

HOT WORK

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1.0 Introduction

Hot Work is work which is capable of creating an ignition source that could lead to a fire or explosion.

Examples of Hot Work include grinding, gas cutting, welding, drilling, use of a heat gun, use of any gas heated portable appliance.

Hot Work also includes taking an ignition source into a hazardous zone, an area where there is the potential for highly flammable or explosive material to be present.

A hot work management system is required to:

- Prevent immediate combustion and/or explosion during the work; and,
- Preventing delayed combustion after work has finished.

2.0 Scope

This procedure covers all hot work undertaken on Contact sites and work being undertaken on behalf of Contact on other sites.

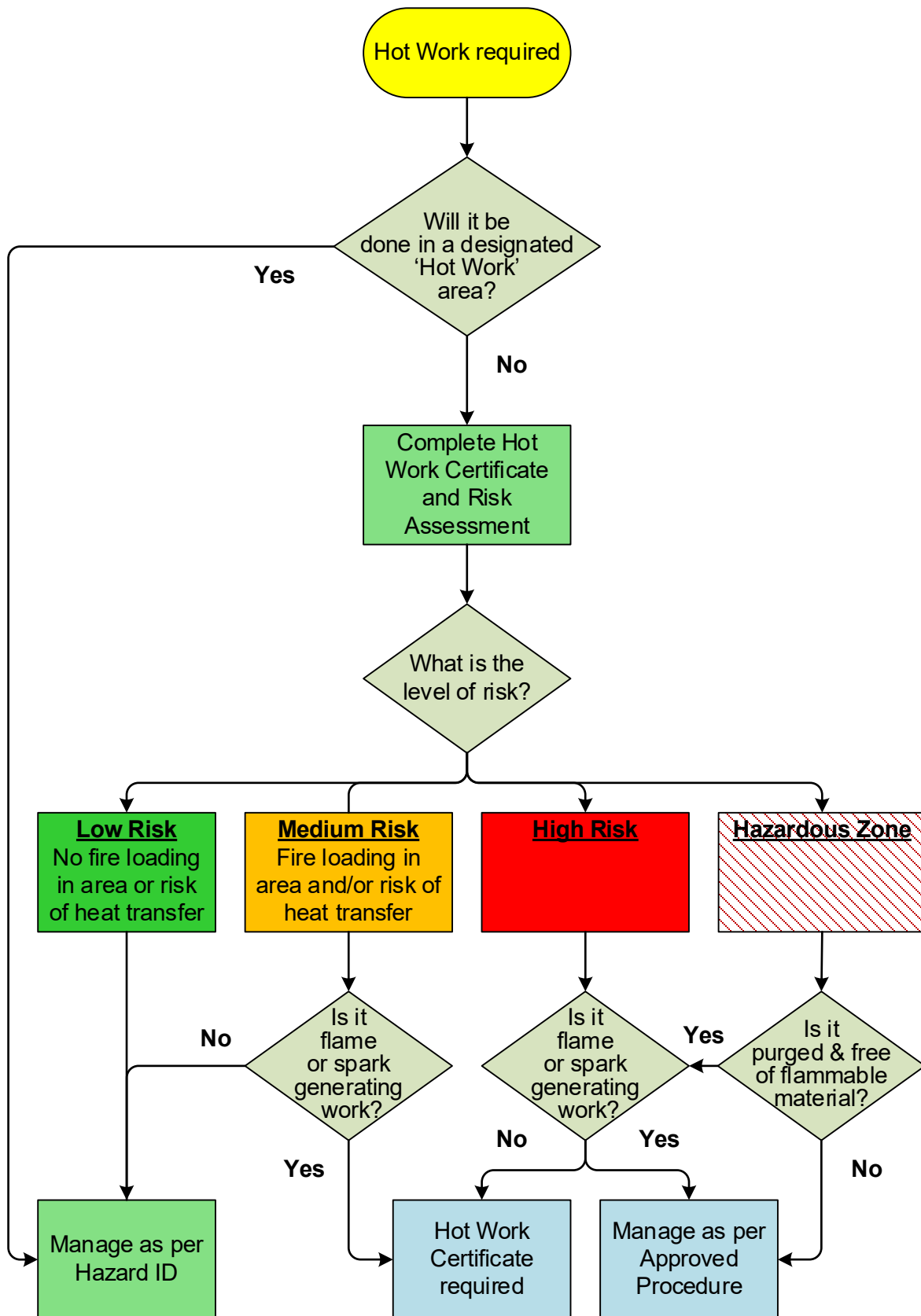
Contracting companies undertaking work on behalf of Contact on other sites may use their own hot work procedures if they are accepted by Contact as being fit for purpose.

3.0 Requirements

On Contact Energy sites, hot work is allowed:

- In designated hot work areas. These are areas set aside free of flammable materials, adequately delineated so as not to contain any combustible products and provided with suitable means of extinguishment. Hot work being conducted in a designated area outside of a workshop still requires a hazard ID to be completed. To designate an area outside of a workshop for hot work, the “Hot Work Temporary Location Form” **MUST** be completed and stored in that area.
- In other areas Hot Work is subject to a formal risk assessment as outlined in the Hot Work Certificate.

4.0 Hot Work Process Flow Guide Hot Work Procedure



5.0 Risk Assessment Process

The risk assessment process as outlined on the certificate should be completed prior to Hot Work commencing.

Completing the Hot Work Certificate

1	<p>Scope of works</p> <p>Record appropriate details as requested on the form</p>
2	<p>Fire Suppression and Detection Systems</p> <p>If Hot Work generates smoke and/or heat it may trigger fire suppression and /or alarm systems.</p> <p>Isolation of fire suppression systems MUST be authorised and carried out by operation staff. Requirements for working without fire suppression systems must be discussed and agreed with the Senior Authorised Person (SAP) or permit issuer. Disabling these systems may require notifications to be made to the insurer.</p>
3	<p>Risk Assessment Guide</p> <p>The risk assessment compares the type of Hot Work with respect to the fire loading in the area where the work is to be undertaken. Based on the assessment the risk level will determine the degree of controls to be implemented. For low risk activities work may commence with the completion of a Hazard ID. For medium risk activities the Hot Work Certificate MUST be completed by the Nominated Competent Person and signed off by the Nominated Supervisor. Identified controls must be in place before work is carried out. Activities deemed high risk require an approved procedure. Examples of High Risk activities are: Taking an ignition source into a hazardous zone; undertaking hot work activities outdoors during periods of high fire risk; undertaking spark producing activities in a dry cooling tower.</p>
4	<p>Hot Work Controls</p> <p>For medium risk activities the Hot Work controls MUST be determined by the Nominated Competent Person and reviewed and authorised by the Nominated Supervisor.</p> <p>Controls MUST be established with respect to the type of work being undertaken. The likelihood of smouldering sparks MUST be assessed and any requirement for fire watch to monitor the area post completion of work MUST be determined. Particular attention should be paid to areas such as cable racks where dust can accumulate or sparks could become entrained. Drains should also be checked to ensure they are free of oils and other contaminants and covered where possible. Elevated work on scaffolds or at higher levels on grating floors may necessitate floor covering, exclusion zones and additional fire watch resources to be in place. Fire extinguishers MUST be of a type appropriate to the nature of the potential fire.</p>

<p>5</p>	<p>High Risk Work High risk work requires an Approved Procedure. This MUST be reviewed by the work party and the required controls established prior to the work commencing. If gas detection is required results can be recorded in this space.</p>
<p>6</p>	<p>Review of the conditions of the certificate A review of the hot work controls MUST be taken prior to work commencing each working day. Conditions can change depending on the nature of the work and the work area. A more frequent review may be required as determined by the Nominated Supervisor in discussion with the Nominated Competent Person.</p>
<p>7</p>	<p>Authorisation by Nominated Supervisor The Nominated Supervisor signs the Certificate accepting the agreed assessment and controls and authorising the work to proceed.</p>
<p>8</p>	<p>Acceptance by Nominated Competent Person The Nominated Competent Person confirms that all the agreed measures have been communicated to the work party and are in place prior to the work commencing. If the work is carried out over multiple days, the end of day Fire Watch MUST be completed and signed by the NCP.</p>
<p>9</p>	<p>Final Workplace Check Up Once the work has been completed and all of the conditions of the certificate have been met the Nominated Competent Person closes it out by signing it off and returning it with the other safety documentation.</p>

6.0 Roles and Responsibilities

Role	Requirement	Comment
Nominated Supervisor	<p>Know and understand the scope of work, the location of and the estimated duration of the work</p> <p>Know what equipment will be required such as grinders, welders, gas torch, and heat gun.</p> <p>Identify if a JSEA is required or if a confined space is involved.</p> <p>Discuss the work with a SAP.</p> <p>Ensure the work area is safe and take all hot work preplanning precautions.</p> <p>Ensure the hazard ID/JSEA form identifies the hot work requirements.</p>	<p>The correct scope of work is essential. This provides the detail required by the SAP to determine the necessary plant isolations, if required, and if fire detection and/or suppression systems are required to be deactivated.</p> <p>Ensure all equipment has been checked and complies with Contact Energy’s requirements. Tools must be appropriate for the task.</p> <p>A JSEA is a more in-depth appraisal of each step of the activity. It details the controls to be put in place to mitigate any hazard or risk.</p> <p>Include the senior authorised person in the planning stages so that they are aware of the intended work and the location where the hot work will be carried out.</p> <p>As part of the planning before work starts the area MUST be safe from general hazards. Specific hazards and precautions for hot work include:</p> <ul style="list-style-type: none"> • If work is to be done in a high risk or hazardous area then approved work procedures will be required. • Clearing the area of any debris that could combust. • Ensuring hose reels or fire extinguishers are available and are suitable for type of work. • Ensuring there is adequate ventilation in the area. • Ensuring the Fire Watch is trained in their role and in the use of the fire safety equipment. • Ensuring the work area is barriered off. <p>Portable fire extinguishers provided at the place of hot work MUST not be taken from normally deployable positions but drawn from stores or hired in for the purpose.</p>

Appendix A: Glossary

Term	Definition
Designated Hot Work Areas	Areas set where Hot Work can be undertaken safely. These areas MUST be free of flammable materials, have defined boundaries that will contain any by-products of the Hot Work that could initiate combustion and have suitable fire extinguishing equipment available. Additional hazards such as welding fumes, smoke and arc flash MUST be taken into consideration. Designated Hot Work areas may be permanent, such as welding bays, or temporarily established for outages, projects or similar.
Fire Watch	A person whose focus is to closely monitor the immediate environs of a Hot Work workplace during the course of the Hot Work. The watch MUST continue over meal breaks and for a period after the Hot Work has ceased. In some cases, notably, working at height, more than one Fire Watch may be necessary.
Gas hazard areas	The defined area or location in which leakage of a flammable gas or gas mixture into the air may cause the concentration in air of the gas or gas mixture to exceed the Lower Explosive Limit (the minimum percentage of combustible gas in a mixture with air that can be ignited and will continue to burn). Such areas are defined by signage, structural or geographical boundaries. Gas hazard areas are required to be treated as a hazardous zone.
Hazardous zone	Area(s) deemed to contain combustible materials in sufficient quantities and / or state where a risk exists for immediate combustion.
Hot Work	Work involving burning, welding or similar operation that is capable of initiating fires or explosions. Non flame producing activities designated as Hot Work include grinding, gas cutting, welding, drilling, use of a heat gun, use of any gas heated portable appliance.
Hot work certificate	Certificate to be issued by Nominated Supervisor outlining the agreed controls to manage hot work of medium risk.

Appendix B: Applicable Legislation, Approved Codes of Practice, STDs & CPRs

Legislation	
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016	
Health and Safety at Work Act 2015	
Approved Codes of Practise and Guidelines	
Hazardous Atmosphere Zones	AS/NZS 60079.10.1:2009
Safety Manual – Electricity Industry Guide	Part 2, Section 13 Personal Protective Equipment
Standard for Fire Prevention During Welding, Cutting, and Other Hot Work	NFPA 51B
Code of Practice for Safety in Welding and Cutting	NZS 4781: 1973
Contact Energy Generation Safety Rules	DMS: 10000002408
Protect @ Contact Essentials Hot Work	DMS: 10000023830
Hot Work Form	DMS: 10000007305
Hot Work Temporary Location Form	DMS: 10000010872

Appendix C: Hot Work Certificate Cancellation

The hot work certificate cancellation **MUST** be signed and dated with the cancellation time of the fire watch and workplace supervisor. This deems the hot work officially complete.

Responsibilities relating to the Hot Work Certificate:

Nominated Competent Person	<ul style="list-style-type: none"> The Nominated Competent Person MUST: Sign Date Record the time on the hot work certificate.
Selected Person	<ul style="list-style-type: none"> Any gas testing MUST be carried out by a selected person or other suitably trained person competent in atmosphere checking.
Workplace/Nominated Supervisor	<ul style="list-style-type: none"> The hot work certificate acceptance MUST be: Signed dated with the acceptance time by the workplace/nominated supervisor