

## ***Fall Protection Plan Standard***

### **1.0 PURPOSE**

This standard supports the Hazard Control Policy and establishes the consistent management of hazards posed by working from heights, specifying the requirements of Fall Protection Plan at SaskPower. The Full Body Harness Standard and Personal Fall Arrest System Components Standard have been combined with the Fall Protection Plan Standard.

### **2.0 DEFINITIONS**

#### **2.1 Anchorage**

A permanent structure or part of a structure designed to withstand any fall arrest forces imposed.

#### **2.2 Connecting components (connectors)**

An element that is used to couple (connect) parts of a personal fall-arrest system (PFAS), which may include carabiner, D-ring, O-ring, oval-ring, self-locking connector and snap hook.

#### **2.3 Control Zone**

The area within two metres of an unguarded edge of a level ( $\leq 1$  in 25 slope (rise / run) or  $\leq 4\%$  grade), elevated work surface of three metres or more in height. The control zone is clearly marked with a raised warning line or other effective method. A travel restraint system or equally effective method is used in the control zone.

#### **2.4 D-ring, O-ring, Oval-ring**

A connector used integrally in a harness as an attachment element or fall arrest attachment and in lanyards, energy absorbers, lifelines, and anchorage connectors as an integral connector.

#### **2.5 Energy Absorber**

A component or element that is included as an integral part of an SRD that dissipates kinetic energy and limits deceleration forces during fall arrest.

#### **2.6 Extended Dorsal Ring**

A component of the full body harness, which is a short 60-cm section of webbing that is connected to the full body harness "D" ring which allows the worker to connect the Self Retracting Lifeline to the body harness and make a visual confirmation of the connection.

#### **2.7 Lanyard**

A flexible line or strap used to secure a worker or an energy absorber to a lifeline, anchorage, or anchorage connector

#### **2.8 Lifeline**

Length of rope or strap that is attached to a safe point of anchorage at one end or, in the case of a horizontal lifeline, at both ends to support and guide for a personal fall arrest system or personnel lowering device.

## **2.9 Fall protection system**

A control zone, a personal fall arrest system, a safety net or a travel restraint system.

## **2.10 Falls from heights**

Exposure to different level falls while working at heights or around floor level openings. This includes working from poles, ladders, elevated work platforms, above or below ground level.

## **2.11 Full Body Harness**

Personal protective equipment that is designed to support the body during and after the arrest of a fall.

## **2.12 Guardrail**

A structure that prevents falls from heights and is constructed in a manner specified by *The Occupational Health and Safety Regulations 1996*, section 122.

## **2.13 Personal Fall Arrest System (PFAS)**

An assembly of interconnected components (lanyards, energy absorbers, lifelines, and anchorage connectors) and subsystems connected to a suitable anchorage that will arrest a worker's fall.

## **2.14 Self-retracting device (SRD)**

A device that performs a tethering function while allowing vertical movement to the maximum working length, which will arrest a workers fall in conjunction with a full body harness.

## **2.15 Shock Absorber**

A lanyard component that sacrificially elongates to dissipate energy generated during a fall.

## **2.16 Similar Barrier**

Any barrier that the employer or contractor can demonstrate to provide a level of protection that is at least equivalent to a guardrail.

## **2.17 Temporary**

Refers to a designed structure that is to be removed by the last workers using it before commissioning or prior to turnover to the contractor or owner and it is intended and designed to last not more than one year.

## **2.18 Tensile Strength**

The stress level at which a material fails.

## **2.19 Travel Restraint System**

A system that prevents a worker from travelling to the edge of a structure or to a work position from which the worker could fall.

## 2.20 Worksite

An area at a place of employment where a worker works or is required or permitted to be present.

## 3.0 METHOD / PRACTICE

### 3.1 Identify Fall Hazards

- Fall hazards at a temporary or permanent worksite shall be identified via a documented hazard/aspect and risk assessment. Fall hazards include:
  - If employee is elevated at a vertical distance of three metres or more; or
  - Where there is potential of injury from falls at less than three metres.

### 3.2 Control Methods

- Where reasonably practicable, falling hazards shall be removed. Where hazards cannot be removed, control methods shall be used to reduce the risk.
- Guardrails or similar barriers are the preferred means of fall protection and shall be constructed in accordance with *The Occupational Health and Safety Regulations, 1996, section 122*.
- Where there is a potential for falls over three metres, a Fall Protection Plan is required.
- Where a personal fall arrest system (PFAS) is the protective equipment that is best suited for the work, a full body harness, along with the personal fall arrest system components (PFAS) components, shall be selected accordingly.
- Full body harnesses, including tensile strength, shall meet the requirements of CSA Z259.10-06 Standard.

#### 3.2.1 Fall Protection Plan

- A fall protection plan shall be developed, where guardrails or similar barriers do not protect employees.
  - The plan shall be in writing and available to employees.
  - The plan shall be available at the work site before work begins.
  - A unique fall protection plan need not be created for each work site.
    - If an employer faces the same fall hazards at multiple work sites and the fall protection equipment and rescue procedures are identical at each work site, then a single plan applicable to all the work sites is acceptable.
    - Alternatively, an employer can create a single fall protection plan that covers all of the fall hazards likely to be encountered during normal operations.
  - In the event of unique work, a new or amended fall protection plan shall be required.
  - Employees affected by the fall protection plan shall be trained in all of its elements and the plan shall be made available to them.
  - Site specific “Rescue Plans” shall be prepared in writing and they shall be maintained for all instances where employees work at heights and where they are exposed to fall hazards.
- A fall protection rescue plan is required for bucket trucks, cranes and other aerial devices.
- Where the use of a guard rail, similar barrier or travel restraint system is not reasonably practicable, a safety net or control zone shall be used.

#### 3.2.2 Full Body Harness

### 3.3 Use

- Users shall be trained in the correct use of full body harnesses.
- The use of suspension trauma relief straps on a full body harness is mandatory for all T&D employees and contractors.
- Full body harnesses shall:
  - Be worn and used as per the manufacturer specifications and instructions.

- Be donned and adjusted prior to entering a fall risk area.
  - Be removed after leaving a fall risk area.
- Full body harnesses that have been subject to a fall shall be removed from service, tagged and inspected and/or disposed of through the Division's inspection process.
- Full body harnesses shall not be modified.
- Other PPE or equipment must not compromise the level of protection provided by the full body harness.

### 3.4 Inspection

- Full body harnesses in use shall be inspected by a competent person:
  - Documented inspection annually, or more frequently as per manufacturer's specifications.
  - When the harness has been subject to a fall.
- Full body harnesses shall be inspected by the user prior to use. If in doubt, do not use.
  - Inspect all straps and webbing for cuts, frays, pulled stitching, burns, or chemical damage.
  - Inspect D-Rings/Back pads for cracks, sharp edges, distortion.(bends)
  - Inspect buckles for any unusual wear, distortion, or corrosion.
  - Inspect Tongue/Grommets for heavy wear, from repeated buckling and unbuckling, loose grommets, punched holes in webbing or corrosion.
  - Inspect Tongue Buckle for distortion or sharp edges.
  - Inspect Friction and Mating Buckles for distortion or corrosion.
  - Check the date of manufacture. The harness expiry date shall not exceed manufacturer's recommendations.

### 3.5 Care of Full Body Harness

- Full body harnesses shall only be cleaned with manufacturer's recommended cleaning agents.
  - Oil and grease lubricants shall not be used on any fall arrest system component.
- Full body harnesses shall be stored in a cool dry area, out of the elements, sunlight and potential chemical exposure.
  - Hang the harness by the dorsal "D" ring to prevent tangling or in a storage bag.
- Do not drop your equipment on any hard surface, such as a concrete floor or a pavement.
- Do not remove labels, tags, or any other markings.
- Do not mark with paint, felt marker or tape, as chemical damage may result.
- Retention of records in compliance with SaskPower Enterprise Classification and Retention Schedule (ECaRS) and RIM Guidelines

### 3.2 Selection of PFAS Components

- The Personal Fall Arrest System shall meet the requirements of *The Occupational Health and Safety Regulations 1996, Section 102*.
- The anchor point shall meet the requirements of *The Occupational Health and Safety Regulations 1996, Section 116.3*.
- Where a lifeline is used, it shall meet the requirements of *The Occupational Health and Safety Regulations 1996, Section 101*.
- Where the following components are used, they shall be compatible (ANSI 359.1-2007) and CSA approved:
  - Self-retracting devices
  - Shock Absorbers
  - Energy Absorbers and Lanyards
  - Lineman's Body Belt and Lineman's Safety Strap
  - Pole Straps

### 3.3 Care and Use of PFAS Components

Fall arrest components shall be:

- used and inspected as per manufacturer specifications;
- inspected for damage before each use;
- inspected when subject to a fall and replaced if damaged;
- cleaned and stored according to manufacturer's specifications;
- inspected by a competent person at a frequency defined by the manufacturer;
- supplied through Central Stores or through the Division's purchasing process;
- destroyed if defective or expired (manufacturers date).

### 3.2 Provisioning

- Full body harnesses and PFAS components shall be supplied through SaskPower Central Stores or through the Divisions purchasing process.

## 4.0 REFERENCES

- Saskatchewan
  - The Occupational Health and Safety Regulations 1996
- SaskPower (located on SafetyNet)
  - Hazard/Aspect and Risk Assessment Policy
  - Hazard/Aspect and Risk Assessment Standard
  
  - Hazard Control Policy
  - Safety Rulebook
- Safety Directive – Procurement of Fall Arresting Equipment within Transmission and Distribution
  
- Third Party
  - National Building Code of Canada, Roofing Types and Slope Limits, Table 9.26.3.1
  - Occupational Health and Safety Code, Explanation Guide 2006, Part 9, Alberta
  - CSA Z259.16-15 Design of active fall-protection systems
  - Z259.2.2-98 Self-Retracting Devices for Personal Fall-Arrest Systems
  - Z259.11-M92 Shock Absorbers for Personal Fall Arrest Systems
  - Z259.12-01 Connecting Components for Personal Fall Arrest Systems (PFAS)
  - Z259.11-05 Energy absorbers and lanyards
  - Z259.1-95 Safety Belts and Lanyards
  - Z259.3-M1978 Lineman's Body Belt and Lineman's Safety Strap
  - Z259.14-01 Fall Restrict Equipment for Wood Pole Climbing
  - ANSI 359.1-2007