall will be barricaded, and avoided by employees if there is a danger from materials falling from above.
9. Toeboards will be capable of withstanding, without failure, a force of at least 50 pounds applied in any downward or horizontal direction at any point along the toeboard.

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10. Toeboards will be at least three and one-half inches high from the top edge of the toeboard to the level of the walking/working surface.

## **9.0 TYPES OF SCAFFOLDING USED**

There are only four types of scaffolding currently being used by HES personnel. The types are Tube and Coupler Scaffolds, Fabricated Frame Scaffolds, Mobile Scaffolds, and Aerial Lifts. These four types are defined in section 4.0 of this document.

## **10.0 AERIAL LIFTS**

Aerial lifts used will be designed and constructed in conformance with the applicable requirements of the American National Standards for "Vehicle Mounted Elevating and Rotating Work Platforms," ANSI A92.2-1969. The following practices will be recognized while working on or around aerial lifts:

1. Lift controls will be tested daily prior to use to determine that the controls are in safe working condition.
2. Belting or tying off to an adjacent pole, structure, or equipment while working from an aerial lift is not allowed.
3. Personnel will not sit or climb on the edge of the basket or use planks or ladders on the lift platform.
4. The operator will be aware of obstacles and personnel prior to moving or changing positions.
5. A full-body harness will be worn with a lanyard attached to the boom or basket when working from an aerial lift.
6. Boom and basket load limits specified by the manufacturer will not be exceeded.

## **11.0 TRAINING**

Personnel will be trained by a competent person prior to the equipment use. The training will be supported by the practices set in this document, manufacturer specifications, and the following:

1. Nature of any electrical hazards, fall hazards, and falling object hazards in the work area;
2. Proper use of fall protection systems;

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3. Proper use of scaffolds and material on scaffolds;
4. The maximum intended load and the load-carrying capacities of the scaffolds used (manufacturer specifications);
5. Procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the equipment (manufacturers specifications);  
and
6. Any changes in hazards or equipment.

