	PERSONAL PROTECTIVE EQUIPMENT ALL_A0A-00-000-HST-0009	Retention Code: CG01 - CA
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Document History

Date	Approved by	Change Summary
February 2020	David Reaich	Usability Mapped – Issued for Use

About this Standard

Purpose

The purpose of this standard is to ensure Personal Protective Equipment (PPE) is provided and used when PPE:

- requirements are posted.
 - is identified by a hazard assessment.
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1. PPE

1.1. General Requirements

Defenses Required

Based on hazard assessment, defenses may be required to address the following:

Hazard Type	Examples
Physical	<ul style="list-style-type: none"> Hot and cold surfaces noise overhead hazards temperature
Chemical	<ul style="list-style-type: none"> acids caustics flammable and combustible liquids gases
Biological	<ul style="list-style-type: none"> molds hantavirus
Environmental	<ul style="list-style-type: none"> weather conditions

Minimum PPE on work sites

Minimum PPE required to be worn on ConocoPhillips (CPC) work sites include:

- Hard hat
- Safety glasses
- Steel toed boots
- Task appropriate gloves
- Fire resistant clothing (FRC)


Additional PPE may be required based on location or job specific hazard mitigation.

Jewelry

No jewelry is permitted to be worn when:

- Performing any work where jewelry can get caught in, on or between objects.
- Performing electrical work.

Exception: Medical Alert bracelets are allowed on the work site. Bracelets must be secured.



NOTE: Examples of jewelry includes watches, rings, necklaces, nose and eyebrow piercings.

1.2.Head Protection

Regulations

Hard hats must meet the most current version of CAN/CSA-Z94.1 or ANSI Z89.1. Hard hats must **not** be:

- Metal
- Worn with other headwear that interfere with protective properties.
- Worn backwards unless the design specifically permits it.
- Stored in direct sunlight or heat.
- Altered in any way e.g., drilling holes, painting, cutting, carving etc.

Hard hat liners and chin straps

Hard hat liners must be:

- flame-resistant
- installed as per manufacturers’ instructions.
- thin layer FR toques may be permitted.

Safety head gear chin straps or other effective means of retention (hard hat lanyards) must be used when:

- climbing or working from a height exceeding 10 feet.
- exposed to high winds.
- other conditions may cause loss of headgear.


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Pre-use Inspections

A daily pre-use visual inspection of all hardhat components e.g., shell, suspension, headband, sweatband and other accessories should check for:

- Dents
- Cracks
- Any other damage reducing the degree of safety originally provided.




NOTE: Remove hard hat or suspension from service if there are signs of decline or impact or replace per manufacturer’s instructions.

Using Bicycles or Off-Highway Vehicles (OHV)

The following head protection is required when using Bicycles or OHVs:

Activity	Head Protection Requirements
Bicycles	When riding bicycles within a controlled location (i.e. plant, a hard hat may be worn if: <ul style="list-style-type: none"> • Speeds do not exceed 20km/h. • A chin strap is worn with the hat.
OHVs (All-terrain vehicles and snowmobiles)	Safety headgear must be worn meeting one of the following: <ul style="list-style-type: none"> • USA Federal Motor Vehicle Safety Standard FMVSS 218 • Snell Memorial Foundation Standard M2005 • BSI Standard BS6658: 05 • CSA CAN3-D230-M85 (British Columbia only) Use of safety headgear meeting the above requirement does not apply if the vehicle is equipped with rollover protective structures and seatbelts or restraining devices that comply with the code when travelling on flat terrain within the confines of facility leases.




NOTE: safety headgear may be worn in lieu of a hard hat while working at a remote site if the work is short duration and the workers are not working with energized electrical sources.

1.3. Eye and Face Protection


Regulations

Protective eyewear must meet the requirements of:

- the most current version of CAN/CSA-Z94.3 or ANSI Z87.1.



NOTE: Glass lenses are not permitted. Glass lens prescription eyewear must be worn behind the appropriate safety eyewear.



CAUTION: Contact lenses must not be worn where a hazardous substance or condition could adversely affect the worker.

Locations required

Safety or prescription glasses with side shields are required as part of minimum PPE.

Safety eyewear and face protection type

Safety eyewear and face protection types and recommended use are:

Type	Recommended use
Safety glasses	<ul style="list-style-type: none"> • Protect against impacts of solid objects.
Goggles / Splash goggles	<ul style="list-style-type: none"> • Used for protection against liquid splashes. • When a tight seal around the eye area is required such as overhead work or work in windy conditions.
Face shields	<ul style="list-style-type: none"> • Protect the face from splashes of chemicals (i.e. acids, caustics, solvents). • Typically used with splash goggles or safety glasses • All-in-one goggle / face shield combinations may be used. • For activities generating flying particles or chips. • When working with hot slag or molten metal. • To protect against welding glare if UV rated.
Full face respirators	<p>Used when work requires both respiratory and eye protection due to:</p> <ul style="list-style-type: none"> • Chemical vapours, mists and dusts • Liquid splashes.
Welding	<ul style="list-style-type: none"> • Must have suitable UV protection to perform job tasks involving welding or lasers. • Personnel not performing the task, but are in the work area, must use UV eye protection or be protected by a suitable screen e.g., welder’s helper.

1.4. Hearing Protection

Regulations

Hearing protection must meet or exceed specifications in CSA Z94.2.

Hearing Protection is required

Hearing protection is required as follows:

Noise Level	Requirement
Equal or >82 dBA	Single hearing protection
Equal or >100 dBA	Double hearing protection

Further information can be obtained from the industrial hygiene coordinator.

1.5. Respiratory Protection and Gas Detection

Respiratory Protection is required

Respiratory protection is required when the worker might be exposed to any airborne hazard including:

- Dust
- Fumes
- Mist or chemicals
- Other identified in a hazard assessment.

See Respiratory Protection Standard for additional information on types of respiratory protective equipment.

Personal gas detection

All workers must wear a personal-style four head gas detection monitor on all sweet and sour facilities, pipelines and well sites.

The gas detection monitor must be able to detect

- LEL (combustible gas - lower explosive limit)
- O₂ (oxygen)
- H₂S (hydrogen sulphide)
- CO (carbon monoxide)

1.6. Hand, Arm, Leg Protection

Gloves Required

Gloves are required when entering the work area and during all work-related activities where there is potential for exposure to:

- Chemicals
- Hot / cold materials or surfaces
- Prolonged water exposure
- possible cuts and abrasions to the skin.



NOTE: Glove type is chosen based on hazard assessment and must address the specific job task. Refer to the Hand Protection Guideline for further information.

Safety pants or chaps

Safety pants or chaps must be used when performing tasks where there is lower body injury potential from:

- Cut
- Puncture
- Irritation
- Abrasion.

Arm and wrist protection

Arm and wrist protection such as gauntlets are required to mitigate cut and/or puncture potential from:

- Work with sheet metal and/or demister pads
- Wire stripping / running wire
- Other tasks determined by hazard assessment.

1.7. Foot Protection

Regulations

Protective footwear must meet the requirements of the most current version of CAN/CSA-Z195 minimum CSA Grade 1 – green triangle or ANSI Z41.

Electrical shock resistant footwear must be worn where the risk of electrical shock exists (identified by the orange omega symbol).



NOTE: Safety-toed running shoes are prohibited

Ankle support

Boots must provide sufficient ankle support to prevent ankle injury.

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Foot Protection for non-routine tasks

Specialized foot protection selection for non-routine tasks/environments must be determined during hazard assessments for activities including:

Activity	Footwear Selection
Pressure washing	<ul style="list-style-type: none"> Footwear selection must include metatarsal protection to prevent injuries from contact with pressurized fluid streams
Tasks in icy winter conditions	<ul style="list-style-type: none"> Foot traction devices / stabilizers are recommended e.g. cleats.
Chemical conditions	<ul style="list-style-type: none"> Impervious knee-length boots in natural rubber, neoprene, urethane, urethane/vinyl composite, PVC and Hazmax (Bata) PVC and natural rubber hip and chest waders Boot covers and overboots in butyl rubber, nitrile, neoprene, Hazmax (Bata), PVC, polyethylene and natural rubber.

1.8. Fall Protection

Regulation

Fall protection equipment must be worn whenever the worker may fall:

- A vertical distance of 3 meters (10 feet) or more
- A vertical distance of less than 3 meters (10 feet) if there is an unusual possibility of injury
- Into or onto a hazardous substance or object
- through an opening in a work surface.

Further information is available in the Fall Protection Standard.

2. Flame Resistant Clothing (FRC)

FRC Required

FRC is required on CPC as minimum PPE and may be:

- single layer apparel e.g., shirts, pants and summer coveralls
- multilayered e.g., parkas, jackets, rain wear, insulated coveralls, bib overalls
- hard hat liners
- balaclavas and FR toques.

FRC must be worn as:

- the outermost layer of clothing
- directed by manufacturer instructions.



NOTE: Alternatives to FRC may be considered in Greenfield environments where workers are not exposed to hydrocarbon, electrical, or flash fire hazards.



NOTE: It is unacceptable to disable FR clothing by rolling up sleeves or leaving zippers improperly closed.



CAUTION: Synthetic underclothing must not be worn under FRC.

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FRC Specifications

FRC specifications based on worker type are as follows:

Worker Type	Specifications
CPC employees and full-time equivalent workers	<ul style="list-style-type: none"> • must be certified as FRC and include an external tag to indicate FR compliance. • must meet Arc flash protection at HRC-2 with minimum arc rating of 8.0 cal/cm² or greater in a single layer garment. • garment stripes/band must be retro reflective compliant with CSA Z96 Class 1, Level 2 and be labelled as per CSA Z96. • Refer to Procurement Specifications.
Contractors working on CPC sites	<ul style="list-style-type: none"> • must be certified as FRC and include an external tag to indicate FR compliance with CGSB 155.20 or NFPA 2112. • Exposure to Hazard Risk Category 1 must use a FR textile with a minimum incident energy rating of 4 cal/cm². • exposure to arc flash hazards must wear FRC appropriate to hazard risk category (HRC-2) as defined by CSA Z462-2012 and NFPA 70E and include external tag to indicate arc flash compliance. • garment stripes/bands must be retro reflective compliant with CSA Z96 Class 1, Level 2 and be labelled as per CSA Z96.

Hazard Risk Class Category 3 and 4 requires outerwear (flash suits) rated for the known flash hazard.



NOTE: If you work in HRC 2 or higher environment, you must ensure your FRC is rated for the work activities.

Welding and molten metals

Where FRC is required when welding, clothing appropriate for the task based on hazard assessment may be worn. Leather gauntlets for arms, legs and upper torso may be necessary to:

- aid in further protection
- extend the life of the clothing.

FR product must be rated for molten metals where the potential exists for exposure.

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Garment care

Manufacturer's recommended garment care must be followed.

Fabric rips, tears and abrasions must be repaired with appropriate FR materials. FRC that is visibly stained with hydrocarbons that can't be removed should be disposed.

3. Additional PPE

3.1. Disposable Protective Garments & High Visibility Clothing


- Selection** Selection of disposable protective garments is based on hazard assessment and must consider:
- FR requirements (3M™ 4530 Blue Disposable FR-Treated Protective Coveralls)
 - Nature of contamination e.g., benzene, mercaptan, refractory ceramic fibers.
 - Sizing
 - Disposal requirements.
 - Tychem suits for HCL acid work.

3.2. High Visibility Clothing

- Requirements** Selection of High Visibility Clothing is based on hazard assessment for tasks such as working near vehicles or mobile equipment and working in low light conditions.

3.3. Aprons, Rain Suits and Specialized Protective Suits

- Specialized Protection** Specialized protection including aprons and rain suits are permitted including the following materials:
- PVC
 - Neoprene, Neoprene / Nomex
 - Nitrile
 - nylon/polyurethane
 - natural rubber.

 **NOTE:** All protective body coverings must comply with FR clothing standards and include defenses against heat stress.

Hot Fluid Sampling Additional PPE must be worn when working with hot fluid, steam or piping:

Temperature (°C)	Required PPE
>55	<ul style="list-style-type: none"> • Face shield • Chemical / temperature resistant gloves • Chemical resistant FRC coat.

3.4. Immersion Devices and Personal Floatation

Regulations

Personal floatation devices must meet Canadian General Standard Board specification CAN/CGSB-65.11, Lifejackets must meet CAN/CGSB-65.7, and Immersion suits must meet the standards of TC Marine CAN/CGSB 65.16.

Requirements

Immersion Devices and personal floatation is based on hazard assessment and as outlined in the [Working Near Water Guideline](#).

3.5. Cold Weather Gear

Requirement

Cold weather gear appropriate for weather conditions is required or must be immediately available for use when travelling and performing outside job tasks.

Gear includes:

- Jacket or parka
- Bib coveralls
- Boots
- Gloves
- Face mask
- Hard hat liner
- Balaclava.



NOTE: Cold weather gear must be FR if working in an operational brownfield area.

References

Reference the following documents as required.

Document Name	Document ID
CPC Fall Protection Standard	
CPC Respiratory Protection Code of Practice	
CPC Working Near Water Guideline	

CPC Flame Resistant Clothing Specifications

Garment must provide arc flash protection at HRC-2 with a minimum arc rating of 8.0 cal/cm² or greater in a single layer garment (CSA Z462[†] or NFPA 70E).

FR protection against hydrocarbon flash fire, with proven independent test results indicating a body burn of less than 25% in using ASTM F1930 and must meet the requirements of CGSB 155.20 or NFPA 2112.

Garment snaps, enclosures, zippers are to be covered with FR material so as not to attract electrical arc and to not contact the skin of the wearer.

Lay flat collar or safety collar with Velcro closure.

FRC stripes/bands are to be in a distinctive standardized pattern including the following detail:

- Symmetric 'X' on the back extending from the shoulders to the waist.
- Two vertical stripes on the front passing over the shoulders and down to the waist.
- A continuous 360 degree waist-level horizontal band extending around the bottom intersecting stripes 'X' on the back and along the bottom of the front vertical stripes.
- Bands encircling both arms and both legs are required and must be at least 50 mm (1.96") away from the edge of a garment, sleeve or pant leg.
- The total width of stripes/bands must be at least 50 mm (1.96") throughout.
- Stripes/bands must be made up entirely of combined-performance or retro-reflective material in accordance to CSA Z96 Class 1, Level FR.

All labeling must be in accordance with CGSB 155.20, NFPA 2112, ASTM 1506, & CSA Z96-09[†] and will include the following at a minimum:

- Name, trade mark or other means of identifying the manufacturer or representative
- Designation of product type, commercial name, or code
- Garment size
- Description of FR fabric of the background material
- Compliance to CSA Z96-09[†] along with class and level of compliance
- Compliance to CSA Z462-2012[†]
- Arc Rating (ATPV) in accordance with ASTM 1506
- FR designation
- Label must state CGSB listing number in accordance with CGSB 155.20
- Laundering instructions.