

CMR 007 – Isolation Standard
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1. Purpose

MPC Kinetic (MPK) consider incorrect or lack of isolation as one of its highest risk activities undertaken within its operations. Within the business these high-risk activities are referred to as Core Mandatory Requirements (CMR's). CMR's focus on the critical controls required to manage high-risk activities and allow our personnel to make informed decisions to manage those risks effectively.

The purpose of CMR 007 – Isolation Standard is to provide guidance on how to

- Manage the risks associated with incorrect or lack of isolation, which is supported by the isolation bow tie risk assessment
- Implement the Isolation Core Mandatory Requirement (CMR). This is supported by GRP-CMR-FRM-007 Isolation Critical Controls.

2. Scope

The scope of this standard applies to all MPK Employees and Sub-Contractors who are involved with isolation activities for MPK operations within all MPK controlled work sites.

Note: works outside of MPK control is not considered in scope

3. Reference Documents

Document Name
GRP-CMR-FRM-007 Isolation Critical Controls

4. Critical Control Implementation

4.1 Isolate Hazardous Energies

4.1.1 Perform an Energy Isolation

An energy isolation must be performed by:

1. Identifying the equipment to be worked on
2. Identifying all possible hazardous energy sources
3. Isolating the energy source by securing the isolation points
4. Dissipate any stored energy, if relevant
5. Verify the isolation is effective by testing for dead

A retest to confirm isolation must also be completed after any break or change in conditions.

4.1.2 Group Isolation Requirements

A group isolation must be used if:

- Multiple persons are involved in the task; or
- Multiple isolation points are associated with a task

Note: Not required for vehicles or mobile plant.

All group isolations must:

- Be performed under an authorised isolation permit
- Have an associated Safe Work Method Statement (SWMS)
- Be conducted by a minimum of two (2) competent people
- Apply positive isolation methods

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4.1.3 Positive Isolation Method

Positive isolation methods must be applied during group isolations.

These include:

- The use of permanent or temporarily locking devices; or
- Establishing a physical separation barrier

Means of isolation will be dependent on the type of energy and the equipment itself.

Isolation methods may include:

Energy Source	Ways to Isolate the Energy
Electrical	<ul style="list-style-type: none"> • Operating the main isolators to open • Disconnecting by un-plugging cables • Applying locks to switches
Pressure	<ul style="list-style-type: none"> • Removing and/or installing plugs • Installing and/or removing blanking plate • Valve isolation - Double block and bleed, Double block, Double Valve, Single valve • Releasing stored energy to achieve atmospheric pressure
Gravitational	<ul style="list-style-type: none"> • Installing chocks or wedges.
Radiation & Explosive	<ul style="list-style-type: none"> • Installing or erecting barriers

4.1.4 Permit to Work Requirements

All group isolation of potentially hazardous energy must be conducted under an authorised isolation permit.

The permit must be issued in accordance with MPK's Permit to Work Procedure / equivalent BU procedure or any client requirements.

The permit must be in writing and can be recorded on MPK's Isolation Permit.

As a minimum, the permit must contain:

- Details about the project, task, location, and time frame
- Identify the specific plant or equipment to be isolated
- Identify the energies to be isolated
- Record the isolation points, locks and who isolated and verified the isolation
- A list of personnel who will be working on the plant or equipment

Each person conducting work on the isolated plant or equipment must review the permit, attach their personal locks and tags and sign onto the permit.

4.1.5 Authorised Isolators

Any person undertaking an isolation must be authorised. The Authorisation is based on the type of energy that is due to be isolated.

The Authorised person must:

- Understand the hazardous energy sources and the potential impacts
- Have the expertise and knowledge to complete the required steps for effective isolation of the plant or equipment

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4.1.6 Personal Isolation Requirements

Personal isolation can be used when the isolation involves one person or isolations on vehicles or mobile plant.

To undertake a personal isolation:

- The same person must be conducting the work and the isolation
- The person must be trained and competent to perform the isolation and conduct the task
- The isolation must remain under the control of that person for the duration of the works
- The isolation and the scheduled work must be completed before the end of that person’s shift
- The isolation points and isolation methods are identified within a procedure or safe work instruction
- A personal lock and danger tag must be attached at the isolation point by each individual completing works.

Where these criteria cannot be met, the group isolation requirements must be met.

4.2 Applying & Removing Isolation Locks & Tags

4.2.1 Use Personal Isolation Locks

When using a personal isolation lock, they must:



- Only be fitted to either a lockable isolation point or a multi-lock hasp
- Only be applied and removed by the owner of the lock
- Be accompanied with a completed personal danger tag

4.2.2 Remove Another Person’s Lock & Tag







Before removing another person lock and tag, the responsible Site or Operations Manager must:

- Make all reasonable attempts to contact the lock and tag owner
- Conduct a risk assessment to decide if it is safe to remove the lock and tag
- Only remove the lock and tag if safe
- Complete incident report and investigation following the event

4.2.3 Types of Locking Devices

Lock Type	Purpose	Example
Personal Lock	A lock used for personal protection attached at each isolation point or a multi-lock device if more than one worker requires protection.	Red 
Equipment Isolation Lock	A lock and identification that is applied to equipment that is to be isolated and out of service.	Yellow 

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Lock Type	Purpose	Example
Group Locking Device	<p>Used when multiple padlocks must be used.</p> <p>If more than one person is working on the same plant, each person must attach their personal lock to prevent the isolator being opened before all locks have been removed.</p>	<p>Multi-hasp </p> <p>Lock Box </p>
Valve Lock-Out Devices	<p>Equipment that is used to assist in the isolation of valves.</p>	<p>Wheeled Gate </p> <p>Cable </p> <p>Butterfly </p> <p>Universal Gate </p>

4.2.4 Personal Danger Tag Requirements

All isolation points fitted with a locking device must have a personal danger tag attached. The tag must be secured in a visible location on the personal lock or lock box.

The tag must contain:

- Name of the person who applied the tag
- Contact number of the person who applied the tag



4.2.5 Out of Service Tag Requirements

Out of services tags must be attached where a yellow lock is placed on equipment. This tag tells others that the equipment is out of operation for repairs or alteration, or equipment that is still being installed or commissioned.

The tag must contain:

- Name of the person who applied the tag
- Reason for the out of service



An out of service tag must only be removed by the owner of the tag.

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4.3 Manage Testing Equipment

4.3.1 Testing Equipment Requirements

Any testing equipment used for testing isolations or identifying hazardous atmospheres must:

- Be fit for purpose
- Calibrated to the relevant standard

4.4 Planning Emergency Response

4.4.1 Emergency Response Requirements

Prior to any isolation, emergency response planning must:

- Identify all system emergency isolation points and confirm they are accessible
- Confirm a trained first aider is present during the isolation
- Provide the work crew with emergency contact numbers for the asset owner
- Communicate the location of the emergency muster points to the work crew