

Requirements Documents

HMIS-RD-SP-43284

Fall Protection

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Subject Matter Expert: Mathews, Levi E

Functional Manager: Nielsen, Christopher E

Use Type: Administrative



- No USQ Required

JHA: Administrative

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Change Summary

Description of Change

Update and revision of document to HMIS references
Pub Correction 8390: add alternate SME

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1.0 PURPOSE

The purpose of this requirements document (RD) is to provide direction regarding application of requirements within the referenced programs and standards. This direction is for the requirements for the inspection of fall protection equipment, training processes, roles and responsibilities of specific personnel as applicable to Hanford Mission Integration Solutions (HMIS) personnel exposed to fall hazards, and guidelines for utilizing administrative controls around trenches and similar excavations at HMIS Projects.

The requirements in this RD do not replace or eliminate compliance with OSHA 29 CFR 1926, Subpart M, "Fall Protection," OSHA 29 CFR 1910, Subpart D, "Walking and Working Surfaces," OSHA 29 CFR 1910 Subpart I, "Personal Protective Equipment," and 10 *Code of Federal Regulations* (CFR) 851, "Worker Safety and Health Program," and are meant to supplement the requirements of DOE 0346, "Hanford Site Fall Protection Program" in meeting these requirements.

The primary goal when protecting HMIS employees and subcontractor employees from fall hazards is to eliminate or control hazards using fall protection methods based on the hierarchy of controls as stated in section 3.0 of DOE-0346, *Hanford Site Fall Protection Program (HSFPP)*.

This document implements the HMIS-PLN-WP-003, *Integrated Environment, Safety, and Health Management System Description* (ISMS), Core Functions of identifying hazards and requirements, analyzing hazards and implementing controls, and providing feedback and continuous improvement.

2.0 SCOPE

This RD applies to all HMIS work activities except those exemptions outlined in DOE-0346, *Hanford Site Fall Protection Program* Section 1.0.

The Fall Protection Methods used shall be based on a hierarchy of controls as discussed in

ANSI Z359.2, *Minimum Requirements for a Comprehensive Managed Fall Protection Program* and adopted in the HSFPP, in the following order:

1. Elimination
2. Engineering Controls
3. Personal Protective Equipment
4. Administrative Controls

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NOTE: *The preceding hierarchy or preferred order of control shall be used to choose methods to eliminate or control fall hazards. The fall protection hierarchy shall be considered when designing fall protection solutions for both existing and new facilities.*

The methods listed above are in decreasing order of preference.

For General Industry activities, fall protection is required when employees are exposed to a fall from 4 feet or more to a lower level, any height above dangerous equipment, or as specified within the HSFPP

For Construction activities, including demolition, fall protection is required when employees are exposed to a fall from 6 feet or more to a lower level, any height above dangerous equipment, or as specified within this Program. When employees are exposed to a fall hazard, as defined in the HSFPP, a Fall Protection Work Permit (FPWP) is required.

Administrative controls may be used when allowed by DOE-0346 when other indicated methods of fall protection are infeasible or creates a greater hazard to implement based upon a risk analysis of the fall hazard and is documented on the FPWP.

3.0 REQUIREMENTS

3.1 General Requirements

NOTE: *For the table in this section under the requirement "type" column, "V" means verbatim, "I" means interpreted.*

#	Requirement	Type V or I	SOURCE
1.	Comply with the following worker protection requirements: Title 29 of the Code of Federal Regulations (CFR), Part 1910, "Occupational Safety and Health Standards." Title 29 CFR, Part 1926, "Safety and Health Regulations for Construction." DOE 0346, "Hanford Site Fall Protection Program"	I	10 CFR 851
2.	Status of Competent and Qualified Persons for Fall Protection shall be documented on their respective Training Completion Records (TCRs) Site Forms A-6005-674 (HMIS Competent Person for Fall Protection)	I	29 CFR 1926.502 29 CFR 1910.30 29 CFR 1910.140

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#	Requirement	Type V or I	SOURCE
	and A-6005-670 (HMIS Qualified Person for Fall Protection). The employee's manager shall sign for the designation of the employee for these positions once the TCRs have been completed.		ANSI Z359.0 DOE 0346 HMIS-PLN-TQ-011

3.2 Inspections

#	Requirement	Type V or I	SOURCE
1.	Personal fall arrest systems shall be inspected by the user following the manufacturer's instructions prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.	I	29 CFR 1926.502(d) (21) 29 CFR 1910.140(c) DOE 0346 ANSI Z359.2-2007 HMIS-PLN-TQ-011
2.	Personal fall arrest equipment shall be inspected by a trained and designated Competent Person for Fall Protection following manufacturer's instructions. These inspections shall be performed and documented semi-annually. <i>NOTE: Attachment 1 provides an optional format and form that may be used by the Competent Person conducting this inspection. The inspection must be documented using either the appendix or other comparable form and be retained by the organizations owning the equipment.</i> Equipment that fails the semi-annual inspection shall be removed from service.	I	29 CFR 1926.502(d) (21) 29 CFR 1910.140(c) DOE 0346 ANSI Z359.2-2007

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<p>3.</p>	<p>The competent person shall perform initial and pre-use inspections of work sites each shift and following installation of systems to ensure that fall protection systems are installed and used correctly.</p> <p>Where an engineered portable guard rail system is used to serve as a barrier to a fall hazard, the system shall be installed and inspected prior to use by the competent person to verify it is installed in accordance with manufacturer's instructions.</p> <p>In the case of portable guardrail systems where the manufacturer's instructions are not available or it is not possible to verify all components are of the same manufacturer (i.e. loss of identifying marks due to environmental conditions or a lack of manufacturer instructions) the components will be installed using the most conservative instructions for portable guardrail systems known to be on site. (i.e., set back, rail securement, perpendicular placement)</p> <p>The competent person shall perform initial and pre-use inspections of work sites each shift and following installation of systems to ensure that fall protection systems are installed and used correctly in accordance with the Temporary/Portable Guardrail Inspection Checklist (Site Form A-6007-922) . Which will be used for both systems that are from a known manufacturer and for systems where the manufacturer cannot be verified and contains the most conservative instruction for portable guardrail systems know to be one site. Fall protection systems modified or not installed correctly in accordance with the Temporary/Portable Guardrail Inspection Checklist (Site Form A-6007-922) shall not be used.</p>	<p>I</p>	<p>29CFR1926.32(f) DOE-0346 section 2.6</p>
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3.3 Work At or Near Excavations

#	Requirement	Type V or I	SOURCE
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<p>1.</p>	<p>Each employee at the edge of excavations 6 feet or more in depth with a slope of less than 1.5/1 shall be protected from falling by guardrail systems, fences, barricades, or administrative controls.</p> <p>Administrative controls (including awareness) may be used in lieu of conventional fall protection methods when deemed necessary by the fall protection competent person, excavation competent person, and the projects safety professional and based upon an analysis of the fall hazards, soil conditions, and collocated work. This analysis shall be documented on the FPWP.</p> <p>The following is an acceptable (though not only) method of administrative controls of fall protection near open trench excavations:</p> <ul style="list-style-type: none"> • A Trench Safety Monitor (TSM) is an acceptable method to provide fall protection when employees are within 6’ of the fall hazard. • The TSM shall be qualified as a Competent Person in Fall Protection and as a Competent Person for Excavations, Trenching and Shoring and designated as the TSM for the project and listed on the FPWP. <p>When a TSM is used they shall comply with the following requirements:</p> <ul style="list-style-type: none"> • The TSM shall warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner. • The TSM shall be on the same walking-working surface and within visual sighting distance of the employee(s) being monitored. • The TSM shall be close enough to communicate orally with the affected employees. • The TSM shall not have other responsibilities that could distract the TSM’s attention from the monitoring function. • If the TSM is required to leave the immediate vicinity, then all workers shall leave the area of 	<p>I</p>	<p>DOE 0346</p> <p>Sect. 3.7</p>
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	the fall hazard or an alternate designated TSM shall be assigned the duties.		
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4.0 RESPONSIBILITIES

- Project Supervision (i.e., Construction Manager, Construction Supervisor/Superintendent and foremen) are responsible for the implementation of these requirements and guidelines for all construction, maintenance and other project work activities (in accordance with contractual requirements), and ensuring that each employee understands their roles and responsibilities, as it applies to their work activities.
- The Buyer Technical Representative will ensure the requirements of this RD are communicated to the sub-contractor, through SOW or other contract documents.
- The employees (this includes project staff and craft employees) are responsible for complying with the requirements of this RD and when compliance cannot be achieved, the employee will Stop Work and contact supervision for resolution and/or correction of the issue or concern.
- HMIS projects and organizations are responsible for implementing the overall worker safety and health program and appropriate integration into contracting and work planning activities; including pertinent hazards analyses associated with the tasks being completed.
- Sub-contractor Management and supervision are responsible for complying with the requirements of this RD and when compliance cannot be achieved, work shall be suspended and the project construction point-of-contact will be contacted for resolution and/or correction of the concern or issue.
- The Competent Person shall visually inspect/walkdown the work site where fall hazards exist prior to work commencing and at least once per shift. The walkdown shall include the evaluation of any fall protection equipment in place to ensure it has not been modified beyond the guidelines of the respective manufacturer.
- The HMIS Fall Protection Subject Matter Expert or Functional Manager shall interview all candidates for the Competent Person for Fall Protection and shall be documented on Form A-6005-674, HMIS Competent Person for Fall Protection
- The following FPWP Positions for the review and approval of any Fall Protection Work Permits at HMIS Activities are:
- Cognizant Supervisor – This position as defined in DOE-0346 is fulfilled by Field Work Supervisors, Planners, or Managers of the work group performing the scope of the task.
- Prime Contractor Cognizant Safety Manager – This position as defined in DOE-0346 is fulfilled by a safety professional assigned to the organization that will be performing tasks associated with the scope of work addressed by the FPWP.

The review and approval by the Prime Contractor Cognizant Safety Manager of the Hanford Site Fall Protection Program – Exception Approval (Site Form A-6006-584) is

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fulfilled by the safety professional assigned to the organization that will be conducting inspections, investigations, and assessments of working conditions prior to the actual start of work activities or after all work activities have been completed as described in DOE-0346 Section 1.0 Purpose and Scope.

FPWPs used for documenting non-hazardous conditions (such as non-compliant fixed ladders) that do not create a fall hazard as defined in Section 3.0 of DOE-0346 are valid for one year from approval. They shall be reissued if conditions change or if the condition is reassessed during a subsequent analysis.

5.0 DEFINITIONS

DOE-0346, Appendix A defines terms and acronyms used in this RD.

6.0 RECORD IDENTIFICATION

Documentation generated by this procedure (e.g., forms, data sheets, checklists) shall be submitted to Document Control in accordance with HMIS-PRO-RM-10588, *Records Management Processes*.

Records Capture Table

Name of Document	Submittal Responsibility	Retention Responsibility
Form A-6004-286, <i>Fall Protection Work Permit</i>	Project Safety and Health	Work Control
Form A-6006-584, <i>Hanford Site Fall Protection Program – Exception Approval</i>	Project Safety and Health	Work Control
Fall Protection Equipment Inspection,	Inspecting Competent Person for Fall Protection	Organization Owning Equipment
Form A-6005-674, HMIS Competent Person for Fall Protection	Organizational Management of Competent Person	Training Records
Form A-6005-670, HMIS Qualified Person for Fall Protection	Organizational Management of Qualified Person	Training Records
Form A-6007-922, Temporary/Portable Guardrail Inspection Checklist	Competent Person for Fall Protection	Work Control

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7.0 REFERENCES**7.1 Source References**

10 CFR 851, *Worker Safety and Health Program*, as amended
29 CFR 1910, *Occupational Safety and Health Standards, Subpart D Walking Working Surfaces and Subpart I Personal Protective Equipment*
29 CFR 1926, *Safety and Health Regulations for Construction, Subpart M Fall Protection*
American National Standard Institutes (ANSI) Z359.0-2012, *Definitions and Nomenclature Used for Fall Protection and Fall Arrest*
American National Standard Institutes (ANSI) Z359.2-2007, *Minimum Requirements for a Comprehensive Managed Fall Protection Program*
DOE-0346, *Hanford Site Fall Protection Program (HSFPP)*
HMIS-PLN-TQ-011, *HMIS Training and Qualification Plan*

7.2 Working References

HMIS-PRO-RM-10588, *Records Management Processes*
HMIS-PLN-WP-003, *Integrated Environment, Safety, and Health Management System Description (ISMS)*

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APPENDIX A
Inspection of Fall Protection Equipment
(Optional)

All fall protection equipment shall be inspected in accordance with the manufacturer's instructions and documented where required.

NOTE: *Additional information on inspection issues, service life, and recalls for fall protection equipment is available at the [Hanford Site Wide Fall Protection Program](#) website.*

The following criteria may be utilized by users and competent persons inspecting fall protection equipment as a general option:

Full Body Harnesses

- 1) Inspect before each use.
 - Closely examine all of the nylon webbing to ensure there are no burn marks, which could weaken the material.
 - Verify there are no torn, frayed or broken fibers, pulled stitches, or frayed edges anywhere on the harness.
 - Examine the D-ring for wear, pits, deterioration, or cracks.
 - Verify that buckles are not deformed, cracked, and operate correctly.
 - Check to see that each grommet (if present) is secure and not deformed from abuse or a fall.
 - The harness should never have additional punched holes.
 - All rivets should be tight and not deformed.
 - Check tongue/straps for excessive wear from repeated buckling.
- 2) A competent person will inspect harnesses every six months using Attachment 1, Full Body Harness Competent Person Inspection Checklist and manufacturer's required inspection criteria. Full body harnesses meeting the inspection criteria will be marked using either a metal tag indicating the next inspection date or by the use of the provided manufacturer's label noting the month and year inspected and returned to the owner with the completed inspection checklist.
- 3) Harnesses will be stored in a manner to protect them from physical, chemical or environmental damage.
- 4) All harnesses that are involved in a fall or not meeting inspection criteria will be removed from service.

Lanyards/Shock Absorbing Lanyards

- 1) Inspect before each use.
 - Check lanyard material for cuts, burns, abrasions, kinks, knots, broken stitches and wear.
 - Inspect the hardware for distortions in the hook, locks, and eye.
 - Check hardware for wear, distortion, and lock operation.
 - Ensure that all locking mechanisms seat and lock properly.
 - Once locked, locking mechanism should prevent hook from opening.

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- Visually inspect shock absorber for any signs of damage, paying close attention to where the shock absorber attaches to the lanyard.
 - Verify that points where the lanyard attaches to the snap hooks are free of defects.
- 2) A competent person will inspect lanyards every six months using Attachment 2, *Lanyard Competent Person Inspection Checklist* and manufacturer's required inspection criteria. Lanyards meeting the inspection criteria will be marked using either a metal tag indicating the next inspection date or by the use of the provided manufacturer's label noting the month and year inspected and returned to the owner with the completed inspection checklist.
 - 3) Lanyards will be stored in a manner to protect them from physical, chemical or environmental damage.
 - 4) All lanyards that are involved in a fall or not meeting inspection criteria will be destroyed.

Self-Retracting Lanyards

- 1) Inspect before each use.
 - Visually inspect the body to ensure there is no physical damage to the body.
 - Make sure all nuts and rivets are tight.
 - Make sure the entire length of the nylon strap/wire rope is free from any cuts, burns, abrasions, kinks, knots, broken stitches/strands, wear and retracts freely.
 - Test the unit by pulling sharply on the lanyard/lifeline to verify that the locking mechanism is operating correctly.
 - If the manufacturer requires, make certain the retractable lanyard is returned to the manufacturer for scheduled inspections and/or maintenance.
- 2) A competent person will inspect self-retracting lanyards every six months using Attachment 3, *Self-Retracting Lanyard Competent Person Inspection Checklist* and manufacturer's required inspection criteria. Self-retracting lanyards meeting the inspection criteria will be marked using either a metal tag indicating the next inspection date or by the use of the provided manufacturer's label noting the month and year inspected and returned to the owner with the completed inspection checklist.
- 3) Harnesses will be stored in a manner to protect them from physical, chemical or environmental damage.
- 4) All self-retracting lanyards that are involved in a fall or not meeting inspection criteria will be destroyed or returned to the manufacturer for service.
- 5) A Leading Edge Self Retracting Lanyard (LE-SRL) is inspected in a similar manner as other SRL's except that it also includes inspection for the shock absorber webbing pack as well.

Other Fall Protection Hardware

- 1) Inspect before each use.
 - Examine the hardware for wear, pits, deterioration, or cracks.
 - Verify hardware is not deformed and operates correctly.
- 2) A competent person will inspect harnesses every six months using Attachment 4, *Fall Protection Hardware Inspection Checklist* and manufacturer's required inspection criteria.

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Fall protection hardware meeting the inspection criteria will be marked using either a metal tag indicating the next inspection date or by the use of the provided manufacturer's label noting the month and year inspected, and returned to the owner with the completed inspection checklist.

- 3) Hardware will be stored in a manner to protect them from physical, chemical or environmental damage.
- 4) All hardware involved in a fall or not meeting inspection criteria will be destroyed or returned to the manufacturer for service.

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**Attachment 1
Full Body Harness
Competent Person Inspection Checklist**

Manufacturer: _____

Model Number: _____

Serial Number: _____

Other Identifier: _____

Date of Manufacture: _____

Customer POC: _____

General Factors	Status	Supportive Details/Comments
1. Service Life: Harness is within service life specified by manufacturer. Verify that no recalls have been issued by manufacturer for the equipment being inspected.	Accepted Rejected	
2. Hardware: includes D-rings, buckles, keepers and back pads. Inspect for damage, distortion, sharp edges, burrs, cracks and corrosion.	Accepted Rejected	
3. Webbing: Inspect for cuts, burns, tears, abrasions, frays, excessive soiling and discoloration.	Accepted Rejected	
4. Stitching: Inspect for pulled or cut stitches.	Accepted Rejected	
5. Labels: Inspect, making certain all labels are securely held in place and are legible.	Accepted Rejected	
6. Other:	Accepted Rejected	
Overall Disposition:	Accepted Rejected	

Competent Person Signature: _____ Date: _____

Next Inspection Due Date: _____ (Every six months by a competent person)

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Attachment 2

Lanyard

Competent Person Inspection Checklist

Manufacturer: _____ Model Number: _____
 Serial Number: _____ Other Identifier: _____
 Date of Manufacture: _____ Customer POC: _____

General Factors	Status	Supportive Details/Comments
1) Service Life: Lanyard is within service life specified by manufacturer. Verify that no recalls have been issued by manufacturer for the equipment being inspected.	Accepted Rejected	
2) Webbing: Inspect for cuts, burns, tears, abrasions, frays, excessive soiling and discoloration.	Accepted Rejected	
3) Stitching: Inspect for pulled or cut stitches.	Accepted Rejected	
4) Synthetic Rope: Inspect for pulled or cut yarns, burns, abrasions, knots, excessive soiling and discoloration.	Accepted Rejected	
2) Hooks/Carabiners: Inspect for physical damage, corrosion, proper orientation and markings.	Accepted Rejected	
5) Energy Absorbing Component: Inspect for elongation, tears and excessive soiling.	Accepted Rejected	
6) Labels: Inspect, making certain all labels are securely held in place and are legible.	Accepted Rejected	
Overall Disposition:	Accepted Rejected	

Competent Person Signature: _____ Date: _____

Next Inspection Due Date: _____ (Every six months by a competent person)

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**Attachment 3
Self-Retracting Lanyard
Competent Person Inspection Checklist**

Manufacturer: _____ Model Number: _____
 Serial Number: _____ Other Identifier: _____
 Date of Manufacture: _____ Customer POC: _____

General Factors	Status	Supportive Details/Comments
1) Service Life: Lanyard is within service life specified by manufacturer. Verify that no recalls have been issued by manufacturer for the equipment being inspected.	Accepted Rejected	
3) Screws/Fasteners: Inspect for damage and make certain all screws and fasteners are tight.	Accepted Rejected	
4) Housing: Inspect for distortion, cracks and other damage. Inspect anchoring loop for distortion or damage.	Accepted Rejected	
5) Lanyard/Lifeline and Shock Absorbing pack (LE-SRL's only): Inspect for cuts, burns, tears, abrasion, frays, excessive soiling and discoloration. (See impact indicator section.)	Accepted Rejected	
6) Locking Action: Inspect for proper lock-up of brake mechanism.	Accepted Rejected	
7) Retraction/Extension: Inspect spring tension by pulling lanyard out fully and checking retracting action.	Accepted Rejected	
8) Hooks/Carabiners: Inspect for physical damage, corrosion, proper orientation and markings.	Accepted Rejected	
9) Labels: Inspect, making certain all labels are securely held in place and are legible.	Accepted Rejected	
Overall Disposition:	Accepted Rejected	

Competent Person Signature: _____ Date: _____
 Next Inspection Due Date: _____ (Every six months by a competent person)

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Attachment 4

Fall Protection Hardware

Competent Person Inspection Checklist

Manufacturer: _____ Model Number: _____
 Serial Number: _____ Other Identifier: _____
 Date of Manufacture: _____ Customer POC: _____

General Factors	Status	Supportive Details/Comments
1. Service Life: Hardware is within service life specified by manufacturer. Verify that no recalls have been issued by manufacturer for the equipment being inspected.	Accepted Rejected	
2. Hardware: Inspect for damage, distortion, sharp edges, burrs, cracks and corrosion.	Accepted Rejected	
3. Labels: Inspect, making certain all labels are securely held in place and are legible.	Accepted Rejected	
4. Other:	Accepted Rejected	
5. Other:	Accepted Rejected	
Overall Disposition:	Accepted Rejected	

Competent Person Signature: _____ Date: _____

Next Inspection Due Date: _____ (Every six months by a competent person)

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