



Uncontrolled Ignition Source Critical Risk Standard



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1. PURPOSE

PMNZ recognises that the risks associated with Uncontrolled Ignition Source can result in injury or death and widespread property damage. This is typically as the result of fire when an uncontrolled ignition source ignites a fuel source. PMNZ has multiple activities that could expose workers or property to an Uncontrolled Ignition Source. The purpose of this critical risk standard relates to the prevention and/or mitigation of risks associated with Uncontrolled Ignition Source, through the implementation of systemised risk controls.

2. SCOPE

This standard applies to all PMNZ sites and operations involving Uncontrolled Ignition Source.

If PMNZ is involved in any Project requiring Uncontrolled Ignition Source, managed by any third party, PMNZ will ensure that the standards and policies of the controlling PCBU are consistent with those of PMNZ. PMNZ will consult, communicate and coordinate with other PCBUs and stakeholders as required to meet overlapping duties.

Role	Responsibilities			
The Company (PCBU) &	The PCBU & Officers of PMNZ have a responsibility to:			
Officers	 exercise due diligence to ensure all duties and obligations under HSWA 2015 are met including eliminating/minimising risks to health & safety so far as is reasonably practicable. 			
Senior Leadership Team	Senior Managers are responsible for:			
	 ensuring the requirements of this standard are adhered to. 			
	 ensuring that adequate resources are available to ensure the full implementation of this standard. 			
Critical Risk Sponsor	Critical Risk Sponsors have responsibility to:			
	Report on critical control effectiveness monthly, including critical control performance highlighted by incident data.			
	• ensure all ongoing actions determined by the CRC panel are implemented effectively.			
Critical Risk Owner	Uncontrolled Ignition Source Critical Risk Owner is responsible for:			
	 ensuring this standard is implemented, kept up to date, and reported on. 			
	 providing coaching to managers as required. 			
Managers	Managers have a responsibility to:			
	 ensure the requirements of this standard are met within their area of responsibility 			

3. AUTHORITIES AND RESPONSIBILITIES



Workers	Workers have a responsibility to:
	 ensure the requirements of this Standard are applied where relevant to their roles.
	 seek further information and advice if they do not believe they are competent to participate in work activities involving Uncontrolled Ignition Source.

4. UNCONTROLLED IGNITION SOURCE OPERATIONS

4.1 PMNZ ACTIVITIES INVOLVING UNCONTROLLED IGNITION SOURCE

The following are activities at PMNZ that involve Uncontrolled Ignition Source:

- Marina (moored vessel) fires
- Boatsheds
- Marina Hardstand
- Hot Works
- Hazardous substances
- Storage of bulk cargo or materials (includes bark)
- Electrical Fires (Covered in Hazardous Energy CRS)
- Disposal of flammable waste materials.

4.2 RISKS ASSOCIATED WITH UNCONTROLLED IGNITION SOURCE

The following provides an overview of the key risks associated with Uncontrolled Ignition Source including but not limited to:

- Marina fire involving multiple vessels.
- Hardstand Fire
- Boatshed Fire
- Fuel storage & distribution
- LPG fire/explosion
- Vehicle Fire
- Vessel, structure, building, bulk cargo fire as a result of hot works.
- Incorrectly stored hazardous substances resulting in explosion and/or fire.
- Incorrectly stored bulk cargo or materials resulting in fire.
- The potential human consequences to the above risks include injury or death caused by smoke inhalation or burns.



 The potential material consequences to the above include the destruction of materials or property caused by smoke damage or fire.

4.3 GENERAL REQUIREMENTS FOR UNCONTROLLED IGNITION SOURCE

The following sets out general minimum requirements for the control of risks associated with Uncontrolled Ignition Source:

- Routine hot works in locations such as PMNZ workshops and port & marina tenancies to be controlled by SOPs and non-routine hot works controlled through the permit to work system.
- Comply with the Harbour Masters Bylaw and Direction for hot-works onboard vessels.
- All elements of the PMNZ Emergency Response Plan are implemented including ERP exercises for multiple fire scenarios.
- All workers involved in the critical risk of Uncontrolled Ignition Source complete the relevant training and competency requirements.
- Hazardous substances are stored and used in accordance with the Hazardous Substance Management Plan.
- MSM ensure compliance with the marina & hardstand rules and guidelines.
- Complete a risk assessment and SOP for all flammable bulk cargo and/or stored bulk materials.
- Fuel storage & distribution

4.4 CRITICAL CONTROLS FOR MANAGING THE RISKS OF UNCONTROLLED IGNITION SOURCE

4.4.1 PERMIT TO WORK - HOT WORKS

Prior to undertaking landside hot-works a hot-work permit to work must be completed and issued. The hot-work permit won't be authorised until:

- Combustible materials and/or substances are isolated from the hot works.
- All relevant persons are consulted and/or notified of the hotworks.
- Fire fighting equipment is available on-site.
- Confined space hazards are identified and managed in accordance with the Confined Space Entry critical risk standard.
- A safe system of work is completed and briefed to describe the work methodology and risk assessment.
- Correct PPE is provided.

4.4.2 HOT WORK ON VESSELS

In accordance with the Harbour Masters (HM) Bylaw and Direction the HM is the permit issuer for hot works onboard vessels with exception to Cook Strait Ferry and PMNZ vessels. The HM consults with PMNZ for hot work permits issued to on vessels within the Port by providing a notification.

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4.4.3 BULK CARGO & STORED BULK MATERIALS

If a bulk cargo or stored bulk material is flammable, a risk assessment and corresponding standard operating procedure (SOP) must be completed. The SOP will describe how the cargo/materials should be safely stored and isolated from an ignition source including the following:

- Maximum volume or mass to be stored at a specific location of facility.
- Maximum length of storage time.
- Protection requirements including moisture, temperature and separation from other substances.
- Isolation requirements from potential ignition sources.
- Spontaneous combustion detection (heat monitoring).
- Firefighting methods and equipment.

4.4.4 HAZARDOUS SUBSTANCE MANAGEMENT PLAN

In accordance with the Health & Safety at Work (Hazardous Substances) Regulations 2017, PMNZ maintains a Hazardous Substance Management Plan (HSMP) including a Hazardous Substance inventory.

With exception to tanked fuels only storage sites approved by the PMNZ Hazardous Substance Management Plan can be used for the storage of hazardous substances.

The HSMP assesses the risks associated with hazardous substances in PMNZ workplaces and describes appropriate risk controls to control them.

4.4.5 ELECTRICAL SAFETY

Electrical Safety is crucial in preventing electrical fire and/or explosions. PMNZs arrangements for Electrical Safety are described in the Hazardous Energy Critical Risk Standard.

4.4.6 BUILDING PERFORMANCE – FIRE SAFETY REQUIREMENTS



- A Building warrant of fitness will be maintained for each applicable PMNZ building and will be displayed in a prominent area along with the buildings specified firefighting systems.
- In accordance with the Fire and Emergency New Zealand (Fire Safety, Evacuation Procedures, and Evacuation Schemes) Regulations 2018 – PMNZ ensures that all PMNZ buildings meeting the following criteria have a Fire Scheme registered with FENZ and all buildings not meeting the scheme criteria have a Fire & Evacuation Plan:
 - Building accommodates 10 or more people.
 - Building can accommodate more than 100 people.
 - Building stores hazardous substances.

4.5 VESSEL & MARINA FIRES

There is a significant risk of vessel and marine fires due to the abundance of flammable materials and substances combined with multiple ignition sources. Vessel and marina fires can spread quickly and present unique emergency response challenges due to hazardous conditions and limited access. The following critical risk controls are specific to vessel and marina fires and are additional to those described in the preceding section.

4.5.1 MARINA RULES & REGULATIONS

The Marlborough Sounds Marinas (MSM) Marina Rules and Guidelines include the following UIS related requirements:

- Safe Repair
- Power Connections
- Hot Works
- Dangerous Goods
- Fire Fighting Equipment
- Approved Contractors

4.5.2 HOT WORKS



As described in sections 4.4.1 & 4.4.2 landside hot work within a common user area requires a PMNZ Hot Work permit and hot work onboard berthed vessels can only occur at the maintenance berth and requires a Hot Work permit from the Harbour Master and notification to the marina operations manager.

4.5.3 SHORE POWER SUPPLY – ELECTRICAL SAFETY

Each power supply outlet within the marina is protected at source by a residual current device (RCD).

4.5.4 ELECTRICAL WARRANT OF FITNESS (EWOF)

In accordance with the Electricity Act 1992 connectable installations for mobile accommodations such as caravans, porta-coms, and pleasure vessels up to 50m must hold a current Electrical Warrant of Fitness in accordance with NZS3001 and NZS3004.2 for pleasure vessels. Commercial vessels are not subject to this requirement. Marlborough Sounds Marinas require all berth holders to hold a current EWOF and are required under the Electricity ACT 1992 to monitor and enforce compliance. Cords?

4.5.5 UNATTENDED VESSELS

Whenever possible fuel and ignition sources should be isolated on unattended berthed vessels. This includes isolating liquid and gas fuel and disconnecting electrical equipment (heaters & dehumidifiers).

4.5.6 MARINA SUPERVISION

Daily patrols of each marina jetty are completed to ensure the Marina Rules & Regulations are complied with and to detect hazards including uncontrolled ignition source.

4.5.7 FIREFIGHTING EQUIPMENT

The following firefighting equipment is provided at each of the marinas:

- Fire hose at 30m intervals.
- ABE Fire extinguishers provided at 60m intervals.
- Evacuation procedure TBC
- Fire trolley including extinguishers and portable pump and hoses.
- Loud Speaker Evacuation



• RIB - to relocate vessels

4.6 SAFETY IN DESIGN

Safety in design is about changing the health and safety outcomes throughout the lifecycle of a project or asset. This is achieved by embedding safety concepts at the earliest stages of project management. The Health and Safety at Work Act requirement is the designer must, so far as is practicable, ensure that the plant, building or structure is designed to be without risks to the health and safety of persons.

A Safety In Design (SID) process must be followed when changing or creating any infrastructure or equipment involving the critical risk of Uncontrolled Ignition Source. This may include buildings, vessels, wharfs, jetties, hardstand.

4.7 EMERGENCY RESPONSE PLAN

Appropriate emergency response protocols reflecting the nature of potential incidents associated with Uncontrolled Ignition Source shall be identified and established, including but not limited to:

- Electrical Fire.
- Vessel Fire
- Building Fire

5. TRAINING & COMPETENCY

All people involved in the planning, permitting, carrying out, and monitoring of work activities involving Uncontrolled Ignition Source must have the skills and knowledge to understand the hazards and associated risks of Uncontrolled Ignition Source, and the control measures required to be implemented to effectively manage the risks associated with these activities.

Appropriate training must be completed by workers who:

- Plan work activities involving Uncontrolled Ignition Source, including those who undertake hazard identification or risk assessment.
- Set up and/or carry out work activities involving Uncontrolled Ignition Source.
- Issue Excavation permits.

All persons with work activities involving Uncontrolled Ignition Source shall be trained and assessed as competent to perform those activities. The following sets out minimum training requirements for Uncontrolled Ignition Source:

Permit Issuers	PMNZ Permit to Work system/issuers training.
	PMNZ Risk management



Permit Receiver	PMNZ Permit to Work system/receivers training.
SSOW Developer & Reviewers	PMNZ Developing and reviewing SSOWs
Fire Extinguisher	Unit Standard NZQA3271 & NZQA 4647

6. MONITORING AND REVIEW OF APPLICATION

Monitoring and review of application of this standard will be performed on a regular basis. The frequency of these will be dictated by the nature of the Uncontrolled Ignition Source and associated activity. The PMNZ Permit to Work System and Permit Issuer will determine the nature and frequency of this for work carried out under a Hot Work Permit. The Critical Risk Management Framework will also provide guidance on critical control monitoring.

7. Associated Documents

- PMNZ Critical Risk Management Framework
- PMNZ Hazard and Risk Management Procedure
- PMNZ Permit to Work Procedure
- PMNZ Health and Safety Management System (HSMS)

8. References

8.1 RELEVANT LEGISLATION

Legislation available at http://www.legislation.govt.nz

- Electricity ACT 1992
- Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
- Health and Safety at Work (Worker Engagement, Participation and Representation) Regulations 2016
- Health & Safety at Work Act 2015
- MTA 1994 Maritime Rules Part 46
- Electrical Safety Regulations 2010
- Health & Safety at Work (Hazardous Substances) Regulations 2017
- Fire and Emergency New Zealand (Fire Safety, Evacuation Procedures, and Evacuation Schemes) Regulations 2018

8.2 OTHER DOCUMENTS

 Electrical Codes of Practice (ECPs) issued by Worksafe under Section 36 of the Electricity Act



- Electrical Warrant of Fitness in accordance with NZS3001 and NZS3004.2 Maritime New Zealand Interim Technical Notice ITN-11-18: Standard for the inspection of wire rope used on ship's lifting appliances in New Zealand.
- Navigational Safety Bylaw 2009
- MDC Harbour Masters Direction

9. REVIEW

This document will be reviewed every two years or after any critical event associated with it. The Review will be performed by the Critical Risk Owner in consultation with key stakeholders, and any changes agreed by the Critical Risk Panel.

10. REVISION HISTORY

Version	Date	Brief Description of Changes	Owner
V001	05/08/2024	New Document	GM-HSW