



Te Kaunihera-ā-Rohe o Ngāmotu

New Plymouth District Council

Isolations Procedure

Document #: HSP-0751-001

Version 2.0

Location of Controlled Copies:	ECM 8504990
Document Reviewer:	Courtney Taylor
Approved By:	David Langford
Responsible:	All Three Waters Leadership, Staff and Contractors Property Manager, Facilities Management Coordinator, Staff and Contractors All Infrastructure Projects Leadership, Staff and Contractors
Accountable:	Group Manager Planning & Infrastructure as element owner
Consulted:	Senior Health and Safety Business Partner Three Waters Quality and Compliance Lead Three Waters Production Manager PTW working party
Informed:	Executive Leadership Team

REVISIONS

Rev	Date	Pages	Description	Ву
а	October 2020	10	Draft	Fleur Robertson
1.0	September 2021	all	Updated isolation section	Fleur Robertson
2.0	May 2022	All	Final version – published	Fleur Robertson

This document is the property of New Plymouth District Council (NPDC), and may not be used for any purpose unless authorised in writing by NPDC and which, upon demand, shall be returned to NPDC. The document contains NPDC confidential, proprietary information and shall not be copied, reproduced, used, transferred to other documents or disclosed to others for any purpose unless specifically authorised in writing by NPDC."

Document Set ID: 8504990 Version: 4, Version Date: 19/05/2022



Table of Contents

1.0	Introduction	3
2.0	Scope	3
3.0	References	3
4.0	Definitions	3
5.0	Responsibilities	4
6.0	Training & Competency	5
7.0	Isolation Certificate (IC)	6
8.0	Pre isolation requirements	7
9.0	Isolation/De-isolation process.	8
10.0	Process isolations	11
11.0	Work on isolated equipment	12
12.0	Isolation of Safety /Emergency Systems	12
13.0	Hold Cards/ Personal Locks/ Do Not Operate Cards	13
13.1	Locking/Tagging	13
14.0	Extended period isolation	14
15.0	Attachments	15

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 2 of 15



1.0 Introduction

The purpose of this procedure is to define the requirements for isolations, the use of the isolation certificate (IC), the isolation and de-isolation processes and methods.

Isolations are a key component of the permit to work process that allows a task to be completed in a safe manner and without unplanned loss of containment. Lock out and tag out (LOTO) of plant and/or equipment provides a clear indication that plant and/or equipment should not be activated, energized or started up while work is being undertaken, which could potentially result in harm to people, undesired effects on a treatment process, and damage to assets and/or the environment.

The following types of isolation can be managed through the use of the Isolation Certificate and these procedures:

- Process isolation (refer to section 9)
- Isolation of safety/emergency systems (refer to section 12)
- Extended period isolation (refer to section 13)

2.0 Scope

The requirements specified in this procedure apply equally to all persons working for and on behalf of NPDC, i.e. workers, contractors, subcontractors etc.

This document must be read and used in conjunction with the NPDC Permit to Work Procedure.

This procedure will not apply to the Reticulation Maintenance and Resource Recovery Contractors as they carry out work, as required, as part of their contract with NPDC using their own agreed risk management and PTW procedures.

3.0 References

- Health and Safety at Work Act 2015
- Electricity (safety) regulations 2010
- Worksafe Safe use of Machinery
- The safe isolation of plant and equipment

4.0 Definitions

Close proximity	Locations on installations, where deliberate, accidental or inadvertent contact with electrical equipment is possible, either direct or indirect through tools, long objects, drills, cutting blades, etc. For the purposes of this practice "close proximity' is taken to be 500mm.
Competent	An individual possessing adequate qualifications such as suitable training and
person	sufficient knowledge, experience and skills for the safe performance of the
	specific work scope.
Complex	These may include, but are not limited to, work requiring isolation of dual
isolations	energy sources, multiple sources of energy requiring isolations, isolation

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 3 of 15



	required by multiple trades. Consider all sources, not just electrical when assessing the complexity of isolations required to safely execute the work	
De-energised	Disconnected from all sources of supply but not necessarily isolated, earthed or	
De-elleigiseu	out of commission.	
Endorse	To support or approve the permit.	
Lock-out	The use of locks and/or locking devices (e.g. chains and locks, clasps and locks)	
	to ensure energy sources and energy control devices such as electrical breakers	
	and valves are secured in a safe position.	
LOTO	Lock out, Tag out	
MCC	Motor Control Centre	
PCF	Permit Control Facility	
Permit	The person who applies for the Permit and is responsible for the planning and	
Receiver/PICWS	execution of the permitted work. Where a permit has been issued to a team	
	the receiver is the person responsible for the work activity at the work	
	location.	
	PICWS is the abbreviation for Person in Control of the Work Site.	
Positive	Positive isolation is defined as either:	
Isolation	a) Spool removal – removal of a pipework section or spool piece and	
	blanking the live end, also called 'air gapping'.	
	b) Blind isolation – insertion between flanges of a blind (spade); the	
	swinging closed of a spectacle blind (plate) or; replacement of a spacer	
	(slip-ring) with a line blind (spade)	
Personal Lock	A lock applied by a person that is undertaking the actual work on the isolated	
	equipment in addition to the NPDC locks applied in accordance with the	
	process described in section 9.1 by the NPDC Operations team. The intention	
	of the personal lock is to enable that person to be in control of the isolation to	
	protect their own safety.	
Testing of LOTO	The act of confirmation that plant and equipment is isolated and de-energised	
	by checking the integrity of the local energy control device (e.g. valve, isolator)	
	and that plant and equipment is de-energised (e.g. by trying to start equipment	
	or confirming de-pressurisation/drain down. It is critical that all bleeds, vents	
	and drains are checked to be free from blockage prior to testing	

5.0 Responsibilities

In addition to the responsibilities listed in the NPDC Permit to Work Procedure, the specific responsibilities in relation to Isolations are:

Area Technician

- Are deemed competent in Permit to work and application of Isolations. They are responsible
 for planning the isolation through consultation with the Permit Issuer. They ensure the
 requirements of the isolation and this procedure prior to work commencing has been
 communicated with the Permit Receiver (PR) and that the PR has been provided with the
 opportunity to apply their own lock.
- Detail the isolation process in section 5 of the Isolation Certificate, and apply locks/tags.
- Should physically check the integrity of the isolation, by attempting to start the driven equipment.

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 4 of 15



Permit Issuer

- No person is to issue Isolation Certificates if they are not competent or their isolations competency has expired.
- The Permit Issuer (PI) ensure the requirements of this procedure and conditions of the risk assessment for the task and any associated work permits (as applicable) are followed.
- Ensure there are 2 points of isolation where possible.
- Identify all plant and/or equipment and methods for isolation required with the Permit
 Receiver and other relevant personnel as part of the initial site inspection and record on the
 IC.
- Ensure the permit receiver has put their personal lock on the correct lockbox.

Permit Receiver / PICWS

- No person to request or receive Isolation Certificates if they are not competent or their competency has expired.
- Is responsible for completing section 1 of the Isolation Certificate and informing the Permit Issuer that an isolation is needed, well in advance of when the work is required to be carried out. Permit receiver is to provide the details of the equipment to be isolated and by when.
- States whether the work they are conducting will require a test run before full reinstatement.
- Applies their own personal lock on the lockbox and completes section 2 on the IC.
- Request the de-isolation process when work on the isolated equipment is complete.
- Remove their personal lock from the lockbox when the work is completed and the permit is cancelled.

5.0 Training & Competency

In addition to the training listed in the NPDC Permit to Work Procedure, the following applies.

Only Council Approved Contractors and personnel are allowed to work on any NPDC owned or operated plant and/or equipment. A competent person must have the necessary skills and experience in which they understand the processes and environment in which they work.

- For electrical work personnel must hold current New Zealand Practising Licences for Registered Electricians.
- For non-electrical work, isolations must be undertaken by a competent person with relevant knowledge and understanding of the plant and equipment in which they are isolating.
- The Permit receiver must supply evidence of such licences, registrations or other assessment of competency.
- All permit issuers must also have formal internal training on the objectives and key controls of the PTW and this Isolation procedure on a biennial basis, i.e. once every two years.

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 5 of 15



6.0 Isolation Certificate (IC)

The Isolation Certificate is used to record all details for a specific isolation. It includes 7 sections covering the following:

- 1. Application
- 2. Master Isolation Register (IR)
- 3. Extended Period Isolation (EPI)
- 4. Isolation of Safety/Emergency Systems
- 5. Isolation Procedure
- 6. Approval to proceed with the application of isolations
- 7. Approval to remove isolations

7.1 Application

This is section 1 of the Isolation Certificate and is completed by the Permit Reciever/PICWS. It is the PR's responsibility to inform the Permit Issuer that an isolation is needed well in advance of when the work is required to be carried out.

The Permit Receiver is to provide the details of the equipment to be isolated, the reasons for the isolation and when the isolation is required by, by completing the IC application section.

7.2 Master Isolation Register (IR)

This is section 2 of the Isolation Certificate and records all permits issued for work involving the specified isolations and is completed by the Permit Issuer in conjunction with the Permit Reciever. This section records the details of when a permit is registered as issued associated with the IC. It records the date of registration, type of permit, permit number, PICWS's name and if applicable the PICWS/PR lock number applied to a lock box. This section is also used to record when a permit is cancelled and is therefore no longer registered on the Master Isolation Register.

Only once all permits that were registered on the Master Isolation Register have been cancelled, and it is safe to do so, can the de-isolation process then be applied in accordance with the procedures in section 8 of this procedure.

This is one of the fundamental purposes of this isolation process under the PTW System; to ensure all work happening, that relies on an isolation to ensure there is no harm to people, process, an asset or the environment is recorded and completed prior to the isolations being removed.

7.3 Extended Period Isolations

This is section 3 of the Isolation Certificate and is used to record isolations that are in place with no permits issued against them. Refer to section 13 for more detail on the extended period isolations process. Completed by the Permit Issuer.

7.4 Isolation of Safety/Emergency Systems

This is section 4 of the IC and is used by the relevant Lead/Manager with responsibility for the asset to demonstrate their awareness of the actual isolation of any Safety or Emergency Systems. Refer to section 12 for more details on the isolation of safety or emergency systems process.

7.5 Isolation Procedure

This is section 5 of the Isolation Certificate and is where the details of the Isolation Procedure are recorded. This is a statement signed by two competent personnel i.e. permit issuer and area

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 6 of 15



technician that the equipment to be worked on has been isolated from energy sources and/or that appropriate measures have been taken to ensure containment of any process streams or product.

The details may be written in this section of the Isolation Certificate or a reference may be made to an attached work instruction (WI) or standard operating procedure (SOP).

The procedure should follow a standardised format: Action – Identification – Method

There SHALL be only one action for each item; e.g. "isolate inlet valve MX610 at local control point". The use of tags are to be identified and documented as part of the isolation procedure/ action steps.

7.6 Approval to proceed with the application of isolations

This is section 6 of the Isolation Certificate and is completed by the Permit Issuer once an isolation procedure has been compiled and checked, and the isolations are ready to be applied.

7.7 Approval to remove isolations

This is section 7 of the Isolation Certificate and is completed by the Permit Issuer once it has been confirmed that all associated permits, as recorded on the Master Isolation Register (section 2) of the IC, have been cancelled and it is safe to proceed with the de-isolation process in accordance with section 8 of this procedure.

7.0 General rules for Isolation

Any isolation should generally reflect the following constraints:

- To be in accordance with associated NPDC safety manuals and procedures.
- All depressurising, draining and pressurising SHALL be done within plant design criteria (temperature, pressure limitations).
- Isolation spaces, blind/blank flanged plugs and caps SHALL be of the same class/rating as the pipe work they are being fitted to. Isolation Procedures/action (section 5 of IC) are to specify the required class or rating.
- New gaskets are to be fitted upstream of isolation spaces and blind flanges.
- When a major project, with multiple isolations is performed, a formal debrief is to take place which includes a review of all isolations.
- A lock or tag number will be recorded on only one Isolation Procedure (list).
- Isolations will only be applied by or removed by competent persons with the direct authority of the Permit Issuer.
- No isolation will be removed without the authority of all the PICWS responsible for permits issued against that set of isolations/Isolation Certificate. See Test run procedure and checklist in section 9.2 of this procedure.

8.0 Isolation, Test Run, De-isolation process

9.1 ISOLATION PROCEDURE

Prior to work being undertaken under the isolation the following must occur:

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 7 of 15



- 1. The Permit Issuer and/or area technician plan for and carry out the isolation. The Permit Issuer, area technician and the Permit Receiver shall discuss the details of the isolation and agree on the points and method of isolation and record details on section 5 of the Isolation Certificate.
- 2. The Permit Issuer will check existing isolations to determine any isolation points that may be in conflict with the proposed isolation. If an individual point is already isolated an additional lock/tag will be applied in the field and the permit number will be added to the appropriate Isolation Certificate.
- 3. Any isolation/de-isolation process that exceeds 10 lines shall be attached to the Isolation Certificate as a separate document. They will then assign an isolation lock/tag to each isolation point where each lock has a unique number to be recorded on the isolation procedure on section 5 of the Isolation Certificate.

 The number of mechanical and electrical locks/tags issued for the isolation shall also be entered on Section 5 of the IC.
- 4. Permit Issuer to review and approve the isolation procedure and sign section 6 of the Isolation Certificate, approving the isolation process to take place.
- 5. When undertaking the isolation there is to be 2 competent persons; 1 person to install the isolation and1 person to check the isolations is correct. The persons who install and check the isolation shall initial at each step on the isolation procedure (section5) to acknowledge that it has been completed correctly. *Note:* Isolations must be placed and installed as close to the worksite as possible to assist with security and ease of monitoring.
- 6. Competent NPDC operators are to isolate the plant, making it safe for the persons working on the equipment, prior to a permit being issued. All actions will be documented in section 5 (IP) of the Isolation certificate. All padlock keys will be placed into a lockbox which is located in the control room. The Permit Receiver then applies their personal lock to the associated lock box and documents this in section 2 of the isolation certificate against the relevant permit number that applies to them.
- 7. Tests shall be conducted on all points of isolation to confirm that equipment is isolated, by trying to reactivate the plant or equipment. This ensures the equipment is de-energized/depressurized and/or cannot be started.

Note: If the isolation is required to be changed for any reason, the 'Valid Change' process shall be followed. See section 9.3.

- 8. The Permit Issuer is to then check that the isolations have been signed for (installed, Initialled and Checked) on the isolation procedure in section 5 of the Isolation Certificate.
- 9. The IC shall then be filed in the ISOLATION section of the permit rack. This indicates the isolation is complete and they can now authorise permits relating to the isolation.
- 10. The PI can now "Endorse" permits that are applicable to that isolation. The Permit Issuer must ensure the following is complete:
 - a. The permit number is recorded in the Master Isolation Register section of the IC.
 - b. The Isolation Certificate number is recorded in section 2 of the applicable permit as a cross reference.

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 8 of 15



c. Provide the PR/PICWS working under the isolation the opportunity to apply their own personal lock, signed and initialled, documented on section 2 of the IC.

All permits that are approved under the same set of isolations will have their Permit Numbers, Date, and name of PICWS recorded on the Master Isolation Register of the IC.

Isolations must stay in place until all Permits issued working under these isolations have been cancelled on the Master Isolation Register, unless -

- A test run is being carried out using the test run checklist. See section 9.2 and attachment.
- The need arises to relocate an isolation, e.g. the scope of work changes; or
- A piece of equipment carrying an isolation tag has been removed from the plant. In this case, the isolation is to be cancelled.

Work on the equipment shall not begin until tests have confirmed it is safe to do so.

9.2 TEST RUN PROCEDURE

Often repair and maintenance work is carried out on rotating equipment or machinery requiring the necessity to test run before complete reinstatement. To remove locks and isolations required to start the equipment goes against the principles of protection the permit system is trying to provide.

All parties must understand that additional controls must be put in place to allow testing of equipment which is being worked on under Permit Control to ensure that it is carried out in a safe manner.

PREPARTAION

- The Permit Receiver (PR) must notify the Permit Issuer (PI) that a test run is required and provide documented details of the required test.
- The PI and PR identify the associated equipment and services required, identify hazards, determine controls and formulate a test process to follow. (See test run checklist in attachments). PI must verify that the controls as stated are in place.
- The Permit Issuer must check that no other permits are dependent upon the
 isolations and check that other work or workers will not be affected and inform as
 required, PR must ensure all others working under the permit are made aware of
 test run and the controls being applied.

TESTING

- When ready for the "test", the PR/PICWS informs the PI, who will suspend all work
 dependant on the same isolations as the equipment to be tested and withdraw the
 permits.
- The Permit issuer then authorises the removal of the isolations and these changes are documented on the Isolation Procedure or checklist.
- The PR/PICWS informs all those working under the permit that the "test" is about to proceed and that the permit has been 'released for testing'. They will then with the permit issuer initial the IC to verify the equipment this.

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 9 of 15



• If the "test" was successful and the permit can be cancelled, the PI and PICWS sign the "cancellation section" of the Work Permit.

NOTE: Testing of equipment shall be supervised by a knowledgeable and competent person from the NPDC operations team, who shall determine whether or not the equipment is safe to be temporarily released and tested and that all people working on the equipment are made aware of the tests to be undertaken.

FURTHER WORK

- If further work is required following the test run, OR if other jobs required the
 reapplication of the isolations, the Permit Issuer or authorised competent person
 reapplies the isolations and then PI and PICWS will initial the Isolation Procedure
 (section 5 of the IC). The equipment must be isolated, locked and tagged by the
 Permit Issuer before additional work can be carried out.
- The PI then can reissue other permits.
- See attachments for the Test Run checklist.

9.3 DE-ISOLATION PROCEDURE

- 1. The person requesting the de-isolation is to inform the Permit Issuer of their requirement for the equipment to be de-isolated.
- 2. Prior to allowing de-isolation of the equipment, the Permit Issuer SHALL check that the 'Permit Cancelled" section of the IC has been completed, i.e. all permits listed on the IC have been returned and cancelled.
 - a) If there is more than one Permit operating under an isolation, the Permit Issuer SHALL only sign and date the 'permit cancelled' section of the IC (section 2) for the Permit applicable to the job that has been completed. The isolation locks/tags are not removed until all permits applicable to that IC have been returned and signed off on the Master Isolation Register.
- 3. Upon completion of ALL jobs operating under an isolation, the Permit Issuer SHALL have a competent person inspect the worksite to ensure all work is complete and no other work is proceeding under the isolation.
- 4. The Permit Issuer then grants approval to start the de-isolation process by signing Section 7 of the IC.
- 5. A competent person undertakes the de-isolation, initialling and dating each step in the removed column to acknowledge it has been completed. This is to also be checked and initialled by another competent person.
 - a) If an isolation point is to be de-isolated and it is also common to another isolation, only the isolation lock/tag applicable to the relevant Isolation Certificate is to be removed.
- 6. Once the de-isolation is complete the IC and the locks/tags are returned to the Permit Control Facility.
- 7. Permit Issuer verifies that, the number of locks/tags returned correlates with the number issued, the record of the de-isolation is complete, i.e. all signatures are present, and signs the IC where applicable. Should locks/tags be missing, an investigation to determine the reason as to why shall be undertaken.

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 10 of 15



9.4 Valid Change Process

If an isolation point requires to be changed after it has been "approved" by the Permit Issuer, the change to the IP shall be managed via the valid change process below:

1. Discuss and agree requirement for and extent of valid change with the PI. PI to update the IP to reflect agreed changes- details of these are recorded in section 5 of the IP. All changes shall be identified with a valid change stamp and initialled by the PI.

NOTE: Where changes are significant, the permit shall be cancelled and rewritten.

9.0 Process isolations

A process isolation SHALL be required for opening any vessel or tank, breaking flanges or connections on pipelines or process equipment.

Process isolations may be carried out under a verbal permit at the discretion of the Permit Issuer. In this case the tasks to be carried out must have a written risk assessment or SOP and the verbal permit must be listed on the permit register.

Variation - NPDC Mechanical maintenance team are authorised to apply their own isolations/personal locks for certain tasks with a medium or less risk rating and that are in a routine nature.

10.0 Work on isolated equipment

Prior to starting any work at the start of each working day, the isolation SHALL be checked using approved methods and this SHALL include a check to ensure that all isolation locks/tags are attached.

For electrical work requiring the use of Hold cards/Personal Locks/Do not Operate Tags (as described in detail in section 13.0 of this procedure): the Permit Issuer or designated AT SHALL ensure that the person who is to work on the isolated equipment has sufficient knowledge of the site to enable them to place the Hold Cards/Do Not Operate Tags and/or Personal Locks on the correct isolations points and stop/start stations. The Permit Issuer (or delegate) SHALL assist as required.

Regular monitoring and testing of isolations shall be stipulated in the work permit, risk assessment, or procedure for the task.

This should be done by a competent person who understands the complexity of the equipment and associated plant including control stations and computers remote from the plant as applicable.

11.0 Isolation of Safety / Emergency Systems

Section 4 of the Isolation Certificate is a signed statement by the relevant Site Lead/Manager that they are aware of any isolation that directly affects the operation of safety and/or emergency systems. This requires a Work Permit together with an Isolation Certificate to cover the isolation. Examples of its use are:

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 11 of 15



- 1. Work requiring the isolation of shutdown trips/interlocks in production process systems.
- 2. Work requiring the isolation of automatic emergency shutdown devices.
- 3. Hot work requiring the isolation of automatic detectors for flame, heat and smoke.
- 4. Routine maintenance of Fire and Gas detection equipment.

The following systems and equipment are classified as Safety and Emergency systems. Work which incapacitates any of them must be carried out under a permit.

Safeguarding systems:	Emergency shutdown, Process shutdown and control logic systems. (also known as integrity valves, relief valves and associated interlocks)
Alarms:	Annunciator panels, safety system/EDP monitor, Emergency sirens, Fire alarms, status lights and rotating beacons
Fire & Gas detection:	Heat, smoke, flame and gas detectors
Fire Control:	Firewater distribution system, hydrants, backup systems, monitor and sprinkler systems extinguisher systems, pressurisation fans etc,

The isolation, or inhibiting of safety systems, requires a different approach to that or normal isolation and de-isolation of process and electrical systems for maintenance or repair. During the time a Safety/Emergency system is isolated or inhibited, the installation is without the safety protection of that system or equipment. This may limit the operability of the equipment that is being protected.

If the isolation is a safety system isolation, the PR will tick the appropriate box and entre the system/area to be isolated. They will then obtain the relevant Lead/Manager signature to ensure that they are aware of the proposed isolation.

Isolations which have been in place for more than one week will be formally reviewed by the Site Lead/Manager.

12.0 Hold Cards/ Personal Locks/ Do Not Operate Cards

Hold cards/ Do Not Operate Cards and/or Personal locks are placed by an individual at the point or points of isolation to indicate that the individual is currently working on that isolated equipment and could be injured if the isolation were removed. Hold Cards/ Do Not Operate Cards and/or Personal locks maybe applied by individuals to any isolation that could have an impact to their work area.

The person placing the Hold Card/Do Not Operate Card at an isolation point is to fill in the following information on the card:

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 12 of 15



- Name and signature
- Team or Company
- Equipment details
- Isolation Cert No.
- Date and time the card is placed.

DANGER DO NOT OPERATE This lock/tag may only be removed by: Name Degt. Date.





13.1 Locking/Tagging

Two methods of securing and identifying isolation points are used within the PTW system, **Locks and/or Tags.**

General rules:

- Isolations will only be applied or removed by a competent person (within the NPDC operations team as the asset owner) with the direct authority of the Permit Issuer to be an installer or checker. Anyone interfering with an NPDC isolation will be subject to disciplinary action. Personal locks shall be removed by the person that applied the lock (see section 13.2 below).
- 2. No isolation will be removed without the authority of the Permit Issuer.
- 3. Blinds, spades etc are isolations and must be identified as such by the use of a numbered tag.
- 4. The PICWS or other permit user must be provided with a working copy of the isolation procedure on request and if necessary shown the location of each isolation.
- 5. The Permit Issuer is to check that the number of locks/tags returned to the permit coordination centre match the number issued.
- 6. Except where testing (see test run checklist) is required, such as the direction of rotation of an electric motor, de-isolation of equipment will not normally take place until the PICWS has indicated completion of the work by signing the work completed section of the Permit. Deisolation will only take place after the PI has checked that there are no outstanding Permits registered on the Isolation Certificate.

Lockout stations are located in secured areas under the control of the Permit issuer, usually in the control room or close vicinity and will be used to manage the use and control of lockout equipment. These stations are equipped with all lockout items such as uniquely keyed and numbered lockout padlocks, tags, lockout jaws and kits.

13.2 Personal Locks

A Personal lock refers to the individual lock applied by the Permit Receiver, PICWS or other persons working on the isolated equipment, this is in addition to the NPDC lock that has been applied by NPDC Operations and is to be located on the lock box that contains the keys for the required isolations.

13.3 Removal of personal locks if a person is unavailable.

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 13 of 15



If a personal lock and tag cannot be removed by the person who applied the lock and tag, e.g. they have left the workplace and the equipment is safe and must be reinstated for operation, the following steps shall be followed and documented:

- 1. All attempts shall be made to contact the owner of the personal lock and tag in order for them to return to the worksite and remove their lock and tag.
- 2. Where a person has placed and left personal lock and tag and is not available to remove the isolation, the person in control of the equipment shall advise the Permit Issuer of the person who applied the personal lock.
- 3. The Permit Issuer must satisfy themselves that the person who applied the lock and tag is not available on site and/or every attempt to contact that person has been made and this has been documented. The Permit Issuer must personally investigate the isolation including the area where the person was working and if they conclude that no person is in danger or potential danger and no equipment is in an unsafe condition they will contact the plant relevant Lead/Manager to advise them of the situation.
- 4. The Permit Issuer shall explain the situation to the relevant Lead/Manager and seek approval to remove the personal lock and tag.
- 5. If approval is given to remove the personal lock and tag the Permit Issuer may remove the lock and tag. The circumstances relating to the removal of the personal lock and tag must be recorded and signed by all involved.

14.0 Extended period isolation

Extended Period Isolations (EPI's) are isolations which are left in place after the work permit has been cancelled, e.g. when awaiting spares for a repair. They are not intended to be used for decommissioned equipment. In this instance close the permit and leave the isolation in place until the equipment is removed. If equipment is to be out of service for longer than 2 months, review the status weekly to ensure the reason is current.

The procedure for documenting EPI's is as follows:

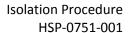
- When it becomes apparent that the work cannot be restarted within the validity period of
 the Permit, the associated Permit is to be cancelled by the PICWS who indicates on the
 Permit that the work has not been completed, but that the isolation is to be retained under
 the relevant IC. The Permit Issuer also then registers on the permit by counter-signing in the
 cancellation section.
- 2. The PICWS/PR is to indicate in the appropriate box of the EPI section of the IC:
 - a. The reason for the isolation and the type of systems that are to remain isolated
 - b. The type and number of the Permit being signed off.
- 3. The Permit Issuer is to sign the EPI section of the IC. Retain in the EPI section of the Permit rack at the coordination centre. The details of the EPI is documented on the register for quick reference purposes.

When it becomes possible for the work to restart again within the EPI boundary:

- 1. The PR is to raise a new Permit, entering the IC number of the EPI in the appropriate box of the Permit, and the new Permit number in the Isolation Register section of the IC.
- 2. The Permit Issuer will record the fact that the EPI has been cancelled by signing the appropriate box in the EPI section of the IC.

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 14 of 15







3. The IC is then to be filed in the ISOLATION section of the Permit rack and the new permit is handled in the normal manner.

Extended period isolations that have been in existence for a period exceeding 3 months, are to be reviewed by the Site Lead/Manager. The review should aim to either return the equipment to its normal condition, or decommission and permanently isolate the equipment, or to remove the equipment permanently.

15.0 Attachments

Isolation Certificate
Hot work Certificate
Test Run Motors Checklist
Isolation form and section guidance

NPDC Document Management	Approved By: David Langford	Review Date: September 2023
ECM: 8504990		Page 15 of 15

Document Set ID: 8504990 Version: 4, Version Date: 19/05/2022