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CS ENERGY PROCEDURE

BARRICADES AND SIGNAGE
CS-OHS-36

Responsible Officer: Health and Safety Specialist
Responsible Manager: Head of Health and Safety
Responsible Executive: Executive General Manager Plant Operations

DOCUMENT HISTORY

Key Changes	Prepared By	Checked By	Approved By	Date
Original Issue				23/01/1998
General revision and deletion of Gamma Radiography tape				15/01/2001
General review and update				28/03/2011
General review and update	C Kendrick-Ward	A Brown	A Brown	14/03/2012
Live electrical work requirements altered	D Kendrick	D Bell A Brown K Ussher	D Bell K Ussher	21/06/2013
Updated - Plastic chain inclusion, construction delineation & revised barricade methods	B Pike	M Kelly P Matha L McLachlan	D Clarke	03/03/2015
Clarification point added to 4.1 due to action raised in incident 8938. Context and intent of procedure remain unchanged.	S Hogan	N/A	S Faulkner	30/04/2019
Added Section 4.2.4 Drop Zone Tape	J Newkirk	A Cashin T Hoare S Hogan	Sarah Colley	03/05/2022
General review and update	V Hardaker	A Bonk	T Preston	24/07/2025

CONTENTS

1 PURPOSE

To identify the methods of barricade permitted at CS Energy sites by both CS Energy employees and Contractors working on site.

2 SCOPE

This procedure details the application of:

- The types of approved boundaries;
- The signs to be used; and
- The requirements for solid barricades.

3 RESPONSIBILITIES AND ACCOUNTABILITIES

3.1 CS Energy

CS Energy is responsible for ensuring that:

- Sufficient resources are allocated to ensure the requirements of this procedure are implemented on site.

3.2 Employees and Contractors / Consultants

Are responsible for ensuring that:

- They comply at all times with the requirements specified within this corporate procedure and any relating approved site-specific procedures; and
- They utilise the appropriate equipment provided for erecting barricades and signage.

4 ACTIONS

4.1 Assessing the Need for a Barricade

The following situations will identify the need for a barricade:

1. Task Oriented – Requirement identified as the result of completing a JSEA / Risk Assessment
2. Plant Hazard – Requirement identified as the result of plant failure or defect found necessitating access to be controlled (e.g. – Steam leak or hazard which presents risk to health and safety, removal flooring or handrails etc.)
3. Scene preservation following an incident

Once the need of a barricade is identified the method of barricading must be determined.

- Consideration should be given to hazards in the area when erecting barricading (i.e. access points, stairs wells, falling objects), and that the barricading itself does not introduce a hazard.

4.2 Methods of Barricading

4.2.1 Soft Barricading

Soft barricading is the use of tape and signage to advise of the hazards and indicate access requirements. CS Energy uses two (2) types of endorsed tape and signs, which are supplied by Blackwoods. Refer to sections below for more information regarding their use.

Where there is a fall risk >0.5m – 2m (e.g. pit or uneven ground) soft barricading may be used to demarcate the hazard. This barricading shall be 2m away from the hazard.

When a worker erects a barricade, the following must be completed every time:

- Barricade is always erected with approved signage on every open side;
- Information on the hazard/situation present in the area;
- Task to be undertaken and any possible interactions;
- Details of the Officer-in-Charge (OIC), Person-in-charge of Works (PICW) or Erector & date; (including contact number)
- Associated specific instructions
- Access Points should be installed (don't force people to go under or step over barricade)
- Keep barricade at waist height
- Always attempt to install bollards to support barricade and not the plant – always encapsulate the area

Wheelie bins and other devices that can be moved and affect the integrity of the barricaded zone must be not used.

Soft barricading can be applied to hard barricading to increase visibility.

4.2.2 Warning Tape and Warning Signs

Warning Tape and Warning Signs shall be used as a barricade for control of access to a "general hazard". A PTW is not required to use warning tape.

Black on yellow 'Warning' tape [Material Number 5002672] and associated signs are to be used whenever it is deemed appropriate to provide warning to others that some extra care is required within the identified area.

Where warning tape is used, warning signs (filled out) must also be used to provide information on the hazard/situation present and the responsible person for the area.

To access the area inside the warning tape and signs, persons must ensure they are aware of the hazards present inside the area and any other restrictions as detailed on the warning sign.

Where the person erecting the barricade does not want personnel accessing past the tape and signs without their explicit knowledge, this requirement must be detailed on the warning sign and a contact number provided.

Points to be considered must include:

- Identify the hazards;
- The task to be undertaken and any possible interaction; and
- Associated specific instructions.

Tape and signs are available from workgroup stores.

Note: this form of barricading may not stop a person entering the taped zone. Any high-risk hazards (e.g. falling objects, suspended loads, exposed electrical parts) need to be managed by risk. Danger tape must be applied to manage the risk of inadvertent access.

4.2.3 Danger Tape and Dangers Signs

Danger Tape and Danger Signs shall be used as a barricade for control of access to a "High risk hazard areas" which may present a life threatening risk. Danger tape is Red and white striped with the wording 'Danger Do Not Enter' [Material Number 5002669].

Where danger tape is used, danger signs (filled out) shall also be used to provide information on the hazard/ situation present and details of the Erector and PTW as required.

Danger tape shall be linked to a PTW to allow control of the area. Before any person accesses the area inside the danger taped area they must have approval by the OIC/PICW and sign on to the PTW and JSEA. The following are exemption where PTW is not required:

- To control high risk areas when deemed necessary by the Operator Lead/Supervisor or Site Management. e.g. areas with steam leaks, high risk hazards, etc; or
- To control an area where required by the Emergency Response team.

After hours (or when permit has been suspended by the OIC), the Operator Lead/Supervisor can give authority to entry after a risk assessment is performed to identify the hazard controls are in place.

Danger Do Not Enter tape and signs are only available from the control room. The erector is responsible to ensure the barricading is intact at all times and signage is in place at all main points on the relevant barricade.

4.2.3.1 Live Electrical Work Barricading

Danger tape and Danger Signs shall be used as a barricade for control of access to live electrical equipment, which may present a life threatening risk. This requirement shall be determined by the OIC/PICW and documented on the JSEA, guidance is provided below:

- Barricades shall be used for:
  - High voltage testing;
  - Working on a switchboard that has energised sections (all live cubicles shall be barricaded);
- Barricades are not mandatory for:
  - Routine testing to prove dead, voltage measurement etc. where a safety observer can control access of others to exposed live parts

Where work is required in High Voltage Switchyards, barricades shall be erected as per High Voltage Electrical Isolation and Access CS-OHS-53.

4.2.4 Drop Zone Tape

Drop Zone Tape shall be used as a barricade to prevent entry into areas that are considered “High risk hazard areas” which may present a life-threatening risk due to dropped or falling objects. It is designed to remove the potential of possible personnel interaction with dropped objects.

Examples where this tape maybe used are:

- The levels below where a scaffold is being built
- Any open void area that may have a load passing overhead or an item could fall from one level to another.

Drop Zone Tape

- is purple and white striped with the wording ‘DANGER DROP ZONE’.
- The requirement for signage to be hung on the tape is optional.

Where Drop Zone Tape has been erected no one can enter that area even if signed on and locked onto the Permit.

The tape can be erected by any member of the work party and shall be taken down and disposed of when the task is completed or there is no dropped object risk present.

4.2.5 Solid Barricades

The use of a solid barricade shall be determined by:

- A Job Safety Environment Analysis(S1878)/ Risk Assessment; or
- CS-PTW-HAZ-02 Working at heights and Unprotected Edges; or
- Where access into an uncontrolled area will expose a fall risk, which has the potential to cause injury.

The purposes of a solid barricade it to provide a physical barrier capable of performing the same function as a permanent handrail.

A Solid Barricade shall:

- Have a solid top rail (eg. Scaffold tube and coupling or equivalent) with the applicable sign attached (Top rail to be at least 1 metre high);
- If the fall height is greater than 2.0 metres, a mid rail and a kick plate must also be fitted;
- Have a construction with suitable strength to support a person leaning or falling into the barricade;
- Triton barricades/bollards (eg yellow water filled plastic barricades) are classed as a suitable barricading method and should be linked together and water filled where there is risk of vehicle impact;
- Where solid barricades are used they must be accompanied with the correct type of barricade signs (Warning or Danger) to highlight the existence of the barricades and communicate the hazard information.

4.2.6 Plastic Chain

Instances where soft barricading is required to be installed for an extended period of time plastic chain should be used as a substitute to plastic tape.

Warning signage can be attached to Yellow chain [Material Number 5076729]

Danger signage can be attached to Red and White Chain [Material Number 5076728]

Plastic chain is not a substitute for hard barricading.

4.3 Construction work

Construction work area's shall be clearly sign posted at strategic locations, delineation of construction zones to be broadcasted via maps during overhaul inductions and site wide tool box discussions.

4.4 Removal

Tapes and barricades must be removed once they are no longer required. The person who erected the barricade shall ensure it is removed and the area left is in a safe condition. Where the person who erected the barricade is not contactable, approval shall be obtained by Site Management or Operator leads / supervisors.

All CS employees & Contractors have an obligation to report uncontrolled use of barriers or the failure to remove barriers are no longer required to the person listed as OIC/ responsible person on the sign.

In the event that there is no sign attached, a risk-based process shall be adopted by Site Management or Operator leads / supervisors for the removal of the barricade.

5 DEFINITIONS

Term	Definition
General Hazard	A situation or condition where the hazard present is not deemed to be an immediate life threatening risk
SPTWO	Senior Permit to Work Officer
High Risk Hazard Areas	A situation or condition where the hazard present is deemed to be an immediate life threatening risk (e.g. – Steam leak, fall areas, etc)

6 REFERENCES

Reference No	Reference Title	Author
C/D/09/171	Procedure - CAL - CAL-OHS-006 - Industrial Radiography Emergency and Operating Procedure	Callide
B/D/11/19581	Procedure - CSE - CS-PTW-HAZ-02 - Working at Heights	CS Energy
	Qld Electricity Entity Procedures for Safe Access to High Voltage Electrical Apparatus	

7 RECORDS MANAGEMENT

In order to maintain continual improvement, suitability, safety and effectiveness of the organisation, registered documents will be reviewed on a two-yearly basis or at intervals specified by legislative or regulatory requirements. Review of registered documents should occur where it has been identified that there are changes in technology, legislation, standards, regulation or where experience identifies the need for alteration to the content. Registered documents should also be reviewed following an incident, change management process, modification or where directed as part of a risk assessment process. A 'review' can simply mean that it has been identified, confirmed and appropriately recorded that no changes are required and that the existing process remains the same.

Government Owned Corporations must ensure that records are retained according to accountability, legal, administrative, financial, commercial and operational requirements and expectations. In compliance with records retention and disposal, all documentation created in relation to business must be retained in line with minimum retention periods as detailed in legal retention and disposal schedules.

8 ATTACHMENTS

8.1 Attachment 1 – The Warning and Danger Sign

8.2 Attachment 2 – Warning and Danger Tape