ConocoPhillips Canada

HOT WORK

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About This Standard **4**

1. Determining Hot Work Requirements **4**

1.1 Hot Work Classification 4

1.2 Work Location 5

1.3 Work Authorization 6

2. Hazardous Area Controls **7**

2.1 Hazardous Area Identification 7

2.2 High Energy Hot Work Controls 7

2.3 Low Energy Hot Work Controls 8

2.4 Mobile Devices 8

2.5 Building Surfaces 9

2.6 Containers and Vessels 9

2.7 Mobile Equipment 9

3. Monitoring and Verification Controls **10**

3.1 Atmospheric Monitoring 10

3.2 Fire Watch 11

3.3 Fire Monitoring 12

3.4 Documentation 12

4. Welding, Cutting and Allied Hot Work in Hazardous Areas **13**

4.1 Ventilation and PPE 13

4.2 Equipment, Gas Cylinder and Ignition 14

4.3 Fire Prevention and Explosion Prevention 16

5. Special Hot Work Activities **17**

5.1 Intrusive & Non-Intrusive Hot Work on Live Equipment 17

6. Provincial Specific Requirements **18**

6.1 British Columbia Only 18

7. Roles and Responsibilities **18**

7.1 Roles & Responsibilities-Defined 18

8. Training and Competency **19**

8.1 Training and Competency Requirements 19

1. Appendix A - Electrical Standard Details-Hydrocarbon Process Bldg.....20

2. Appendix B- Hot Work-Decision Tree.....21

9. Appendix C: Can the 1-Hour Fire Watch Be Reduced to 30 Minutes?.....22

10. Appendix D: Identification of Flammable Gas/Vapour Sources 22

11. Appendix E- What's Changed- Revision Control Information.....24

12. Appendix F- ConocoPhillips/FTE Contractor Assessment Questions 25

12.1Hot Work Final Assessment and Sign Off 26

About This Standard

Purpose

The purpose is for all hot work on CPC sites to be planned, authorized and conducted in compliance with CPC and legislative requirements.

Scope

This scope sets what is in and out of scope of this CPC Hot Work Standard.

In scope	Out of scope
Work on CPC sites that can produce ignition sources capable of igniting flammable or combustible materials, atmospheres, or residues.	Medical devices & Wearable technology. Electrical arc flash. Emergency response activities.

Authorized user

Authorized users are CPC and contractor personnel trained and competent in hot work duties, approved by their employer and CPC safe work permit.

1. Determining Hot Work Requirements

1.1 Hot Work Classification

Hot Work

Hot Work is any work that uses a flame or produces sparks, heat, or other ignition sources that could ignite flammable gas/vapour or combustible materials.

High Energy

High energy hot work is any activity that produces an open flame or generates a spark capable of causing ignition.

Low Energy

Low-energy/spark potential hot work involves equipment that may unintentionally spark but does not use open flames or intentionally generate sparks.

1.2 Work Location

Designated Hot Work Area

A specific location approved for routine hot work operations and maintained in accordance with the requirements below:

1.2.1 Located and maintained so that flammable gases, vapours, combustible dust, or explosive atmospheres are not reasonably expected to be present during hot work activities.

1.2.2 Constructed of noncombustible or fire-resistant materials.

1.2.3 Free of combustible and flammable materials where practicable.

1.2.4 Arranged or protected to prevent fire spread beyond the work area.

Designated Hot Work Area-Control Requirements

The following controls must be maintained for a location to remain a Designated Hot Work Area:

1.2.5 Fire extinguishers are available, accessible, and maintained in working condition.

1.2.6 Ventilation is adequate to maintain a safe atmosphere for the work being performed.

1.2.7 Barriers, shields, or other protections are in place to contain sparks, heat, and slag within the work area.

1.2.8 Openings, cracks, penetrations, and other pathways that could allow sparks, heat, or slag to spread beyond the work area are sealed or protected.

1.2.9 Hot work equipment is maintained in safe working condition.

1.2.10 Permanent Designated Areas are reviewed at least annually and clearly identified with signage.

Hazardous Area-Locational Permit Trigger

Hot Work in hazardous areas requires a hot work permit when performed within the locational control boundaries specified below.

Flammable or Explosive Atmosphere	Combustible Material
Low energy hot work within 3m of flammable gas/vapour source.	High energy hot work within 15m of combustibles.
Low energy hot work inside tank berms containing flammable commodities.	
High energy hot work within 25m of flammable gas/vapour source.	

1.3 Work Authorization

Hot Work Permit

A Hot Work Permit is required when hot work is performed in a hazardous area where flammable, explosive, or combustible materials are present.

The Hot Work Permit is used to identify, communicate, and manage elevated risks through additional controls.

Where a Hot Work Permit is required (Section 2), CPC manages the work based on ignition energy and risk by requiring either:

1.3.1 High-energy hot work permit, or

1.3.2 Low-energy (Spark Potential) hot work permit.

Hot Work Permit Requirements

A hot work permit must include the following:

1.3.3 Equipment or location-specific hazards that may influence hot work.

1.3.4 Required atmospheric testing, and control measures.

1.3.5 Required Fire Watch equipment and assessment frequency.

1.3.6 Specialty personal protective equipment.

1.3.7 Emergency response provision for the area must be understood and available.

1.3.8 Wildfire restrictions or additional precautions during elevated fire danger periods must be followed.

General Work Permit

A General Work Permit may be used to authorize hot work performed outside the hazardous area locational triggers identified in Section 2 where site permitting is required.

Hot Work Permit Duration

Hot Work Permit duration must be established by the Safe Work Permit Authority in accordance with the applicable Safe Work Permit process.

FLHA

Where approved work involving non-intrinsically safe tools or equipment is performed in a hazardous area, an FLHA may be used to record atmospheric monitoring for CPC/FTE employees.

2. Hazardous Area Controls

2.1 Hazardous Area Identification

Hazardous Area Identification

Hazardous areas are identified using one of the following:

- Hazardous Area Classification (HAC) mapping where available, or
- Electrical Area Classification (EAC) drawings where HAC mapping has not been developed.

Before starting hot work, workers must:

2.1.1 Understand the classification of the area, consider how the hazards influence the work and control it.

Flammable Gas/Vapour Source

A flammable gas/vapour source is a location where flammable gas or vapour may be released or may reasonably accumulate (See Appendix D).

Process piping, vessels, tanks, and equipment that are fully enclosed and do not have a credible release point within the work area are not automatically considered flammable gas/vapour sources for the purpose of determining high-energy hot work requirements.

2.1.2 Where uncertainty exists, the Safe Work Permit Authority will determine whether a flammable gas/vapour source is present.

2.2 High Energy Hot Work Controls

High Energy Hot Work Controls

For high energy hot work, the following locational controls must be in place:

If	Then-Required
Within 25m flammable gas/vapour source.	CPC Representative- Initial gas test. High Energy-Hot Work Permit. Aspirated continuous monitoring.
Within 15m of combustibles.	Fire Watch and response equipment. High Energy-Hot Work Permit.

2.3 Low Energy Hot Work Controls

Low Energy Hot Work Controls

For low energy hot work, the following locational controls must be in place:

If	Then-Required
Within 3m of flammable gas/vapour source or, Inside tank berms containing flammable commodities.	Personal gas monitoring. Low Risk/Spark Potential- Hot Work. Permit.

The HAC boundary is extended from 3m to 7.5m when heavier-than-air gas or vapour is present outside the building. See Appendix A.

2.4 Mobile Devices

Non-Intrinsically Safe Mobile Devices- No Hot Work Permit Control Required

Non-intrinsically safe mobile devices used for company purposes do not require a hot work permit in Zone 2 hazardous areas when all the following conditions are met:

The area supervisor has not restricted the use of mobile devices.	✔
Mobile devices are not a flip phone.	✔
Mobile devices do not contain a removable battery.	✔
A personal gas monitor is worn continuously assessing the atmosphere.	✔
The device is in good working condition and protected by a heavy-duty case.	✔
No peripheral devices or charging equipment are plugged in while in the hazardous area.	✔

Mobile Devices- Hot Work Permit/FLHA Control Required

All non-intrinsically safe mobile devices require a hot work permit/FLHA when:

2.4.1 They are being used in Zone 0, Zone 1 or Class 1 Div 1 hazardous areas.

2.5 Building Surfaces

Building Surfaces

Hot work must not be performed on building surfaces containing combustible materials unless ignition risk is effectively controlled.

2.5.1 Surfaces that cannot be made non-combustible must be kept wet or otherwise protected, and equipment must be protected from electric shock.

2.5.2 Hot work is prohibited on walls, partitions, ceilings, or roofs containing combustible coverings, insulation, or sandwich-type panels.

2.6 Containers and Vessels

Hot Work on Containers, Vessels, and Systems

Tanks, containers, and piping must:

2.6.1 Be free of residual ignitable substances and ignition risk with proper isolation in place before hot work begins.

2.6.2 If this is not practicable, atmospheric testing must confirm levels are less than 10% LEL prior to work. This includes any connected or adjacent equipment.

2.7 Mobile Equipment

Mobile Equipment-Fired Heaters in Hazardous Areas

Mobile equipment with a fired heater operating within 25 m of any flammable gas/vapour source or within 15 m of combustibles must:

2.7.1 Be authorized via a High Energy Hot Work Permit.

2.7.2 Be observed by a Fire Watch when it is within 15m of combustibles.

2.7.3 Have continuous atmospheric monitoring in pace when within 25m of any flammable gas/vapour source.

If mobile equipment with a fired heater is operating outside of the above determined hazardous area a hot work permit is not required.

3. Monitoring and Verification Controls

3.1 Atmospheric Monitoring

Acceptable Atmospheric Limits

Hot work must not be started, and must be stopped, if atmospheric conditions are not controlled to the lowest reasonably practicable level (ALARP) or if any of the following limits are exceeded:

3.1.1 Oxygen (O2): Must be maintained between 19.5% and 23%.

3.1.2 Combustible gases: Must be maintained ALARP and must not exceed 10% of the lower explosive limit (LEL).

3.1.3 Carbon Monoxide (CO): Must be maintained below 25ppm.

3.1.4 Atmospheric limits may only be adjusted for approved site-specific purging activities supported by a formal risk assessment.

Atmospheric Monitoring Requirements

Atmospheric monitoring must:

3.1.5 Be conducted based on the hot work classification, work location, and the potential for a flammable gas/vapour atmosphere.

3.1.6 Metals coated with materials that may release hazardous fumes during hot work must be evaluated and controlled before work.

Low Energy Atmospheric Monitoring

Where low energy hot work is performed within 3m of flammable gas/vapour source or inside tank berms containing flammable commodities:

3.1.7 Work groups must complete atmospheric monitoring with passive (personal) monitors and documented on associated permit/FLHA.

High Energy Atmospheric Monitoring

Where high energy hot work is performed within 25m of the defined distances of flammable gas/vapour source:

3.1.8 A competent person must complete and record an initial gas test prior to work authorization.

- The competent person is a person familiar with the process, equipment, and potential sources of flammable or explosive atmospheres within the work area.

3.1.9 Continuous atmospheric monitoring must be maintained by the work group using an aspirated monitor.

Where atmospheric monitor alarms may not be heard or observed:

3.1.10 A dedicated worker must be assigned to continuously monitor conditions.

Confined Space Hot Work	Atmospheric testing must confirm conditions are below 10% LEL before hot work begins and must be maintained and documented throughout the work. 3.1.11 When atmospheric conditions are monitored remotely during hot work in a confined space, alarms must be set to activate at 10% LEL. 3.1.12 Hot work performed in or near a confined space must comply with the Confined Space Standard and permit requirements.

3.2 Fire Watch

Fire Watch Assignment	A Fire Watch must be assigned during high energy hot work when: 3.2.1 Hot work is performed within 15m of combustibles. 3.2.2 Risk of heat transfer, spark travel, or fire exposure beyond the work area exists. 3.2.3 Limited visibility, physical barriers, multiple work levels, and other conditions exist that prevent effective observation of the entire hazard area. Additional fire watch personnel must: 3.2.4 Be assigned when a single Fire Watch cannot effectively observe the entire hazardous area.
Fire Watch Duties	A Fire Watch must: 3.2.5 Maintain continuous observation of the hot work area and adjacent areas where fire could occur. 3.2.6 Keep fire extinguishing equipment available and accessible. 3.2.7 Be protected from heat, sparks, and slag. 3.2.8 Be capable of: • Detecting fire. • Initiating response. • Stopping work if unsafe conditions develop.

Post -Work Fire Watch

Fire Watch person is required post hot work to confirm no fire/hot spots remain. Fire watch must:

3.2.9 Fire Watch must be maintained for a minimum of 1 hour after hot work is complete.

- Fire Watch duration may be reduced to no less than 30 minutes if absence of fire hazards warrants reduction (See Appendix C).

3.2.10 Deviations from the default 1-hour Fire Watch duration must be documented within the Hot Work Permit or Fire Watch Log.

3.2.11 Fire detection systems must not replace required fire watch duration.

Combining Monitoring Duties

Where both fire watch and atmospheric monitoring are required, one worker may perform both duties only when continuous observation of the work area and immediate response to fire and atmospheric hazards can be maintained.

Separate workers must be assigned when:

3.2.12 Monitoring requires manual sampling, multiple locations, or extended distances.

3.2.13 Monitoring activities could distract from fire watch duties.

3.2.14 Alarms cannot be reliably seen or heard.

3.3 Fire Monitoring

Fire Monitoring

If a fire risk remains after completion of the fire watch duties:

3.3.1 Fire monitoring must be implemented, continuing up to 3 hours, or as determined by the CPC Supervisor.

3.4 Documentation

Monitoring Records

At minimum during hot work, fire watch and atmospheric conditions must be documented at the following times.

3.4.1 At the start and completion of hot work, including post-work fire watch or,

3.4.2 Whenever conditions change or an alarm activates.

Permit Close Out

Hot Work Permit must:

3.4.3 Not be “closed” without confirming and recording that the area was left in a safe condition.

4. Welding, Cutting and Allied Hot Work in Hazardous Areas

4.1 Ventilation and PPE

Ventilation Requirements-Hot Work

This section addresses ventilation used to control worker exposure during hot work and does not apply to temporary venting used for process safety or ignition source management.

Ventilation used during hot work must:

4.1.1 Effectively control fumes and gases at the source to prevent worker exposure above applicable occupational exposure limits.

4.1.2 Ventilation must be arranged so airflow moves contaminants away from workers and does not draw fumes or gases past workers.

4.1.3 Where exhaust ventilation is used, contaminated air must not be recirculated into the work area, unless approval has been provided by CPC Industrial Hygienist.

4.1.4 Where failure of a ventilation system could create a hidden or immediate hazard, workers must be warned of the failure.

4.1.5 Where dilution ventilation alone is not sufficient to control welding fumes and gases, additional ventilation measures must be implemented.

4.1.6 Temporary venting must be suitable for service, secured, and bonded/grounded where required.

Ventilation Distance & Placement

Effectiveness of ventilation controls during hot work is influenced by distance from the source and placement relative to workers and ignition hazards.

4.1.7 Local exhaust hoods must be positioned as close as practicable to the point of fume or gas generation to prevent contaminants from entering the workers' breathing zone.

4.1.8 Temporary venting or discharge that could affect hot work areas or nearby workers must be identified and communicated before work begins.

4.1.9 Access points and doorways that could expose workers to vented materials must be barricaded and clearly labelled.

Specialty Personal Protection Equipment and Control

During hot work:

4.1.10 Fall protection PPE must be protected from hot-work exposure or be suitable for hot-work conditions.

4.1.11 Clothing must not be contaminated with flammable or combustible substances due to the risk of ignition and burn injury.

4.1.12 Workers must wear PPE appropriate to the hazards and level of risk associated with the hot work activity.

4.1.13 When welding may result in overexposure, workers must use a full-face respirator or powered air-purifying respirator (PAPR).

4.2 Equipment, Gas Cylinder and Ignition

Compressed Gas Cylinder Use

Compressed gas cylinders used for hot work must:

4.2.1 Be in good condition, suitable for the intended use and removed/isolated from the hot work area/ignition sources when not in use.

4.2.2 Have cylinder valves closed when not in use or when equipment is unattended, and valve protection caps installed when not connected for use.

4.2.3 Be secured and protected from heat, sparks, hot surfaces, and other sources of damage.

4.2.4 Have hoses, regulators, and connections positioned and protected to prevent damage.

4.2.5 Remain outside confined spaces, including hoses and connections.

4.2.6 Oxy-fuel welding and cutting systems must have flashback arrestors (or equivalent) on both oxygen and fuel gas lines.

Compressed Gas Cylinder Storage

Compressed gas cylinders must:

4.2.7 Be stored upright and secured in an approved location.

4.2.8 Only cylinders required for the current work activity may be kept at the work location.

4.2.9 Be separated from combustible materials and ignition sources when stored.

Ignition Control

Equipment used during hot work must:

4.2.10 Be suitable for the work and controlled to prevent ignition, fire, and worker exposure.

4.2.11 Have internal combustion engines controlled or restricted when operated within 25 m of a flammable gas/vapour source.

4.2.12 Have welding and cutting equipment maintained in good condition and operated in accordance with manufacturer's requirements.

4.2.13 Have electrical equipment maintained in good working order, properly grounded, and protected from moisture.

4.2.14 Arc welding and similar processes must be controlled to prevent exposure to arc radiation.

4.2.15 Arc welding and similar processes must be controlled to prevent unintended activation of fire detection systems.

Hot Work Adjacent to Walls, Floors, Ceilings, or Roofs

Hot work on or near walls, floors, ceilings, or roofs must:

4.2.16 Be controlled to prevent ignition of combustible materials on the opposite side of the surface.

Where combustible materials are present, one or more of the following controls must be implemented:

4.2.17 Remove or protect combustible materials from ignition.

4.2.18 Prevent ignition from heat transfer, sparks, or hot material.

4.2.19 Assign a fire watch on the opposite side of the surface.

4.3 Fire Prevention and Explosion Prevention

Fire and Explosion Prevention

Hot work activities must only be performed when:

4.3.1 Flammable gas/vapour hazards in the surrounding area are eliminated or effectively controlled before hot work begins.

4.3.2 High-energy hot work must not be performed within 25 m of low-lying areas that may accumulate flammable gas/vapours unless the hazard is effectively controlled.

4.3.3 Combustible materials within 15 m must be removed or effectively controlled.

4.3.4 Flammable or combustible liquids must not be handled, transferred, or exposed above their flash point unless engineered controls are in place.

4.3.5 Pyrophoric materials must be controlled to prevent ignition.

4.3.6 Combustible dust must be controlled to prevent fire or explosion.

NOTE: Excessive buildup of walnut shells may pose a combustible dust risk.

Temporary Barriers, Plugs and Bungs

Temporary plugs, bungs, inflatable devices, or barriers used during hot work must be:

4.3.7 Suitable for the intended service and

4.3.8 Approved by the appropriate Technical Authority when used to control process hazards or prevent release of flammable gas/vapour.

Devices used only to support welding conditions must:

4.3.9 Not be credited as process isolation unless they are designed, rated, installed, and verified for that purpose, including differential pressure capability and integrity verification.

Tools, Barriers and Fire Protection

Tools, barriers, and fire protection systems must:

4.3.10 Be suitable for hot work and used to prevent ignition, fire spread, and exposure to people and equipment.

4.3.11 Use non-sparking or spark-resistant tools where mechanical action may create an ignition source.

4.3.12 Use thermal barriers where sparks, slag, or molten metal could expose workers, equipment, combustible materials, or adjacent work areas.

4.3.13 Have fire detection and suppression systems maintained in service unless impaired in accordance with approved bypass requirements.

4.3.14 Recently welded, cut, or heated materials must be marked 'hot', guarded, isolated, or otherwise controlled to prevent contact where workers not involved in the hot work could enter the area.

5. Special Hot Work Activities

5.1 Intrusive & Non-Intrusive Hot Work on Live Equipment

Intrusive Hot Work-Live Equipment

Intrusive hot work on live equipment must be planned, approved, and executed in accordance with the ConocoPhillips Canada Hot Tapping Standards.

Intrusive hot work may only proceed when all the following are met:

5.1.1 The work cannot be safely deferred to a shutdown.

5.1.2 Engineering suitability has been formally confirmed.

5.1.3 A formal risk assessment has been completed and approved.

Non-Intrusive Hot Work-Live Equipment

Non-intrusive hot work on live equipment may only proceed when the work scope is clearly defined and bounded based on NDE results and the required controls are confirmed.

At minimum the hot work permit must include:

5.1.4 NDE results and report reference.

5.1.5 Approved work scope limits based on NDE findings, defined by Asset Integrity.

5.1.6 Clear direction on actions required if work cannot be completed within the approved scope.

5.1.7 Post-work requirements, such as follow-up NDE, as applicable.

When these conditions are met, a formal risk assessment is not required. Any uncertainty requires consultation with Technical Safety.

6. Provincial Specific Requirements

6.1 British Columbia Only

British Columbia Exposure Plans

In British Columbia:

6.1.1 Welding, cutting, and allied hot work must be performed in accordance with CSA W117.2.

6.1.2 A separate Exposure Control Plan must be implemented where air contaminant exposures cannot be adequately controlled by this standard or where substance-specific exposure control applies.

7. Roles and Responsibilities

7.1 Roles & Responsibilities-Defined

Worker(s) Involved in Hot Work

Workers involved in hot work must:

7.1.1 Understand hot work scope & follow approved hot work controls.

7.1.2 Keep required controls in place for the full duration of the work.

7.1.3 Maintain communication with the Fire Watch, when required.

7.1.4 Stop hot work if conditions change or controls are no longer effective.

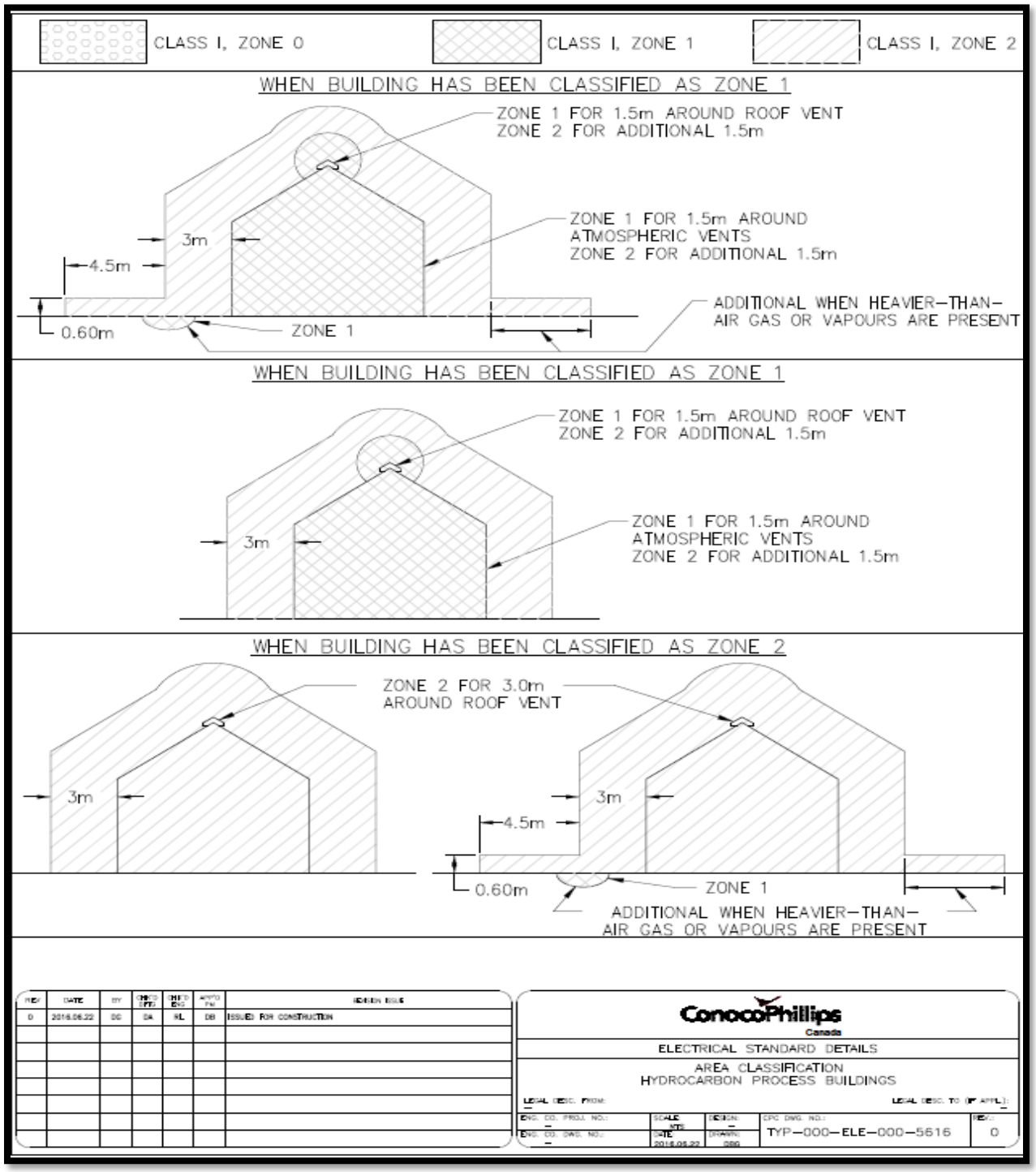
Permit Approver/Issuer Responsibilities	The Permit Approver/Issuer is responsible for preparing the work area and equipment under their control so that hot work can be safely introduced. They must: 7.1.5 Ensure work area and equipment in their area are safe for hot work. 7.1.6 Allowing hot work to start only when area conditions are safe.
Permit Receiver/Supervisor Responsibilities	The individual responsible for receiving and supervising hot work must. 7.1.7 Ensure workers are competent to perform the work. 7.1.8 Inform the Permit Approver/Issuer of any aspect of the planned hot work that could affect the work area, atmosphere, equipment, or permit conditions. 7.1.9 Stop work and notify the Permit Approver/Issuer if the scope of work, work methods, hazards, or conditions change from those identified on the permit.
Fire Watch	Fire Watch is responsible for duties in accordance with this standard.
Atmospheric Monitor	The Atmospheric Monitor is responsible for conducting and recording atmospheric monitoring in accordance with this standard.

8. Training and Competency

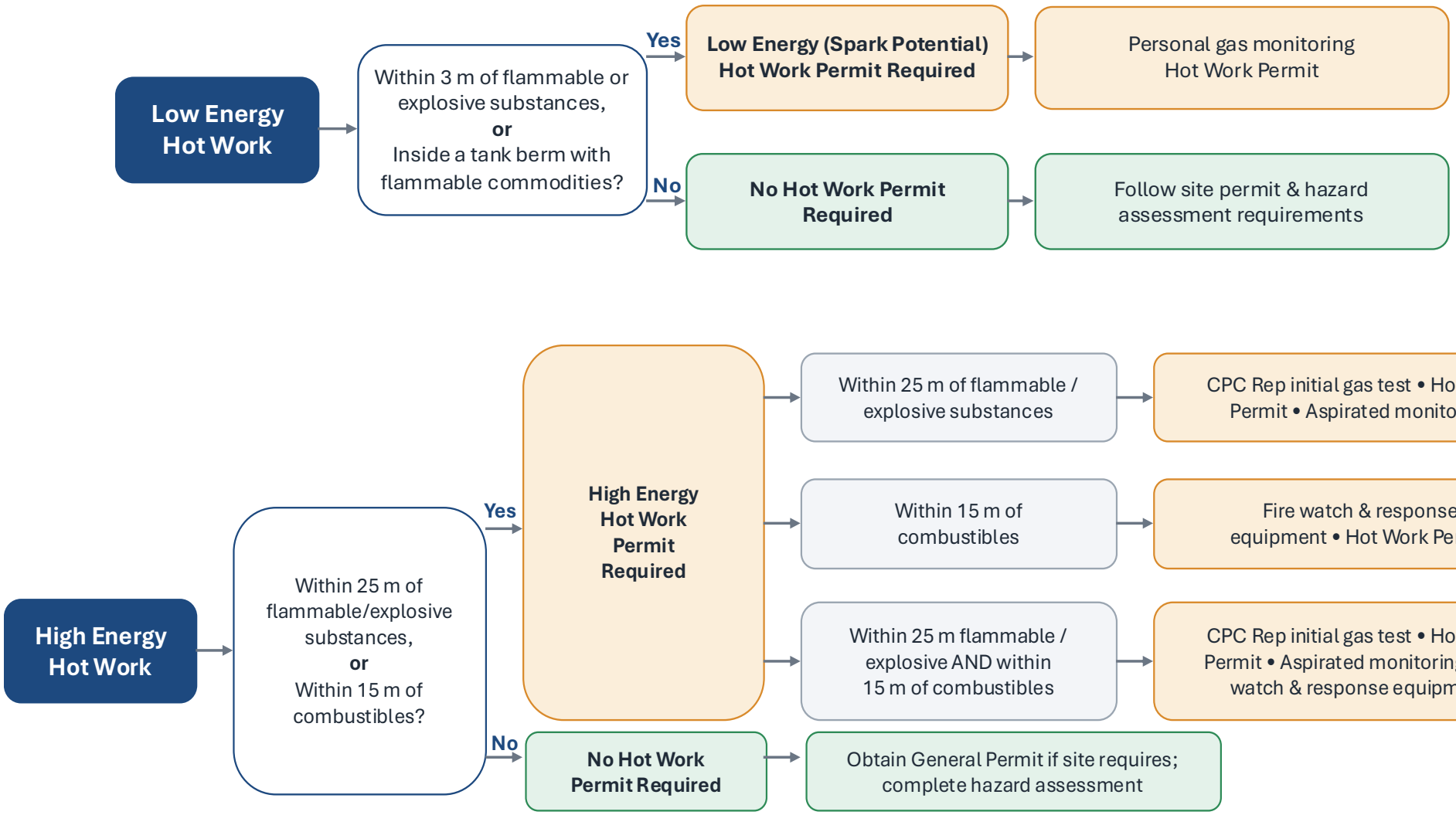
8.1 Training and Competency Requirements

Hot Work Training and Competency	Hot work must only be performed by workers who are trained and deemed competent for the specific equipment, hazards, and conditions of the task.

1. Appendix A - Electrical Standard Details-Hydrocarbon Process Bldg.



2. Appendix B- Hot Work-Decision Tree.



9. Appendix C: Can the 1-Hour Fire Watch Be Reduced to 30 Minutes?

If all the conditions below are met, the fire watch duration may be reduced to 30 minutes. If any condition is not met, a minimum 1-hour fire watch is required.

Requirement	Check
Combustible materials have been removed where practicable or remaining combustible materials are fully covered, shielded, or otherwise protected from sparks, slag, heat, and hot particles.	✔
No cracks, gaps, penetrations, drains, cable openings, or other pathways exist that could allow sparks or heat to reach concealed combustible materials.	✔
No combustible insulation, liners, coatings, debris, vegetation, or other hidden combustible materials are present.	✔
Heat transfer to adjacent equipment, structures, floors, walls, or materials is not possible.	✔
Wind, elevation, or other site conditions could not carry sparks or hot particles beyond the protected work area.	✔
A final inspection confirms no smoldering materials, retained heat, or hot spots are present.	✔

10. Appendix D: Identification of Flammable Gas/Vapour Sources

This appendix provides guidance for determining whether flammable gas/vapour sources are present within 25 m of planned hot work.

Equipment/Systems	Considered Flammable Gas/Vapour Source.
Process Release Points	Flanges, threaded connections, fittings, unions, valve packing, instrument connections.
Vents and Openings	Atmospheric vents, vent headers, bleeds, open-ended lines, sample points, thief hatches.
Drain Systems	Open drains, non-isolated drains, sump connections, drain headers, low-point drains.
Pressure Relief Systems	Relief valves, PSV outlets, rupture discs, flare system connections.
Temporary Repairs	Coffins, clamps, composite repairs, wraps, temporary plugs, leak containment devices.
Equipment Being Opened or Disturbed	Line openings, first breaks, equipment under isolation, de-inventory, draining, venting, purging, gas freeing, maintenance activities.
Vapour Accumulation Areas	Pits, trenches, excavations, sumps, enclosed spaces, low points, poorly ventilated areas where vapours may collect.
Process Buildings and Modules	Buildings or enclosures containing hydrocarbon processing equipment, hydrocarbon ventilation systems, or process vent discharges.

Equipment/Systems	Considered Flammable Gas/Vapour Source.
Tanks and Vessels	Tanks, separators, treaters, vessels, and associated nozzles, manways, vents, drains, and connections.
Other Conditions	Any other location where flammable gas or vapour may reasonably be released or accumulate based on the hazard assessment.

Equipment/Systems	Considered Flammable Gas/Vapour Source.	Explanation
Fully Enclosed Process Piping	Welded process piping with no flanges, fittings, vents, drains, valves, temporary repairs, or other credible release points within the work area.	No – not automatically considered a flammable gas/vapour source.
Utility Gas Systems in Non-Process Buildings	Furnaces, water heaters, unit heaters, office/shop building gas systems that are intact and are not being disturbed.	No – unless the system is being opened, repaired, isolated, vented, or the hazard assessment identifies a credible release or vapour accumulation hazard.
Hydrocarbon Source	A credible release point	A hydrocarbon source is not any pipe containing hydrocarbons or any system where hydrocarbons exist. It is a credible release point.

NOTE: Determine flammable gas/vapour hazards based on credible release points, vapour accumulation potential, operating conditions, venting/draining activities, and nearby equipment that may release hydrocarbons—not solely on the presence of hydrocarbons within a closed system.

11. Appendix E- What's Changed- Revision Control Information

REVISION CONTROL SHEET		
Revision	**Date Issued** (YYYY/MM/DD)	**Comments**
2	2025/08/27	Included the following changes in Section 1 Hot work Types and permits • Type B Lower Energy (Spark Potential) permit as per Enablon – Within an entire tank berm where tanks contain a hydrocarbon source. • Added "may extend from 3 meters to 7.5 meters" and "Refer to the HAC drawing" in the Note. • Added Hydrocarbon Sources section • The following changes are made in section 2.2 based on regulatory updates: • Minimum distance from Hot work to any combustible material 15 meters instead of 10 meters due to the updated fire code. • Fire watch must remain for 30 minutes once Type A hot work is complete to ensure no fire or hot spots remain. • Fire watch must remain for 60 minutes when there are combustible materials within 15 meters of the hot work area due to the updated fire code. • If fire eyes are activated and a hot work area can be monitored, then a fire watch may not be required.
3	2026/08/05	Major revision. Standard reorganized and usability mapped. • Restructured the standard using UX mapping principles and reorganized requirements by work location, work authorization, hazardous area controls, monitoring, fire prevention, training, and competency. • Replaced Type A/Type B permit categorization with High Energy and Low Energy hot work classifications. • Added Designated Hot Work Area requirements and hazardous area locational permit triggers. • Clarified Hot Work Permit, General Work Permit, FLHA, and mobile device authorization requirements. • Revised atmospheric monitoring, fire watch, fire monitoring, and documentation requirements to align with hazard and risk. • Added controls for ventilation, PPE, ignition sources, combustible materials, live equipment, walls/floors/ceilings, and mobile equipment with fired heaters. • Added provincial requirements, decision trees, and fire watch duration guidance to support consistent implementation.

12. Appendix F- ConocoPhillips/FTE Contractor Assessment Questions

The following competency assessment questions apply to workers required to complete the Hot Work competency within their Training & Competency Profile. Workers must not independently perform or oversee hot work until they have successfully completed the assessment and been deemed competent.

Associated Competency Objectives	Assessment Method	Standard Met
Explain the key responsibilities of the Permit Approver/Issuer before authorizing hot work to begin.	Verbal	☐ Competent ☐ Not Yet Competent
Explain the actions a worker must take when site conditions change or required hot work controls are no longer effective.	Verbal	☐ Competent ☐ Not Yet Competent
Explain the difference between high-energy and low-energy (spark potential) hot work and why the classification is important.	Verbal	☐ Competent ☐ Not Yet Competent
State the minimum information and controls that must be documented on a hot work permit before work begins.	Verbal	☐ Competent ☐ Not Yet Competent
State the atmospheric limits for oxygen, combustible gas (LEL), and carbon monoxide (CO) that require hot work to be stopped. Explain when these limits may be adjusted.	Verbal	☐ Competent ☐ Not Yet Competent
Explain the initial and continuous atmospheric monitoring requirements for high-energy hot work near flammable or explosive substances and for low-energy hot work.	Verbal	☐ Competent ☐ Not Yet Competent
Explain where the hazardous area classification can be confirmed when hot work requirements are unclear	Verbal	☐ Competent ☐ Not Yet Competent
Explain the conditions under which a non-intrinsically safe mobile device may be used and when a hot work permit or FLHA is required.	Verbal	☐ Competent ☐ Not Yet Competent
Explain when a Fire Watch is required and describe the Fire Watch responsibilities during and after hot work.	Verbal	☐ Competent ☐ Not Yet Competent
State how long a Fire Watch must remain in place after hot work is complete and explain the requirements for the post-work final inspection.	Verbal	☐ Competent ☐ Not Yet Competent
British Columbia Only: When there is a potential for workers not involved with the work to enter the work area, explain the precautions required for recently welded or flame-cut materials.	Verbal	☐ Competent ☐ Not Yet Competent

12.1 Hot Work Final Assessment and Sign Off

Candidate Hot Work Sign Off	I confirm that the *Hot Work Assessment* is now completed. Signature Time / Date
Supervisor Hot Work Sign Off	I confirm that the above candidate has successfully completed the Hot Work Assessment. Signature Time / Date