JER-8000-MGT-PRO-0030 Hazardous Energy Isolation

(AS/NZS, ISO 45001:2018, Clause 8.1.2)

1 SCOPE

The procedure applies to all KGL Resources Workers undertaking work where there is a risk of exposure to hazardous energy which requires isolation.

2 PURPOSE OF DOCUMENT

The purpose of this procedure is to provide guidelines for KGL Resource workers to isolate hazardous energy.

3 RELEVANT LEGAL & OTHER REQUIREMENTS

It is the responsibility of all personnel to comply with this procedure and seek guidance from the Project Director where clarification is required.

- Work Health and Safety Act 2011 (NT)
- Work Health and Safety Regulation 2011 (NT)'
- Safe Work Australia Model Code of Practice – 'Managing the Risks of Plant in the Workplace', 2013
- Code of Practice, Managing Electrical Risks in the Workplace (2020) NT

4 DEFINITIONS

Alive (Live)	Connection to a source of electrical supply or subject to hazardous induced or capacitive voltages. All Electrical Apparatus must be regarded as being alive until proved de-energised.
Cable	An insulated electrical conductor or two (2) or more such conductors laid together, whether with or without fillings, reinforcements or protective coverings.
Competent person	Person who: • holds a current licence for the electrical work they are undertaking; or • any other person permitted to carry out or supervise electrical work under relevant State or territory legislation (e.g. electrical engineer, electrical apprentice); or a person who has acquired through training, qualification or experience and the knowledge and skills to carry out the task.
De-energised	Means separated from all sources of supply, but not necessarily isolated from the supply, earthed, discharged or out of commission
Electrical Apparatus	Any electrical equipment. For the purpose of this procedure electrical equipment must mean any combination of cables, busbars, overhead conductors, switchgear, circuit

	breakers, transformers, starters, capacitors, motors or other electrical equipment of which low voltage conductors form an integral part.
Electrical Work	Electrical work is connecting electricity supply wiring to electrical equipment or disconnecting electricity supply wiring from electrical equipment, or installing, removing, adding, testing, replacing, repairing, altering or maintaining electrical equipment or an electrical installation.
Energised	Connected to a source of electrical supply or subject to hazardous, induced or capacitive voltages, i.e. live.
Exposed Conductor	An electrical conductor, approach to which is not prevented by a barrier of rigid material or by insulation which is adequate under a relevant Australian Standard specification for the voltage concerned
Hazardous Energy Isolation Permit	A document used to record the steps taken, and the approval, of an isolation of hazardous energy.
High Risk Construction Work	Has the same meaning under the WHS Regulation, namely construction work involving: a. a risk of a person falling more than 2 metres; b. demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure; c. or is likely to involve, the disturbance of asbestos; d. structural alterations or repairs that require temporary support to prevent collapse; e. work that is carried out in or near a confined space' f. work that is carried out in or near: i. a shaft or trench with an excavated depth greater than 1.5 metres, or ii. a tunnel; g. the use of explosives; h. work that is carried out on or near pressurised gas distribution mains or piping; i. work that is carried out on or near chemical, fuel or refrigerant lines; j. work that is carried out on or near energised electrical installations or services; k. work that is carried out in an area that may have a contaminated or flammable atmosphere; l. tilt-up or precast concrete; m. work that is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians; n. work that is carried out in an area at a workplace in which there is any movement of powered mobile plant; o. work that is carried out in an area in which there are artificial extremes of temperature; p. work that is carried out in or near water or other liquid that involves a risk of drowning; or q. diving work.

Information tag	A tag used to convey information relating to the use of the structure, plant or process other than information directly relating to unsafe or unfit for use issues. Information tags may be attached to isolation devices, operation panels or control devices. The tag must be annotated with the: • name and employer of the Worker who affixed the tag • date the tag was affixed • information to be conveyed to user.
Isolated	Disconnected from all possible sources of electrical supply and rendered incapable of being made energised without premeditated and deliberate action.
Isolation	The process that segregates the hazardous energy or toxic substance from the recipient. This may be achieved by a number of methods such as blinding, electrical isolation or positive physical isolation.
Lock Out	A process where a lock is used to lock a device in the “off” or “safe” position. The lock out process is used in conjunction with the danger tag.
Make Safe	Preparing Electrical Apparatus for access by performing the following procedures in conjunction with development of SWP or Take 5.
OEM Instructions	An instruction from the Original Equipment Manufacturer.
Out of service	Equipment, plant or machinery that is not operational due to the following reasons: • awaiting commissioning or introduction into service • intentionally taken out of service for testing, maintenance or decommissioning and • fault or breakdown pending corrective action
Out of Service Tag	A tag fitted to the isolation device(s) of a structure, plant or process that is not safe and fit for use. The tag must be coloured and patterned in the international “caution” format (i.e., yellow with black diagonal stripes). The tag must be annotated with the: • name and employer of the Worker who affixed the tag • date the tag was affixed • specific reasons that make the structure, plant or process unsafe and/or unfit for use.
Personal Danger Tag	A red coloured tag carrying the words “Danger” and “Do Not Operate” (or similar) with provision to record: • The name of employer of the Worker placing the tag, and • The date the tag is placed, and • A description of the device not to be operated.
Personal Isolation Lock	A padlock used by an individual to lock an isolation device in the position that ensures the individual’s safety. The padlock: • should be red coloured; • must have only one, unique key;

	• may be a set of padlocks all keyed the same; and • must be identified with the name and employer of the padlock owner either directly on the padlock or the by use of a tag threaded directly onto the shackle (shank) of the padlock.
Safe Work Procedure (SWP)	A prescribed method to undertake a specific, repetitive task that includes control measures that are prescribed for that particular task and have been developed in consultation with the relevant workers and where all hazards and risks have been assessed, and controls identified in accordance with statutory requirements and relevant procedures. Safe Work Procedures are developed for all repetitive tasks.
So far as is reasonably practicable (**SFARP**)	SFARP means that which is, or was at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters including: a) the likelihood of the hazard or the risk occurring, b) the degree of harm that might result from the hazard or the risk; c) what the person concerned knows, or ought reasonably to know, about: (i) the hazard or the risk, and (ii) ways of eliminating or minimising the risk, and d) the availability and suitability of ways to eliminate or minimise the risk, and e) after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.
Tag Out	A process of attaching personal 'Danger' tags at each isolation by individual Workers when used as part of an isolation process involving Lock Out when work is performed. The means of attaching the tag must comply with the requirements detailed in Minimum Tag Requirements.
Workers	Workers include employees, contractors, sub-contractors, volunteers, visitors and consultants who conduct work for KGL Resources.

5 RESPONSIBILITIES

Senior Leadership Team	1. Provide adequate resources to managers and workers to comply with this procedure. 2. Provide adequate training, resources and support to ensure the requirements of this procedure can be fulfilled. 1. Review and act on reported organisational risk management performance.

Safety Manager	1. Establishes and maintains hazard identification, risk management and training systems within the KGL RESOURCES Safety Management System, including consultation with workers. 2. Assesses and reports on risk management performance to the Leadership Team. 3. Ensures this procedure is fit for purpose and meets all legislative requirements. 4. Ensures that this procedure is implemented and is regularly reviewed and monitored for ongoing effectiveness. 5. Supports managers and supervisors in the implementation and operation of this procedure. 6. Recommends change or improvement to this procedure as required. 7. Provides advice on hazardous energy risk management requirements. 8. Reviews and monitors hazardous energy risk management by managers and supervisors.
Managers and Supervisors	1. Managers and supervisors are responsible for ensuring this procedure is implemented in their area and this may include ensuring that: a. all workers are aware of and understand this procedure; b. any risks arising from hazardous energy are addressed proactively through risk assessments to ensure the health and safety of workers; c. risk assessments for hazardous energy are performed as required; d. workers are provided with appropriate training in relation to the risks arising from hazardous energy and the appropriate control measures; e. workers comply with this procedure, including implementing the required risk control(s).
Worker	Workers are responsible: a) to ensure they are familiar with the requirements of this procedure; b) comply with this procedure at all times; and recommend any change or improvement to this procedure as required.

6 GUIDING PRINCIPLES

At KGL RESOURCES we:

- Apply higher order controls in the hierarchy of controls
- Only use administrative controls (such as procedures) and personal protective equipment (**PPE**) in conjunction with other risk controls or where there are no other risk controls available. Further information is available in specific procedures that relate to these risks.
- Comply with all procedures and instructions
- STOP work if it seems unsafe
- Do not carry out work unless we are competent and trained to perform the task
- Check the plant, equipment and PPE each time we perform a task
- Report all hazards, incidents and near hits
- Wear and use appropriate PPE.

- When in doubt, escalate the concern.

7 HAZARDOUS ENERGY RISK MANAGEMENT

KGL Resource manages risk associated with hazardous energy through a risk management approach. The key elements of KGL Resource's systematic approach to risk management include:

a. hazard identification;
b. risk assessment;
c. controlling risks; and
d. reviewing control measures to ensure they remain effective.

This is to be undertaken in line with the **KGL Resource Risk Management procedure.**

Before undertaking any work involving hazardous substances, workers:

a. Must complete a **Take 5**; and
b. If applicable, complete a SWMS.
c. Any decisions and reasons for the decisions about risk management must be documented in accordance with this procedure.

7.1 HAZARD IDENTIFICATION

Table 1: Examples of Hazardous Energies

Definition: DAMAGING ENERGY	**DESCRIPTION**
Electrical	• Extra low voltage (Not greater than 50 VAC or 120 VDC) • Low voltage (Greater than ELV, but not greater than 1,000 VAC or 1,500 VDC) • High voltage (Greater than low voltage)
Mechanical	• Pressurised fluids including hydraulic fluid, water & slurries • Compressed air and other gases • Mobile plant • Moving parts of plant (fixed or mobile) • Controlled combustion • Noise • Vibration
Stored (May require release as well as isolation)	• Pressure vessels • Springs • Vacuum • Heat

	• Tension (e.g. winch cable) • Electrical capacitors
Gravity (Potential energy)	• Persons or objects elevated above ground/floor level • Persons or objects on inclines • Liquids stored in tanks
Chemical	• Fumes, smoke & vapours • Diesel fuel • Chemicals, dangerous goods, hazardous substances
Biomechanical	• Muscular actions of the human body
Radiation	• Heat – fire, naked flames • Welding flash • Electrical arcing • Gamma, X-rays & Laser

7.1.1 Risk Assessment

When assessing the risks arising from working from hazardous energy, the worker must consider the following:

a. identify which Workers are at risk of exposure;
b. determine what sources of energy are causing that risk;
c. determine the severity and likelihood of the risk;
d. identify if and what kind of control measures should be implemented; and
e. check the effectiveness of existing control measures.

7.1.2 Risk Control Measures

As set out in KGL Resources' Risk Management Procedure, control measures should always be considered in the order of the hierarchy of controls starting with elimination. In some circumstances, two or more control measures will be required to minimise so far as is reasonably practicable the risk(s).

KGL RESOURCES applies the Hierarchy of controls to eliminating, so far as is reasonably practicable, or minimising the risks arising from electrical work

Workers must not work on plant or equipment unless all relevant energy sources are isolated in accordance with this procedure. Work must only be executed on plant or equipment when all energy sources are isolated in accordance with this procedure.

Work on plant or equipment where energy sources are not isolated in accordance with this procedure (this may include commissioning and testing of plant) may only be conducted by workers where the

work without isolation is planned and carried out strictly in accordance with a specific Take 5 or Standard Operating Procedure that is prepared for the work by the worker and is reviewed and approved by the supervisor or manager..

8 ENERGY ISOLATION AND RESTORATION STEPS

There are 12 steps to Hazardous Energy Isolation that BBL adopts, **see Figure 1**.

The 12 Steps include the following:

1. Identify Energy Sources;
2. Advise Relevant Parties;
3. Isolate Energy Sources;
4. Verify Isolations;
5. Place Locks, Execute Permit;
6. Commence Work;
7. Complete Work;
8. Check Work, Place Tags;
9. Clear Area;
10. Remove Locks, Complete Permit;
11. Restore Energy Sources; and
12. Confirm Operations.

The 12 Steps

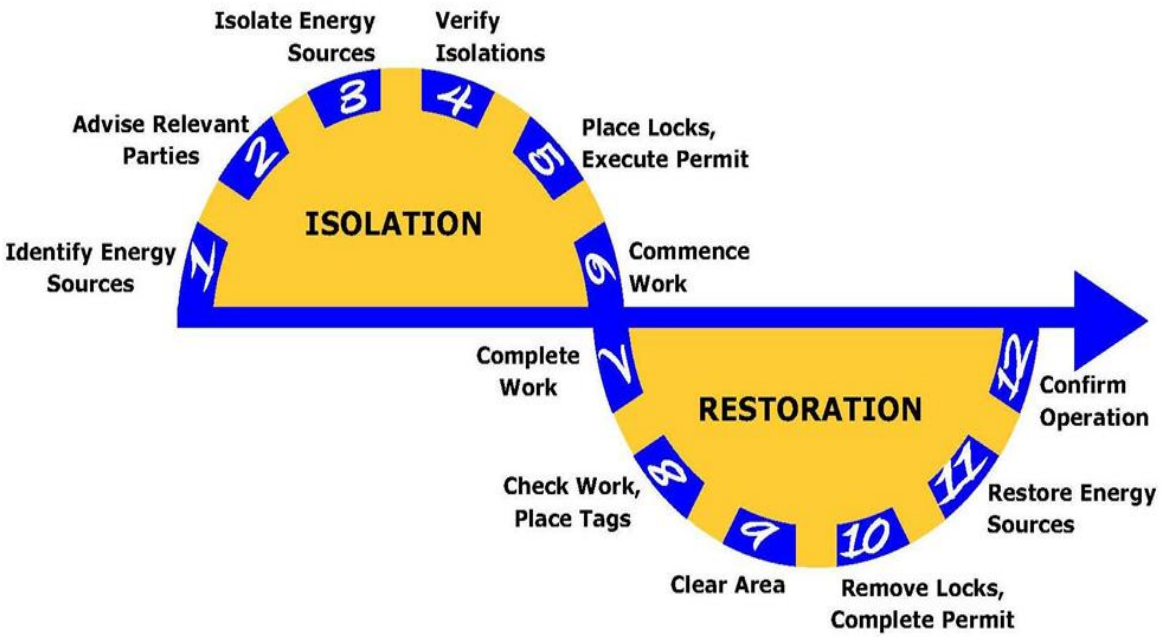


Figure 1 – 12 Step Isolation Process

Step 1: Identify Energy Sources

Identification of energy sources may be achieved by reviewing (or undertaking) one of the following:

a) Safety observations or site inspections

b) Take 5;

c) survey or audit of premises or place of work;

d) process flow diagrams and single line diagrams;

e) plant operating and maintenance instructions;

f) Training Manual and/or OEM Instructions;

g) Review of schematic drawings and General Arrangement Drawings;

h) Reviewing Maintenance procedures applicable to the task; or

The energy sources must be document and identified. Identify all circuits requiring isolation. For example, valves, pump isolator switches, whole current isolators, circuit breakers, battery isolators, and raised load securing devices.

A Competent Person must identify all of the isolations required for the specific work.

Specific controls should be developed to ensure that all workers are aware of the risk. Controls may include an Isolation Permit and appropriate log out and tag out actions.

While plant may be electrically isolated, all energy sources must be considered, e.g. fluid under pressure (water, air, gas, hydraulic oil), compressed or extended springs or gravitational energy (head pressure in pipes, pits, elevated forklift tines, suspended loads).

Once the energy source has been identified, then determine all the circuits requiring isolation.

Then disconnect all active conductors from the relevant sources. Note that there may be multiple sources, including:

- standby systems generators; and
- photovoltaic system as well as auxiliary supplies from other boards.

Step 2: Advise Relevant Parties

All parties that may be impacted by the proposed isolations must be identified and consulted. This must include the relevant Statutory Engineer.

Notify all persons whom will be affected by the isolations and confirm that no safety or operational hazards will be created by isolating the plant and equipment.

The notification should include the nature of the task being undertaken, the expected period the plant will be out of service and where applicable agreement on the process for the safe removal and return to service for the plant being isolated.

Step 3: Isolate Energy Sources

Isolate all of the identified damaging energy sources. Where there is a procedure for the plant or equipment being isolated, the isolation must be conducted in accordance with this procedure.

In addition: dissipate, secure or otherwise treat all the stored damaging energy sources, ensuring that in doing so Workers are not exposed to the hazards of that damaging energy e.g. persons must not work below a suspended mass for the purpose of chocking or otherwise securing it.

Eliminating the risk posed by damaging energy sources can include actions such as:

a) the release of any stored or potential energy in plant, for example;

b) safely releasing stored energy(water, air or gas) from pipes, pumps, tanks;

c) controlled discharging of electricity stored in capacitors,

d) controlled bleeding off of stored fluid pressure contained in pressure vessels or accumulators;

e) securing or barricading elevated equipment or material

f) the physical isolation of piping, ducts, vents, drains, service pipes and fire protection equipment

g) the shut down and prevention of activation of machinery

h) the activation of plant or services outside the task area which may impact the Workers safety

i) the use (inadvertent) of electrical equipment.

Do not use control devices such as push buttons, control switches, emergency stop buttons, key-switches or conveyor lanyards for isolation.

Mobile plant approaches that impact upon workplace safety must be blocked by the use of appropriate barriers and sign posting. Mobile plant operators must be made aware of the areas to which mobile plant access is prohibited.

Isolate in an approved manner or using manufacturers recommended instructions.

All isolation devices will be identified and labelled such that their “isolated” and “energised” (off and on) positions are unambiguously identified by fixed labelling.

Isolation devices are devices designed to control a damaging energy source. These may include but are not limited to:

a) Using a locking cover or suitable chain to secure the valve handle;

b) Bleed drain or scour valve;

c) Secure Isolation (locks);

d) Disconnection of couplings or drive shafts;

e) Inserting a blanking device (Spade or slip plate) into the pipeline;

f) Fitting lockable cover to airline valve;

g) Inserting a mechanical arm or prop under an elevated load;

h) Earthing or connection of conductors;

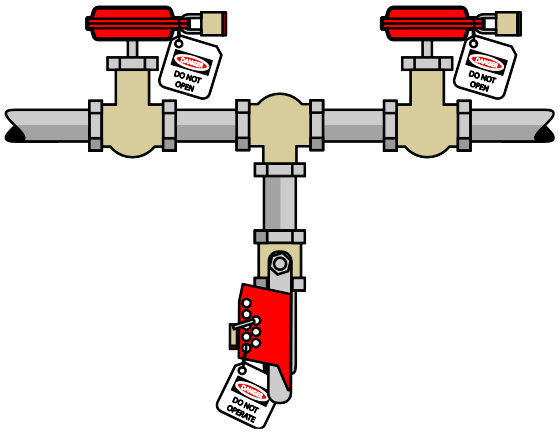
i) Disconnection and termination of load side conductors from power supply;

j) Circuit breakers or removable fuses being racked out to provide a visible break for isolation verification then locked out and tagged;

k) Removing power plugs from sockets – encapsulating and tagging with danger tag;

l) Removing fuses and securing in a locked cabinet; and

m) Isolation of sub-main feeding electrical cabinet or switchboard to ensure all contents are de-energised.



Example of: *Closing, locking and tagging at least two valves*

Step 4: Verify Isolation

Verification of isolations must be executed to confirm that the isolations made have been effective. Stored energy sources must be verified as dissipated or otherwise secured.

The methods of verification of isolation must not expose the verifier to any additional hazards or risks. Where specific competencies or knowledge may be required to verify isolation, specific controls must be developed, documented and implemented to ensure that only the competent person(s) execute the verification of the isolation.

All devices used to verify isolations must be confirmed as operative and fit for purpose immediately prior to and immediately after their use.

All isolations made for a work task must always be verified prior to any Worker commencing work on that task.

Isolation verification must be executed as described by the SWP or Take 5 for the task or by the use of some or all of the following methods:

a) Attempting to start the equipment as per normal starting process

b) Directly observing the switching element status of electrical isolators so designed (visual break isolators);

c) Confirming by the use of local or remote operator controls that the plant operates before isolation and that, after isolation, use of the same controls will not cause the plant to operate;

d) Observing the supply available/not available indicators (if provided);

e) Measuring, with known good test equipment (equipment operationally checked before and after verification use), that energy present before isolation is not present after isolation e.g. pressure gauge downstream of isolator, physical verification of zero pressure in hose or use of a multi-meter (Multi-meter to be only used by Electricians);

f) Visual inspection of stored damaging energy treatment devices (e.g. check blanking spade locked in place, valve is securely closed, check securing pins/chocks are in place);

g) Check that all mobile plant approaches that impact upon workplace safety are delineated by barricades, marker cones or other suitable means and that plant operators are aware of the delineated work areas.

No Worker must lock out or work on isolated plant until that person has confirmed, either directly or indirectly, that the isolation and stored energy dissipation has been verified.

In the case of live electrical testing, specific procedures defined in Electrical Safety Procedures must be followed.



Always test and verify the isolation is effective

Step 5: Place locks execute permit

8.1 LOCKS AND TAGGING:

a) All isolations must be secured by application of a hasp and a single keyed padlock.

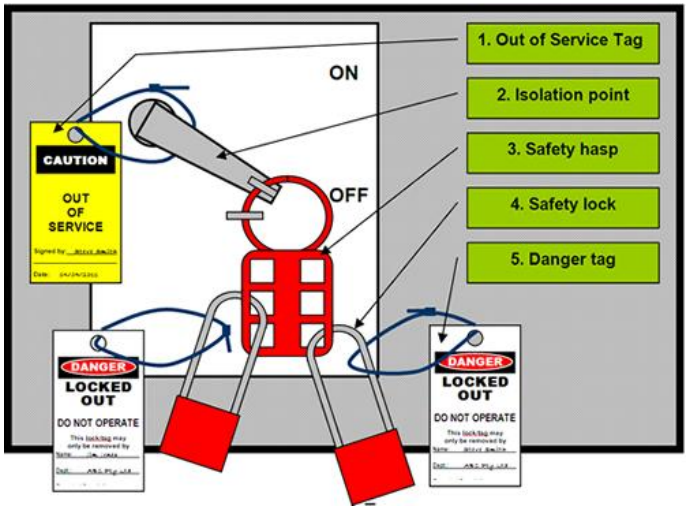
b) Where isolation points cannot accept the direct application of a lock and hasp, suitable devices to allow the application of a lock must be procured under the authority of the responsible Supervisor or Manager.

c) Only in situations where the isolation has no locking facilities, and it is impracticable to fit a lockable isolation securing device, a Personal Danger Tag may be used.

d) Every person either participating in the task for which the isolation has been made or otherwise requiring protection from the isolated damaging energies must apply, at each of the prescribed isolation points one of their single keyed Personal Isolation Locks.

e) Only an Individual Isolator can apply a Personal Isolation Lock.

f) Permits and tags applicable to the types of isolation described in Section 4 of this procedure must be completed in full and/or placed.



Example of Isolation with Hasp, Personal isolation Locks and Tags

Step 6: Commence work

Carry out the work task(s) for which the isolation has been made. If new hazards are introduced, complete a Take 5 to assess the impact and take actions using the Hierarchy of Controls to reduce the risk so far as is reasonably practicable.

If unable to do this, stop work and contact your supervisor for further instruction.

Step 7: Complete work

Ensure all identified tasks have been completed safely.

Step 8: Check Work, place tags

Confirm that the plant, structure or process worked upon is safe to return to normal operation and place Tags if required.

If the plant, structure or process worked upon is not safe or fit for use at the end of a work shift, a completed “Out of Service” tag must be fitted to the appropriate isolator(s) prior to all Personal Locks and/or Personal Danger Tags being removed.

If required, fit an ‘Information’ tag to note any specific requirements relating to use of the structure, plant or process.

When leaving unfinished work, the equipment and area are to be left in a safe condition and present no hazard to other personnel. This must include, where applicable:

a) Terminating and insulating exposed conductors;

b) Physically securing cables, tubing, pipework etc.;

c) Tagging, taping off the electrical equipment and workplace area;

d) Informing relevant personnel that work is not completed;

e) Taking all necessary precaution s to ensure that the electrical equipment cannot become inadvertently re-energised. This may include:

(i) Making sure that isolation from the energy source remains effective and secure;

(ii) Closing and securing switchboard doors;

(iii) Ensuring switchboards are clearly labelled in relation to circuits;

(iv) Placement of additional signage / barriers.

Step 9: Clear Area

Ensure all persons who have worked on the task are clear of the structure, plant or process subject of the task.

Ensure all materials used for the work and waste resulting from the work has been safely and correctly stored.

Verify that all Workers, tools and equipment have been removed from the work area.

Step 10: Remove Locks & Complete Permits

Each Worker must remove their own Personal Isolation Lock(s) or Personal Danger Tags from the isolation device(s) when they are satisfied that they have completed their work and that the plant, structure or process that they worked upon is safe and fit for service or is tagged as ‘Out of Service’.

Step 11: Restore Energy Sources

All parties that may be impacted by the proposed restoration of an isolated energy source must be identified and consulted. All isolation devices must have their isolated and energised (off and on) positions unambiguously identified by fixed labelling.

Where specific competencies or knowledge may be required to operate any isolation devices specific controls must be developed and implemented to ensure that the required isolations are always successfully made.

Controls may include:

a) the use of specific competent persons only for identifying,

b) making and restoring isolations;

c) development and use of isolation plans for specific work;

d) operating instructions displayed adjacent to isolation device.

Step 12: Confirm Operation

The safe and correct operation of the structure, plant or process to which energy source(s) have been restored should be confirmed as soon as is possible after the restoration of the energy source(s). All workers must be clear of all reasonably foreseeable hazards that may arise when the structure, plant or process undergoes an operational check.

If the operational check indicates that the plant, structure or process worked upon is not safe or fit for use, a completed “Out of Service” tag must be fitted to the appropriate isolation devices. Where a simple isolation has been identified, the Take 5 conducted must assess all the associated risks.

In order to obtain approval for isolations, the Permit (see JER-8000-MGT-FRM-0031) must be completed by the person managing the task and approved by the Site Manager. The process for approval will follow the steps below;

a) Site Manager will complete and approve a Single Isolation Checklist

b) Site Manager will communicate all Isolation Controls to the workers involved and apply the 12 Step Isolation process

c) Where continuous monitoring of the Isolation is required

i. the Site Manager will ensure the resources required are available and the controls implemented, verified and tested prior to persons commencing work.

ii. If the continuous monitoring fails or an alarm trigger point is reached, workers must be withdrawn from the area immediately; and

iii. The Alarm trigger points must be documented in the Take 5 and communicated at the daily tool box talk

Tags

The following tags form an integral part of the BBL’s Isolation of Energy Sources System. The table below notes mandatory use of the tags and details the Workers and Non-Worker employees who are allowed to apply and remove the tags.

Out of Service Tag - Used to advise personnel that plant is unsafe and/or unfit for purpose. With tag in place only authorised and controlled operation of the plant to facilitate test or repairs is allowed.

Can be removed by the person who makes the plant safe and fit for purpose or a competent person who has assessed the plant to be safe and fit for purpose.



Information Tag -Used to convey information about a particular area or item of plant other than that conveyed by the specific tag types described within this table. This includes information relating to the commissioning of plant such as who is authorised to operate it and when it is to be operated.

Can be removed when the information they convey is no longer current or applicable.



Danger Tag

Used to secure isolations when use of locks is impractical and risks of not using locks are acceptable or when Personal Isolation Locks do not contain the employee Name, Number and Employers

Can ONLY be removed only by the person who placed it – disciplinary action applies to breaches of procedure.

Red in Colour



Personal Danger Lock

Single keyed

Can ONLY be removed only by the person who placed it – disciplinary action applies to breaches of procedure.

Red in Colour

Name & Company details in indelible writing (i.e.Traffolyte labels.)

Can ONLY be removed only by the person who placed it – disciplinary action applies to breaches of procedure.

Red in Colour

Name & Company details in indelible writing (i.e.Traffolyte labels.)



Personal Isolation Locks are NOT to be used for any other purpose than securing isolation points.

Each tag should include following information:

a) name of the Worker who placed the tag;

b) organisation they belong to;

c) date the tag was placed;

d) a brief description of reason for isolation. e.g.: “Main electrical isolation”, “Compressed Air Isolation” must be noted on the tag;

e) if tag is an Out of Service Tags, then provide details of why plant is out of service;

f) if tag ins an Information tag, then provide details of why the tag was placed;

g) contact phone number of Worker who placed the tag.

Written information on tags should be clear and in permanent marker.

9 REMOVAL OF LOCKS OR CANCELLING OF PERMITS BY PERSONS OTHER THAN THE WORKER

Where it is desired to restore damaging energy sources and the person who placed a lock (or tag) in accordance with this procedure is unavailable to remove the lock (or tag), the lock (or tag) may be removed by, or with the written approval of, the relevant Site Manager or his designate.

Before the lock (or tag) is removed the Designated Person present on site must execute, the following actions:

a) Identify the person who applied the lock (or tag);

b) Identify the reason for which the lock (or tag) was applied;

c) Attempt to contact Worker who applied the lock (or tag);

d) If the Worker is contacted, he/she must return to site to remove the lock.;

e) If the person cannot be contacted, record the investigation process carried out to ensure that the person is not onsite and not exposed to the damaging energy sources that the lock (or tag) secures;

f) Only when the person has been contacted and cannot return to site or an investigation has confirmed that the person is not onsite and not exposed to the damaging energy sources that the lock (or tag) secures may the lock (tag) be removed by, or with the written approval of, the most senior person present on site;

g) After removal of the lock (tag) damaging energies may be restored if otherwise safe to do so by competent persons;

h) An incident report must be completed in accordance with Maskill Incident Reporting and Investigation Procedure.

Note: Personal Isolation Locks and Danger tags must only be removed when it can be shown “beyond a reasonable level of doubt” that the Personal Isolation Lock or Information Tag owner has left the site.

10 LONG TERM ISOLATION & DECOMMISSIONED PLANT

When plant is required to be out service for long periods of time (greater than 3 months) or has been decommissioned from service, the following process will be followed by the Worker placing the tag;

a) An Out of Service tag will be attached to the item of plant which will be completed in permanent ink/marker and contain the following;

b) Name of Person;

c) Position of person Reason for Plant being out of service;

d) Contact number;

e) Statement of how long plant is expected to be Out of Service; and

f) Statement to say plant is decommissioned (if applicable).

g) Verification that the plant is isolated, and that all damaging energy is in a zero state or effectively controlled.

h) Placement of Purple Equipment Lock on each isolation point with Out of Service tag completed as above.



Example of Decommissioned plant lock

11 REVIEW AND REVISION OF CONTROL MEASURES

Risk controls must be reviewed on a regular basis to ensure their effectiveness and also to ensure that new risks have not been introduced. A review is required:

- when the control measure is not effective in controlling the risk;
- before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control;
- if a new hazard or risk is identified;
- if the results of consultation indicate that a review is necessary; and
- if a health and safety representative requests a review.

12 INFORMATION, INSTRUCTION, TRAINING & SUPERVISION

All Workers (new, existing or transferred) involved in equipment, plant and machinery servicing and maintenance must be trained and deemed competent in hazardous energy isolation specific to their respective site. Training must include:

a) Recognition of applicable hazardous energy sources

b) Recognition of methods to isolate / control these energy sources

c) Instruction in the purpose and use of a Lock-out and Tag-out procedure Site-specific lockout and tag-out procedures for complex plant.

Periodic refresher training must be conducted whenever there is a change in procedure.

13 INCIDENT REPORTING AND INVESTIGATION

Any incidents arising from fatigue must be reported in accordance with the **KGL Resource Incident Managing Procedure**.

14 BREACH OF THIS PROCEDURE

Workers must comply with this procedure at all times. KGL Resources takes breaches of this procedure very seriously.

If an employee is found to have breached this procedure, they may be subjected to disciplinary action in accordance with KGL Resources' disciplinary processes. Contractors of KGL Resources who are found to have breached this procedure may be the subject of action under their contract with KGL Resources.

15 CONSULTATION

This procedure has been developed and implemented in consultation and co-operation with KGL Resources' workers.

16 RELATED DOCUMENTATION

JER-8000-MGT-PRO-0006	Risk Management
JER-8000-MGT-PRO-0023	Incident Management
JER-8000-MGT-PRO-0036	Competency & Training
JER-8000-MGT-FRM-0031	Hazardous Energy Isolation Permit

17 MONITORING, EVALUATION AND REVIEW

VERIFICATION	
Monitoring	Compliance with this procedure will be monitored through training and regular audits.
Evaluation & Review	The risk rating is medium, reviewed every 2 years. A review will be undertaken sooner if there are changes to legislation, standards and industry codes, or following an SMS review, changes as defined by WHS Regulators, or to ensure continual improvement.
Version Control	Version 1: May 2026

18 APPROVAL

Konrad Litfin

Project Director