

FALL PROTECTION



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1. INTRODUCTION

As a rule, **H2 Enterprises, LLC (H2)** does not perform work greater than 6 feet above grade. When or if we do, the following Fall Protection Program will be adhered to.

Falls pose a particularly severe hazard when performing cleaning or general labor work for various industries, due to elevated work-positioning necessary to perform certain job requirements. Whether using a portable ladder, scaffolding, climbing inside towers/vessels/tanks, or along process piping, all **H2** employees will be required to be “tied-off” when they reach, or are potentially exposed to, an elevated work position above a lower level surface that equals or exceeds six (6) feet in height and they are not protected by guarding means.

Although work location(s) may indicate potential for a fall to occur, other contributing factors may play a role. They may be personal (lack of concentration, use of medication, poor vision, illness, poor housekeeping or improper use of tools and equipment) or environmental (wet and slippery surfaces, poor lighting, electrical hazards, weather changes, or gravity itself).

2. RESPONSIBILITY

It is the responsibility of **H2** management to determine the need (jobs, activities, situations) for fall protection, provide appropriate fall protection equipment and training for all affected employees. However, it remains the responsibility of all **H2** employees to display a pro-active safety attitude and properly wear, use, inspect and maintain their assigned fall protection equipment.

3. TRAINING

When required, a comprehensive training session will be provided for all **H2** employees working in areas requiring fall protection by personnel certified and qualified in fall protection.

Documentation of this training will be maintained by the HSE Director in the Safety Files at the home office, which includes who was trained, when, dates of training and signature of the person providing the training. This training session will cover the following training topics:

- a. Recognition of fall hazards in the work area.
- b. Avoiding fall hazards by using established safe work practice.
- c. Recognition of unsafe practices or working conditions.
- d. When fall arrest systems should be used.
- e. Proper wear, use, maintenance, assembly/disassembly and inspection of personal fall arrest systems.
- f. The function, use and operation of designated safety monitoring systems, guardrail systems, controlled access zones and other protection to be used. A guardrail shall

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consist of a top rail, midrail and posts with a vertical height between 42 & 45 from upper surface.

- g. Personal fall arrest systems shall limit maximum arresting force on an employee to 1,800 pounds when used with a body harness.
- h. Be rigged that an employee can fall no further than 6 feet or contact any lower level and where practical the anchor end of the lanyard be secured at a level not lower than the employees waist; bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet; and have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.

4. RE-TRAINING

Re-training will be provided for any **H2** employee, job-site or situation that demonstrates the following circumstances

- a. If the employee demonstrates deficient knowledge or that the original training was inadequate.
- b. If any work-place hazards change or now become evident.
- c. If any fall protection system or equipment becomes outdated, replaced or changed-out that would render the previous training inadequate.

5. PASSIVE FORMS OF FALL PROTECTION

Employees of **H2** can expect to encounter passive forms of fall protection while on job sites to include the following:

- Guard-rails,
- Fences, barricades
- Safety nets
- Covers (over holes)

NOTE: guard-rails, fences and barricades act as barriers, but they are not 100% safe as employees can still fall over them. Safety nets and covers are designed to provide complete protection for employees at all times that they are working.

6. ACTIVE FALL PROTECTION EQUIPMENT

H2 employees utilize Company-provided active fall protection equipment (full body harnesses and shock-absorbing lanyards with double-locking snap-hooks), which meets or exceeds all ANSI/ASTM Standards. This assigned equipment is required to be inspected prior to use by

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each employee. Any item found to be defective will be delivered to H2 management for repair or replacement by authorized manufacturer's, or discarded.

7. ANCHORAGE

An approved anchorage point is a secure point of attachment for a personal fall arrest system, capable of supporting 5,000 pounds per worker attached. Attachment to this point must be reachable without exposing a worker to a fall hazard. H2 employees will locate different types of fixed structures (I-beam, H-beam, cat-walk, guard-railing, fixed eye-bolts, etc.) to secure their lanyards. In the event these fixed structures are not available for tie-off, various other devices (tie-off adapters, bar- grab clamps, vertical drop lines, horizontal life-lines, and etc.) will be made available for employee use.

Positioning device system shall be rigged such that an employee cannot free fall more than 2 feet. And be inspected prior to each use for wear, damage and other deterioration or defective components. If any are found it shall be removed from service immediately. Non-locking snap hooks are prohibited to be used. Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.

8. INSPECTION (Daily or After a Fall Occurs)

Once a personal fall arrest system has been subjected to impact from a fall, it must be immediately removed from service and inspected by a competent person to determine if it is safe to use again. The harness may not have to be replaced, but the shock- absorbing lanyard will, as it most likely will have opened up upon impact. Items for inspection are to include the following:

- Tears, cuts, abrasions
- Signs of wear, stretching, fraying
- Deformed eyelets or D-rings
- Loose or damaged mountings
- Degradation caused by ultraviolet light
- Discoloration or deterioration due to chemical exposure
- Functioning springs, keepers, buckles, grommets
- Build-up of dirt, grease, paint
- Any change that may affect the equipment's efficiency

When needed, fall protection equipment can be washed in warm water using a mild detergent. Rinse thoroughly in clean water and allow to dry at room temperature. Storing immediately in a

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locker or gang-box can cause deterioration if mold and mildew starts forming. Store equipment in a clean area away from degrading sunlight and temperature extremes. If in doubt, follow the manufacturer's guidelines.

9. SITE SPECIFIC FALL HAZARD ANALYSIS

Due to the diverse work locations and job assignments that employees of **H2** can experience, various fall hazards have the potential to be encountered. As a result, site specific fall hazard analysis will be performed by a qualified, competent **H2** supervisor, most of the time this will be the Project Safety Coordinator. This fall exposure determination will be made without regards to the use of PPE.

The **H2** competent persons are identified as all **H2** Project Safety Coordinators. These employees have completed accredited training programs with various recognized training providers. Documentation of this training regime is maintained in the Safety Files located at the home Office.

H2 will determine if the use of a ladder, scaffolding, man-lift or crane-basket can be used to reduce the fall potential. If conventional fall protection is unable to be used in an identified location because it is not feasible to use, or a greater hazard would be created by the use of standard protection methods, then this area of work operation will be identified as a controlled access zone (CAZ).

- Controlled access zones are restricted areas that allow only employees working directly in that area to enter it.
- A CAZ is indicated by a control line made of rope, wire, tape or other equivalent and supporting stanchions, with a minimum breaking strength of 200 lbs.
- Each line material is flagged or clearly marked by the use of high visibility material, no further than 6 feet apart.
- The control line shall extend along the entire length of the unprotected edge and be approximately parallel to it.

Where no alternate methods have been implemented, a safety monitoring system shall be implemented.

Safety monitoring systems use competent personnel to actively patrol work areas and verbally warn others of their approach to any possible dangers. This competent person will be assigned to:

- Recognize fall hazards
- Warn employees if unaware of a fall hazard
- Warn employees if acting in an unsafe manner

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- Be on the same working surface and in visual sight
- Stay close enough for oral communications
- Have no other assignments to distract full attention

10. FALL INVESTIGATION

H2 shall provide for the prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves. Should a fall occur, all incidents or near-incidents involving a fall will be reported to H2 management immediately. Each incident will be thoroughly investigated, analyzed, documented and a determination will be made whether or not changes will need to be implemented to the existing fall protection plan prior to continuing assigned work at elevated positions.

11. SUMMARY

The method, technology and equipment exists for 100% fall protection, but you the worker have to make the decision of your life, by committing to the use of all of your fall protection equipment every time you perform work at unprotected heights.

Non-compliance by any H2 employee with any part of this described program will result in disciplinary action as outlined in the Company's Corrective Action and Disciplinary Program found in this manual.